Policy 3.1 – Chetwynd Barracks:

ID	Organisation
Duty to Co-operate / Interest Groups	
21	Natural England
34	Nottinghamshire Wildlife Trust
48	Sport England
55	Pedals (Nottingham Cycling Campaign)
64	Derbyshire County Council
142	Historic England
211	Nottinghamshire County Council
222	Severn Trent
6276	Nottingham West Clinical Commissioning Group
6279	Bramcote Neighbourhood Forum
6577	Chetwynd: The Toton and Chilwell Neighbourhood Forum
6882	Broxtowe Labour Group
6963	East Midlands Councils
Developer / Landowner	
6284	DIO (JLL)
2542	Mrs Viitanen (Represented by Featherstones)
4622	Barnes (represented by Featherstones)
6881	Mr Taylor (Represented by Featherstones)
2652	W.Westerman (Represented by Oxalis Planning)
2685	Bloor Holmes (Represented by Oxalis Planning)
4200	Taylor & Burrows Property (Represented by Phoenix Planning (UK) Limited)
Individual / Local Resident	
623	Trussell
3855	Hill
6809	Sellers

Details

Agent	
Please provide your client's name	
Your Details	
Title	[redacted]
Name	[redacted]
Organisation (If responding on behalf of an organisation)	Natural England
Address	[redacted]
Telephone Number	[redacted]
Email Address	[redacted]
Would you like to be contacted regarding future planning policy consultations?	Yes
If you wish to comment on more than one issue you will need to submit a form for each representation.	

Policy relates to

Please specify what your comment relates to					
Policy number	**Page number**	**Policy text/ Paragraph number**	**Policies Map**	**Sustainability Appraisal**	**Other (e.g. omission, evidence document etc.)**
3: Main Built up Area Site Allocations		Policy 3.1 Chetwynd Barracks			

Question 1: What does your comment relate to? Please specify exactly

Question 2

Question 2: What is the issue with the Local Plan?	
Do you consider this paragraph or policy of the Local Plan to be:	
2.1 Legally compliant	Yes
2.2 Compliant with the duty to co-operate	Yes
2.3 Sound	Yes

Additional details

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details.	Policy 3.1 Chetwynd Barracks Natural England welcomes the key development requirements within this policy for retaining and enhancing green infrastructure, retaining trees and linking open spaces. The provision of accessible green space within this site would take the pressure from the nearby Attenborough Site of Special Scientific Interest (SSSI)

Question 4

Question 4: Modifications sought	
Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound.	none

Question 5

Question 5: Public Examination Attendance	
If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	No
If you wish to participate at the public examination, please outline why you consider this to be necessary	

Planning Policy
Broxtowe Borough Council
Council Offices
Foster Ave
Beeston
Notts NG9 1AB

3rd November 2017

Dear Sir/ Madam

Comments on Publication Version Part 2 Broxtowe Local Plan

Thank you for the opportunity to comment on the Broxtowe Local Plan Part 2 (publication version).

Whilst recognising the need for housing provision and economic investment in Broxtowe, we have significant concerns about whether the scale of growth proposed during the plan period is necessary or sustainable.

We do not currently have resources to submit each comment on a separate form but to help with your collation of responses our comments are broadly set out by policy number, as requested on the response form (question 1). Where appropriate, we have also indicated if we query the 'soundness' of the plan, as per question 2 and 3. After putting forward our comments we have submitted suggested modifications, as per question 4 of the response form.

Our comments on individual policies are set out below:

Policy 3 Main built up area site allocations

For the reasons provided at 3.1 and 3.2 we generally support the Spatial Strategy approach. We do, however, have substantive concerns about the scale of some of the allocations. We do understand that allocation sites would not necessarily be built up in their entirety and land within the allocation boundary would potentially be set aside for Green Infrastructure (GI) provision and related requirements. However, we think that seeing sites with large red-line boundaries might be potentially confusing and of concern to many of the other consultees - certain local community groups and individuals have contacted us about their concerns about potential loss of greenfield and wildlife sites.

Policy: 3.1 Chetwynd Barracks: 500 homes (within the plan period)

If this site is to be allocated, we very much support the 'key development requirement' to "*Retain and enhance Green Infrastructure corridors around the eastern and northern areas of the site*".

Some parts of the site have developed significant habitat value. These include Hobgoblin Wood and the adjacent Chilwell Ordnance Depot Local Wildlife Site (LWS) which is located outside the redline boundary. Both areas should be protected during construction phase and be retained within GI with their management secured and paid for in perpetuity by the developer. Focusing new built development on the previously developed parts of the site whilst converting and reusing existing buildings, roads and infrastructure wherever possible would allow for a more sustainable form of development to be achieved.

Nottinghamshire Wildlife Trust

[redacted]

Email [redacted]

Website
www.nottinghamshirewildlife.org

Modification sought
Include a clear statement confirming that Hobgoblin Wood, other woodland area, mature trees and grasslands will be retained and their long-term management will be secured in perpetuity.

Policy: 3.2 Toton (Strategic Location for Growth): 500 Homes

Toton sidings is at the very centre of the Erewash Valley Living Landscape area, where many partners including Broxtowe Borough Council are investing in extending and improving habitats and GI to achieve Broxtowe Borough Council's Biodiversity and GI targets.

We therefore **object** to this site as a strategic location for growth. Not only would it lead to the loss of a substantial area of Green Belt, resulting in the merging of Chilwell and Stapleford, it would cause a well-defined wildlife corridor between the Erewash Valley and Wollaton Park (via Bramcote Village and Beeston Fields golf course) to be lost. This corridor is identified as primary corridor 1.2 and secondary corridors 2.12 and 2.23 in the Broxtowe Green Infrastructure Strategy and the land between the two secondary corridors will also, in effect, function as a single wide corridor.

We cannot see how transport issues can be addressed in a location already suffering from severe congestion and where other large-scale developments are planned for the current plan period, i.e. 500 homes in connection with the Chetwynd Barracks redevelopment.

We need to point out that part of this land, especially the northern and eastern part of the sidings, are within floodplain and are at high risk of flooding. Therefore, there should be a presumption against development of these parts of the site. Also, if substantive measures are not put in place (e.g. flood storage), development of such a large parcel of land could increase risk of both fluvial and surface water flooding in adjacent areas, especially within Toton and parts of Long Eaton.

Whilst we don't support the principle of development on Green Belt and the scale of the proposed development, we welcome inclusion of open space: "*Minimum of 16ha Open Space, to incorporate Green Infrastructure of sufficient width and quality to provide attractive and usable links between Hobgoblin Wood in the east and Toton Fields Local Wildlife Site in the west and the Erewash Canal, which will blend with a high quality built environment*."

However, we would expect to see the quantity of 'informal' open space (wildlife habitat) specified in the policy wording. In the absence of this, we are concerned that:
a). the 16ha minimum could be taken up with 'formal' open spaces, such as sports pitches, play areas etc,
b). the open spaces would be sited in areas subject to high levels of disturbance, such as along paths, road verges etc, which will never develop high wildlife value,
c). areas of open spaces will be too narrow to usefully function as wildlife habitat (our comments on policy 27 and our recommendation for 50 metre wide buffer are relevant to this).

We are also concerned about the loss of such a large extent of brownfield land in the sidings, which has regenerated to woodland. New open space wildlife sites cannot be recreated easily and will take many years to develop a level of wildlife value equivalent to what will be lost from the sidings, if achievable at all.

Modification sought
Removal of the allocation. If Broxtowe Borough Council is minded to allocate then all LWS habitat should be removed from the allocation, as it might never be possible to recreate habitats of the same value. Clarification that the 16ha minimum will comprise a significant amount of informal open space (wildlife habitat), including a 50m wide habitat corridor.

Policy: 3.3 Bramcote (East of Coventry Lane): 300 Homes

If the entire site is to be developed, this allocation would result in the loss of a LWS – Bramcote Moor Grassland, which we would strongly **object** to.

LWSs are defined areas identified and selected locally for their substantive nature conservation value. Their selection takes into account the most important, distinctive and threatened species and habitats within the county. They therefore comprise many of our best remaining flower-rich meadows, ancient woodlands, ponds, swamps, fens and mires and provide a home to many of our native plant and animal species, including many rare, declining or protected species. These sites can be of SSSI quality or can be even more important than SSSIs for wildlife. We therefore consider protection of this network of sites to be of the upmost importance.

Should the LWS be lost, we would consider the policy unsound as it is not consistent with local (Policy 17 of ACS) and national policy (NPPF para 118).

Modification sought
Inclusion of a sentence stating that the LWS will not be developed or removal of LWS from the allocation boundary. If the LWS would be retained, it would also need to be adequately buffered and work would be required to make the site more robust, as it will be subject to greater footfall post any development. Future management of the LWS should also be secured.

Policy: 3.4 Stapleford (West of Coventry Lane): 240 Homes

The 'key development requirements' include "*provide enhanced Green Infrastructure corridors linking urban areas of Nottingham to the east with Bramcote and Stapleford Hills, Bramcote Park, Boundary Brook, Pit Lane Wildlife Site, Nottingham Canal and Erewash Valley Trail*".

Whilst we **object** to this allocation because we consider it is encroaching significantly into the surrounding countryside and that local needs have been met by the adjacent Fields Farm site, achievement of a strong corridor is very important. We also agree with the last point of the 'key development requirements', that the cemetery and Stapleford Hills should be adequately buffered, forming a strong and robust habitat corridor linking to Bramcote Moor Grassland LWS.

Modification sought
Removal of allocation. Clarification as to the extent of the corridor, so the site isn't over developed. The adjacent Field Farm Development is mentioned in the location description but we think this policy needs to offer some guidance in terms of how GI linkages will be provided between the two sites.

Nottinghamshire Wildlife Trust

[redacted]

Website
www.nottinghamshirewildlife.org

Policy: 3.5 Severn Trent (Lilac Grove): 150 Homes

The 'key development requirements' states that the 150 homes will be located towards the north of the site, which appears to be on the former Severn Trent works, and that access will only be from the north (Lilac Grove).

We are hopeful this means the land at the end of Cornwall Avenue will remain undeveloped. It also talks about 'soft landscaping' along the canal and the importance of "Green Infrastructure" corridors. The field at the end of Cornwall Avenue is an important buffer to the Beeston Canal, which itself is a Local Wildlife Site and this should form part of the "Green Infrastructure" and remain undeveloped and long-term management of GI needs to be secured.

Modification sought
Clarification of the extent of GI, confirmation that fields along the Beeston Canal will not be developed and that long-term management of GI will be secured.

Policy: 3.6 Beeston Maltings: 56 Homes

Transport corridors can provide essential wildlife habitat. For instance our sister Wildlife Trust in Yorkshire is promoting a project to maximise their value, which is supported by the Humberhead Levels Nature Improvement Area. Given the apparent lack of buffer on the south of the railway line, we would strongly recommend some form of green link be provided along the southern development boundary.

Modification sought
Provision of green infrastructure link along the railway line under the 'key development requirements'.

Policy: 3.7 Beeston Cement Depot: 21 Homes

Transport corridors can provide essential wildlife habitat. For instance our sister Wildlife Trust in Yorkshire is promoting a project to maximise their value. We would strongly recommend some form of green link be provided along the southern development boundary.

Modification sought
Provision of green infrastructure link along the railway line under the 'key development requirements'.

Policy 4 Awsworth Site Allocation

A substantial population of common toad (Local Biodiversity Action Plan Priority species and NERC Act species of principal importance in England) was known to be present in the vicinity of the allocated site. We are aware that toad tunnels, which we understand have not been maintained, were installed underneath the Awsworth Bypass, to allow toads to migrate between breeding habitat (Nottingham Canal) and fields on the opposite side of the new bypass. Potentially, the fields subject to this allocation still provide terrestrial habitat for common toad, should they still occur. We would recommend surveys for common toad and other wildlife, possible reinstatement of toad tunnels (if required). Due to it's greenfield nature and strong hedgerow network, we think the land could provide habitat for many other species.
Common Toad is considered a biodiversity asset under policy 31, as they are a species of concern in the Notts Biodiversity Action Plan.
Should this species be subject to further adverse impacts, we would consider the policy unsound as it is not consistent with local (Policy 17 of ACS) and national policy (NPPF para 118).

Modification sought
We would wish to see removal of this allocation. If the allocation is to remain, provision of substantial green infrastructure, incorporation of existing hedges and retention of some meadows (quantity defined) and protection of common toads, should they still occur.

Policy 5 Brinsley Site Allocation

We would have preferred to have seen the alternative site included (option 2) rather this one (option 1) for the reasons provided in our response to the Brinsley Alternative Site Consultation February 2017:

"Option 1 is located immediately adjacent to Brinsley Headstocks Local Nature Reserve and associated Local Wildlife Sites, Brinsley Brook Grassland LWS (5/2302) and Brinsley Headstocks LWS (5/3405), which are identified for their botanical interest. The wildlife value of Brinsley Headstocks, which has been well recorded, may be harmed by any substantial increases in recreational use, which would be inevitable if Option 1 is taken forward.
The LNR and adjacent land is considered locally by members of the Friends Group and others who carry out regular birdwatching locally, as being more valuable for birds. This is certainly likely because the LNR itself supports more structural diversity in its habitats, with areas of woodland, plantation, hedges alongside meadows and the Brinsley Brook These features are largely lacking from land within Option 2, which is predominantly arable. The LNR currently has good, strong habitat connectivity along the brook and to Saints Coppice to the north, which could be adversely affected by built development if Option 1 is taken forward.
Option 1 contains areas of permanent grassland whereas the majority of land within option 2 is mainly arable, which contains no known botanical interest is less valuable in wildlife terms, apart from hedges which we would like to see sensitively retained within any development".

Local residents have reported that the fields in the vicinity of the Brinsley allocation included in the current consultation support a number of wintering farmland bird species. We are also concerned about possible hydrological impacts on the Brinsley Brook. As this allocation is within the catchment for the watercourse there is the potential for adverse impacts on the ecology of the brook due to increased runoff rates, contamination (directly or indirectly, via any new drains) etc.

Modification sought
Replace this site allocation with 'option 2'.

Policy 6 Eastwood Site Allocation

Walker Street Eastwood is an important Green Space in the centre of Eastwood. Whilst we welcome retention of 'Canyons' as open space, we would wish to see Green Infrastructure/ habitat corridors enhanced throughout the site.

Modification sought
Include a commitment to provide GI links across the wider site.

Nottinghamshire Wildlife Trust

[redacted]

Website
www.nottinghamshirewildlife.org

Policy 7.1 Land south of Kimberley Depot

We find proposals to develop the exiting built up part of the site acceptable but are concerned about the impact on wildlife arising from loss of surrounding farmland and plantation woodland. Kimberley Disused Railway, on the southern boundary, is a LWS and important wildlife corridors, which should be adequately buffered from any development.

Modification sought
If this allocation is to remain, we would like to see a statement about extent of developable area, ideally limiting it to the existing built up part of the site. It is important that the allocation is sensitive to, and secures future positive management of the LWS.

Policy 7.2 Land south of Eastwood Road Kimberley

We consider this is an important area of remnant fields on the edge of urban area which, when considered with the adjacent woodland, is an important wildlife corridor. We would be concerned about inclusion of the site as an allocation.

Modification sought
Site to be excluded.

Policy 17 Place-making, Design and Amenity

We **support** the inclusion of 1(n – p):
"n). Incorporates ecologically sensitive design, with a high standard of planting and features for biodiversity; and
o). Uses native species of trees, shrubs and wild-flower seeds in landscaping proposals; and
p). Integrates bat and/or bird boxes into the fabric of new buildings".

Modification sought
Under n) adding reference to following:

- green walls,
- brown and green roofs,
- ecologically designed / focused suds schemes,
- features to assist permeability for wildlife through the built environment (e.g. gaps under fences for hedgehogs).

Under p) adding a reference to insect houses.

The policy should raise future responsibilities and funding mechanisms for management of habitats / informal open spaces. The developer should cover the costs for management of habitats in perpetuity, so that it does not fall to Broxtowe Borough Council to pay for this.

Policy 19 Pollution, Hazardous Substances and Ground Conditions

Sub section 1b). "*Lighting schemes unless they are designed to use the minimum amount of lighting necessary to achieve their purposes and to minimise any adverse effects beyond the site, including effects on the amenity of local residents, the darkness of the local area and nature conservation (especially bats and invertebrates)".*

We **support** inclusion of point in relation to darkness and nature conservation.

Policy 27 Local Green Space

We strongly **support** this policy and welcome inclusion of the sites listed. Protection of the sites around Bramcote Hills Park and wood, Stapleford Wood and the Bramcote Schools (section 3 relating to land east and west of Coventry Lane) is welcome, as these are very important wildlife sites with historic / cultural interest.

In terms of policy wording, we are concerned about inclusion of '*exceptional circumstances'* clause, as this will undermine the policy protection.

Paragraph 28.2 states, "*The greatest opportunities for enhancing the corridors will come through development, and the Council intends to work with developers to create and maintain new spaces and to improve connectivity. The details of these opportunities for enhancement will depend on the characteristics of the corridors concerned".*

Development certainly creates opportunities for enhancing corridors but we would question whether it creates the 'greatest opportunities'. Many of the corridors are in the rural landscape, not through areas allocated for potential development and significant opportunities exist through working with existing landowners and farmers, in relation to improving existing Rights of Way or strengthening important landscape features and wildlife habitats, such as hedgerows, woodlands and field margins.

Green infrastructure corridors need to be of a reasonable, specified width to be viable; otherwise they will fail to function in ecological terms. Without specified widths there is the danger the corridors will be narrow as developers will naturally seek to maximise the size of the new built development. We have carried out some research on what is considered viable widths of green corridors. In summary:

- "Corridors should be preserved, enhanced and provided, […..], as they permit certain species to thrive where they otherwise would not. Corridors should be as wide and continuous as possible" (Dawson, 1994).
- 50m buffers [are] recommended for developments in the Local Plans of both Wakefield & Darlington Councils to protect local wildlife sites and / or river corridors.
- A 50m width allows corridors to function as a 'multi-purpose network', as defined in NECR 180, so that it includes attributes that are valuable to people, i.e. biodiversity alongside amenity, footpaths, cycleways, sustainable drainage, microclimate improvement, heritage [etc.]
- Quadrat Scotland 2002 (Appendix 1). For connectedness, to be defined as 'high' (on scale high, medium, low), the corridor needs to be at least 50m wide for more than 50% of the corridor

<u>References</u>

- Dawson, D. 1994. Are Habitat Corridors Conduits for Animals and Plants in a Fragmented Landscape? A Review of the Scientific Evidence. English Nature Research Reports
- Wakefield Consultation on spatial strategy: Wakefield Council Spatial Policy Areas
- Darlington consultation on draft housing allocations: Darlington Council Housing Allocations report
- Natural England Commissioned Report NECR180 (2015). Econets, landscape & people: Integrating people's values and cultural ecosystem services.

Nottinghamshire Wildlife Trust

[redacted]

Website
www.nottinghamshirewildlife.org

- Quadrat Scotland (2002) The network of wildlife corridors and stepping stones of importance to the biodiversity of East Dunbartonshire. Scottish Natural Heritage Commissioned Report

Modification sought
Removal of "*except in very special circumstances*" from the final sentence of the policy wording.
State that development provides opportunities for enhancing corridors, but remove (development) 'provides *the greatest'.*
State that corridors must be at least 50 metres wide to be considered beneficial and viable for wildlife.

Policy 28 Green Infrastructure Assets

We strongly **support** this policy and welcome that "*Development proposals which are likely to lead to increased use of any of the Green Infrastructure Assets listed below, as shown on the Policies Map, will be required to take reasonable opportunities to enhance the Green Infrastructure Asset(s)*".

Policy 29: Cemetery extensions

We **support** this policy and welcome that the potential biodiversity value of new proposed cemeteries has been recognised in the supporting text.

Policy 31: Biodiversity Assets

In terms of defining biodiversity assets, 1b "*Priority habitats and priority species (as identified in the Nottinghamshire Local Biodiversity Action Plan and section 4.5 of the Green Infrastructure Strategy)*", whilst we welcome inclusion of the reference to Nottinghamshire LBAP, we consider that the definition of biodiversity assets is missing the following:

1. Any reference to UK priority species and habitats (formerly called UK BAP priority species and habitats). Section 41 of the Natural Environmental and Rural Communities (NERC) Act 2006 identifies these and they may be found both within or outside designated sites. Priority species correspond to those identified under Section 41 of the NERC Act as species of principal importance for the conservation of biodiversity in England and have to be considered under planning policy.

2. Any reference to protected species. This is different from priority species list (although some priority species may also be protected).

Due to lack of reference to S41 species and habitat NERC Act and Biodiversity Duty, Legally protected species we consider the policy is not sound as it is not consistent with local (Policy 17 of ACS) and national policy (Biodiversity paras).

Modification sought
Inclusion of a reference to NERC Act (species and habitats of principal importance) and legally protected species.

We also consider there is a requirement for a Biodiversity SPD to help protect Broxtowe's important nature sites, habitat and species and would like to see a commitment to produce one made in the LPP2 main document. A Biodiversity SPD would also help the council to secure its aspirations set out in the Green Infrastructure Strategy and Nature Conservation Strategy.

Policy 32: Developer Contributions

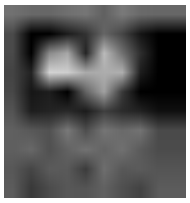
We welcome that financial contributions may be sought for biodiversity for applications of 10 or more houses and therefore **support** the policy in this respect.

In terms of question 5 on the response form (participation at public inquiry), if we have resources available at the time of the hearings, we would be happy to attend public examination sessions. In any case, we are happy to be contacted by the Planning Policy Team regarding future consultations and would welcome email correspondence in connection with this and future consultations.

Please do not hesitate to contact me should you have any further queries.

Yours sincerely

[redacted]
Southern Conservation Officer
Nottinghamshire Wildlife Trust



Nottinghamshire Wildlife Trust

[redacted]

Website
www.nottinghamshirewildlife.org

Details

Agent	
Please provide your client's name	
Your Details	
Title	[redacted]
Name	[redacted]
Organisation (If responding on behalf of an organisation)	Sport England
Address	[redacted]
Telephone Number	[redacted]
Email Address	[redacted]
Would you like to be contacted regarding future planning policy consultations?	Yes
If you wish to comment on more than one issue you will need to submit a form for each representation.	

Policy relates to

Please specify what your comment relates to					
Policy number	**Page number**	**Policy text/ Paragraph number**	**Policies Map**	**Sustainability Appraisal**	**Other (e.g. omission, evidence document etc.)**

Question 1: What does your comment relate to? Please specify exactly

Question 2

Question 2: What is the issue with the Local Plan?	
Do you consider this paragraph or policy of the Local Plan to be:	
2.1 Legally compliant	Yes
2.2 Compliant with the duty to co-operate	Yes
2.3 Sound	No

Question 3

Question 3: Why is the Local Plan unsound? Please only answer this question if you answered 'No' to 2.3 above	
If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	Yes
It is not effective	No
It is not positively prepared	No
It is not consistent with national policy	Yes

Additional details

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details.	Consistency with National Policy Thank you for consulting Sport England on Part 2 of the Local Plan. The Local Plan as proposed is consistent with National Policy due to having a robust and up to date evidence base in regard to its Playing Pitch Strategy and Built Facility Strategy. Please note that it is important to keep these strategies up to date so they can remain robust. However, this is questionable as this evidence base does not appear to be considered and implemented in line with NPPF paragraph 74. Justification of the Plan - Policy Specific Considerations In relation to the locations identified in policies 3.1- 3.3, 3.5 & 6.1 for potential major growth, when decisions are made about these locations when they were brought forwards and their potential dwelling capacity. As the plan stands it is currently lacking justification or relevant consideration to whether any of the sites contain existing sports facilities such as playing fields which justify protection under policies 25, 27 and 28 of the plan and paragraph 74 of the NPPF. Policy 3.1 – Site Allocation of Chetwynd Barracks – There is no mention of playing fields on site within the description. This site Contains 3 x full size football pitches, tennis courts, cricket wickets, bowls provision and a sports hall. The site is highlighted within the Playing Pitch Strategy as a football site. This site currently provides training capacity for Toton Tigers and the Playing Pitch Strategy highlights the need to convert the tennis courts to an Artificial Grass Pitch. Policy 3.2 – Site Allocation of Toton Lane – The allocation includes a school site and playing pitches within the area. The development is marked for additional land for community facilities including education (the relocation of George Spencer Academy which is Mentioned in the playing pitch strategy as a football and cricket site) and the provision of a Leisure Centre. The proposals also include an allocation for 500homes. Policy 3.3 - Site Allocation of Bramcote (East of Coventry Lane) – This site is referred to as being greenfield and as a former playing field associated with the adjacent school. The policy states that the site is currently unused. However, the most recent aerial view is from 2013 and shows marked pitches and is listed within the 2016 Playing Pitch Strategy. The site contains 7 x football pitches 3x mini football pitches and 3 cricket wickets. Playing Pitch Strategy states that site is needed and suggests proposals for cricket nets, Artificial Grass Pitch and a sports barn. Playing Pitch Strategy confirms that should the site be lost then equivalent or better provision is required as mitigation. The Site Allocation of Bramcote School and Leisure Centre is also included within this policy for redevelopment. The site includes 3 schools and borders existing playing fields the site contains a small sided Artificial Grass Pitch which is currently used by football, multiple courts and a sports hall which is also used by a local football club. Therefore, it will need to be insured that any development does not prejudice the use of these facilities. Policy 3.5 - Site Allocation of Severn Trent – This site borders playing pitches therefore any development needs to ensure that there are no negative impacts to these pitches. The Playing Pitch Strategy also refers to the Nottingham casuals site which is stated as being overplayed and needing investment of £340,000 for changing room improvements and floodlighting. Policy 6.1 – Walker street Eastwood – There is no mention of playing fields on site within the description. However, Google image from 2016 shows a cricket wicket and Google history shows site with 3 football pitches and a rounders pitch. This site does not appear to be covered by the Playing Pitch Strategy where there is a shown deficiency and no justification for pitches to be lost. The pitches should be protected from development. Map 3 - this map includes the site allocation of Trent Vale sports club within the mixed-use commitments however the plan gives no further information on this allocation. Details of the allocation should be provided to ensure the facilities are retained as playing fields and upgraded to sufficient standards as detailed within the Playing Pitch Strategy. Where these sites contain pitches and the evidence base highlights a deficiency in provision there is a conflict within the policies. Therefore, the extent of development in these locations should account for the need to maintain such facilities and site policies

	should require the facilities to be protected or replaced. The loss of the playing fields without an agreed compensatory project being implemented would not accord with Sport England's playing fields policy or paragraph 74 of the NPPF. Policies 17 & 24 - Sport England supports the idea of health impact to be a design consideration for new communities and would encourage the inclusion of a design policy which encourages developments to be designed to promote active lifestyles through sport and physical activity (through use of Sport England's and Public Health England's established Active Design guidance (http://www.sportengland.org/facilities-planning/planning-for-sport/planning-tools-and-guidance/active-design/) Policy 25 – Sport England seeks to ensure that a planned approach to the provision of facilities and opportunities for sport and recreation is taken by planning authorities. We are pleased that it is the council's intention to ensure policies provide adequate sport and recreation facilities as part of new developments. However, the level of provision should be determined locally and should be informed by the Playing Pitch Strategy and Green Infrastructure Strategy. Policy 27 - Sport England is encouraged that the emerging local plan looks to include policies to protect existing sport/leisure facilities where there is a need to do so to meet existing/future community needs which accord with paragraph 74 of the NPPF - policies that support the principle of enhancing existing sports/leisure facilities to meet community needs. However, it is thought that the plan should also include policies and to provide new sports/leisure facilities that are required to meet identified needs e.g. site allocations for new playing fields, requirements in major housing and mixed-use developments for sport/leisure provision, sports hubs allocations etc Policy 28 – Sport England welcomes the inclusion of policies which ensure adequate provision for new development (especially residential) to provide for the additional sport/leisure facility needs that they generate through CIL and/or planning obligations. If you would like any further information or advice please contact me.

Question 4

Question 4: Modifications sought	
Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound.	.

Question 5

Question 5: Public Examination Attendance	
If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	No
If you wish to participate at the public examination, please outline why you consider this to be necessary	

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	n/a

Your Details

Title	Mr	Mrs	Miss	Ms	Other:
Name	[redacted]				
Organisation (if responding on behalf of the organisation)	On behalf of Pedals (Nottingham Cycling Campaign)				
Address	[redacted]				
Postcode	[redacted]				
Tel. Number	[redacted]				
E-mail address	[redacted]				

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations. **Please tick here** Y ☐

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: _____

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised.

Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB
For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	**Policy 1**: Flood Risk		
	Policy 2: Site Allocations		
	Policy 3: Main Built up Area Site Allocations	P28-	
	Policy 4: Awsworth Site Allocation		
	Policy 5: Brinsley Site Allocation		
	Policy 6: Eastwood Site Allocation		
	Policy 7: Kimberley Site Allocations		
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations **Policy 14**: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and nondesignated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		

Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)			

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		**Yes**	**No**
2.1	Legally compliant	y	
2.2	Compliant with the duty to co-operate	y	
2.3	Sound		n

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	n
It is not effective	
It is not positively prepared	n
It is not consistent with national policy	n

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.

Not all sections in this make clear the need for good cycle as well as pedestrian links, although some are very supportive, such as Policy: 3.1 Chetwynd Barracks and Policy: 3.2 Land in the vicinity of the HS2 Station at Toton, which we very much welcome and support, especially the many aspirations for Policy 3.2 including good routes to and from Stapleford and Long Eaton, and the Erewash Trail, as well as the existing main urban areas in Beeston and Chilwell etc. with their substantial existing cycle network.

We also welcome the inclusive of cycle access as a key development requirement for Policy: 3.7 Cement Depot Beeston, in view of the fact that this is of direct relevance to improving a substandard stretch of Sustrans National Cycle Network Route 6, as well as being of particular importance to improving cycle access to and from Beeston Station.

National policy is to support cycling as well as walking and this is very much indicated in the new DfT system of Local Cycling and Walking Infrastructure Plans, and its technical guidance, launched in 2017.

The ones where a specific need for good cycle as well as pedestrian access should be mentioned specifically include:-

Policy: 3.3 Bramcote (East of Coventry Lane)

Policy: 3.5 Severn Trent, Beeston, which includes a proposal for a new pedestrian bridge over the canal

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

National policy is to support cycling as well as walking and this is very much indicated in the new DfT system of Local Cycling and Walking Infrastructure Plans, and its technical guidance, launched in 2017.

We therefore think that there is a need for good cycle as well as pedestrian access to be mentioned specifically include:-

Policy: 3.3 Bramcote (East of Coventry Lane)

Policy: 3.5 Severn Trent, Beeston, which includes a proposal for a new pedestrian bridge over the canal

This would also help to connect to existing cycle routes and generally to increase the extent of the Greater Nottingham Cycle Network, for both leisure and utility (commuting etc) purposes.

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	
No, I do not wish to participate at the public examination	/

If you wish to participate at the public examination, please outline why you consider this to be necessary

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

Guidance Note:

Please complete a **separate form** for **each representation** you wish to make.

'Legally Compliant':

If your response relates to **the way in which the plan has been prepared,** then this is likely to relate to whether it or not it is '**Legally Compliant'**. To be 'Legally Compliant', the Local Plan has to be prepared in accordance within the 'Duty to Cooperate' and legal and procedural requirements. These are set out by legislation in the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended). If you think that we have not met the legal requirement in the preparation of the Local Plan, please use the response form to tell us what we have not done or what we have done incorrectly.

'Compliant with the Duty to Co-operate':

If your response relates to **the way in which we have worked with other authorities** then this is likely to relate to the '**Duty to Co-operate'.**

The 'Duty to Co-operate' places a legal duty on Local Planning Authorities, County Councils and certain public bodies to engage constructively, actively, and on an on-going basis, to maximise the effectiveness of Local Plan preparation in the context of strategic cross-boundary matters. The 'Duty to Co-operate' is not a duty to agree. However, Local Planning Authorities should make every effort to secure the necessary co-operation on strategic cross-boundary matters before they submit their Local Plan for examination.

'Sound'

If your response is about the **content** of the Local Plan and the strategy it adopts, then it is likely to relate to whether or not the Local Plan is '**Sound**'.

To meet the 'Test of Soundness', the independent Planning Inspector is required to consider whether or not our Local Plan is '**justified', 'effective',** has been '**positively prepared',** and is '**consistent with national policy'**. You may wish to consider the following before making a representation on the 'Soundness' of our Local Plan:

- **'Justified':** This means that the Local Plan is based upon a robust and credible evidence base. If you think that the evidence doesn't support the choice made in our Local Plan, or there are realistic alternatives, then your comments may relate to whether or not it is 'justified'.
- **'Effective':** This means that the Local Plan will deliver what it sets out to. If you think that what we are proposing in the Local Plan is not deliverable, then your comments may relate to whether or not our Local Plan is 'effective'.
- **'Positively Prepared':** This means the Local Plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development.
- **'Consistent with National Policy':** Do you consider that our Local Plan accords with the National Planning Policy Framework (NPPF) and other policies, or includes clear and convincing reasons for doing something different?

For further guidance or assistance, please contact the **Planning Policy Team** on **0115 917 3452** or by emailing **policy@broxtowe.gov.uk**.

DERBYSHIRE County Council

Improving life for local people

[redacted]
Strategic Director
Economy, Transport and Communities
[redacted]

Minicom: [redacted]
Telephone: [redacted]
Ask for:
Our ref: PM/DMD/Broxtowe Local Plan
Your ref:
Date: 3 November 2017

Planning Policy
Broxtowe Borough Council
Town Hall
Foster Avenue
BEESTON
Nottinghamshire
NG9 1AB

Dear Madam/Sir

Localism Act 2011 – Strategic Planning Comments

Broxtowe Borough Council Local Plan Part 2: Publication Version

Thank you for consulting Derbyshire County Council (DCC) on the Broxtowe Borough Council Local Plan Part 2: Publication Version (BBCLP2). Please find below Officers' technical comments for your consideration:

Officer Comments

Housing

There are two key strategic housing allocations identified in the BBCLP2, which raise potential cross-boundary strategic planning policy implications for Derbyshire, and on which DCC has previously provided strategic planning policy comments. The two sites are identified in Policy 3.1: Chetwynd Barracks and Policy 3.2: Land in the vicinity of HS2 Station at Toton (Strategic Location for Growth).

Policy 3.1: Chetwynd Barracks

On 5 October 2016, DCC provided Officer technical comments to Broxtowe Borough Council on a proposed additional site consultation for the Local Plan Part 2 comprising the site at Chetwynd Barracks. DCC's comments considered that the site was located in a very sustainable location within the urban area between Toton and Chilwell and would be well located to take advantage of the recent opening of the Nottingham Express Transit (NET) extension and the proposed High Speed Two (HS2) station at Toton, both of which are a short distance away to the north-west. Although comprising a housing development of 800 dwellings, the comments considered that the proposed allocation would be unlikely to have any significant implications for housing delivery in nearby

Erewash Borough, particularly the strategic housing allocation at Stanton. The comments above remain relevant to the allocation and are reaffirmed.

Since DCC submitted the comments above, the County Council has been party to a joint submission in association with Nottinghamshire County Council, Nottingham City Council, Derby City Council, Erewash Borough Council, Broxtowe Borough Council and Chesterfield Borough Council to the Government's Housing Infrastructure Fund (HIF) – Forward Funding Scheme for the HS2 East Midlands Network of Garden Villages. The Forward Funding bid includes the identification of a range of large-scale housing development proposals in Derbyshire and Nottinghamshire, whose delivery could be facilitated through the HIF and includes the site at Chetwynd Barracks, which is identified as having potential capacity for up to 1,600 dwellings in total between 2021 and 2036 onwards. In the context of the above, the proposed allocation of the Chetwynd Barracks site for 500 dwellings (within the Plan period) is supported as a key element of a HIF bid to maximise the delivery of housing growth associated with the development of HS2.

Policy 3.2: Land in the vicinity of HS2 Station at Toton (Strategic Location for Growth)

On 24 November 2015, DCC submitted Officer technical comments on a consultation by Broxtowe Borough Council on a masterplan for the Toton Strategic Location for Growth. The comments considered that the broad area of the site would form a logical sustainable urban extension to the existing large area of residential development in Toton to the south of the allocation and west and north-east of the B6003 Stapleford Lane. The scale of housing and employment land identified was supported as the most appropriate scale and mix of development for the site. Because much of the area of land included in the allocation is Green Belt land, the comments indicated that it was an important consideration in the design of the scheme that significant areas of landscaping and open space were incorporated to ensure that the separation of the urban areas of Toton, Stapleford, Long Eaton and Chilwell was maintained. It is welcomed and supported, therefore, that Policy 3.2 indicates that 16 ha of land in the allocation will be dedicated for open space, to incorporate Green Infrastructure of sufficient width and quality to provide attractive and usable links between Hobgoblin Wood in the east and Toton Fields Local Wildlife Site in the west and the Erewash Canal, which will blend with a high quality built environment.

In terms of connectivity, it is welcomed and supported that Policy 3.2 sets out key requirements for the development of the site that would facilitate good connectivity of the site with the wider surrounding area, including within Derbyshire and particularly Erewash Borough through the provision of:

An integrated local transport system that facilitates access enhancements to the station from the two gateway towns of Long Eaton to the south (in Erewash Borough) and Stapleford to the north; and

An integrated traffic system that flows well including proper consideration of access both from Long Eaton and Stapleford.

It is noted that Policy 3.2 includes a requirement that additional land for community facilities will be included in the allocation, including land for a new primary school. In its comments on the masterplan consultation referred to above, DCC's Officer comments considered that the allocation of the site for 500 dwellings and the provision of a new primary school could raise cross-boundary education issues for DCC, not least because the site lies in close proximity to the Derbyshire Local Education Authority Normal Areas of a number of schools at primary and secondary level. The comments supported the need for a new school on the site and recommended that an assessment of the potential impact of the development area on Derbyshire schools should be undertaken as part of the development proposals and that the potential for pupils from Derbyshire wishing to attend the new primary school (and extended secondary school within Broxtowe) should also be assessed. These comments remain relevant to Policy 3.2 and are reaffirmed. DCC would welcome the opportunity to engage in on-going discussions with Broxtowe Borough Council on this matter as proposals for the new primary school on the site are progressed.

Since DCC submitted the comments above, the County Council has been party to a joint submission in association with Nottinghamshire County Council, Nottingham City Council, Derby City Council, Erewash Borough Council, Broxtowe Borough Council and Chesterfield Borough Council to the Government's Housing Infrastructure Fund – Forward Funding Scheme for the HS2 East Midlands Network of Garden Villages. The Forward Funding bid includes the identification of a range of large-scale housing development proposals in Derbyshire and Nottinghamshire, whose delivery could be facilitated through the HIF and includes the Toton Strategic Location for Growth that is identified as having potential capacity for up to 3,700 dwellings in total between 2021 and 2036 onwards. In the context of the above, the proposed allocation of the Toton Strategic Location for Growth for 500 dwellings (within the Plan period) is supported as a key element of a HIF bid to maximise the delivery of housing growth associated with the development of HS2.

Highways

There are a significant quanta of developments, including existing commitments, as indicated on Map 5: Housing and Mixed Use allocations in Chilwell, Toton and Stapleford, that could potentially have significant impacts upon roads in Derbyshire.

The local Highway Authorities, Derbyshire County Council, Nottinghamshire County Council, Derby City Council, and Nottingham City Council, together with Highways England, have expended considerable effort in deciding and agreeing a way forward in the scoping of the Transportation Assessment required to support the inclusion of a new HS2 East Midlands Hub station at Toton, as confirmed by the Government in November 2016, together with the necessary traffic modelling required to underpin it. In view of the quantum of

development under consideration, early engagement with the East Midlands Gateway Modelling Group would be advisable.

I trust that you will be able to take the above comments into account prior to submission to the Secretary of State for examination. If you have any questions, or anything is unclear, please contact me.

Yours faithfully

[redacted]

[redacted]

Policy and Monitoring and LA lead: CLIP: Planning Sub-group

Historic England

EAST MIDLANDS OFFICE

Mr Dave Lawson
Broxtowe Borough Council

Direct Dial: [redacted]

Our ref: PL00035448
3 November 2017

Dear Mr Lawson

RE: BROXTOWE LOCAL PLAN PART 2 CONSULTATION

Thank you for the opportunity to comment on the above Plan in its current form. Historic England would wish to submit the following comments:

Policy 3.1 - Chetwynd Barracks - Key Development Aspiration 2 in respect of non-designated heritage assets is welcomed and supported.

Policy 4.1 - Land West of Awsworth - It is noted that heritage assets are not mentioned in the policy or subsequent text when Grade II* Bennerley Viaduct forms a key feature in relation to this site. It is recommended that a suitable sentence referring to the conservation or enhancement of heritage assets and their setting is made in the Key Development Requirements or the Key Development Aspirations for the avoidance of doubt.

Policy 5.1 - East of Church Lane, Brinsley - It is recommended that 'conserve' be used in place of 'preserve' with regard to the setting of St James' Church in line with NPPF terminology. It is noted that the site area has been reduced from that of the earlier consultation on the site in order to mitigate impact on heritage assets.

Policy 6.1 - Walker Street, Eastwood - The inclusion of the need to conserve views of DH Lawrence related heritage is welcomed and supported.

Policy 18: Shopfronts, signage and security measures - This policy is welcomed and supported since it will assist with the Council's endeavours to support the vitality of historic shopping centres in the Borough and enhancement of public realm.

Policy 23: Proposals affecting designated and non-designated heritage assets - In part 3c we recommend the use of 'conserve' rather than 'preserve' in line with NPPF terminology. Policy 23 would address the requirements of NPPF Para.139 in its current form. With regard to the supporting Para 23.6 it is noted that the Plan states that 'heritage protection may be seen as a constraint to development'. We recommend that a balanced view is provided here in that heritage can also be seen as a positive element contributing to heritage led regeneration (*Historic England: Heritage Counts 2017*).

Policy 28: Green Infrastructure Assets - The provisions of the policy and its justification text are welcomed.

Policy 32: Developer Contributions - Financial contributions can be required in situations where mitigation measures are required in respect of heritage assets or their setting, and/or where NPPF Para 139 sites are revealed but the policy does not currently include provision for this. As such it is recommended that criteria 'h) the historic environment, heritage assets and/or their setting' or a similar alternative is included within the policy. To exclude heritage from the list would make it very difficult to negotiate any mitigation that may be required to address any harm arising when it is known and expressed in the Plan that some of the allocation sites are likely to impact on heritage assets and/or setting.

We hope that this information is of use to you at this time. Should you have any queries, please do not hesitate to contact me.

[redacted],

[redacted]

Historic Environment Planning Adviser

[redacted]

Details

Agent	
Please provide your client's name	
Your Details	
Title	[redacted]
Name	[redacted]
Organisation (If responding on behalf of an organisation)	Nottinghamshire County Council
Address	[redacted]
Telephone Number	[redacted]
Email Address	[redacted]
Would you like to be contacted regarding future planning policy consultations?	Yes
If you wish to comment on more than one issue you will need to submit a form for each representation.	

Policy relates to

Please specify what your comment relates to					
Policy number	**Page number**	**Policy text/ Paragraph number**	**Policies Map**	**Sustainability Appraisal**	**Other (e.g. omission, evidence document etc.)**
3: Main Built up Area Site Allocations					

Question 1: What does your comment relate to? Please specify exactly

Question 2

Question 2: What is the issue with the Local Plan?	
Do you consider this paragraph or policy of the Local Plan to be:	
2.1 Legally compliant	Yes
2.2 Compliant with the duty to co-operate	Yes
2.3 Sound	No

Question 3

Question 3: Why is the Local Plan unsound? Please only answer this question if you answered 'No' to 2.3 above	
If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	Yes
It is not effective	Yes
It is not positively prepared	Yes
It is not consistent with national policy	Yes

Additional details

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details.	In order to make the Plan sound, policy 3.1 section 3.5 the 'Key development requirements' section should specify highway requirements or access opportunities or aspirations. The critical infrastructure (transport section) of the Infrastructure Development Plan (page 36) sets out the aspirations of the Highway Authority and opportunities this site offers to develop strategic highway linkages and the County Council considers that these should be reflected in the policy requirements. The County Council notes that the Infrastructure Delivery Plan text relative to the Toton strategic location for growth (pages 39 to 48 inc.) advise that the allocation of the Toton Strategic growth site needs to considered in the round with the land at Chetwynd Barracks. This linkage should be made within the policies for Chetwynd Barracks and Toton Strategic Growth site.

Question 4

Question 4: Modifications sought	
Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound.	Policy 3.1 'Key development requirements' section should specify highway requirements as reflected in the Infrastructure Delivery Plan.

Question 5

Question 5: Public Examination Attendance	
If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	Yes
If you wish to participate at the public examination, please outline why you consider this to be necessary	To help contribute to the discussion of this strategic site in terms of highway matters and help clarify any points raised for the Planning Inspector.

Details

Agent	
Please provide your client's name	
Your Details	
Title	[redacted]
Name	[redacted]
Organisation (If responding on behalf of an organisation)	Nottinghamshire County Council
Address	[redacted]
Telephone Number	[redacted]
Email Address	[redacted]
Would you like to be contacted regarding future planning policy consultations?	Yes
If you wish to comment on more than one issue you will need to submit a form for each representation.	

Policy relates to

Please specify what your comment relates to					
Policy number	**Page number**	**Policy text/ Paragraph number**	**Policies Map**	**Sustainability Appraisal**	**Other (e.g. omission, evidence document etc.)**
3: Main Built up Area Site Allocations		3.1			

Question 1: What does your comment relate to? Please specify exactly

Question 2

Question 2: What is the issue with the Local Plan?	
Do you consider this paragraph or policy of the Local Plan to be:	
2.1 Legally compliant	Yes
2.2 Compliant with the duty to co-operate	Yes
2.3 Sound	No

Question 3

Question 3: Why is the Local Plan unsound? Please only answer this question if you answered 'No' to 2.3 above	
If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	Yes
It is not effective	Yes
It is not positively prepared	Yes
It is not consistent with national policy	Yes

Additional details

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details.	Policy 3.1 Chetwynd Barracks section 3.5 the 'Key development requirements' does not specify any highway requirements or access opportunities or aspirations? The critical infrastructure (transport section) of the IDP (page 36) clearly sets out the aspirations of the highway authority and opportunities this site offers to develop strategic highway linkages. The IDP text relative to the Toton strategic location for growth (pages 39 to 48 inc.) advise that the allocation of the Toton Strategic growth site needs to considered in the round with the land at Chetwynd Barracks. This linkage is not made in the P2LP re the Chetwynd Barracks site?

Question 4

Question 4: Modifications sought	
Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound.	Policy 3.1 'Key development requirements' section should specify highway requirements as reflected in the Infrastructure Delivery Plan.

Question 5

Question 5: Public Examination Attendance	
If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	Yes
If you wish to participate at the public examination, please outline why you consider this to be necessary	To help contribute to the discussion of this strategic site in terms of highway matters and help clarify any points raised for the Planning Inspector.

Broxtowe Borough Council

Potential impact of proposed developments on sewerage infrastructure assets

Date: 17/10/2017

NOTE: The purpose of these desktop based assessments are to indicate where proposed development **MAY** have a detrimental impact on the performance of the existing public sewerage network taking into account the size of the development proposals.

For most new development provided the surface water in managed sustainably through use of a SuDS the additional foul only flows will have a negligible impact on existing sewer performance but where there are pre-existing capacity constraints additional capacity improvements may be required.

Where subsequent detailed modelling indicates capacity improvements are required such work will be phased to align with development occupancy with capacity improvement works will be funded by Severn Trent Water. However, whilst Severn Trent have a duty to provide additional capacity to accommodate planned development, we also have a requirement to manage our assets efficiently to minimise our customers' bills. Consequently to avoid potential inefficient investment we generally do not provided additional capacity until there is certainty that the development is due to commence. Where development proposals are likely to require additional capacity upgrades to accommodate new development flows it is highly recommended that potential developers contact Severn Trent as early as possible to confirm flow rates and intended connection points. This will ensure provision of additional capacity can be planned into our investment programme to ensure development is not delayed.

Note: These are desktop assessments using readily available information and have not been subjected to detailed hydraulic modellin

Site Ref	Site Name	Size	Units	Sewage Treatment Works Catchment	Sewerage Comment	Potential impact on sewerage infrastructure
Toton, Stapleford and Bramcote						
3.1	Chetwynd Barracks	91.5 ha	500	Toton STW	Sewer records do not exist for Chetwynd Barracks. Therefore the current drainage at the site is unknown. It is assumed the majority of flows will join the 300 dia combined sewer on Chetwynd Road. RPA predicts flooding in a 30 year storm. D/S of Chetwynd Road there is a large flooding cluster on Crofton Road. An FA scheme has been delivered which protects properties internally up to 40 year storm and externally up to a 20 year storm. There are no pollution incidents recorded D/S at the Attenborough Lane PS. Surface Water flows can be drained to local brook running through Chetwynd barracks.	Low
	Toton	UNK	500	Stapleford STW	It is likely that a capital scheme would be required for a new gravity sewer to take foul flow from the development to Stapleford STW in the North West. There are numerous hydraulic flood incidents on incoming pipes to the STW. If foul flows were to discharged to the south the topography suggests a pumping station would be required. Pipes on Stapleford Lane where it would be expected to discharge to are predicted to flood in low RPs. There are foul flooding incidents recorded to the south off Stappleford Lane. Surface water will be able to drain to pre-existing surface water systems in the vicinity of the development.	High
	Bramcote	UNK	300	Stoke Bardolph STW	It is expected that foul flows will be connected to 225mm dia pipe on Latimer Drive. RPA does not predict flooding in storm events up to 40 yrs. Flows from the east of the site may have to be pumped due to the topography of the site.	Low
	Stapleford	UNK	240	Stapleford STW	It is likely that a capital scheme would be required for a new gravity sewer to take foul flow from the development to Stapleford STW in the North West. There are numerous hydraulic flood incidents on incoming pipes to the STW. If foul flows were to discharged to the south the topography suggests a pumping station would be required. Pipes on Stapleford Lane where it would be expected to discharge to are predicted to flood in low RPs. There are foul flooding incidents recorded to the south off Stappleford Lane. Surface water will be able to drain to pre-existing surface water systems in the vicinity of the development.	Med
3.6	Beeston Maltings	1.3 ha	56	Lilac Grove STW	Based on topographic levels it is likely the development will connect to the sewage system on Cartwright Way to a 150 mm dia pipe. Surface water would also drain to the existing system on this road. The model does predict flooding on low RPs D/S on Ireland Avenue. However there are no incidents of flooding reported.	Low
	Beeston Cement Depot	UNK	21		Sewage from the development is likely to join the network on Station Road into a 375 mm dia combined sewer. Surface Water will be able to be connected to local surface water network. There are no reports of flooding in the area and flooding is not predicted in low return periods.	Low
	Wollaton Road Beeston	UNK	12		The building adjacent to the proposed development site has experienced repeat floodings recently. Return period analysis predicts flooding in a storm with a two year return period. The development is unlikely to have a noticeable impact to Severn Trent's sewage infrastructure, however, the development is likely to flood.	Low
	Awsworth	UNK	350	Newthorpe STW	Surface Water from the development will be able to drain to a local watercourse. Foul water from the development will join a 225mm dia combined sewer running across the development site. Flooding in a low return period is predicted downstream and there are pollutions recorded at Awsworth - A610 TPS. There are also a large number of flooding incidents upstream of the development in the south of Awesworth.	Med
4.1	Awsworth	UNK	250	Newthorpe STW	Surface Water from the development will be able to drain to a local watercourse. Foul water from the development will join a 225mm dia combined sewer running across the development site. Flooding in a low return period is predicted downstream and there are pollutions recorded at Awsworth - A610 TPS. There are also a large number of flooding incidents upstream of the development in the south of Awesworth.	Med
	Brinsley	UNK	150	Newthorpe STW	Foul flows from the development will join a 225 mm dia combined sewer running adjacent to the development site. Surface water from the development will be able to drain to Brinsley Brook. Flooding is not predicted in low return periods locally and there are no reported flooding incidents near the development	Low
			110	Newthorpe STW	Foul flows from the development will join a 225 mm dia combined sewer running adjacent to the development site. Surface water from the development will be able to drain to Brinsley Brook. Flooding is not predicted in low return periods locally and there are no reported flooding incidents near the development	Low
6.1	Walker Street	9	230	Newthorpe STW	Foul and surface water flows will join pipes on Greenhills Avenue. Flooding is not predicted in low periods downstream of the development. However there are a number of recorded flooding incidents that additional flow could exacerbate.	Low
	Kimberley	UNK	600	Newthorpe STW	Foul flows from the development will join the 750 mm dia existing combined sewer which runs through the site. Surface Water from the development can join the existing surface water network which runs through the proposed development site. Flooding is predicted in a low return period storm on the combined system close to the development site. There is a repeat internal flooding caused by the combined sewer. The development is likely to exacerbate the flooding at this property.	Med

NHS
Nottingham West
Clinical Commissioning Group

NHS Nottingham West Clinical Commissioning Group
Stapleford Care Centre
[redacted]

[redacted]
www.nottinghamwestccg.nhs.uk

Steffan Saunders
Head of Neighbourhoods and Prosperity
Directorate of Legal and Planning Services
Council Offices
Foster Avenue
Beeston
Nottingham
NG9 1AB

30 October 2017

Dear Steffan

Broxtowe Local Plan Part 2 Consultation

Thank you for allowing us the opportunity to respond to your consultation document. New treatments and an aging population mean that pressures on services are greater than they have ever been, as people are living longer, often with very complex conditions. An increase in local population as a result of new housing developments compounds that pressure particularly on primary care - family doctor services. Having the right infrastructure in place in primary and community settings is crucial for the successful delivery of the Sustainability and Transformation Plan (STP) ambitions and the GP Forward View (GPFV). The ability to transform care and keep services sustainable will only be possible if efficient, fit-for-purpose, high quality facilities underpin the delivery of services.

Workforce recruitment for GPs in particular is paramount for sustaining quality general practice provision. Good quality fit for purpose primary care facilities are a key part of attracting the necessary workforce to support the existing and new population as a result of these housing developments.

In recent years there have been a number of developments approved which have had a major impact on our ability to provide primary care services. As a consequence we would like to work with the Borough Council to explore a better way of planning for care homes and retirement living facilities. We are often the last public sector organisation to find out that a care home is opening; a building has a change of use or that retirement facilities are being developed. 65% of the NHS budget is spent on the over 65s and understandably the elderly are the predominant users of health and social care services so the impact of such changes on the health and social care system are huge for a relatively small part of the population.

In terms of this consultation document, we have taken each of your options in turn and outlined our current position with regards to primary care facilities, indicating where we have areas of risk.

Potential Site Allocations Sites Adjacent to the Main Urban Area

Policy: 3.1 Chetwynd Barracks 500 homes with potential for 800+ overall **Land for Medical Centre required in order to make plan effective and therefore sound**	The potential for 800+ dwellings (with a maximum of 1,500) presents significant concern with respect to local health service provision. The nearest facilities for this development, and where patients are likely to register, is Chilwell Valley & Meadows Surgeries which comprise a main surgery (Valley) which has no development potential; and a branch surgery (Meadows) which has some expansion potential. Based on 2.3 residents per dwelling we would anticipate an increased patient population of up to 3,500 patients if the total of 1,500 dwellings was achieved, which would require 2 full-time General Practitioners, over and above the current service provision. Given the size of this development and the potential for further development at Toton, together with the limited / non-existent expansion potential of the current facilities, we are to consider the option of a new Primary Care Centre for the Chilwell / Toton area subject to funding being made available. Therefore, in order for the plan for Chetwynd Barracks to be effective and sound, we request a reserved site within this development to provide primary care services to the residents of this area. **We are not in a position to confirm the size of site required at this stage; however based on similar size developments it would be no more than 1 acre to serve a potential population of around 18,000 patients. Funding contributions should be sought through Section 106.**

Policy: 3.2 Toton – 500+ homes	We understand that we have missed the opportunity to comment on this proposal as it stands currently at 500 homes. However, we consider that there may be further development in this area and would like to offer the following comments: The nearest facilities for this development is Chilwell Valley & Meadows Surgeries which comprise a main surgery (Valley) which has no development potential; and a branch surgery (Meadows) which has some expansion potential. We would like to consider any expansion to the Toton development over and above the original 500 houses alongside the Chetwynd Barracks development which

	affects the same GP practice.

Policy: 3.3 & 3.4 Bramcote, East of Coventry Lane 300 homes Stapleford, West of Coventry Lane 240 homes	The nearest facilities to these developments are Bramcote Surgery and Hickings Lane Medical Centre. Hickings Lane Medical Centre has recently extended the surgery to take account of the new resident population generated by 450 dwellings (a potential of 1,035 residents based on 2.3 residents per dwelling) at Field Farm. There is potential to further expand this facility. Bramcote Surgery is a purpose built facility with some potential for small scale development which could assist with the expansion of patient population from these two developments. We are also aware of discussions regarding the development of the old Bramcote Hills Golf Course for retirement / continuing care privately owned units. This will, if it goes ahead, compound capacity issues within the existing practices. **We ask the Borough Council to request on our behalf a Section 106 contribution to support the expansion to the physical capacity of these existing facilities in order to provide health services to the additional 1,242 residents these developments will attract.**

Beeston (339 homes / 780 residents) Policy: 3.5 Seven Trent (Lilac Grove), Beeston 150 homes Policy: 3.6 Beeson Maltings, 56 homes Policy: 3.7 Cement Depot Beeston, 21 homes Policy: 3.8 Wollaton Road, Beeston, 12 homes Policy: 11 Beeston Square, 100 homes (minimum)	There are four GP practices providing healthcare to the residents of Beeston; Abbey Medical Centre, The Manor Surgery, The Oaks Medical Centre and West End Surgery. The Oaks Medical Centre is currently undergoing an extension to their purpose built facility in response to the planned housing developments underway in Beeston. However, the future developments as outlined in the Local Plan Part 2 whilst not significant when considered alone, need to be considered in its entirety together with what is underway and will have significant impact upon the physical capacity of practices to provide health services. There is some potential for small scale developments to assist with this further expansion of the patient population in particular from the Seven Trent and Beeston Square developments. **We would ask for a Section 106 contribution to be**

	available to this locality to increase the physical clinical space required to meet the needs of this increase in population over and above that already underway as part of The Oaks Medical Centre expansion.

Policy: 4.1 Awsworth West of Awsworth (inside the bypass) 250 homes Policy: 5.1 Brinsley East of Church Lane 110 homes	The nearest facilities to this development and where patients are likely to register are Church St Medical Centre and Church Walk Surgery in Eastwood. See below for details of the Eastwood joint public services proposed development to meet the needs of this increase in population.

Policy: 6.1 Eastwood 200 homes + 30 Extra Care Units Walker Street, Eastwood (Map 24) **Land for Medical Centre required in order to make plan effective and therefore sound**	A new health centre for Eastwood is the CCG's top priority within its Strategic Estates Plan. The old Eastwood Health Centre was considered no longer fit for purpose and has been recently disposed of resulting in there being no local facilities for extended, community based health services in Eastwood. Both GP practices in Eastwood are in separate facilities which can no longer be extended. They are intending to merge into one practice as of April 2018 to provide GP services to 20,000 local residents. We have been working with Nottinghamshire County Council, the land owners, on the preferred solution which would be a One Public Estate public services hub incorporating a new health facility on the Walker Street site (Map 24). Alongside library services and third sector organisations this new facility would also house the two merged GP practices (Church Street Medical Centre and Church Walk Surgery in Eastwood) plus supporting community health service provision. **In order that the plan for Eastwood is effective and therefore sound, part of the Walker Street site must be allocated for a new, purpose built health facility to sit behind the existing library with direct access to the main road with its public transport links ensuring it is easily accessible to the community. A one acre site is required (GIA 2000m2 of two or three storeys dependent upon meeting planning requirements). Direct vehicular access would be required to Walker Street if the site is also identified as the preferred site for a co-**

	located blue light service base. Funding contributions should be sought for this development through Section 106.

Kimberley (167 homes / 385 residents) Policy: 7.1 Kimberley Depot 105 homes Policy: 7.2 South of Eastwood Road 40 homes Policy: 7.3 Eastwood Road Builders Yard 22 homes	The nearest facility to these developments is Hama Medical Centre, Kimberley. This is a purpose built facility with potential to expand through internal re-organisation of rooms changing their use from clinical to non-clinical physical space. **We would ask for a Section 106 contribution to be requested in order to increase the physical clinical space required to meet the demands of the increase in population brought about by the housing developments.**

In summary, we have considered the impact on our existing facilities for each of the potential developments detailed in the Local Plan Part 2. Our main challenges are:

- **Policy: 6.1 Eastwood** where we have had extended discussions with Nottinghamshire County Council regarding a public sector hub and require a site of 1 acre to be reserved on the Walker Street site for this;
- **Policy: 3.1 Chetwynd Barracks / Policy: 3.2 Toton** where we will do more work on a potential hub servicing this area but would ask for a reserved site on the Barracks site to be identified for a potential health facility;
- The impacts of other developments in the plan are of a smaller scale and could be resolved by relatively modest extensions and/or internal re-design. For these we ask for Section 106 contributions to fund the necessary works to meet the health needs of the increase in population.

I hope you find this of use in your considerations. Please let me know if you need any further information.

Yours sincerely

[redacted]

[redacted]
Director of Contracting and Deputy Chief Officer
NHS Nottingham West CCG

Bramcote Neighbourhood Forum
Response to Broxtowe Borough Council Part 2 Plan

Submitted by: Paul Nathanail of [redacted] on behalf of the Bramcote Neighbourhood Forum

			LEGALLY COMPLIANT		Compliant with Duty to Cooperate		Sound						
POLICY	**PAGE / PARA.**	**TEXT**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**		**COMMENTS**	**MODIFICATIONS SOUGHT**	**PUBLIC EXAMINATION ATTENDANCE**	**WHY**
Policy 1 Flood Risk			x		x		x					No	
Policy 2 Site Allocations	2.7			x				x	It is not justified	The statement that sites with commitments "of 10 or more dwellings these have been shown on the overview plans" is untrue and misleading - the land of the former Bramcote Hills Golf course was granted outline planning permission for 100 dwellings earlier in 2017 but is NOT shown on the overview plans	The consequences of commitments of more than 10 dwellings on housing land allocation should be consdiered in the evidence base	Yes	Part 2 is misleading in the way it represents the land committed for housing in Bramcote and therefore fails to provide sound support for land allocation adjacent to the former Bramcote Hills Golf Course
Policy 2 Site Allocations	2.8			x	x			x	It is not justified	The statement that the "the Council has maximised to the greatest possible extent the supply of sites in existing urban areas" is not true as, for example, it has failed to use the air space above the bus tram interchange in Beeston Town Square for residential and also failed to require residential development when granting planning permission for the redevelopment of Phase 1 of BeestonTown Square.		Yes	The Council should demonstrate why areas within the built up part of the Main built Up area are unsuitable for housing whereas an urban extension is
Policy 2 Site Allocations	2.8			x	x			x	It is not justified	The statement that "When sites currently in the Green Belt are selected, exceptional circumstances are demonstrated" is untrue for the land in Bramcote - no exceptional circumstances exist for allowing 300 homes to be developed on the green belt - the financial straits of a private company can hardly be considered a matter for planning	The permanence and openness of the green belt has been compromised by the proposals in Part 2 and no exceptional circumstances for the scale and extent of changes to the green belt have been provided.	Yes	The sacrifice of the green belt has not been justified
Policy 2 Site Allocations	"2.10			x	x			x	It is not justified	The statement "the urban and main built up area sites are assessed as being the most sustainable" has not been followed through by keeping land allocation within the main built up area and instead requiring release of the green belt		Yes	Part 2 is misleading as the text and Map 1 are not consistent and the extent of the Main Built Up area is grossly and wrongly over exagerrated
Policy 3 Main Built up Area Site Allocations	Map 2			x	x			x	It is not justified	The map mislabels open countryside adjacent to the M1 and stretching east to Bramcote as Main built Up area	The Map should be amended to reflect the built up area and ensure land allocation is retained within that built up area without urban extension and loss of green belt	Yes	Part 2 is misleading and the consequences of this mismatch between text, map and reality on the ground are enormous
Policy 3 Main Built up Area Site Allocations	3.2			x	x			x	It is not justified	The statement that "It is considered that there are exceptional circumstances required to amend the boundary of the Green Belt to allow residential development." is untrue for the land in Bramcote - no exceptional circumstances exist for allowing 300 homes to be developed on the green belt - the financial straits of a private company can hardly be considered a matter for planning		Yes	The sacrifice of the green belt has not been justified
Policy 3 Main Built up Area Site Allocations	Map 4			x	x			x	It is not justified	Map 4 omits the committed land on the former Bramcote Hills Golf course and thereby paints a very misleading picture of land allocation in Bramcote. Map 4, however, does illustrate the extent of open countryside east of the M1.		Yes	Part 2 is misleading and the consequences of this mismatch between text, map and reality on the ground are enormous
Policy 3 Main Built up Area Site Allocations	3.1		x		x			x	It is not positively prepared	The requirements fail to state the net housing density to be achieved	A minimum net housing density of 40 per hectare should be added and the effects of this on the total number of houses that can be delivered should be reflected in the list of requirements	No	
Policy 3 Main Built up Area Site Allocations	3.1		x		x			x	It is not positively prepared	The requirement for a small retail / service centre fails to recognise the nearby facilities and would jeopardise the viability of both existing and new businesses	Remove the requirement for a small retail/ service centre	No	
Policy 3 Main Built up Area Site Allocations	3.1		x		x			x	It is not justified	The extent of the public space to the south of the memorial is not shown and there is a potential use of land eminently suitable for housing to be lost in this way	The extent of the public space should be made clear and the reasons for not allocating that land for housing should be reported. There are plenty of green and open spaces within the Barracks.	Yes	It is essential that land allocation is optimised to prevent loss of green belt elsewhere and for the council to comply with National policy on the need to protect the green belt
Policy 3 Main Built up Area Site Allocations	3.3	3.7		x	x			x	It is not justified	The pen picture is inaccurate and fails to point out that part of the land is a county level protected area - the last remant of Bramcote Moor.		Yes	The true nature of the land ought to be understood before making decisions to take it out of the green belt and allocate it for housing
Policy 3 Main Built up Area Site Allocations	3.3	3.8	x		x			x	It is not justified	The figure of 300 houses is not justified and is at odds with both the objectively assessed housing need for Bramcote (ca 180 houses over the plan period) and the various statements by the leasors of this land of 350 or 450-500 homes.		Yes	It is essential that the use of this land is such as to deliver the maximum benefit for the local community and the county council who own the freehold

Bramcote Neighbourhood Forum
Response to Broxtowe Borough Council Part 2 Plan

Submitted by: Paul Nathanail of [redacted] on behalf of the Bramcote Neighbourhood Forum

Policy 3 Main Built up Area Site Allocations		3.8	x		x			x	It is not effective	The requirements do not encourage lifts from west of the site to terminate on the land and for pedestrian access to the school.	Provision of a dropping off area and school walking buses should be within the area proposed for housing	Yes	It is essential that the residents of Moor Lane, Thorseby and Arundel Drive do not unnecessarily suffer increased traffic - with associated poor air quality and danger of road traffic accident by parents being unable to drop off their children within walking distance of the schools
Policy 3 Main Built up Area Site Allocations		3.8	x		x			x	It is not effective	The removal of any vegetation from the Moor Lane cutting should be done in such a way that the present stability of the cutting is not compromised now and into the future.			
Policy 3 Main Built up Area Site Allocations		3.8	x		x			x	It is not effective	The caveat "if required" disreagrds the oft and strongly stated desire of local residents for the leisure centre to remain in Bramcote	"If required" should be removed	Yes	Bramcote is being asked to pay a heavy price for no tangible benefit and to face the loss of the leisure centre as well as its green belt alongside increased traffic congestion and air pollution is not compatible with sustainable development
Policy 3 Main Built up Area Site Allocations		3.9		x	x			x	It is not consistent with national policy	The loss of green belt is not recognised in the summary of the sustainability appraisal. The loss of green belt and the loss of the last remnant of Bramcote Moor cannot be trivialised as a very minor disbenefit.	The sustainability appraisal should be revised to accurately reflect the scale of disbenefit loss of green belt and Bramcote Moor would have	Yes	The impact of this flawed assessment of the green disbenefits has knock on consequences to other parts of Part 2.
Policy 3 Main Built up Area Site Allocations		Map 8		x	x			x	It is not consistent with national policy	The map fails to show the status of the Bramcote Moor land and also suggests a housing density of only 19 houses per hectare.	A greater density accompanied by a requirement to pay for a replacement leisure centre should be included.	Yes	The benefits to the local community of a higher housing density generating more funds to pay for a replacement leisure centre should be at the centre of land use decisions in this locality and would better reflect local residents views as well as represent a more sustainable form of development in the area.
Table 4		Table 4	x		x			x	It is not effective	The table shows that Bramcote will house over 440 of the 2729 houses in the entire main built up area of Broxtow. It is ridiculous that such a small area should be taking more than 16% of the housing need while the council allows land to be developed at low densities or not at all elsewhere.		Yes	The negative social, economic and environmental impact of the unfair burden of new housing in Bramcote is a combined effect of a series of failings by the council in formulating its plan.
	82	3b.9		x	x			x	It is not justified	The reference to a leisure hub should not be seen as a replacement for the leisure hub at Bramcote.	The text should be amended to make it clear that any leisure hub at the western extremity of the borough ought to be in addition to the one at Bramcote.	No	
Policy 8 Development in the Green Belt	8.5			x	x			x	It is not effective	We welcome the reporting of "strong support for the protection of the Green Belt" and lament the fact the council has ignored this and considerably reduced the green belt in Bramcote.		Yes	The council has consistently ignored local views expressed formally and at workshops and through the ballot box and is not delivering tangible benefits to the local community in Bramcote while at the same time asking it to bear an enormous and unfair share of the burden of new housing allocation.
	8.3			x	x			x	It is not justified	The Preferred Approach to Site Allocations erroneously assumed that all green belt sites served the same or no purpose in encouraging urban regeneration and this has skewed the council's assessment of the need to take land out of the green belt.		Yes	The flawed assessment of the five functions of the green belt has skewed the allocation of land in the green belt for housing contrary to the strong protection due to the green belt from the NPPF and the manifesto promises at the 2015 & 2017 general elections - both post dating the ACS
Policy 11 The Square, Beeston	11.2		x		x		x			We strongly support the mixed development in the Square, Beeston.	We would encourage the proposed cinema to be of flexible use by including moveable partitions and a stage.	No	
Policy 19 Pollution, Hazardous Substances and Ground Conditions	2			x	x		x			The required site investigation should be carried out by a competent person as required by the NPPF	The text should be amended to reflect the need for a competent person to carry out the site investigation	No	
Policy 20 Air Quality	119		x		x		x			We welcome the three measures to protect air quality.		No	
Policy 24 The health impacts of development	146		x		x		x			We welcome the requirement for a health impact assessment		No	
Policy 26 Travel Plans	153		x		x		x			We welcome the requirement for travel plans to be submitted		No	
Policy 27 Local Green Space	154		x		x		x			We support the designations as Local Green Space in Bramcote and ask the Council to consider the additional areas being designated as Local Green Space in the Bramcote Neighbourhood Plan	We are disappointed that none of the former Bramcote Hills Golf course is to be designated as local green space	No	
Policy 27 Local Green Space	27.2			x	x			x		The statement that the "The land at Bramcote and Stapleford (item 3 in the policy) comprises a former area of Green Belt between Moor Farm Inn Lane, Moor Lane, Derby Road, Ilkeston Road and Coventry Lane" is untrue. Such land would only be taken out of the green belt by the adoption of this part 2.	The text should be amended to accurately reflect the present and new status of the land and the role of Part 2 in any change	No	
Policy 28 Green Infrastructure Assets	157		x		x		x			We welcome the policies on green infrastructure.			
Policy 28 Green Infrastructure Assets	Map 62		x		x			x	It is not justified	The map erroneously shows (2.11) a continuous corridor through the former Bramcote Hills Golf - part of which is committed having been granted planning permission earlier in the year		Yes	This map is one several misleading maps which seek to underrepresent the enormous damage to the local environment Part 2 will have on Bramcote
Policy 30 Landscape	165		x		x		x			We note that this policy would be contradicted by housing development in land currently within the green belt and ask the council makes provision for suitable compensation to be provided in such cases			
Appendix 4	187		x		x			x	It is not justified	The Moor Lane cutting is omitted from the list.	The Moor Lane cutting should be added to the list	Yes	The considerable scientific and cultural significance of this cutting and its educational value should be recognised and included in Part 2.

Broxtowe Part 2 Local Plan

Agent

Please provide your client's name	

Your Details

Title	Mr
Name	Graham Heal
Organisation (if responding on behalf of the organisation)	Chetwynd: The Toton and Chilwell Neighbourhood Forum
Address	[redacted]
Postcode	[redacted]
Tel Number	[redacted]
E-mail address	[redacted]

Comments should be received by 5.00pm on Friday 3 November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here Yes

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to:

[redacted]

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page no	Policy text / para no.
Part 2 Local Plan	**Policy 1: Flood Risk**	**20**	**Para 1.4**
	Policy 2: Site Allocations		
	Policy 3: Main Built up Area: Policy 3.1	**30**	**Pol 3.1, Para 3.5**
	Policy 3: Main Built up Area: Policy 3.2	**81**	**Para 3b.6, 3b.7**
	Policy 4: Awsworth		
	Policy 5: Brinsley		
	Policy 6: Eastwood		
	Policy 7: Kimberley		
	Policy 8: Development of Green Belt		
	Policy 9: Retention of …employment sites		
	Policy 10: Town Centre …uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge of Centre, Eastwood		
	Policy 13: Proposals…..		
	Policy 14: Centre….		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design & amenity	**111**	**Pols 1, 2**
	Policy 18: Shopfronts….		
	Policy 19: Pollution, Hazardous Substances		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated...	**124, 125**	**Para 23.1, 23.2, 23.5**
	Policy 24: The health impacts of….		
	Policy 25: Culture, Tourism and Sport	**152**	**Pol 1, 2 Para 25.1**
	Policy 26: Travel Plans	**153**	**Para 26.1**
	Policy 27: Local Green Space	**155**	**Para 27.5**
	Policy 28: Green Infrastructure Assets	**157, 158**	**Pol 1.b, Para 28.2, 28.5**
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions	**171**	**Para 32.1**

Policy number	Page number	Policy text / Para number
1 Flood Risk	**20**	**Para 1.4**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Resident's comments:
"There is already serious flood risk in the Erewash Valley at Toton Sidings. Adding new housing in the area will only increase the risk of flash flooding in the area especially nearby houses on Goodwood Road and side roads."
"All housing should have solar panels + rain water harvesting systems built-in."

1. We are seriously concerned with the increased risk of flash flooding that development in and around Toton Sidings will cause. We believe para 1.4 needs to be strengthened to reflect the specific risk in the Sidings due to not being currently defended by flood protection measures

2. A resident has suggested all new housing (and by extension, commercial developments) should have solar panels & rain water harvesting systems incorporated 'by default'. It is not clear where this suggestion should be included in our response but added here following advice by Steffan Saunders on Oct 30th. Solar panels and water harvesting systems clearly have a role to play in reducing carbon dioxide emissions. We would like to see a positive 'Justification' paragraph that encourages the incorporation of these systems where feasible.

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend para 1.4 to:

1.4 With regard to point 4 of the policy, flood mitigation will be required in all cases (whether the site is defended or not). Examples of mitigation include flood resistance/resilience measures, emergency planning and good site design that does not increase risk to others. The Environment Agency will also require flood compensation (i.e. at least equivalent replacement of lost flood storage) in areas, ***such as the Erewash Valley at Toton Sidings,*** which are not defended by an appropriate standard of flood protection (such as the Nottingham Trent Left Bank Flood Alleviation Scheme*)*.

Create new para to state something along the lines of:

1.n The Council recognises the impacts of Climate Change – as detailed in Aligned Core Strategy Policy 1: Climate Change – and wishes to encourage the reduction of carbon emissions through the installation of renewable energy solutions such as solar panels and rain water harvesting systems in [set % aspiration] of new housing and all new commercial developments.

Policy number	Page number	Policy text / Para number
3.1 Chetwynd Barracks	**30**	**Policy 3.1 / para 3.5**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments include:

"[..] Barracks to be treated as one entity and not split up into separate development plots"
"Keep Chetwynd Road [Chilwell] closed." "Chetwynd Road: make it a cycle & pedestrian route only?" "Chetwynd Road to be opened both ends to share new traffic load."
"Keep Hobgoblin wood." "Keep trees on the west side of Barracks - from the quarry upwards."
"All large trees on the Barracks to be the subject of tree preservation orders"
"New feed Road into Depot from Bardills essential (with Tram/Bus/Cycle links?)"
"Re-route Erewash Country trail & public footpath down through the eastern edge of the Barracks site to exploit a newly created green corridor"
"Sports provision needs to be included on the Barracks site to protect current facilities"
"[….] War memorial must be protected and given plenty of space. [….]:

1. Fourteen residents specifically commented on Chetwynd Barracks – although all comments submitted were, of course, triggered by future developments of the Barracks and HS2 Station.
   Some comments were contradictory (opening Chetwynd Road, Chilwell) but this is not surprising given the impact the development of the site will have and the depth of feeling by residents.

2. Specific additions to Policy 3.1 (para 3.5) are therefore sought to strengthen current requirements

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend Policy 3.1 (at para 3.5) to:

3.5 The following key development requirements must be met.

Key Development Requirements:

- 500 Homes (within the plan period), 800+ overall.
- ***The Barracks must be treated as one entity and not split up into separate development plots***
- Provide attractive and convenient walking and cycling connections to the proposed HS2 station and to the tram.
- Provide a bus route through the site***, including access to the site from Chetwynd Road, Chilwell. However, only buses should be given access to the site from this eastern gateway.***
- ***New access road is needed to the site from the north to fall in line with HS2 Growth Strategy***
- Retain and enhance Green Infrastructure corridors around the eastern and northern areas of the site ***including the creation of footpaths and cycle ways***
- Provide a new Primary School within close proximity to the open space at the east of the site.
- Link open space at the east of the site.
- ***Enhance the provision of sports facilities at the south east of the site***
- Retain existing large trees and grass verges and incorporate these into a boulevard approach to the street scene. ***All large trees on the Barracks will be subject to Tree Preservation orders once the site is released***
- Provide public access to the Listed Memorial, ***the associated gardens and all heritage assets (still to be formally registered) on the site***
- Provide public space to the south of the memorial and retain/enhance the existing memorial garden.
- Provide ~~***small***~~ retail/service centre ***sufficient*** to meet local need along the main through route.
- Provision of small scale employment development.

Policy number	Page number	Policy text / Para number
3.2 Land in vicinity of the HS2 Station at Toton	**81**	**3b.6 & 3b.7**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments:
"If residents only parking is introduced, it needs to be at zero cost to residents"
"Size of the depth of the "green corridor" to the south of the boundary and definitive information as to whether this corridor is STRICTLY for wildlife or inclusive of pedestrian access? Further, some categorical assurance as to who will be responsible for the ongoing maintenance of hedges and vegetation?"
"I work between Derby/Notts + London. HS2 + business development in Toton is greatly needed!"

1. Parking by HS2 station users must not overspill into neighbouring residential streets – as detailed in last bullet of para 3b.6. It is suggested that a 'residents only parking' system may be the solution to this issue. However, we need to ensure residents are not disadvantaged by any such scheme.

2. Viable green corridors on the site (especially the southern boundary) must be considered a mandatory requirement of any development proposals – as outlined in para 3b.7. This para needs to be strengthened to include a minimum width of the primary corridor to the southern boundary.
   The corridor to the northern boundary (south of Stapleford) is less important, given the likely creation of HS2 station access roads, so this can be treated as an 'informal greenspace' corridor.

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend para 3b.6 to:

3b.6 Aspirations ***(last bullet):***

- Prevent overspill parking in existing residential areas when the station is operational. This may include Toton to become 'residents only parking' area to mitigate issues with Station/Tram traffic. ***Any such scheme needs to be implemented at zero cost to residents.***

Amend para 3b.7 to:

3b.7 Aspirations ***(first bullet):***

- Extensive multi-purpose interconnected Green Infrastructure routes to be provided to connect areas of growth and existing communities all of which should be of sufficient width and quality to provide attractive and usable links in the following locations:
- Along the southern boundary of the location north of existing communities of Toton and Chilwell between Hobgoblin Wood in the east and Toton Fields Local Wildlife site in the west. **This will be a significant corridor in the area, and could incorporate both pedestrian and cycle access to HS2 station so needs to be 50 meters wide;**
- Along the northern boundary of the location south of Stapleford. **This could comprise a narrow, graded tree and shrub roadside corridor to improve screening of the Innovation Village from the A52;**
- Along the Erewash Canal ***and Erewash River (between Toton Washlands and Stapleford)*** to the west of the location (incorporating flood mitigation on the low lying Sidings part of the site);
- Along the north/south corridor…..

Policy number	Page number	Policy text / Para number
17. Place-making, design and amenity	**111**	**17.1 & 17.2**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments:
"Good broadband internet connections needed."
"Promote more walking/cycle ways (and fewer cars) in new developments"

1. Policy 17.1 would benefit by explicitly stating that provision of high speed broadband must be treated as a core utility in all new developments

2. Policy 17.2 would also be strengthened by a statement encouraging good design for walk ways and cycle ways to and through the site is included in the design and access statement

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend Policies 17.1 & 17.2 to:

17.1 For all new development, permission will be granted for development which, where relevant:
…)
m) Enables convenient use by people with limited mobility***, pedestrians & cyclists;*** and
n) Incorporates ecologically sensitive design, ***including high speed broadband services***, with a high standard of planting and features for biodiversity; and
…)

17.2 Applicants for housing developments of 10 dwellings or more will be required to submit a design and access statement which includes an assessment of***: a)*** the proposals against each of the 'Building for Life' criteria (see Appendix 5) ***and b) how the development promotes and encourages walking and cycling through the development.***

Policy number	Page number	Policy text / Para number
23. Proposals affecting designated and non-designated heritage assets	**125**	**Para 23.1, 23.2, & 23.5**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Resident's comment:
"Do not destroy NSFF building at Chilwell end of site. War memorial must be protected and given plenty of space. It means a lot to long term residents like me. 73yrs."

1. Chetwynd Barracks is due to be sold and redeveloped during the period of this Plan. The site has several valuable heritage assets – especially the memorial and associated garden area - to those who lost their lives during WW1, the shell factory explosion.
   There are also other significant buildings – a WW1 Nurses Infirmary and the Officers Mess (part) - and there may be others. We need to ensure these assets are: a) formally identified and registered and; b) protected from any applications to develop the site in advance of any registration.
   It is not clear who can apply to register these assets – does it need to be the site owner (MoD) or can the Forum apply?

2. There is a strong case to support the creation of a new Conservation Area within the Barracks site covering these buildings, memorial & gardens. The Forum will look to make such an application at the earliest possible time.

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend para 23.1 to:

23.1 This policy applies to all heritage assets, including Listed Buildings, Conservation Areas, Scheduled Monuments ***and immediate associated areas (such as green spaces / gardens etc.)*** and non-designated assets of all kinds.

Amend para 23.2 to:

23.2 Heritage Statements should accompany all applications relating to heritage assets. ***Such a statement will be expected from an application to develop Chetwynd Barracks that will cover those heritage assets located on the site but which may not yet have been formally registered. On-site investigations of heritage assets (such as Hill Farm, on the Barracks), prior to any development starting, should be incorporated into statements. All statements ~~These~~*** should clearly illustrate the nature of the proposals and their effect on the asset. They should refer to relevant sources of local information including Conservation Area Appraisals, the 'Heritage Gateway', relevant literature and paintings, and the Heritage at Risk Register. Attention should be paid to the Borough's notable industrial heritage. Applications which are not directly related to heritage assets but could impact visually on their setting should include a proportionate Heritage Statement.

Amend para 23.5 to:

23.5 The Council will aim to produce Appraisals and Management Plans for all its Conservation Areas and will consider the merits of amendments to Conservation Area boundaries. It will also consider the production of a Local List of non-designated assets, criteria for their identification and/or an associated SPD. The Council will look to work pro-actively with established Civic Societies ***and Neighbourhood Forums*** to aid understanding of the local historic environment.

Policy number	Page number	Policy text / Para number
25. Culture, Tourism and Sport	**152**	**Policy 1, 2 & para 25.1**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Resident's comment:
"Provide astro turf facilities for all-year football"

1. There is a lack of all-weather artificial football pitches throughout the Borough but especially in the south. The Forum has opened discussions with the Notts FA to see how we might work together to develop pitches in the south of the Borough. It will help give a steer to developers if the Local Plan specifically referenced the need for more artificial pitches as well as turf pitches.

2. Chetwynd Barracks has a significant history and it should be recognised and used to enhance the tourism 'offering' in the Borough. By making specific reference to the site in this policy It will help to protect these heritage assets from future development.

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend Policies 1 & 2 to:

Development proposals will be encouraged that;

1. Make specific provision for sports pitches, ***including artificial, all-weather '3G' pitches,*** that are suitable for a wide age range of users, in particular children's sport.

2. Enhance the tourism offer in association with DH Lawrence, ***the legacy of Chetwynd Barracks (especially relating to the WWI shell factory and associated memorial),*** or the industrial/ pharmaceutical heritage of the Borough.

Amend para 25.1 to:

25.1 The adopted Playing Pitch Strategy identifies a deficiency in accessible and secured floodlit football turf ***and artificial, all-weather '3G'*** pitches to the Football Association accreditation standard within the Borough (mainly in the south)

Policy number	Page number	Policy text / Para number
26. Travel Plans	**153**	**Para 26.1**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments:
"Traffic congestion now is bad. Stapleford lane is so congested could a relief road be put across the depot or around the back of it to ease the congestion on Stapleford Lane please"
"New feed Road into Depot from Bardills essential (with Tram/Bus/Cycle links?)"
"Promote more walking/cycle ways (and fewer cars) in new developments"
"Need regular bus route from Toton to Stapleford into the evenings"

1. The Forum will promote access to the HS2 Hub Station using walk ways, cycle ways and additional bus routes.
   We would like to see a new, specific 'Justification' paragraph that states all Travel Plans must include a section on walk ways, cycle ways & and improved public transport (better bus routes; both frequency and extending services into the evenings)

2. Use section 106 money to improve pavements and cycle ways in local vicinity of developments. For instance, consider creating one-way streets in existing Toton streets bordering the HS2 station such as: Woodstock Road, Epsom Road etc. to allow space to create wider pavements & new cycle ways

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Create new Justification para 26.2 to:

26.2 We expect Travel Plans to include specific sections detailing how developments will encourage more walking, cycling and public transport (bus routes both frequency and operating times) to / from and through the sites.

Policy number	Page number	Policy text / Para number
27. Local Green Space	**155**	**Para 27.5**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments:
"Keep Hobgoblin wood"
"Keep trees on the west side of Barracks - from the quarry upwards"

1. The Forum intends to submit an application to designate Local Green Space during the development of its Neighbourhood Plan. It will be helpful for the Local Plan to acknowledge this intention so that developers are aware of the need to consult with the community & ensure they include a provision for Green Space in their plans.

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend para 27.5 to:

27.5 Further areas of Local Green Space may be designated through forthcoming Neighbourhood Plans. ***We expect to receive an application to designate significant stretches of green infrastructure as Local Green Space within the Toton Strategic Growth Area and Chetwynd Barracks development sites.***

Policy number	Page number	Policy text / Para number
28. Green Infrastructure Assets	**157**	**Policy 1.b & para 28.2**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments:

"Provide astro turf facilities for all-year football"
"Re-route Erewash Country trail & public footpath down the eastern edge of the Barracks site"
"Size of the depth of the "green corridor" to the south of the boundary and definitive information as to whether this corridor is STRICTLY for wildlife or inclusive of pedestrian access? Further, some categorical assurance as to who will be responsible for the ongoing maintenance of hedges and vegetation?"

1. Playing Pitches need to specifically include the growing trend for artificial, all-weather '3G' pitches

2. We would like to see new footpaths & cycle ways creating in green corridors inc. a re-routing of the Erewash Valley trail through Chetwynd Barracks.

3. We believe green corridors need to be of a decent, specified width to be consider viable. Otherwise developers will seek to minimise the widths of these corridors for their own purposes. The Notts WT has done research for the Forum on what is considered viable widths of green corridors. In summary:

- *"corridors should be preserved, enhanced and provided, [.....], as they permit certain species to thrive where they otherwise would not. Corridors should be as wide and continuous as possible"* (Dawson, 1994):
- 50m buffers [are] recommended for developments in the Local Plans of both Wakefield & Darlington Councils to protect local wildlife sites and / or river corridors etc.
- A 50m width allows corridors to function as a 'multi-purpose network', as defined in NECR 180, so that it includes attributes that are valuable to people, i.e. biodiversity alongside amenity, footpaths, cycle ways, sustainable drainage, microclimate improvement, heritage etc.
- Quadrat Scotland 2002 (Appendix 1). For connectedness, to be defined as 'high' (on scale high, medium, low), the corridor needs to be at least 50m wide for more than 50% of the corridor

References

Dawson, D. 1994. Are Habitat Corridors Conduits for Animals and Plants in a Fragmented Landscape? A Review of the Scientific Evidence. English Nature Research Reports
Wakefield Consultation on spatial strategy: Wakefield Council Spatial Policy Areas
Darlington consultation on draft housing allocations: Darlington Council Housing Allocations report
Natural England Commissioned Report NECR180 (2015) Econets, landscape & people: Integrating .....
Quadrat Scotland (2002) The network of wildlife corridors and stepping stones of importance to the biodiversity of East Dunbartonshire. Scottish Natural Heritage Commissioned Report

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend Policy 1b) to:

1. Development proposals which are likely to lead to increased use of any of the Green Infrastructure Assets listed below, as shown on the Policies Map, will be required to take reasonable opportunities to enhance the Green Infrastructure Asset(s). These Green Infrastructure Assets are:
   a) Green Infrastructure Corridors (not shown on the Policies Map);
   b) Playing Pitches, ***including artificial, all-weather '3G' Pitches;***
   c) Informal……

Amend para 28.2 to:

28.2 The corridors that are [……]. The details of these opportunities for enhancement will depend on the characteristics of the corridors concerned. ***The Council believes corridors must be 50 metres wide to be considered beneficial and viable for wildlife.*** The corridors are detailed in section 6 of the GIS and are shown diagrammatically on the map on page 160 in this Plan. The corridors do not have fixed boundaries and the map on page 160 should not therefore be interpreted rigidly.

Amend para 28.5 to:

28.5 A potential continuation of the Nottingham Canal towpath [……..] should proposals for this emerge in the future. ***With the development of Chetwynd Barracks, the Council intends to exploit a new green corridor planned for the eastern side of the Barracks. It will re-route the Erewash Valley Trail down a new public footpath/cycleway through the corridor, and from there continue the Trail to the Attenborough Nature Centre.*** The Nature Reserves that are referred to in part 1f of the policy include Local Nature Reserves designated by the Council and Nature Reserves managed by Nottinghamshire County Council and Nottinghamshire Wildlife Trust.

Policy number	Page number	Policy text / Para number
32. Developer Contributions	**171**	**Para 32.1**

Question 2. What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be:	Yes	No
2.1 Legally compliant		
2.2 Compliant with the duty to co-operate		
2.3 Sound		**X**

Question 3. Why is the Local Plan unsound?

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	**X**
It is not positively prepared	
It is not consistent with national policy	

Your Comments:

Residents' comments:
"Schools 3-18? What's the impact on existing LEA Primary schools?"
"If HS2 doesn't happen what funding is available to George Spencer to cover influx of children?"

1. Paragraph 32.1 would benefit by explicitly stating that Section 106 contributions are needed to increase capacity at all levels of education. Developers must acknowledge their obligations to increase provision at secondary schools as well as primary schools. This point is well made in the Infrastructure Delivery Plan (sections 4.51, 4.52, 4.55, pages 19, 20)

2. A new paragraph would be useful to explicitly state that all Section 106 contributions will be directed in the first instance to the Borough wards/town & parish councils affected by developments before other areas in the Borough are considered. This is because it cannot be right that other areas of the Borough benefit from developers' contributions before residents in the immediate vicinity are awarded suitable recompense for the changes to their environment.

Question 4. Modifications sought

[CTTC Forum text in: ***Black bold italic***]

Amend para 32.1 to:

32.1 This policy strikes the appropriate balance between ensuring the infrastructure requirements to make the development acceptable in planning terms are met, at the same time as not compromising the viability of developments***. It is acknowledged that financial contributions are needed to increase provision of education capacity at secondary schools in key areas of the Borough***

New Justification para 32.2 to:

32.2 All Section 106 contributions will be directed in the first instance to the Borough wards/town & parish councils affected by developments before other areas in the Borough are considered

Question 5. Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	**Yes**
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary

1. **The CTTC Forum would like the opportunity to explain in more detail the rationale for our suggested modifications to the Examiner. A specific concern relates to paragraph 28.2 and the need to explicitly commit to a specified width of green corridors necessary to assure viability of wildlife. However, we want the opportunity to explain our suggestions across all policies as appropriate.**

6882

[redacted]

3rd November 2017

Broxtowe Labour Group response to the Local Plan Part 2

Dear Steffan

I am writing in my capacity as Deputy Leader of the Labour Group in order to respond to the Local Plan Part 2 on behalf of the Labour Group of Councillors on Broxtowe Borough Council.

The Labour Group recognise the time, commitment and level of consultation that has gone into developing the current draft of the local plan, and we commend the officers involved on their efforts in relation to this important work.

The Local Plan Part 2 sets out the vision for Broxtowe for the next ten years, and during that time Broxtowe is likely to face significant changes, with demographic change, population growth and a fundamental shift in infrastructure with for example the advent of HS2. Broxtowe's residents are also likely to change the ways in which we live our lives, with the advent of new technologies and green energy. We believe that our Council must take a progressive and forward thinking approach to meeting those changes and challenges head on.

Broxtowe's Local Plan Part 2 must not only to be environmentally responsible, but also be environmentally progressive. Our commitment in Broxtowe is for 6150 homes by 2028 and when taken collectively, those homes have the ability to make a significant impact on the environment. We would therefore like to see additional commitments built into the plan in respect of new developments that ensure environmentally friendly housing development, which proactively encourages energy efficiency through the use of technologies such as solar panels, and ground source or air source heat pumps.

Over the next ten years, we have the opportunity to bring about significant change in Broxtowe in terms of becoming a proactively green borough. We believe that there are a number of adjustments to the local plan that may provide for this, including the introduction of electric charging points across the borough, a commitment to introduce a significant shift in the uptake of cycling by increasing the cycle paths available in the borough, and the allocation of land specifically for the creation of green energy - such as solar or wind energy. In addition, we recognise that fracking

East Midlands Councils

Our ref: AP/lmd
3rd November 2017

Mr Steffan Saunders
Broxtowe Borough Council
Foster Avenue
Beeston
Nottingham
NG9 1AB

Dear Steffan

Draft Broxtowe Local Plan Part 2

On behalf of East Midlands Councils (EMC) I am making a representation in support of Policy 3.1 and 3.2 of the Draft Broxtowe Local Plan Part 2.

EMC is a voluntary partnership of the Borough, District, City and County councils from across the county areas of Derbyshire, Leicestershire, Lincolnshire, Nottinghamshire, Northamptonshire and Rutland.

This representation is based solely on the East Midlands HS2 Growth Strategy: World Class: Locally Led, which EMC published in September 2017 under the auspices of the East Midlands HS2 Strategic Board and the D2N2 LEP.

The Growth Strategy is a non-statutory document which has been produced with funding from the Department for Transport and informed by advice from the Government's Cities and Local Growth Team (a partnership of BEIS & DCLG) and the HS2 Growth Partnership (which includes HS2 Ltd and London & Continental Railways). Members and officers of Broxtowe Borough Council and Nottinghamshire County Council have been closely involved with the development of the Growth Strategy through the HS2 Strategic Board and its sub-groups.

The Growth Strategy sets out a long term vision for how the East Midlands can use HS2 to boost economic growth. Central to this vision is the establishment of a mixed use Innovation Campus adjacent to the proposed Hub Station at Toton. This proposal is consistent with the broad parameters for development set out in Policy 3.1 of the Part 2 Local Plan and the Part 1 Core Strategy – but clearly go into much greater spatial detail.

The Growth Strategy also advocates mixed use re-development of the Chetwynd Barracks site consistent with Policy 3.2 of the Part 2 Local Plan, which is described in the document as a 'Garden Village' development.

EMC will continue to work closely with Broxtowe Borough Council and other relevant authorities and bodies to take forward the further development and implementation of the Growth Strategy.

I would be happy to appear at the Examination in Public if that is considered to be helpful

Yours sincerely

[redacted]

Andrew Pritchard
Director of Policy & Infrastructure, East Midlands Councils
Midlands Connect Project Team
East Midlands HS2 Executive Team

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	DI0

Your Details

Title	Mr	~~Mrs~~	~~Miss~~	~~Ms~~	~~Other:~~
Name	[redacted]				
Organisation (if responding on behalf of the organisation)	JLL				
Address	[redacted]				
Postcode	[redacted]				
Tel. Number	[redacted]				
E-mail address	[redacted]				

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: [redacted]

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	**Policy 1**: Flood Risk		
	Policy 2: Site Allocations		
	Policy 3: Main Built up Area Site Allocations	30-31	Paras 3.4-3.6
	Policy 4: Awsworth Site Allocation		
	Policy 5: Brinsley Site Allocation		
	Policy 6: Eastwood Site Allocation		
	Policy 7: Kimberley Site Allocations		
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map	Map 7: Chetwynd Barracks Policy: 3.1		
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)			

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant	√	
2.2	Compliant with the duty to co-operate	√	
2.3	Sound		√

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	
It is not effective	
It is not positively prepared	√
It is not consistent with national policy	√

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.

DIO **supports** the allocation of 500 houses, and associated commercial and community uses, **within the plan period** at Chetwynd Barracks.

The site possesses a number of attributes that make it particularly suitable for sustainable housing led mixed use development. These include:-

- previously developed land;
- located within the main built up area of Nottingham;
- surrounded by existing housing; and
- situated in an area highly accessible to all forms of transport, including rail, tram and bus.

The site is currently operational but its closure in 2021 has been announced. The site is available for development from this date.

DIO has commissioned a full consultant team to undertake the necessary technical work to demonstrate the suitability, capacity and deliverability of the site for development. This technical work has covered the following disciplines:-

- transport and movement;
- flood risk and surface water drainage;
- ecology;
- air quality;
- ground conditions;
- utilities and services;
- heritage; and
- retail need and impact.

In addition, consideration has been given to market factors. This has covered primarily the pace and mix of housing and the quantity and quality of employment floorspace.

This technical work has enabled the production of a Vision for Development that provides a robust development concept for the site. This development concept, and the technical work that underpins it, has been shared with officers of the Council, and has provided confidence about the capacity and deliverability of the site for development within the plan period and beyond.

The technical work and Vision for Development are summarised by a Non-Technical Sustainability Appraisal and Development Delivery Statement produced by JLL. This statement, along with separate annexes covering all the technical and architectural issues referred to above, have been submitted simultaneously to this representation and forms the principal evidence base to this proposed allocation.

The Vision for Development illustrates well the potential for development of the site. The site is significant in size (75 hectares net of retained Army accommodation in the northern part of the site) and represents an unrivalled opportunity for a unique and characterful settlement which will help to reconnect Chilwell and Toton.

The Vision for Development has fully accounted for the site's heritage with the proposed retention of a number of buildings on site, for conversion to either residential or community use. In addition, the Vision looks to retain large areas of woodland, recreation and green space, with this accounting for over 40% of the gross site area.

The Vision for Development provides a development concept of a new residential community in the region of 1,500 houses, a local centre, employment floorspace, a primary school, and other community uses (e.g. a medical centre). DIO considers the first phase, in the region of 500 houses at a site density of 35 houses per developable hectare, including the first phase of the local centre, is deliverable within the plan period.

However, Policy 3.1 limits its guidance to the development requirements for the site **within the plan period** to 2028. This does not recognise the full potential of the site's development, despite the acknowledgement on page 14 of the Publication Plan that it can deliver *"500 homes within the plan period and* ***substantially more than this beyond the plan period***" (our emphasis). In addition, it is inconsistent with the approach taken with Policy: 3.2 Toton (pages 76-84), which is located close to Chetwynd Barracks and shares many of the same development issues. Policy 3.2 addresses in detail the key development requirements both within the plan period and beyond the plan period.

NPPF provides some relevant guidance. This includes:-

- Local Plans should provide a practical framework within which planning application decisions can be made with a high degree of predictability and efficiency (first bullet point to paragraph 17).
- Encouragement of the effective use of land by reusing previously developed land (brownfield land) (eighth bullet point to paragraph 17).
- Identification of development sites, where possible, to cover up to 15 years housing growth (third bullet point to paragraph 47).
- Supply of new homes can sometimes be best achieved through planning for larger scale developments, following the principles of Garden Cities (paragraph 52).
- In the context of the Green Belt, identification of safeguarded land in order to meet longer term development needs stretching well beyond the plan period (third bullet point to paragraph 85);
- Local Plans to be drawn up over an appropriate timescale, preferable 15 years, and to take account of longer term requirements (second bullet point to paragraph 157);
- to set out clearly strategic policies for an area to ensure neighbourhood plans can reflect these policies and plan positively to support them (paragraph 184).

DIO considers that the Publication Plan, as currently drafted, should consider the key development requirements of the site **beyond the plan period** on the same footing as the Toton Sidings site. This will assist comprehensive development on the site, longer term planning of the Chilwell and Toton area, and support the spatial strategy for the rest of the borough. Such an approach will be consistent with the guidance contained in the NPPF and would represent positive preparation of the Plan.

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

Proposed Modifications to Policy: 3.1 – Chetwynd Barracks, specifically paragraphs 3.4 and 3.5

3.4 Former Ministry of Defence (MOD) Site which as per the 2016 Ministerial Announcement is no longer needed for national defence purposes. The site is previously developed (albeit that particular sections of the site are open) and contains a number of buildings and structures related to its use as an MOD site including; barracks, staff housing, firing range and car parking.

3.5 The site is significant in terms of size (circa 75 hectares net of the retained Service Family accommodation in the northern part of the site) and represents an unrivalled opportunity for a large housing led development in a truly sustainable location on previously developed land. It is surrounded by existing housing and is very well located in respect of access to existing and proposed infrastructure. Attenborough Rail Station is located a short distance to the south east of the site and Toton Lane and Inham Road tram stops are walking distance to the north. The local area is served by a number of well used and regular bus services which currently have to skirt around the perimeter of the site, but could be comprehensively reconfigured as part of the overall redevelopment proposals.

3.6 The site will cease operations and become available for development in 2021. Because of its size and obvious sustainability credentials, it has a capacity for development that goes well beyond the end of the plan period – 2028. The extent of development beyond 2028 will be the subject for review of the Local Plan following the adoption of this Part 2 Local Plan and discussions with key stakeholders, including full engagement with the recently formed Toton and Chilwell Neighbourhood Forum, which intends to produce a neighbourhood plan covering Chetwynd Barracks, the HS2 station at Toton and associated development, and the surrounding area. However, to assist comprehensive development of the site and longer term planning of the area and the wider Borough, consideration has also been given below to the key development requirements beyond the plan period.

3.7 The following key development requirements must be met.

Key Development Requirements beyond the Plan Period:

- Up to an additional 1,000 dwellings, at an approximate site density of 40 dwellings per developable hectare, on the remainder of the site.
- Completion of local centre with retail provision serving local needs and at a scale that does not compete with the retail offer of nearby centres.
- Small scale employment of around 5,000 sq m.
- New community uses, such as a primary school and health centre.
- Integration with adjoining housing, including retained MOD residential accommodation to the north.
- Upgrade and reconfiguration of existing accesses, with Chetwynd Road to be prioritised for buses, cyclists and pedestrians.
- Mitigation measures to the local highway network, to be determined as part of an overall transport strategy.
- New or extended bus routes through the site, through the reconfiguration of existing routes, to be determined as part of an overall transport strategy.
- Attractive and convenient walking and cycling connections to the surrounding area to the north, east and south.
- Retention and provision of public access around Hobgoblin Wood, the playing field in the south east corner of the site, and the parkland to the north of the listed National Shell Filling Factory Memorial.
- Public access to the National Shell Filling Factory Memorial and creation of a public space to the south of the memorial.
- Retention and enhancement of green infrastructure corridors, provision of public open space that meets the Fields in Trust Guidance, and creation of links with public open space in the first phase of development.
- On-site sustainable drainage network based on natural attenuation.
- Retention and reuse of existing heritage assets for residential or community uses, where feasible and merited in the context of the wider planning benefits of the overall development proposals.

Justification

3.8 Since the announcement of the Barracks' closure in 2016, the DIO has undertaken the follo

wing actions to assess the capacity for development:-

- Assembled a team of consultants, including infrastructure engineers, environmental consultants, heritage experts and master planners.
- Produced an evidence base on the site's constraints and opportunities, assessing transport and movement, heritage assets, flood risk and surface water drainage, ecology, air quality, ground conditions, and utilities.
- Reviewed market considerations, including the likely type and pace of housing in this area.
- Held a number of internal workshops to support the production of an initial development concept.
- Taken into account observations received from an OPUN workshop.
- Held a series of meetings with planning officers of the Council and other key statutory consultees (Nottinghamshire County Council and Highways England) and attended the Site Allocations Infrastructure Workshop in March 2017.
- Produced a Vision for Development – a development concept for the site.
- Initially engagement with the Steering Group to the recently formed Neighbourhood Plan Forum, including arranging a site visit and explanation of the constraints and opportunities for development and potential capacity for the site.

3.9 This process has been comprehensive and has provided confidence on the sustainability and deliverability of the first phase of development and the opportunity that exists for the remainder of the site.

Vision

3.10 The vision for the site is for Chetwynd Barracks to be a vibrant new neighbourhood that provides a sustainable mix of housing, retail, employment and leisure opportunities for the local community. By maintaining and enhancing the site's military heritage, a unique and characterful settlement will help to reconnect Chilwell and Toton. While heritage is at the core of the design, green corridors and public open spaces throughout the development will also help to deliver amenity and biodiversity benefits for people and wildlife alike.

3.11 The site provides a number of opportunities that will inform and help to deliver this vision. This includes:-

- Reuse of existing access points and creation of routes across the site to stitch the site back into its surrounding settlement and provide a level of permeability consistent with the Toton/Chilwell urban form.
- Accessibility to all sustainable modes of transport, including the HS2 station at Toton and the tram, to encourage and reduce congestion on the local highway network.
- Opportunity to reconfigure existing bus routes to remove existing inefficiencies and enhance overall accessibility and permeability in the area as a whole.
- Retention of heritage buildings and features, capitalising upon the rich military heritage and history of the site.
- Retention and enhancement of existing woodland, playing fields and parkland (i.e. the memorial garden) and the provision of generous levels of public open space.
- Creation of new green corridors across the site creating ecological connections for local wildlife.
- Laying out of green infrastructure links to the wider area.
- A sustainable drainage network.
- A new local centre providing retail and employment.
- Community uses, such as a primary school and medical centre.
- Phasing of development in a realistic and deliverable manner.

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary
DIO is promoting a strategic site at Chetwynd Barracks. In consequence, DIO considers it has a large stake in the Local Plan making process and would welcome participation at the relevant hearing sessions.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

Guidance Note:

Please complete a **separate form** for **each representation** you wish to make.

'Legally Compliant':

If your response relates to **the way in which the plan has been prepared,** then this is likely to relate to whether it or not it is '**Legally Compliant'**. To be 'Legally Compliant', the Local Plan has to be prepared in accordance within the 'Duty to Cooperate' and legal and procedural requirements. These are set out by legislation in the Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended). If you think that we have not met the legal requirement in the preparation of the Local Plan, please use the response form to tell us what we have not done or what we have done incorrectly.

'Compliant with the Duty to Co-operate':

If your response relates to **the way in which we have worked with other authorities** then this is likely to relate to the '**Duty to Co-operate'.**

The 'Duty to Co-operate' places a legal duty on Local Planning Authorities, County Councils and certain public bodies to engage constructively, actively, and on an on-going basis, to maximise the effectiveness of Local Plan preparation in the context of strategic cross-boundary matters. The 'Duty to Co-operate' is not a duty to agree. However, Local Planning Authorities should make every effort to secure the necessary co-operation on strategic cross-boundary matters before they submit their Local Plan for examination.

'Sound'

If your response is about the **content** of the Local Plan and the strategy it adopts, then it is likely to relate to whether or not the Local Plan is '**Sound**'.

To meet the 'Test of Soundness', the independent Planning Inspector is required to consider whether or not our Local Plan is '**justified', 'effective',** has been '**positively prepared',** and is '**consistent with national policy'**. You may wish to consider the following before making a representation on the 'Soundness' of our Local Plan:

- **'Justified':** This means that the Local Plan is based upon a robust and credible evidence base. If you think that the evidence doesn't support the choice made in our Local Plan, or there are realistic alternatives, then your comments may relate to whether or not it is 'justified'.
- **'Effective':** This means that the Local Plan will deliver what it sets out to. If you think that what we are proposing in the Local Plan is not deliverable, then your comments may relate to whether or not our Local Plan is 'effective'.
- **'Positively Prepared':** This means the Local Plan should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet requirements from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development.
- **'Consistent with National Policy':** Do you consider that our Local Plan accords with the National Planning Policy Framework (NPPF) and other policies, or includes clear and convincing reasons for doing something different?

For further guidance or assistance, please contact the **Planning Policy Team** on **0115 917 3452** or by emailing **policy@broxtowe.gov.uk**.

Defence Infrastructure Organisation
Chetwynd Barracks
April 2017

Retail Needs Study

Contents Page

1. Introduction

1.1. This statement has been produced to provide guidance on the amount of retail floorspace the residential development of the Chetwynd Barracks site can support.

1.2. In undertaking the report regard has been had to the latest masterplan for the site and the findings of the Greater Nottinghamshire Retail Study 2015 (GNRS).

2. Relevant Planning Policy

2.1. The site is being promoted through the development plan process for circa 1,600 new homes broken down as follows:-

- 600 in the period 2021 to 2028; and
- 1,000 post 2028.

2.2. It is also proposed that there will be some new employment uses on site, a new school and other community uses such as a doctor's surgery.

3. Retail Need

3.1. It should be noted that due to changes in the economy, demographics and market trends, retail forecasting is inherently less certain over the long term. Generally forecasts are used over a 5 year period with the longer term providing an overview.

3.2. In this respect the forecast for this allocation should be continually reviewed as the scheme progresses, but allowance should be made in the masterplan to ensure all potential future needs can be met on site.

3.3. In addition when looking this far ahead we cannot predict what applications may come forward for retail development in proximity to the site and therefore we assess the requirement based on predominantly serving the need that arises from the development and we look at the total housing numbers of 1,600.

3.4. This statement looks in detail at the requirement for convenience floorspace as this will be main occupier/anchor of the proposed new centre. A shorter commentary on the requirement for comparison floorspace is provided to give an overall allowance for the retail floorspace allocated for the scheme.

Scheme Generated Expenditure

3.5. We firstly look at the expenditure generated by the scheme alone and how that translates into a floorspace requirement. In doing so this makes no allowance for inflow into the site from surrounding residents or outflow from residents of the scheme. However we assume there would be some balance between the two.

Convenience

3.6. The table below sets out the convenience expenditure generated by the scheme using the figures from the GNRS, we use an end date of 2038 which assumes a build out rate of 100 houses per annum:-

Table 1 – Convenience Expenditure generated by the Scheme

	2028	2038	Overall
Households	600	1,000	
Population	1,380	2,300	3,680
Expenditure per head £	2,063	2,084	
Total £m	2.85	4.79	7.64

3.7. The scheme proposes 600 houses by 2028 which equates to a household numbers of 1,380[1]. Post 2028 there will be a further 1,000 new homes equating to a household numbers of 2,300. Therefore in total 3,680 new residents on site.

3.8. In 2028 the spend per head on convenience will be £2,063 equating to circa £2.8m. Post 2028, it is difficult to forecast but using Experian growth rate of 0.1% (Table 1b Experian briefing note 14) and taking 2038 as the end date leads to an expenditure per head figure of £2,084. This creates £4.79m available expenditure. In total the residents of the scheme will generate circa £7.64m of convenience expenditure

3.9. Based on the GNRS sales density figures for a small format supermarket, this would support a small format foodstore of circa 1,400 sq. m net/ 2,000 sq. m gross.

[1] Census data puts the average household size at 2.3

Comparison

3.10. Floorspace requirements for comparison retailers are harder to forecast as the spending patterns will be much more dispersed than for convenience. Many people will visit higher order centres to undertake comparison shopping rather than visit their local shops. However to provide some context we have undertaken a similar exercise using the figures from the GNRS to demonstrate level of expenditure the allocation will generate.

Table 2 – Comparable Expenditure generated by the Scheme

	2028	2038	Overall
Households	600	1,000	
Population	1,380	2,300	3,680
Expenditure per head £	4,095	5,611	
Total £m	5.65	12.91	18.56

3.11. The scheme proposes 600 houses by 2028 which equates to a household numbers of 1,380[2]. Post 2028 there will be a further 1,000 new homes equating to a household numbers of 2,300. Therefore in total 3,680 new residents on site.

3.12. In 2028 the spend per head on convenience will be £4,095 (taken from the GNRS) equating to circa £5.65m. Post 2028, it is difficult to forecast but using Experian long term growth rate growth rate of 3.2% (Table 1a Experian briefing note 14) and taking 2038 as the end date leads to an expenditure per head figure of £5,611. Leading to total expenditure in 2038 of £12.91m. In total the residents of the scheme will generate circa £18.56m comparison expenditure.

3.13. As stated above, not all of this will be available to support local shops but it does demonstrate that a small level of comparison shopping could be supported in the form of local shops to sit alongside and complement a small supermarket.

3.14. In addition we would anticipate some provision of A3-A5 uses which would complement the local shops.

3.15. We would recommend an allowance of 1,000 sq. m gross for small shops and food and drink uses which at 700 sq. net would equate to around 5 or 6 small units.

Total Requirement

3.16. Taking the supermarket as the lead occupier/anchor at 2,000 sq. m gross we recommend that a total floorspace allowance of circa **3,000 sq m gross** is provided in the allocation which would allow for the provision of a small supermarket, small local shops and foods and drink uses. This can be broken down into net figures as follows:-

- 1,400 sq. m net supermarket; and
- 700 sq. m net of comparison and food and drink uses.

[2] Census data puts the average household size at 2.3

4. Impact

4.1. In order to provide comfort that the level of retail and leisure floorspace proposed will not impact on investment into existing centres we now provide an overview of the potential impact the allocation may have.

4.2. The starting point for this assessment is the work undertaken by Carter Jonas in 2015 to provide part of the evidence base for the emerging plan. This was not a bespoke study for Broxtowe but also considered the retail needs for Gedling, Nottingham and Rushcliffe as part of the preparation of the Joint Core Strategy.

4.3. In respect of convenience floorspace the study assumed a constant market share and based the forecast on population projections provided by Experian. The table below demonstrates that over the period 2014 - 2028, after commitments, there is a total net residual expenditure of £41.5m, which equates to a range of gross convenience floorspace requirements from 3,421 sq m to 7,620 sq m depending on the end occupier.

TABLE 12a: BROXTOWE BOROUGH- CONVENIENCE GOODS CAPACITY ASSESSMENT
Assume Equilibrium at Base Year and Constant Market Shares

		2014	2019	2024	2028
STEP 1:	TOTAL 'CURRENT' TURNOVER OF ALL FLOORSPACE IN BOROUGH (£ m):	£239.5	£252.4	£266.5	£278.6
STEP 2:	TOTAL 'BENCHMARK' TURNOVER OF ALL FLOORSPACE IN BOROUGH (£ m):	£239.5	£236.4	£236.1	£237.1
STEP 3:	NET RESIDUAL EXPENDITURE - EXCLUDING ANY COMMITMENTS (£m):	£0.0	£16.0	£30.3	£41.5
STEP 4:	CONVENIENCE GOODS TURNOVER OF ALL COMMITED FLOORSPACE (£m)	£0.0	£0.0	£0.0	£0.0
STEP 5:	NET RESIDUAL EXPENDITURE - AFTER ALL COMMITMENTS (£m):	£0.0	£16.0	£30.3	£41.5
STEP 6:	FORECAST CAPACITY FOR NEW CONVENIENCE GOODS FLOORSPACE:				
	Superstore Format ('Top 5' grocers):				
i	Estimated Average Sales Density of New Floorspace (£ per sq m):	£12,250	£12,092	£12,079	£12,128
ii	Net Floorspace Capacity (sq m):		1,326	2,513	3,421
iii	Assumed Net / Gross Floorspace Ratio:	70%	70%	70%	70%
iv	Gross Floorspace Capacity (sq m):	0	1,895	3,589	4,887
	Supermarket/Deep Discounter Format (e.g. Aldi, Lidl, Netto, Co-op, etc.):				
i	Estimated Average Sales Density of New Floorspace (£ per sq m):	£5,500	£5,429	£5,423	£5,445
ii	Net Floorspace Capacity (sq m):	-	2,054	5,596	7,620
iii	Assumed Net / Gross Floorspace Ratio:	70%	70%	70%	70%
iv	Gross Floorspace Capacity (sq m):	-	4,220	7,994	10,885

4.4. The report went on to allocate this requirement between the different district and local centres in the Borough and also made an allowance for 'Rest of the Borough' which is the residual capacity once all the district and local centres were accounted for. The range of convenience floorspace allocated to 'Rest of the Borough' is 675 sq. m to 1,503 sq. m gross.

4.5. The GNRS identifies *'that the residual floorspace identified for the rest of the Borough could be used to support local convenience provision at housing allocation sites in the borough including Field Farm (450 homes) and Toton (500 homes)'* (para 16.26) The allocation of this site for circa 1600 new homes will be one of the most significant housing allocations in the Borough, larger than both Field Farm and Toton, and therefore it can be assumed that any retail floorspace being brought forward through the allocation of this site will not only fall into the category 'Rest of the Borough' but should take a significant proportion of the requirement.

4.6. Given that the format both for this site, and for all of the housing allocations, is likely to be a small supermarket, then it is safe to assume the 1,503 sq. m capacity (based on a lower sales density) for the 'Rest of the Borough' is applicable. However this only reflects the capacity to 2028, given that the majority of the scheme will be built post 2028 where the floorspace requirements for the Borough will exponentially increase and the number of households on this site will increase from 600 to 1,600, we would anticipate that in terms of the masterplan an allowance can be made for circa 1,400 sq. m net convenience floorspace without harming investment into, or the vitality of existing centres.

4.7. This allocation will not divert any of the identified expenditure and growth for existing centres therefore allowing them to expand and grow in line with the recommendations in the GNRS.

4.8. In respect of comparison, given the small nature of the proposal and the level of spend generated by the allocation we would not anticipate any trade being diverted from higher order centres.

Centres in Broxtowe

4.9. In terms of specific impacts the two centres in proximity to the allocation are Beeston Town Centre and Stapleford District Centre.

4.10. The GNRS concludes that Beeston is a popular and successful centre which has benefited from recent investment. The completion of the tramline and redevelopment of the square have helped improve occupancy levels and the focus for the centre.

4.11. In respect of Stapleford the conclusions of the GNRS are that this is a relatively healthy centre which has benefited from recent investment. The centre would benefit from a main food retailer to act as more of an anchor store, however the recent development of Iceland and Wetherspoons have improved its attractiveness and there is an existing large co-op store which currently serves as the food anchor.

4.12. Therefore both centres are healthy and withstand small levels of trade diversion.

4.13. In terms of market share Broxtowe as a whole performs well retaining 66%[3] of the main food shopping spend with 20% of this being retained by Beeston Town Centre.

4.14. In terms of top up food shopping Broxtowe retains 72.5% of the available expenditure which is by the far the highest level of retention out of all the local authorities in this study. Therefore the overall picture of shopping patterns in Broxtowe is currently very healthy, with the Borough being able to retain the majority of the expenditure generated by its residents.

4.15. Overall the picture is that the centres are healthy and are retaining much of the local residents existing expenditure.

4.16. Looking forward the GNRS allows for additional floorspace in each of the centres which could support an extension to existing foodstores or the provision of new local format foodstores.

4.17. Therefore both centres have benefited from recent investment and are healthy and vibrant. Going forward both Beeston and Stapleford have been allocated a proportion of the available expenditure to help them continue to grow. The proposed allocation will not divert any of this expenditure and will not harm their vitality or viability.

[3] Appendix 4 GNRS

Impact on Centres in Erewash

4.18. As the site sits very close to the boundary with Erewash Borough Council, consideration should be given to the impact the allocation may have on the centres in the local authority.

4.19. Firstly if we look at the market shares for food shopping and look to Table 1 of Appendix 4 of the GNRS, we can see that currently shops in Broxtowe only attract 8.7% of the available expenditure from Erewash residents (zone 6).

4.20. If we look more closely as to how that is broken down, the figure for where residents primarily shop is lower (7% for main food and 5.7% for top up shopping) but higher for occasional visits (16% for both main food and top up shopping). This indicates that very few residents chose to use shops within Broxtowe on a regular basis for their food shopping, but instead may use them on occasion in passing.

4.21. On this basis it is very unlikely that the proposed allocation will divert or alter current shopping patterns for residents within Erewash.

4.22. The closest centre in Erewash is Long Eaton Town Centre which sits to the south west of the proposed allocation.

4.23. Having reference to the Retail Study prepared for Erewash Borough Council, this identifies that within Zone 1 ('Long Eaton'); existing facilities within the Borough are identified to attract 83% of convenience goods expenditure generated within this zone.

4.24. In addition the findings of the Household Survey indicates that all facilities in Long Eaton Town Centre (including the edge-of centre stores) draw from a wide area with an identified main food shopping catchment population of approximately 52,000 people in 2009 – the largest of the four main centres.

4.25. This is a very healthy level of retention and demonstrates that Long Eaton is well provided for in terms of convenience shopping and these stores are well used by local residents.

4.26. The Retail Study does go on to state that despite this high retention rate many of the stores are under trading and therefore does not propose any allocations for Long Eaton rather the residual capacity is directed towards Ilkeston. This is borne out by the adopted Core Strategy which identifies Ilkeston rather than Long Eaton as a sustainable location to focus a significant amount of the Borough's growth requirements over the plan period to 2028.

4.27. Therefore we would conclude that firstly the foodstores in Long Eaton currently have a high retention rate for local residents and the introduction of a small supermarket as part of the proposed allocation will not change this. Secondly given that much of the investment in retail floorspace is directed towards Ilkeston Town centre, rather than Long Eaton, so the proposed allocation will not impact upon this.

5. Summary

To summarise:-

- The proposed allocation will generate enough expenditure to support a small supermarket of circa 1400 sq. m net as part of the proposed new local centre.
- In addition 700 sq. m net of comparison and food and drink uses could be supported as part of this allocation.
- This leads to a local centre of circa 2100 sq. m net or 3000 sq. gross.
- This allocation will not have an adverse impact on either the centres in Broxtowe or Erewash.
- Retail Studies show existing foodstores and centres have a high retention rates of expenditure and are healthy and performing well, a store of the size proposed will not alter these shopping patterns.
- There is capacity for existing centres to grow and expand as well as the provision of new stores as part of the larger housing allocations; therefore there will be no impact on investment into these centres.

Tamsin Cottle

Director
Planning and Development

[redacted]

[redacted]

www.jll.com

Chetwynd Barracks

Transport & Movement Strategy

On behalf of **Defence Infrastructure Organisation**

Project Ref: 37782/TMS001 | Rev: B | Date: 18 September 2017

[redacted]

Document Control Sheet

Project Name: **Chetwynd Barracks**
Project Ref: **37782**
Report Title: **Transport & Movement Strategy**
Doc Ref: **TMS001**
Date: **April 2017**

	Name	Position	Signature	Date
Prepared by:	Emily Schofield	Graduate Transport Planner	ES	April 2017
Reviewed by:	Marc Rennie	Associate Transport Planner	MR	April 2017
Approved by:	Tim Allen	Partner	TA	April 2017
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
A	August 2017	Revision	MR	MR	TA
B	September 2017	Revision	MR	MR	TA

Contents

Tables

Figures

Appendices

Appendix D Stapleford Lane/Woodstock Road

1 Introduction

1.1 Background to this report

1.1.1 The Defence Infrastructure Organisation (DIO) is part of the Ministry of Defence (MOD), building, maintaining and servicing the infrastructure needed to support defence.

1.1.2 The DIO is responsible for enabling defence people to live, work, train and deploy at home and overseas and the vision for the DIO is to equip defence with a significantly smaller, more efficient, better quality estate.

1.1.3 A better defence estate for the Army is described in the MOD publication *A Better Defence Estate*[1]. It is proposed that the Army's structure will be refined to deliver the outputs required by the Strategic Defence and Security Review 2015. The work has been aligned to the strategy to deliver an efficient basing plan that meets the needs of the Army and its people.

1.1.4 The current planning intent for disposal changes to the future Army basing laydown includes the proposed disposal of Chilwell Station/Chetwynd Barracks, Chilwell, Nottingham which has an estimated disposal date of 2021.

1.1.5 As part of the disposal process, the DIO (as the legal landowner) is seeking to promote Chetwynd Barracks (the site) as a strategic housing-led mixed used allocation in the emerging Broxtowe Borough Council (BBC) Part 2 Local Plan.

1.1.6 Peter Brett Associates LLP (PBA), working on behalf of JLL as lead consultant, has been instructed to provide a Transport & Movement Strategy in support of the sites promotion and allocation for the following:

> *A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sqm of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial.*

1.2 Planning context

1.2.1 BBC, as planning authority, is currently consulting upon additional sites which may be allocated for development through the emerging Part 2 Local Plan. One of which is the site at Chetwynd Barracks.

1.2.2 The site was not included in detail in the 2013 Issues and Options consultation as it was considered undeliverable as a result of the uncertainty surrounding the availability of the site for development.

1.2.3 In March 2016 the MOD released a Ministerial Statement setting out their ambition to release the site for development from 2020.

1.2.4 The August 2016 Broxtowe Borough Council document *Site Allocations: Potential Additional Sites* states the site has the following development potential:

- 800 Dwellings (as set out in the government's Ministerial Statement).

[1] MOD (2016). *A Better Defence Estate – Amended December 2016*.

- Significant provision of Green Infrastructure within the site linking to Green Infrastructure required as part of the Strategic Location for Growth (SLG). Retain and enhance wildlife corridors including Hobgoblin Wood, possibility of making existing 'restricted access' sports pitch publically accessible.

- Employment Development – links to potential HS2 station and associated employment in SLG.

- Small scale Neighbourhood centre (i.e. small parade of shops), could be most appropriately accommodated near to the existing Tesco Extra retail store.

- Enhance the Listed Memorial and adjacent memorial garden – make publically accessible.

1.2.5 The Jobs and Economy Committee (26 January 2017) endorsed an allocation of 500 houses at the site in the plan period to 2028. Discussions have been ongoing with officers about the potential capacity of the site beyond this.

1.3 Liaison with planning and highway authorities

1.3.1 PBA has discussed the proposed allocation of the site with BBC, Nottinghamshire County Council (NCC), as highway authority, and Highways England, given the proximity of the site to the strategic road network.

1.3.2 Discussion with each consultee has enabled PBA to understand and comment on the approach that they are taking to preparing, and supporting, their transport evidence base and to ensure the promotion of Chetwynd Barracks is aligned with these objectives.

1.4 Purpose of this report

1.4.1 It is clear that BBC will be under considerable pressure to find suitable sites outside the Green Belt to meet their objectively assessed need. Chetwynd Barracks is well placed to fulfil the considerable local housing need, given that this is a site which is already developed, is clearly within the urban fabric and which will, in time, inevitably be re-used for housing.

1.4.2 Therefore, the purpose of this report is to be able to evidence the capacity of the site, the scale of development that can be achieved and the means by which it can be delivered, in order to underpin the site's credibility in the site appraisal process for the emerging Part 2 Local Plan.

1.5 Structure of this report

1.5.1 Considering the requirements to evidence the suitability and deliverability of the site, this Transport & Movement Strategy is structured as follows:

- Section 2 presents a summary of relevant national and local policy in the context of site promotion and development.

- Section 3 describes the site, its situation, the trip characteristics of the site and the site's proximity to local community facilities and services.

- Section 4 describes the local road network in proximity of the site. This section also describes the traffic flows and personal injury collisions that have been recorded on the local road network and presents a summary of current network operation.

- Section 5 describes the accessibility of the site by sustainable modes of travel.

- Section 6 explores the potential future baseline traffic conditions on the road network in the vicinity of Chetwynd Barracks up to the end of the plan period (i.e. 2028).
- Section 7 describes the potential for development at Chetwynd Barracks, describing the potential housing numbers, phasing and access strategy and estimated generation, distribution and assignment of development trips.
- Section 8 describes the proposed Access & Movement Strategy for the site, considering the approach to design and connectivity by all modes of travel.
- Section 9 considers the potential implications of development on the surrounding transport network as a result of developing Chetwynd Barracks and providing other significant infrastructure projects in the area.
- Section 10 summarises this Transport & Movement Strategy and draws a conclusion on the principles of development on the site.

2 Policy considerations

2.1 Introduction

2.1.1 This section summarises relevant national and local policy in the context of site promotion and development.

2.1.2 There are a series of existing, and emerging, documents that have a bearing on the way that any development proposal on the site, and its transport impacts, should be considered.

2.2 National policy

National Planning Policy Framework (NPPF)

2.2.1 NPPF encourages reducing the need to travel, and in Section 4 'Promoting sustainable transport' within paragraph 32, the NPPF states that 'improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.'

2.2.2 The key aim of the NPPF is to promote and achieve sustainable development. Within paragraph 182, NPPF states that 'Local authorities should work with neighbouring authorities and transport providers to develop strategies for the provision of viable infrastructure necessary to support sustainable development'.

2.2.3 In reinforcing the principle of supporting sustainable development, paragraph 197 states that, "In assessing and determining development proposals, local planning authorities should apply the presumption in favour of sustainable development."

Planning Practice Guidance

2.2.4 The PPG is a web-based guidance which adds further context to the NPPF. Within the 'Transport evidence bases in plan making and decision taking' section, it states in paragraph 008 that 'the first step in quantifying the impact of the proposed land allocations in the Local Plan on the transport system is to provide an estimate of the person trips (for all types of transport) that are likely to be generated by it.'

2.2.5 'In all cases, an analysis of development-related trips using an appropriate database or an alternative methodology should be agreed with the relevant highway authorities, as this will form the major element of the assessment.

2.2.6 An assessment of the impacts of the proposed additional land allocations can be initiated once initial potential allocations have been determined. There needs to be a description of the type of development at each of the locations proposed in as much detail as possible at the time. Where this is not possible, a "likely" scenario will need to be employed to set out the potential transport impact. Information that could be required includes:

- *location plans of each site*
- *description of all the proposed land uses*
- *scale of development – such as the number of residential units or gross floor area of development – subdivided by land use where appropriate/possible*
- *site area in hectares*

- *likely proposed access to existing transport infrastructure for all types of travel*
- *where known, the likely proposed parking strategy*
- *development phasing, where applicable*
- *potential for securing travel planning benefits and enhanced sustainable transport provision'*

2.2.7 The PPG states that 'The above requirements are not exhaustive and will require adaptation to reflect the knowledge about the potential site allocations and developments as well as the type and scale of the proposed developments.'

2.2.8 'When looking at safety considerations, paragraph 009 states that 'all types of transport should be covered by safety considerations and accident analysis, taking into account the objective of facilitating, where reasonable to do so, the use of sustainable modes of transport'

2.2.9 'Critical locations on the road network with poor accident records should be identified. This is to determine if the proposed land allocations will exacerbate existing problems and whether highway mitigation works or traffic management measures will be required to alleviate such problems.'

Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen (January 2011)

2.2.10 This White Paper forms part of the national strategy to tackle carbon emissions from transport by encouraging short trips (less than five miles) to be undertaken using sustainable modes of transport such as walking, cycling and public transport. The document sets out mechanisms for local authorities to deliver local sustainable transport and provides practical guidance for dealing with transport issues in their areas, supported by case studies.

2.2.11 The priority for local transport set out in the White Paper is to 'encourage sustainable local travel and economic growth by making public transport and cycling and walking more attractive and effective, promoting lower carbon transport and tackling local road congestion'.

2.3 Local policy

Greater Nottingham Local Plan – Core Strategy

2.3.1 The transport related spatial objectives of the core strategy are:

- **'environmentally responsible development addressing climate change'** - reducing '*the causes of climate change'* and minimising *'its impacts, through locating development where it can be highly accessible by sustainable transport'*
- ***'excellent transport systems and reducing the need to travel'*** - ensuring *'access to jobs, leisure and services is improved in a sustainable way, reducing the need to travel especially by private car, by encouraging convenient and reliable transport systems, through implementing behavioural change measures, and encouraging new working practices such as use of IT and home working.'*

2.3.2 'Major new transport infrastructure will be provided to encourage sustainable alternatives to using the private car, address the impacts of growth, and/or meet the objectives of the Local Transport Plans'. Schemes that relate to Chetwynd Barracks are as follows:

- *'existing planned transport schemes with committed funding:*

- Nottingham Express Transit Phase 2 (extensions to Clifton and Chilwell)

- *National and local schemes which will have significant economic and sustainable transport benefits to the plan area if implemented:*

  - High Speed Rail 2 (HS2)
  - HS2 hub station at Toton to serve the East Midlands
  - Extension to NET to serve the new HS2 hub station, and
  - Midland Main Line Speed Improvements and Electrification.'

2.3.3 'The need to travel, especially by private car, will be reduced by securing new developments of appropriate scale in the most accessible locations … in combination with the delivery of sustainable transport networks to serve these developments.'

2.3.4 'The priority for new development is in firstly selecting sites already accessible by walking, cycling and public transport, but where accessibility deficiencies do exist these will need to be fully addressed. The effective operation of the local highway network and its ability to provide sustainable transport solutions or support economic growth should not be compromised.'

2.3.5 The Core Strategy Aims to 'increase modal shift towards public transport, walking and cycling' and 'increase the number of developments supported by travel plans'.

2.3.6 'Developments must contribute as necessary to meet all on and off site infrastructure requirements to enable development to take place satisfactorily.' These include:

- *'transport infrastructure (including footpaths, bridleways, cycleways and roads)*
- *public transport (including services and facilities), and*
- *travel behavioural change measures (including travel plans, marketing and promotion)'.*

Nottinghamshire Local Transport Plan 2011-2026 (LTP3)

2.3.7 The LTP3 transport goals are to:

- **'provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel'** – to be achieved by focusing on *'making best use of existing transport networks, transport's role in regeneration initiatives, maintenance of the transport assets'*, and *'improving connectivity to inter-urban, regional and international networks, primarily by public transport'* as well as focusing on *'public transport provision, promoting and facilitating active, healthy travel, road safety improvements, and community safety improvements'.*

- **'improve access to key services, particularly enabling employment and training opportunities'** – to be achieved by focusing on *'the delivery of the elements of the accessibility strategy*, and *'the provision of an affordable, reliable, and convenient passenger transport network'*, *and*

- **'minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions'** – to be achieved by focusing on '*adapting to climate change, CO2 emissions, congestion management, air quality, noise, and biodiversity, the natural, historic and physical environment'.*

2.3.8 Nottinghamshire's long term transport vision is:

- *'Within local neighbourhoods, to provide safe and sustainable access to local facilities and services, such as health, schools, colleges and local shops. This will include priority for pedestrians, cyclists and those with mobility difficulties'*

- *'To provide everyone with safe and sustainable transport options for movement within and between our towns and district centres. This will include a fully integrated, high quality public transport network and appropriate parking provision for private cars'*, and

- *'To connect our towns, district centres and villages to other parts of the Plan area and beyond (including regional and national trip generators). This will include safe and sustainable strategic links by road and rail for both people and goods'.*

2.3.9 Nottinghamshire's Local Transport Plan identified 12 local transport challenges that need to be overcome in order to reach its goals:

supporting economic growth -

- tackle congestion and make journey times more reliable

- improve connectivity to inter-urban, regional and international networks, primarily by public transport

- address the transport impacts of planned housing and employment growth

- encourage people to walk, cycle and use public transport through promotion and provision of facilities

- support regeneration

helping protect the environment -

- reduce transport's impact on the environment (air quality, buildings, landscape, noise etc.)

- adapt to climate change and the development of a low-carbon transport system

improving health and safety -

- improve levels of health and activity by encouraging active travel (walking or cycling) instead of short car journeys

- address and improve personal safety (and the perceptions of safety) when walking, cycling or using public transport

improving accessibility -

- improve access to employment and other key services particularly from rural areas

- provision of an affordable, reliable, and convenient public transport network

maintaining and improving existing infrastructure -

- maintain the existing transport infrastructure (roads, footways, public transport services etc.).

2.4 Summary

2.4.1 National and local policies in the context of site promotion and development follow similar themes in terms of their key principles. The policies are seeking to address issues such as:

- increasing sustainable travel;
- reducing transport's environmental impact; and
- increasing accessibility to facilities and amenities.

2.4.2 Allocation of Chetwynd Barracks for development would help address the above transport issues due to the site's proximity to a variety of public transport links and a wide range of community facilities and services. This has the potential for reducing the need to travel by private car and encourage the use of sustainable transport alternatives.

3 Site context

3.1 Introduction

3.1.1 This section describes the site, its situation, the trip characteristics of the site and the site's proximity to local community facilities and services.

3.2 Site situation

3.2.1 Chetwynd Barracks is located in the village of Toton, Nottinghamshire within the Greater Nottingham urban area, and in the Borough of Broxtowe. The site is only a short distance away from other villages such as Bramcote and the towns of Long Eaton, Beeston and Stapleford. The nearest city is Nottingham approximately 8km to the north east. The location of Chetwynd Barracks is shown in **Figure 3.1.**

3.2.2 The main site access is located off Swiney Way; a two-way single carriageway that links between the B6003 Stapleford Lane and the A6005 Nottingham Road which are the major roads within Toton. Chetwynd Barracks is situated in proximity to the strategic A52 and the M1 routes to the north west, facilitating access to the wider area.

3.2.3 Two further access points, both of which are not currently in use, are located off Stapleford Lane (to the west of the site) and Chetwynd Road (to the east of the site).

3.2.4 Chetwynd Barracks comprises the red-line boundary, to which this Strategy refers, in addition to Service Family Accommodation (SFA) which lies outside of the red-line boundary and is rented from Annington; one of the largest private owners of residential property in the UK. This rented housing will still be occupied once the site has been disposed. DIO has no control over this land beyond the red-line boundary.

3.3 Existing occupation

3.3.1 The site currently has the following capabilities; each of which will be reprovisioned elsewhere:

- Mission Training & Mounting Centre (Individual).
- 170 (Infrastructure Support) Engineer Group.
- HQ 7 Infantry Brigade & HQ East.
- Nottingham Troop, 11 Explosive Ordnance Disposal Regiment Royal Logistic Corps.

3.3.2 The DIO has indicated that approximately 3,000 people live and work on-site. Approximately 167 civilians also work on-site with most starting work at 8.30am and finishing at 4.30pm, Monday to Thursday, and 2.45pm on a Friday. However, this figure would fluctuate depending when training occurs at the site.

3.3.3 Furthermore, on Mondays, some of the military personnel don't start until 10am and on Wednesday most stay until midday only.

3.3.4 Royal Navy and Army Reserves use the camp at weekends and community engagement functions are also held on the site.

3.3.5 There is 174 SFA inside the wire at Chetwynd Barracks comprising the following:

- Type B housing = 62 (2 bed).

- Type C housing = 51 (3 bed).
- Type D housing = 10 (4 bed).
- Type V housing = 7 (3 bed).
- Type 4 housing = 22 (4 bed).
- Type 3 housing = 20 (4 bed).
- Type 2 housing = 2 (5 bed).

3.3.6 There are currently families living in 158 of the properties. The remaining 16 properties are void.

3.4 Existing vehicle trip generation

3.4.1 Most personnel use the Main Gate off Swiney Way, with some personnel accessing the site via the foot gates.

3.4.2 Traffic surveys were undertaken on 17 January 2017 at the main access to the site off Swiney Way to ascertain the peak hour trip profile of the site. **Table 3.1** shows the vehicle trips recorded.

Table 3.1 - Chetwynd Barracks vehicle trips

Trip Generation	AM Peak Hour (08:00 09:00)			PM Peak Hour (17:00 18:00)		
	Inbound	Outbound	Two way	Inbound	Outbound	Two way
Chetwynd Barracks vehicle trips	104	61	165	73	133	206

3.4.3 **Table 3.1** shows that most vehicle trips are inbound between 08:00-09:00 (AM) hours and outbound between 17:00-18:00 (PM) hours. It should be noted that these trips will also include trips made by occupiers of Annington homes, which are currently outside of the site boundary.

3.4.4 However, as a consequence of civilian departure times, it may be considered that employment traffic only contributes to AM peak hour flows on the local road network and that some trips generated during the PM peak hour may be of a purpose other than travel to/from work.

3.4.5 The trip generation during peak hours at Chetwynd Barracks is approximately 5.2% of the 3,167 regular residents/employees making vehicle trips during the AM peak hour and approximately 6.5% during the PM peak hour.

3.4.6 Some of the trips generated during the AM and PM peak hours could have been made by people other than the usual residents and employees of the site. This would mean that a smaller percentage of the regular residents/employees of Chetwynd Barracks make vehicle trips during peak hours.

3.4.7 Therefore, in order to estimate a more realistic trip rate from the site, it has been assumed that 10% of the population would be arriving and departing during peak hours. This figure derives from the Transport Assessment (TA)[2] that was submitted as a supporting document to the

[2] Amec Environment & Infrastructure UK Ltd (2013). *Defence College of Technical Training, Lyneham: Transport Assessment*.

planning application for a Defence College of Technical Training at the former RAF Lyneham, Wiltshire.

3.4.8 At its peak, the former RAF Lyneham accommodated between 3,000-4,000 permanent military and civilian personnel. Based on counts undertaken at the main gate, approximately 10% of the population could be considered to arrive and depart during network peak hours.

3.4.9 Clearly, this is a guide to potential peak hour trip generation, given that vehicle trips to and from Chetwynd Barracks fluctuate depending on activity on site, such as the number of deliveries received, training events and community engagement functions.

3.4.10 Applying 10% to the population of Chetwynd Barracks and applied proportionally to the arrivals and departures recorded from the January 2017 survey, the resulting trip generation is shown in **Table 3.2.**

Table 3.2 – 10% trip generation from Chetwynd Barracks

Trip Generation	AM Peak Hour (08:00 09:00)			PM Peak Hour (17:00 18:00)		
	Inbound	Outbound	Two way	Inbound	Outbound	Two way
Chetwynd Barracks vehicle trips	200	117	317	112	204	317

3.4.11 There would be higher proportion (63%) of inbound trips during the morning peak hour and vice versa (65%) during the evening peak hour.

3.4.12 It is considered that the vehicle trip generation shown in **Table 3.2** is more of a realistic and robust figure that can be considered to be generated by the site during peak hours.

3.4.13 The other access off Swiney Way is gated and is used infrequently, but will be retained as it does not fall within the site boundary.

3.5 Proximity to local community facilities and services

3.5.1 The site is located close to a number of key facilities including existing residential areas, local primary and secondary education facilities and a range of local retail amenities and leisure facilities as shown in **Figure 3.2**.

3.5.2 Guidance provided by the IHT's document *Guidelines for Providing for Journeys on Foot*[3] identifies acceptable walking distances (Table 3.2 within the document is reproduced in **Table 3.3**).

Table 3.3 - IHT acceptable walking distances

Walking distances	Town centres	Commuting/School/Sight seeing	Elsewhere
Desirable	200m	500m	400m
Acceptable	400m	1,000m	800m
Preferred maximum	800m	2,000m	1,200m

3.5.3 The boundaries for preferred maximum walking distances to the town centre, commuting/schools/sight-seeing and elsewhere can be seen in **Figure 3.3** which illustrates

[3] IHT (2000). *Guidelines for Providing for Journeys on Foot*. IHT: London.

how a wide range of facilities are accessible by foot within the preferred maximum walking distances.

3.5.4 Chetwynd Barracks is within desirable walking distance of Toton town centre and Chetwynd Primary Academy.

3.5.5 Within 800m of the site (less than a 10-minute walk) there are at least six education centres, five open spaces, three community facilities, three retail sites and two medical facilities.

3.5.6 Chetwynd Barracks currently has a medical centre, community centre and recreation ground on site. Additionally, Tesco Extra, a large supermarket on Swiney Way, is less than 100m west of the Chetwynd Barracks main gate.

3.5.7 The walk and cycle distances and times from Chetwynd Barracks to the amenities within Toton are summarised in **Table 3.4**. For the journey times, the industry-standard speeds of 1.4 m/s for walk journeys and a 4.2 m/s for cycling journeys were used.

Table 3.4 - Walk and cycle distance and travel times to local amenities

Amenity Type	Amenity	Distance from Site (m)	Walk time (minutes)	Cycle time (minutes)
Primary Schools	Chetwynd Primary Academy	180	2.1	0.7
	Banks Road Infant School	252	3.0	1.0
	Eskdale Junior School	270	3.2	1.1
	Alderman Pounder Infant School	359	4.3	1.4
	Toton Bispham Drive Junior	378	4.5	1.5
	Sunnyside Primary and Nursery School	809	9.6	3.2
Secondary Schools	Chilwell School	533	6.3	2.1
	George Spencer Academy	705	8.4	2.8
Dentist	School Lane Dental Centre	605	7.2	2.4
Doctors	Medical Centre	0	0.0	0.0
Food Retail	Tesco Toton Extra	34	0.4	0.1
Post Offices	Toton Post Office	34	0.4	0.1
Shopping Centres	Chilwell Retail Park	654	7.8	2.6
Halls and Community Centres	Community Centre	0	0.0	0.0
Leisure Centres	Chilwell Olympia	543	6.5	2.2
Libraries	Toton Library	291	3.5	1.2
Open Spaces	Chetwynd Road Recreation Ground	0	0.0	0.0
	Chilwell Cemetery	29	0.3	0.1
	Sherman Drive Open Space	118	1.4	0.5
	Field Lane Estate Open Space	130	1.5	0.5
	Attenborough Lane Allotments	204	2.4	0.8
Public Houses	The Cadland	438	5.2	1.7

3.5.8 As shown in **Figure 3.4** within 5km of Chetwynd Barracks (less than 20 minutes' cycle time) the entirety of Toton can be accessed as well community facilities in nearby villages and towns such as Barton, Clifton. Long Eaton, Breaston, Risley, Sandiacre, Stapleford, Bramcote and Beeston as well as the west of Nottingham city.

3.6 Summary

3.6.1 Chetwynd Barracks occupies a prominent and strategic position between the A52, the M1 and the A6005 Nottingham Road, facilitating access to local destinations, such as Stapleford, Bramcote, Long Eaton and Beeston, and those further afield.

3.6.2 Approximately 3,000 people live and work on site, plus approximately 167 civilians. The number of trips generated by the site during peak hours was recorded on 17 January 2017. This showed that approximately 165 two-way trips were recorded during the morning peak hour and 206 two-way trips during the evening peak hour.

3.6.3 However, the number of trips generated fluctuates depending on site activity. Therefore, the average number of trips at the site was recalculated based on data from the application that was submitted for the redevelopment of the former RAF Lyneham. Based on counts undertaken at the main gate, approximately 10% of the population could be considered to arrive and depart during network peak hours.

3.6.4 Using 10% as a proxy for the number of site users making vehicle trips at peak times, the vehicle trip generation at Chetwynd Barracks on days with no training would be approximately 317 two-way trips during the morning and evening peak hours. It is considered that this vehicle trip generation is more of a realistic and robust figure that can be considered to be generated by the site during peak hours

3.6.5 The site is also situated in a desirable location, given its proximity to a range of local community facilities and services, such as schools, open spaces, retail and health provision; all of which are accessible from the site by foot and by bicycle.

3.6.6 Indeed, the situation of the site within an existing residential area enables integration with an established community; access from the site to which would be significantly enhanced via the proposed connections to existing pedestrian, cycle and bus provision.

4 Local road network

4.1 Introduction

4.1.1 This section describes the local road network in proximity of the site. This section also describes the traffic flows and personal injury collisions that have been recorded on the local road network and presents a summary of current network operation.

4.2 Description of local road network

Swiney Way

4.2.1 The main access of Chetwynd Barracks is off Swiney Way (see **Figure 4.1**); an all-purpose, two-way single carriageway, approximately 7.4m wide, subject to a 30mph speed limit. Swiney Way is within a community speed watch area and a speed reduction measure is in place on this road in the form of a sign informing drivers of their speed.

4.2.2 To the south east of the site access, the road is lit with footways on both sides and grass verges on one or both sides along its length. From the junction between Swiney Way and Shaw Road, an off road cycleway is provided alongside the footway up to the end of the road. There are three pedestrian crossing facilities along the south east length of Swiney Way from Chetwynd Barracks' main access including one toucan crossing.

4.2.3 Towards the south, Swiney Way meets with Woodward Avenue and Ranson Road, at a lit four arm roundabout. This junction has pedestrian refuges with dropped kerbs and tactile paving at each arm. At the south end of Swiney Way, the road meets Nottingham Road and Barton Lane at a signalised crossroads. The stretch between the roundabout on Swiney Way and the signalised junction is two lanes in each direction; providing a left turn only lane at the end of Swiney Way on to Nottingham Road (E).

4.2.4 To the west of the site access, the road is lit with footways on both sides and grass verges on one or both sides along its length. There are four pedestrian crossing facilities along the west length of Swiney Way from the Chetwynd Barracks' main access including one pelican crossing.

4.2.5 To the west, Swiney Way ends at a signalised crossroads with Banks Road and Stapleford Lane (North and South). Starting approximately 50m away from the junction, Swiney Way widens to two lanes in each direction with a right turn only lane for vehicles turning onto Stapleford Lane (N).

A6005 Nottingham Road

4.2.6 The A6005 Nottingham Road is the major road that runs along the south of Toton (see **Figure 4.1**). It's an all-purpose two-way carriageway that varies between one and three lanes in both directions. The road is subject to a 30 to 40mph speed limit.

4.2.7 There are 7 major junctions along the A6005 Nottingham Road (from west to east):

- Midland Street/A6005 Nottingham Road/Market Place/A6005 Derby Road roundabout.
- Trent Street/A6005 Nottingham Road E/Waverly Street/A6005 Nottingham Road W roundabout.
- A6005 Nottingham Road E/Station Road/A6005 Nottingham Road W priority T junction

- A6005 Nottingham Road W/High Road/A6005 Nottingham Road E signalised T junction.
- Swiney Way/A6005 Nottingham Road E/Barton Lane/A6005 Nottingham Road W signalised crossroads.
- Ranson Road/A6005 Nottingham Road E/Eldon Road/A6005 Nottingham Road W signalised crossroads.
- Attenborough Lane N/Bye Pass Road/Attenborough Lane S/ A6005 Nottingham Road W signalised staggered junction.

4.2.8 Lit footways are provided along Nottingham Road on either side of the carriageway. Along Nottingham Road there are a range of pedestrian crossing facilities. There are central refuges, pelican and puffin signals at major junctions. Away from junctions, spread along the highway there are central refuges, puffin signals and a pelican and pegasus crossing (20m southwest of St Leonards Riding School).

4.2.9 A lit off-road cycleway is provided to the west from the Nottingham Road/High Road Priority T junction. Further west starting from the Toton village gateway, off-road cycleways are provided on either side of the carriageway. West from the Long Eaton town gateway, the cycleway returns to one side of the road again and becomes on-road cycleways from Station Road.

B6003 Stapleford Lane/High Road

4.2.10 The B6003 Stapleford Lane/High Road (see **Figure 4.1**) is an all-purpose, two-way single carriageway road. The road is subject to a 30mph speed limit in the vicinity of Swiney Way and Woodstock Road. The speed limit increases to 40mph heading northbound past Cleve Avenue.

4.2.11 Including the footways along service roads, the whole stretch of the B6003 Stapleford Lane/High Road has lit footways on both sides of the carriageway with grass verges at some points on either one or both sides of the road.

4.2.12 The stretch of Stapleford Lane that runs alongside Chetwynd Barracks has residential service roads running parallel to the main carriageway separated by footways and/or grass verges. These roads are access only.

4.2.13 To the north, B6003 Stapleford Lane/High Road ends where Stapleford Lane becomes Toton Lane, approximately 330m south of Bardills roundabout. To the south, B6003 Stapleford Lane/High Road ends at a signalised T junction between High Road and Nottingham Road (east and west). From approximately 80m north of this junction, the road widens into two lanes to provide a left turn only lane at the junction.

4.2.14 There are many pedestrian crossing facilities along B6003 Stapleford Lane/High Road including two pedestrian refuges, one at either end of the stretch of road and 3 pelican crossings, two of which are at the Stapleford Lane/Swiney Way/Banks road signalised crossroads.

4.2.15 Lit off-road cycleways are provided to the west of High Road between Norfolk Avenue and the Nottingham Road Signalised T junction.

Banks Road

4.2.16 Banks Road is a key route into the residential area to the west of Chetwynd Barracks (see **Figure 4.1**). It is an all-purpose two-way single carriageway road. Approximately 6.9m wide with on street parking, the road is subject to a 30mph speed limit.

4.2.17 Between the Banks Road/Stapleford Lane (north and south)/Swiney Way signalised crossroads and the Banks Road/Goodwood Drive priority T junction a school safety zone is in operation where there is a 20mph maximum speed limit at certain times.

4.2.18 Most of Banks Road, between the priority T junction with Leyland Close and the Banks Road/Epsom Road roundabout, has its carriageways separated by central road hatchings approximately 1.4m wide.

4.2.19 In the east, Banks Road ends at the Stapleford Lane (north and south)/Swiney Way/Banks Road signalised crossroads. In the north, Banks Road ends at a roundabout forming a junction with Epsom Road.

4.2.20 Along the entirety of Banks Road, lit footways are provided on both sides of the carriageway. There is a pedestrian crossing facility in the form of a pelican signal at the east end of Banks Road.

Woodstock Road

4.2.21 Woodstock Road is another key route into the residential area to the west of Chetwynd Barracks (see **Figure 4.1**). It is an all-purpose two-way single carriageway road approximately 6.8m wide with on street parking and subject to a 30mph speed limit. Lit footways are provided on both sides of the carriageway along the length of the road.

4.2.22 In the east, Woodstock Road ends at a priority T junction with Stapleford Lane. In the west, Woodstock Road ends at a priority T junction with Seaburn Road.

4.3 Traffic flows

Introduction

4.3.1 Data is available from the documents submitted in support of the planning application (*Broxtowe Borough Council Planning Application reference: 12/00585/OUT*) for development on **Land to the West of Toton Lane, Stapleford, Nottinghamshire** (Land to the west of Toton Lane); a scheme that has conditional permission.

4.3.2 Assessments of the following junctions supported the Land to the west of Toton Lane application (see **Figure 4.2**):

- M1, J25.
- Sherwin Arms roundabout (A52/A6007/Town Street/B5010 Derby Road).
- B5010/B6003 Church Street/B6003 Toton Lane.
- Bardills roundabout (A52/B6003 Toton Lane/B6003 Stapleford Lane).
- B6003 Stapleford Lane/Banks Road/Swiney Way.
- A6005 Nottingham Road/B6003 High Road.

4.3.3 The base data used to test these junctions derived from 2010. Given the date that these surveys were undertaken, it was considered appropriate that new surveys were commissioned on the local road network in the vicinity of Chetwynd Barracks to determine current traffic volumes.

4.3.4 For the purpose of submitting representations to the emerging Part 2 Local Plan, is was not considered appropriate to obtain data from the Greater Nottingham Transport Model (GNTM),

given that the model looks at impact on the strategic network and would be more appropriate for use during submission of a planning application. Additionally, Highways England has developed a stand-alone M1 J25 to Bramcote PTV Vissim (traffic simulation) Model which is offered to applicants upon request. Again, this model would be more appropriate to use in the future when the site is taken forward by way of a planning application.

4.3.5 Manual turning count (MTC) and automatic traffic count[4] (ATC) surveys were undertaken on key roads and junctions in proximity to Chetwynd Barracks, as shown in **Figure 4.3**.

4.3.6 It was not considered appropriate to survey junctions further afield, given that traffic will dissipate the further away from the origin one travels and the fact that the strategic network, i.e. the A52, is subject to separate testing by Highways England and NCC.

4.3.7 The ATC surveys were undertaken for a one-week period between 17 and 23 January 2017 on:

- Swiney Way - between Calverton Close and Shaw Road.
- Banks Road - between Sandown Road and Seaburn Road.
- Stapleford Lane - between Woodstock Road and Welbeck Gardens.
- Stapleford Lane - between St Georges Drive and Blackrod Close.

4.3.8 The MTCs were undertaken on 17 January 2017 at the following junctions:

- Woodstock Road/B6003 Stapleford Lane (priority junction).
- Banks Road/Swiney Way/B6003 Stapleford Lane (signalised crossroads).
- Swiney Way/Carter Road (Chetwynd Barracks Main Gate) (priority junction with ghost island right-turn lane).
- Swiney Way/A6005 Nottingham Road/Barton Lane (signalised crossroads).
- A6005 Nottingham Road/B6003 High Road (signalised priority junction).

4.3.9 The traffic flows recorded between 17 and 23 January 2017 include trips generated by the current users of Chetwynd Barracks. These include trips made by Royal Navy and Army Reserves who use the site for training events and access the site direct via Swiney Way, to the west of the Main Gate.

ATC results

4.3.10 The network peak hours were calculated using the ATC data. The AM and PM peak hours were found to be 08:00-09:00 and 17:00-18:00, respectively.

4.3.11 During collection of the Banks Road ATC data, between Sandown Road and Seaburn Road, one of the tubes was damaged at 06:00 hours on 20 January 2017 and so only unclassified data was collected after this date.

[4] An ATC is a pneumatic tube-based counter that is installed across a road. ATCs can record volumes of traffic by vehicle direction and classify vehicles and vehicle speeds

4.3.12 During collection of the Stapleford Lane ATC data, between St Georges Drive and Blackrod Close, both tubes were damaged at 21:00 hours on 22 January 2017 and so no data was collected after this time.

4.3.13 For both of these ATCs, average weekday peak hour flows were calculated using the available data.

4.3.14 **Table 4.1** shows the average weekday peak hour flows from all ATCs.

Table 4.1 - Average Weekday Peak Hour ATC Flows (vehicles)

ATC Position	Vehicle Flows	AM Peak	PM Peak
Between Calverton Close and Shaw Road Junctions	Swiney Way (N) to Swiney Way (S)	699	531
	Swiney Way (S) to Swiney Way (N)	421	565
	Two-way	1,120	1,096
Between Sandown Road and Seaburn Road	Banks Road (E) to Banks Road (W)	85	246
	Banks Road (W) to Banks Road (E)	234	125
	Two-way	319	371
Between Woodstock Road and Welbeck Gardens Junctions	Stapleford Lane (N) to Stapleford Lane (S)	941	1,054
	Stapleford Lane (S) to Stapleford Lane (N)	749	718
	Two-way	1,690	1,772
Between St Georges Drive and Blackrod Close	Stapleford Lane (N) to Stapleford Lane (S)	376	418
	Stapleford Lane (S) to Stapleford Lane (N)	347	384
	Two-way	723	802

4.3.15 The ATC data shows that more vehicles are present on the local road network during the PM peak hour compared to the AM peak hour. However, more vehicles are present on Swiney Way during the AM peak hour.

4.3.16 On Swiney Way, during the AM peak hour, most vehicles travel in a southbound direction. This is because of the ease at which it is possible to gain access to the A6005 Nottingham Road and, therefore, trip attractors such as Nottingham City Centre. During the PM peak hour, northbound and southbound flows are more evenly balanced but with a higher number of vehicles traveling north.

4.3.17 On Banks Road, more vehicles travel in an eastbound direction towards the Banks Road/Swiney Way/B6003 Stapleford Lane signalised crossroads during the AM peak hour and a westbound direction during the PM peak hour. This could be because Banks Road is one of the major routes into the residential area to the west of Stapleford Lane and the movements may, therefore, be attributed to journeys from home to work during the AM peak hour and work to home during the PM peak hour.

4.3.18 During the AM and PM peak hours, more vehicles travel on the northern part of Stapleford Lane (north of the Banks Road/Swiney Way/B6003 Stapleford Lane signalised crossroads) compared to the southern part. This could be due to the use of Swiney Way as a relief road to the southern part of Stapleford Lane. During the AM and PM peak hours most vehicles travel in a southbound direction. Of all the links on which traffic was surveyed, the northern part of Stapleford Lane had the highest traffic flows during the AM and PM peak hours.

MTC results

Introduction

4.3.19 **Tables 4.2** to **4.8** show the results of the MTC data collected on 17 January 2017.

Woodstock Road/B6003 Stapleford Lane

Table 4.2 - Woodstock Road/B6003 Stapleford Lane Peak Hour Turning Count

Vehicle Flows	AM Peak			PM Peak		
	Stapleford Lane S	Woodstock Road	Stapleford Lane N	Stapleford Lane S	Woodstock Road	Stapleford Lane N
Stapleford Lane S	0	32	653	0	26	836
Woodstock Road	9	0	138	15	0	50
Stapleford Lane N	923	48	0	922	166	0

4.3.20 As shown in **Table 4.2**, at the Woodstock Road/B6003 Stapleford Lane junction, the main traffic movements are north and south along Stapleford Lane with most vehicles traveling straight ahead at the junction from the north to the south of Stapleford Lane.

4.3.21 At this junction, during both the AM and PM peak hours, approximately 13% of total vehicle flows make turning movements off or onto Stapleford Lane.

Banks Road/Swiney Way/B6003 Stapleford Lane

Table 4.3 - Banks Road/Swiney Way/B6003 Stapleford Lane Peak Hour Turning Count

Vehicle Flows	AM Peak				PM Peak			
	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)
Swiney Way	0	51	63	344	0	114	136	491
B6003 Stapleford Lane (S)	75	0	66	307	59	0	93	335
Banks Road	193	84	0	37	84	74	0	29
B6003 Stapleford Lane (N)	584	292	23	0	539	379	23	0

4.3.22 As shown in **Table 4.3**, at the Banks Road/Swiney Way/B6003 Stapleford Lane junction, the highest flows during the AM and PM peak hours are from Stapleford Lane (N) to Swiney Way.

4.3.23 Overall flows at this junction are higher during the PM peak hour compared to the AM peak hour.

Swiney Way/Carter Road (Chetwynd Barracks Main Gate)

Table 4.4 - Swiney Way/Carter Road (Chetwynd Barracks Main Gate) Peak Hour Turning Count

Vehicle Flows	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
Swiney Way (W)	0	79	704	0	51	526
Carter Road	39	0	22	92	0	41
Swiney Way (E)	410	25	0	521	22	0

4.3.24 As shown in **Table 4.4**, at the junction of Carter Road and Swiney Way, the highest flows are straight ahead along Swiney Way from the west to the east during the AM and PM peak hours.

4.3.25 At this junction during the AM peak hour, 13% of vehicles make turning movements into or out of Carter Road. During the PM peak hour, 16% of vehicles make these turning movements.

Swiney Way/A6005 Nottingham Road/Barton Lane

Table 4.5 - Swiney Way/A6005 Nottingham Road/Barton Lane Peak Hour Turning Count

Vehicle Flows	AM Peak				PM Peak			
	A6005 Nott. Road (E)	Barton Le	A6005 Nottingham Road (W)	Swiney Way	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way
A6005 Nottingham Road (E)	0	87	531	214	0	159	809	237
Barton Lane	78	0	50	48	160	0	140	135
A6005 Nottingham Road (W)	863	92	0	77	513	109	0	89
Swiney Way	355	108	43	0	333	135	64	0

4.3.26 As shown in **Table 4.5**, at the Swiney Way/A6005 Nottingham Road/Barton Lane junction, the highest flows are straight ahead movements on the A6005 Nottingham Road with west to east being the main direction of travel during the AM peak hour and east to west during the PM peak hour. Flows at this junction are higher during the PM peak hour compared to the AM peak hour.

A6005 Nottingham Road/B6003 High Road

Table 4.6 – A6005 Nottingham Road/B6003 High Road Peak Hour Turning Count

Vehicle Flows	AM Peak			PM Peak		
	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))
A6005 Nottingham Road (W)	0	269	888	0	359	637
B6003 High Road	137	0	340	82	0	392
A6005 Nottingham Road (E)	547	73	0	892	128	0

4.3.27 As shown in **Table 4.6**, at the A6005 Nottingham Road/B6003 High Road junction, the highest flows are during the PM peak hour.

4.3.28 During the AM peak hour most vehicles travel from west to east along the A6005 Nottingham Road with approximately 36% of vehicles making turning movements into or out of the B6003 High Road.

4.3.29 During the PM peak hour, most vehicles travel from east to west along the A6005 Nottingham Road with approximately 39% of vehicles making turning movements off or on to the B6003 High Road.

Bardills roundabout

4.3.30 For reference on potential impact further afield, it is useful to note the 2010 flows at Bardills roundabout (see **Table 4.7**) which has been sourced from the Land to the west of Toton Lane scheme.

Table 4.7 - 2010 Peak Hour Vehicle Flow at Bardills roundabout from Land West of Toton Lane Application (vehicles)

Vehicle Flows (vehicles)	AM Peak				PM Peak			
	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)
A52 Brian Clough Way (E)	0	347	1229	173	1	410	1553	246
B6003 Toton Lane (S)	367	0	90	203	343	0	170	352
A52 Brian Clough Way (W)	1445	199	1	64	1678	290	2	63

Vehicle Flows (vehicles)	AM Peak				PM Peak			
	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)
B6003 Toton Lane (N)	221	315	54	0	132	331	68	1

Note: Subject to rounding.

4.3.31 The flows recorded at Bardills roundabout were used with the 2017 survey of vehicle movements at the Stapleford Lane/Woodstock Road junction (**Table 4.2**) to estimate 2017 traffic flows at Bardills roundabout (see **Table 4.8**).

Table 4.8 - Expected Vehicle Flows at Bardills roundabout 2017

Vehicle Flows	AM Peak				PM Peak			
	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)
A52 Brian Clough Way (E)	0	379	1399	197	1	433	1617	256
B6003 Toton Lane (S)	440	0	108	243	351	0	174	361
A52 Brian Clough Way (W)	1645	217	1	73	1747	306	2	66
B6003 Toton Lane (N)	252	344	61	0	137	349	71	1

Subject to rounding

4.3.32 As shown in **Table 4.8,** at the Bardills Roundabout, the highest flows are during the PM peak hour.

4.3.33 During the AM and PM peak hours, most vehicles travel from west to east along the A52 Brian Clough Way.

4.3.34 Approximately 57% of the vehicles during the AM peak hour and 63% of vehicles during the PM peak hour at this junction travel straight ahead along the A52 Brian Clough Way in either direction.

4.4 Network operation

Introduction

4.4.1 The operation of junctions on the local road network were modelled in isolation using industry-standard modelling software to provider an indication of current operation.

4.4.2 In order to model and assess current junction capacity, the recorded MTC traffic flows were converted to passenger car units[5] (PCUs) using the following conversion factors:

- pedal cycle = 0.2 PCUs;
- motorcycle = 0.4 PCUs;
- car / LGV = 1 PCU;
- OGV1 = 1.5 PCUs;
- OGV2 = 2.3 PUCs; and
- bus = 2 PCUs.

4.4.3 In addition, the models have been compared with observed queues to ensure the outputs represent a reasonable snapshot of junction operation.

Woodstock Road/B6003 Stapleford Lane

4.4.4 **Table 4.9** summarises the current operational performance of the junction.

Table 4.9 - Woodstock Road/B6003 Stapleford Lane 2017

Movement	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	RFC	Queue (PCUs)	Delay (Seconds)	RFC
2017 Base Year						
Woodstock Road – B6003 Stapleford Lane N/ B6003 Stapleford Lane S	0.5	11	0.34	0.4	20	0.28
B6003 Stapleford Lane N – Woodstock Road/ B6003 Stapleford Lane S	1	4	0.24	21.5	48	0.95

4.4.5 As shown in **Table 4.9**, at the Woodstock Road/B6003 Stapleford Lane junction, during the PM peak hour, for vehicles travelling from Stapleford Lane (N) to Woodstock Road or Stapleford Lane (S), the junction is nearing capacity. This could be because vehicles turning right from the north of the B6003 Stapleford Lane onto Woodstock Road block the road whilst waiting to turn, therefore preventing movement of vehicles travelling straight ahead from the north to the south of the B6003 Stapleford Lane. For all other movements during the AM and PM peak hours, the junction is operating with reserve capacity.

Banks Road/Swiney Way/B6003 Stapleford Lane

4.4.6 The signalised junction of Banks Road/Swiney Way/B6003 Stapleford Lane is located to the west of the existing site access.

4.4.7 The TA that supported the Land to the North of Toton Way scheme highlighted this junction as a key constraint on the local highway network and demonstrated that the junction would be over capacity in the year 2026, regardless of additional development.

[5] A common unit to represent all common vehicle types.

4.4.8 However, simple mitigation measures were proposed (detection on pedestrian crossing) which would allow for an overall improvement of junction performance, even with significant additional development. It should be noted that this mitigation is yet to be implemented and, therefore, its actual effectiveness unknown.

4.4.9 Therefore, it is evident, without undertaking any modelling, that mitigation measures will need to be investigated further in support of any planning application for development on the site.

Swiney Way/Carter Road (Chetywnd Barracks Main Gate)

4.4.10 The existing access to Chetwynd Barracks is in the form of a wide major/minor priority junction. Due to the security requirements of the Barrack's existing use there is an additional area to the west of the minor arm to allow storage of vehicles waiting to be permitted entrance.

4.4.11 The minor arm exit takes the form of a single lane flaring to two lanes as it meets Swiney Way; Junctions 9 junction modelling software estimates the flare length to be 3.0 PCUs.

4.4.12 A ghost island right turn facility is incorporated into the major arm of the junction, which provides 4.0 PCUs of storage for right turning vehicles without impeding westbound traffic.

4.4.13 The assessment of the current operation of this junction is presented in **Table 4.10.**

Table 4.10 - Swiney Way/Carter Road (Chetwynd Barracks Main Gate) 2017

Movement	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	RFC	Queue (PCUs)	Delay (Seconds)	RFC
2017 Base Year						
Carter Road – Swiney Way E	0	7	0.04	0.1	7	0.08
Carter Road – Swiney Way W	0.2	14	0.13	0.4	14	0.28
Swiney Way E – Swiney Way N/ Carter Road	0.1	7	0.05	0	6	0.04

4.4.14 As shown in **Table 4.10**, there is reserve capacity at the junction for all movements during the AM and PM peak hours.

4.4.15 The junction is operating with the highest RFC for movements from Carter Road to Swiney Way (W) during the PM peak hour leading to approximately 14 seconds delay.

Swiney Way/A6005 Nottingham Road/Barton Lane

4.4.16 This junction is a signalised crossroads to the south of Toton. The junction's location on Nottingham Road is of significance as this is a key route between Nottingham and Long Eaton, as well possibly acting as a section of the route for those traveling to/from the east of the junction to the M1.

4.4.17 The junction incorporates pedestrian crossing facilities on all arms, utilising pedestrian refuges to account for the otherwise long crossing distances.

4.4.18 Nottingham Road widens to accommodate 3 turning lanes in either direction: ahead/left lane, ahead lane and dedicated right turn lanes. The dedicated right turn lanes also benefit from

approximately 20m length of non-hooking vehicle storage in the junction itself to further maximise capacity. There are also two exit lanes on each arm to prioritise throughput, though on the eastern exit arm this tapers to one lane after approximately 75m.

4.4.19 The north-south Swiney Way/Barton Lane link incorporates two entry and two exit lanes. Swiney Way has a dedicated left-turn arrangement, while Barton Lane has a dedicated right turn lane. There is a similar amount of storage within the junction itself for vehicles past the stop-line waiting to turn right.

4.4.20 This junction has not been modelled as part of this Strategy document, given that the focus has been on those junctions located in the immediate proximity of the site. However, it is recognised that the potential implications on this junction will need to be considered as the site is taken forward for development.

A6005 Nottingham Road/B6003 High Road

4.4.21 This junction is a three arm signalised junction towards the south of Toton. It features two lanes on each approach with the signals operating on a simple three stage basis.

4.4.22 It is considered that the current design is optimised for capacity with little opportunity to increase efficiency in scale and, furthermore, given that the focus of this document has been on those junctions located in the immediate proximity of the site, has not been modelled.

4.4.23 However, it is recognised that the potential implications on this junction will need to be considered as the site is taken forward for development.

Strategic Road Network

4.4.24 Further afield, on the strategic road network, Highways England informed PBA that Bardills roundabout had recently been upgraded with MOVA (a traffic signal control system that is designed to optimise performance) and that lane widening had also been undertaken as part of a package of improvement measures at the junction to accommodate the Nottingham Express Transit (NET) Toton Lane Park & Ride.

4.4.25 Highways England are also looking at improving the mainline capacity on the A52 to help facilitate movement as part of their normal programme of works.

4.4.26 At the M1 J25 there are known to be safety issues/queues on the westbound approach to the junction during the AM and PM peaks which, from volumes recorded for the Highways England, are between 07:00-08:00 and 16:30-17:30 hours respectively.

4.5 Personal Injury Collisions

Introduction

4.5.1 Interrogation of CrashMap[6] indicates that no fatalities were recorded on the local road network during the most recent five-year data period (2012-2016).

4.5.2 To consider the extent of personal injury collisions[7] (PIC) in more detail, PIC data covering the most recent five years' worth of data for the road network in the vicinity of Chetwynd Barracks

[6] http://www.crashmap.co.uk/

[7] PICs are road traffic accidents where slight, serious or fatal injuries to people have been recorded. The data would generally include such information as the location of the accident, number of casualties, the modes of travel involved, age and gender of those involved and the contributing factors to the accident

was obtained from Via East Midlands. The requested data search area is illustrated in **Figure 4.4**.

4.5.3 This data was required in order to determine the number of PICs occurring within the search area and how many of these were due to factors related to the layout of the road and which would require identification of appropriate mitigation measures.

4.5.4 The collision data provided by Via East Midlands covered the period between 2011 and 2016. It provided details of the severity level of the collisions and details with regards to the road and weather conditions at the time the collision was recorded. No causation factors for the collisions were provided.

Area 1 - B6003 Toton Lane

4.5.5 From the data supplied for B6003 Toton Lane, there were seven PICs recorded, resulting in a total of ten casualties.

4.5.6 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and three PICs.

Area 2 – Bardills Roundabout

4.5.7 From the data supplied for the signalised junction of B6003 Toton Lane and A52 Brian Clough Way at Bardills roundabout and its surrounding areas, there were 46 PICs recorded, resulting in a total of 70 casualties.

4.5.8 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between five and 11 PICs.

4.5.9 Of the 46 accidents, four were of serious severity. Two collisions could be attributed to driver error and one to mechanical fault.

Area 3 – B6003 Stapleford Lane N

4.5.10 From the data supplied for B6003 Stapleford Lane North of Woodstock Road, there were seven PICs recorded, resulting in a total of seven casualties.

4.5.11 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and two PICs.

4.5.12 Of the seven accidents, one was of serious severity and involved a motorcyclist.

Area 4 – B6003 Stapleford Lane/Woodstock Road T-Junction

4.5.13 From the data supplied for the B6003 Stapleford Lane Woodstock Road T-Junction, there were six PICs recorded, resulting in a total of eight casualties.

4.5.14 The records show that the majority of the PICs occurred in fine and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and two PICs.

Area 5 – B6003 Stapleford Lane S

4.5.15 From the data supplied for B6003 Stapleford Lane South of Woodstock Road, there were three PICs recorded, resulting in a total of five casualties.

4.5.16 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and one PICs.

4.5.17 Of the three accidents, one was of serious severity which involved a pedal cyclist.

Area 6 – B6003 Stapleford Lane/Swiney Way/Banks Road Cross Junction

4.5.18 From the data supplied for B6003 Stapleford Lane, Swiney Way, Banks Road signalised cross junction there were seven PICs recorded, resulting in a total of 11 casualties.

4.5.19 The records show that the majority of the PICs occurred in fine, daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and three PICs.

4.5.20 Of the seven accidents, two were of serious severity and one involved a pedal cyclist.

Area 7 – Swiney Way and Ranson Road (East)

4.5.21 From the data supplied for Swiney Way and Ranson Road (East), there were 11 PICs recorded, resulting in a total of 11 casualties.

4.5.22 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and five PICs.

4.5.23 Of the 11 accidents, two were of serious severity both of which involved pedal cyclists.

Area 8 - B6003 High Road

4.5.24 From the data supplied for High Road, there were nine PICs recorded, resulting in a total of 13 casualties.

4.5.25 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and four PICs.

Area 9 – B6003 High Road/A6005 Nottingham Road T-Junction

4.5.26 From the data supplied for the High Road, A6005 Nottingham Road Signalised T-junction, there were five PICs recorded, resulting in a total of eight casualties.

4.5.27 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and two PICs.

4.5.28 Of the five accidents, one was of serious severity and involved a pedal cyclist.

Area 10 – A6005 Nottingham Road

4.5.29 From the data supplied for A6005 Nottingham Road there were seven PICs recorded, resulting in a total of ten casualties.

4.5.30 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and two PICs.

4.5.31 Of the seven accidents, one was of serious severity and involved a pedestrian

Area 11 – A6005 Nottingham Road/Swiney Way/Barton Lane Cross Junction

4.5.32 From the data supplied for the A6005 Nottingham Road/Swiney Way/Barton Lane signalised cross junction, there were seven PICs recorded, resulting in a total of eight casualties.

4.5.33 The records show that the majority of the PICs occurred in fine, dry and daylight conditions. The extent of network assessed showed an annual PIC rate varying between zero and two PICs.

Summary

4.5.34 Over the review period, there were 115 recorded PICs in the search area, of which 103 were of slight severity and 12 were of serious severity. Of the 115 accidents, 27 (including 5 of serious severity) were not attended by a police officer and were instead reported over the counter. A map showing where accidents occurred and their severity can be found in **Appendix B.**

4.5.35 A summary of all accidents can be found in **Table 4.11**.

Table 4.11 - Summary of Personal Injury Collisions

Area	No. of PICs	No. of Casualties	Severity	
			Slight	Serious
1	7	10	7	0
2	46	70	42	4
3	7	7	6	1
4	6	8	6	0
5	3	5	2	1
6	7	11	5	2
7	11	14	9	2
8	9	13	9	0
9	5	8	4	1
10	7	10	6	1
11	7	8	7	0
Total	115	164	103	12

4.5.36 **Table 4.11** shows that the highest number of collisions occurred in Area 1 at the Bardills roundabout and its approaching arms leading to a total of 70 casualties. This could be due to high traffic flow at the junction compared to other areas of the PIC analysis.

4.5.37 The highest ratio of casualties and serious accidents to total collisions in in Area 5 on Stapleford Lane between the Woodstock Road and Swiney Way/Banks Road junctions. For each collision, approximately 1.7 casualties occurred and one third of the accidents were of serious severity.

4.5.38 The lowest ratio of casualties to accidents was in Area 3 on the north of Stapleford Lane between the Woodstock Road and Bardills roundabout junctions with one casualty for each collision. Despite the lower ratio, as a result of more collisions occurring, more casualties occurred on Stapleford Lane north of Woodstock Road compared to the south.

4.5.39 During the study period, within the study area, no serious accidents occurred on:

- B6003 Toton Lane (Area 1),
- B6003 Stapleford Lane/ Woodstock Road T-Junction (Area 4)
- B6003 High Road (Area 8), and
- A6005 Nottingham Road/ Swiney Way/ Barton Lane Cross Junction (Area 11).

4.5.40 A summary of the most frequent conditions in which accidents occurred can be found in **Table 4.12**.

Table 4.12 - Most Frequent PIC Conditions

Area	Most Frequent Conditions (No.)						
	Weather	Light	Road Surface	Nearest Hour	Day	Month	Year
1	Fine (7)	Daylight (6)	Dry (6)	6pm (2)	Sun (3)	May (2)	2012 (3)
2	Fine (38)	Daylight (37)	Dry (32)	9am, 12pm (6)	Sat (10)	Jun (8)	2015 (11)
3	Fine (6)	Daylight (6)	Dry (6)	5pm (2)	Mon, Tue, Sat (2)	Jan, Feb, Apr, May, Jun, Jul, Oct (1)	2012 (2) 2014 (2)
4	Fine (6)	Daylight (5)	Dry, Wet (3)	11am (2)	Thu, Fri (2)	Jul (2)	2012 (2) 2013 (2)
5	Fine (3)	Daylight (3)	Dry (3)	8am, 9am, 3pm (1)	Thu (3)	Sep (2)	2011 (1) 2012 (1) 2016 (1)
6	Fine (5)	Daylight (4)	Dry (3) Wet (3)	6pm (3)	Thu (3)	Jul, Sep, Nov (2)	2012 (3)
7	Fine (8)	Daylight (7)	Dry (8)	5pm (3)	Tue (3)	May, Jun, Oct (2)	2012 (5)
8	Fine (7)	Daylight (9)	Dry (7)	10am, 3pm (2)	Thu (3)	Mar (3)	2016 (4)
9	Fine (5)	Daylight (3)	Dry (3)	1pm, 4pm 6pm, 10pm, 11pm (1)	Mon, Thu, Fri, Sat (1)	Jan (2)	2012 (4) 2014 (2)

Area	Most Frequent Conditions (No.)						
	Weather	Light	Road Surface	Nearest Hour	Day	Month	Year
10	Fine (6)	Daylight (7)	Dry (6)	12pm (2)	Thu (3)	Apr, Jun, Jul (2)	2011 (2) 2014 (2) 2016 (2)
11	Fine (6)	Daylight (5)	Dry (5)	8am (2)	Wed, Fri, Sun (2)	Jan (2)	2013 (2) 2015 (2)
Total	Fine (97)	Daylight (92)	Dry (82)	12pm (13)	Thu (23)	Jun, Jul (15)	2012 (27)

4.5.41 **Table 4.12** shows that the most frequent accident conditions are fine weather, in daylight with a dry road surface at 12pm on Thursday in June or July in 2012.

4.5.42 It should be noted that PIC occurrences and causation factors may change as a result of developments and infrastructure being constructed over forthcoming years and, therefore, further analysis will be required in advance of a planning application being submitted for development on the site.

4.6 Summary

4.6.1 Chetwynd Barracks is currently accessed off Swiney Way, which forms a link between the B6003 Stapleford Lane and the A6005 Nottingham Road. Heading north on the B6003 Stapleford Lane also enables access to the A52 and M1 of the strategic road network.

4.6.2 Assessment of traffic surveys undertaken on the local road network in January 2017 determined the AM and PM peak hours as 08:00-09:00 and 17:00-18:00, respectively.

4.6.3 Consideration of junction operation on the local road network suggests that, with the exception of the site access, the local road network experiences significant traffic volumes and constraints on capacity as a result of natural growth during the AM and PM peak hours. Indeed, the attraction of Nottingham city centre draws vehicles southbound via the A6005 Nottingham Road, particularly during the AM peak hour.

4.6.4 However, measures are proposed (as part of the Land to the North of Toton Way scheme) at the Banks Road/Swiney Way/B6003 Stapleford Lane junction that would allow for an overall improvement of junction performance, even with significant additional development.

4.6.5 Further afield, Bardills roundabout has recently been upgraded with MOVA and lane widening as part of a package of improvement measures at the junction. Highways England are also looking at improving the mainline capacity on the A52 to help facilitate movement as part of their normal programme of works.

4.6.6 Of those accidents that have been recorded on the local road network, none were fatal, with the highest number of collisions occurring at Bardills roundabout and its approaching arms. However, the review has indicated that there appears no reason why the development potential of the site could not be realised.

5 Sustainable transport network

5.1 Introduction

5.1.1 This section describes the accessibility of the site by sustainable modes of travel.

5.2 Public transport provision

Bus provision

5.2.1 **Figure 5.1** shows the public transport provision in proximity to Chetwynd Barracks with **Table 5.1** showing the closest bus stops to the site.

Table 5.1 - Bus stops near to Chetwynd Barracks

Ref.	Name	Distance from the nearest point of access (m)	Bus Services	Bus Stop Type
1	Stapleford Lane near Katherine Drive	310	510	Lamp Post Flag
2	Woodstock Road outside Shops	210	510	Covered Shelter
3	Swiney Way near Calverton Close	50	510	Covered Shelter
4	Swiney Way	120	510	Lamp Post Flag
5	Swiney Way near Wynwood Road	460	510	Lamp Post Flag
6	Swiney Way near Morris Avenue	650	510	Lamp Post Flag
7	Nottingham Road near Ranson Road	650	510, Indigo, Y5, Skylink Nottingham	Covered Shelter with live departure board and cycle parking
8	Attenborough Lane (N-bound)	350	Indigo, Y5	Covered Shelter
9	Field Lane near Kirkbride Court	260	Orange Line 36/N36	Covered Shelter with live departure board
10	Field Lane near Caldbeck Court	350	Orange Line 36/N36	Covered Shelter with live departure board

5.2.2 **Table 5.1** shows the nearest bus stop to Chetwynd Barracks is on Swiney Way, near Calverton Close, from where frequent services to locations such as Stapleton and Beeston can be achieved.

5.2.3 The 1999 Institution of Highways & Transportation[8] (IHT) publication, *Guidelines for Planning for Public Transport in Developments*, suggests that '*the maximum walking distance to a bus stop should not exceed 400m…*'[9]

5.2.4 77 per cent of the site area is within a 400m buffer distance of the bus stops in proximity to Chetwynd Barracks as shown in **Figure 5.1.**

[8] Now the Chartered Institution of Highways & Transportation.

[9] Guidelines for Planning for Public Transport in Developments, 1999, page 11.

5.2.5 All bus services in the area can be accessed within 650m walk distance of Chetwynd Barracks, with the majority accessible within an acceptable walking distance of 400m.

5.2.6 **Table 5.2** shows bus routes serving these bus stops and the frequency of services.

Table 5.2 - Bus services near Chetwynd Barracks

Bus Route	Provider	Destinations	Frequency (Per Hour)		
			Weekday	Saturday	Sunday
510	Nottsbus Connect	Beeston, Stapleford, Attenborough	1	1	No Service
Indigo	Trentbarton	Nottingham, Long Eaton, Derby, Briar Gate	6	6	4
Skylink Nottingham	Trentbarton	Nottingham, Long Eaton, East Midlands Airport, Loughborough	3	3	2
Y5	yourbus	Nottingham, Beeston, Derby	3	3	1
Orange Line 36/N36	Nottingham City Transport	Chilwell, Beeston, Nottingham	8	8	6

5.2.7 The area around Chetwynd Barracks is serviced by a number of bus routes as seen in **Table 5.2**. The most frequent bus service is the Orange 36 bus which runs between the north of Chetwynd Barracks and Nottingham. This can be accessed from the bus stop on Field Lane.

Rail provision

5.2.8 The closest rail station to all of the site accesses is Attenborough Rail Station, located approximately 1.1km walk distance south of the site (see **Figure 5.1**). This station is managed by East Midlands Trains and has services to locations such as Nottingham, Derby and Leicester.

5.2.9 Attenborough Rail Station has two platforms, both with step free access, over a level crossing. Both platforms have covered shelters with seating for people waiting for the train. The station has parking facilities for up to eight cycles.

5.2.10 **Table 5.3** shows the frequency of services to key locations from Attenborough Rail Station.

Table 5.3 - Rail service frequency from Attenborough Rail Station

Destinations	Frequency (Per Hour)		
	Weekday	Saturday	Sunday
Lincoln	1	1	1
Matlock	1	1	0.5
Nottingham	1	1	1
Derby	1	1	1

5.2.11 Attenborough Rail Station can be accessed via the 510 bus service, from where hourly services (as shown in **Table 5.3**) to Nottingham, Matlock, Lincoln and Derby are achievable. The station also has less frequent services such as to Leicester for which there are two trains each day on weekdays and Saturdays.

Tram provision

5.2.12 A tram service runs to the north of Chetwynd Barracks, between Toton Lane Park & Ride to Hucknall, through Nottingham. This is part of a comprehensive network – the NET system, which provides linkages across the City. Of particular relevance to the site is the direct tram connectivity to the University, enterprise and commercial zones around the marina and on the periphery of the City and the mainline station at Nottingham.

5.2.13 Tram services operate frequently throughout the day, with four to eight trams per hour on weekdays and Saturdays and four to six trams per hour on Sundays.

5.2.14 The nearest tram stop to the site is located at Inham Road, approximately 500m walk distance from where an access point would be created at the north of the site (see **Section 8**). This route involves routing along Airedale Court and up Field Lane.

Summary

5.2.15 Chetwynd Barracks has bus services in desirable walking distance, tram services in acceptable walking distance and rail services within maximum acceptable walking distance of the site (**Table 3.3**). This means that public transport can easily be accessed from Chetwynd Barracks and can therefore be considered a reasonable alternative to the private car, particularly when taking into account the frequency of bus and tram services.

5.3 Pedestrian and cycle network

Pedestrian routes

5.3.1 There is a network of pedestrian and cycle routes within the vicinity of the site which provide connectivity to a number of key locations in the surrounding area including residential and employment areas, shops (such as the Tesco Extra off Swiney Way) and Toton, Long Eaton and Beeston town centres.

5.3.2 Lit footways are present along the roads surrounding the site and off-road Public Rights of Way (PRoW) are present to the north of the site.

5.3.3 The comprehensive network of PRoW in the vicinity of the site is illustrated in **Figure 5.2**. The closest of which are to the north, leading to parts of Stapleford and Bramcote.

5.3.4 Pedestrian crossing facilities are also available at multiple locations close to the site (see **Figure 5.2)** including:

- A pelican crossing at the Stapleford Lane/Swiney Way/Banks Road junction;
- Central pedestrian refuges with dropped kerbs and tactile paving on Swiney Way next to both accesses of Tesco Extra;
- A central pedestrian refuge with staggered entry and exit points, dropped kerbs and tactile paving on Swiney Way, next to Calverton Close; and
- A toucan crossing on Swiney Way, between Shaw Road and Wynwood Road.

Cycle routes

5.3.5 Cycle routes within the vicinity of Chetwynd Barracks provide connectivity to a number of key locations in the surrounding area including residential and employment areas and Long Eaton and Beeston town centres (see **Figure 5.2**).

5.3.6 National Cycle Routes 6 and 67 run to the south and west of the site respectively. Route 6 runs between London and Keswick but connects between the local areas of Beeston and Long Eaton. Route 67 runs between Loughborough and North Allerton but locally connects between the areas of Long Eaton and Stapleford.

5.3.7 Local cycle routes run to the north and east of Chetwynd Barracks, connecting the site to Beeston and areas in the north.

5.4 Summary

5.4.1 This section has demonstrated that 77 per cent of the site area lies within recommended walk distance to bus stops that provide access to local destinations and to destinations further afield, such as Nottingham and Beeston. This is before consideration is given to the potential to operate bus services through the site itself – which will be provided as part of the development proposals.

5.4.2 Attenborough Rail Station and tram services to the north of the site means that public transport can easily be accessed from Chetwynd Barracks and can therefore be considered a reasonable alternative to the private car, particularly when taking into account the frequency of these services.

5.4.3 The site is connected to a comprehensive network of PRoWs and cycle routes, enabling direct access to local town centres and to the local community facilities and services described in Section 3. Connecting with existing provision would complete the existing pedestrian and cycle network, ensuring that pedestrians and cyclists could access key destinations in all directions.

5.4.4 The site is clearly well-connected by all modes of travel. Opportunities exist to access local community facilities and services by modes of travel other than the private car which, in line with the NPPF, enhances the sustainable credentials of the site. It also means that any enhancements proposed by the scheme will be more sustainable in the long term, given that they would strengthen existing facilities rather than seek to introduce and sustain new services.

5.4.5 As will be described in Section 7 of this Strategy, development will provide the opportunity to create an improved environment for pedestrians and cyclists by promoting north/south and east/west connectivity with the surrounding settlement.

5.4.6 In summary, it considered that the site is excellently located to be accessed by modes of travel other than the private car and presents an opportunity to improve existing pedestrian and cycle provision.

5.4.7 Furthermore, development at this location is in line with current national guidance, whereby *'…developments should be located and designed where practical to…give priority to pedestrian and cycle movements, and have access to high quality public transport facilities...'*[10] as the site enables the use of sustainable transport modes in the locality to be maximised.

[10] NPPF, 2012, paragraph 35.

6 Future baseline

6.1 Introduction

6.1.1 This section explores the potential future baseline traffic conditions on the road network in the vicinity of Chetwynd Barracks up to the end of the plan period (i.e. 2028).

6.2 Traffic growth

6.2.1 Growth factors were extracted from TEMPro (Version 7) for weekday AM and PM peak periods for urban, principal roads in the Broxtowe 015 MSOA.

6.2.2 This growth factor, which includes projections of future growth in housing and employment in the area, was applied to the 2017 base year traffic flows to obtain background traffic flows for the future year of 2028. **Table 6.1** shows the TEMPro growth factors used.

Table 6.1 - Broxtowe 15, Urban Principle TEMPro Growth Factors 2017-2028

Year	AM Peak	PM Peak
2028	1.128634	1.123985

6.2.3 Given that the site would not be disposed of until 2021, given the potential extent of development in the area over the forthcoming years and given that further versions of TEMPro will be established between now and when a planning application is submitted, the addition of committed developments on top of the baseline growth has not been factored in, rather the growth projection provides a flavour for potential impact at local junctions and where mitigation measures are likely.

6.2.4 As the site is taken forward for development and a Transport Assessment is prepared as a supporting document to a planning application, it is recognised that appropriate consideration will need to be given to the cumulative impacts arising from committed developments in the area, i.e. development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next 3 years and which have the potential to impact on the same sections of transport network, as well as other relevant local sites benefitting from as yet unimplemented planning approval.

6.3 2028 baseline traffic flows

Introduction

6.3.1 **Tables 6.2** to **6.6** show the MTC data factored up to 2028 with TEMPro growth factors.

Woodstock Road/B6003 Stapleford Lane

Table 6.2 – Woodstock Road/B6003 Stapleford Lane Peak Hour Flows 2028

Vehicle Flows	AM Peak			PM Peak		
	Stapleford Lane S	Woodstock Road	Stapleford Lane N	Stapleford Lane S	Woodstock Road	Stapleford Lane N
Stapleford Lane S	0	36	737	0	29	940
Woodstock Road	10	0	156	17	0	56

Vehicle Flows	AM Peak			PM Peak		
	Stapleford Lane S	Woodstock Road	Stapleford Lane N	Stapleford Lane S	Woodstock Road	Stapleford Lane N
Stapleford Lane N	1042	54	0	1036	187	0

6.3.2 **Table 6.2** shows that the primary route for vehicles is straight ahead from Stapleford Lane N to Stapleford Lane S during the AM and PM peak hours.

6.3.3 Between 2017 and 2028, the total flows at this junction increase by 232 vehicles during the AM peak hour and 250 vehicles during the PM peak hour with a total of 256 vehicles making turning movements during the AM peak hour and 289 during the PM peak hour.

Banks Road/Swiney Way/B6003 Stapleford Lane

Table 6.3 – Banks Road/Swiney Way/B6003 Stapleford Lane Peak Hour Flows 2028

Vehicle Flows	AM Peak				PM Peak			
	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)
Swiney Way	0	58	71	388	0	128	153	552
B6003 Stapleford Lane (S)	85	0	74	346	66	0	105	377
Banks Road	218	95	0	42	94	83	0	33
B6003 Stapleford Lane (N)	659	330	26	0	606	426	26	0

6.3.4 **Table 6.3** shows that the primary route for vehicles at this junction is from Stapleford Lane N turning left on to Swiney Way during the AM and PM peak hours.

6.3.5 Between 2017 and 2028 the number of vehicles expected to be making this movement increases by 75 vehicles during the AM peak hour and 67 vehicles during the PM peak hour with the total number of vehicles at this junction increasing by 273 during the AM peak hour and 292 during the PM peak hour.

Swiney Way/Carter Road (Chetwynd Barracks Main Gate)

Table 6.4 - Swiney Way/Carter Road (Chetwynd Barracks Main Gate) Peak Hour Flows 2028

Vehicle Flows	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
Swiney Way (W)	0	89	795	0	57	591
Carter Road	44	0	25	103	0	46

Vehicle Flows	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
Swiney Way (E)	463	28	0	586	25	0

6.3.6 **Table 6.4** shows that the primary route for vehicles at this junction is straight ahead along Swiney Way travelling from west to east during both peak periods.

6.3.7 Between 2017 and 2028, the total flows at this junction increase by 165 vehicles during the AM peak hour and 155 vehicles during the PM peak hour with a total of 186 vehicles making turning movements during the AM peak hour and 232 during the PM peak hour.

Swiney Way/A6005 Nottingham Road/Barton Lane

Table 6.5 – Swiney Way/A6005 Nottingham Road/Barton Lane Peak Hour Flows 2028

Vehicle Flows	AM Peak				PM Peak			
	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way
A6005 Nottingham Road (E)	0	98	599	242	0	179	909	266
Barton Lane	88	0	56	54	180	0	157	152
A6005 Nottingham Road (W)	974	104	0	87	577	123	0	100
Swiney Way	401	122	49	0	374	152	72	0

6.3.8 **Table 6.5** shows that the primary route for vehicles at this junction is straight ahead along Nottingham Road from west to east during the AM peak hour and east to west during the PM peak hour.

6.3.9 Between 2017 and 2028 the number of vehicles expected to be making straight ahead movements along Nottingham Road increases by 179 vehicles during the AM peak hour and 164 vehicles during the PM peak hour with the total number of vehicles at this junction increasing by 328 during the AM peak hour and 357 during the PM peak hour.

A6005 Nottingham Road/B6003 High Road

Table 6.6 - Nottingham Road/High Road Peak Hour Flows 2028

Vehicle Flows	AM Peak			PM Peak		
	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))
A6005 Nottingham Road (W)	0	304	1002	0	404	716
B6003 High Road	155	0	384	92	0	441
A6005 Nottingham Road (E)	617	82	0	1003	144	0

6.3.10 **Table 6.6** shows that the primary route for vehicles at this junction is straight ahead along Nottingham Road from west to east during the AM peak hour and east to west during the PM peak hour.

6.3.11 Between 2017 and 2028, the total flows at this junction increase by 290 vehicles during the AM peak hour and 309 vehicles during the PM peak hour with a total of 924 vehicles making turning movements during the AM peak hour and 1,080 during the PM peak hour.

Bardills roundabout

Table 6.7 - Bardills roundabout Peak Hour Flows 2028

Vehicle Flows	AM Peak				PM Peak			
	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)
A52 Brian Clough Way (E)	0	434	1604	226	1	495	1850	293
B6003 Toton Lane (S)	504	0	124	279	402	0	199	413
A52 Brian Clough Way (W)	1886	249	1	84	1999	350	2	75
B6003 Toton Lane (N)	288	394	70	0	157	400	81	1

6.3.12 **Table 6.7** shows that the primary route for vehicles at this junction is from A52 Brian Clough Way (W) travelling straight ahead on to A52 Brian Clough Way (E) during the AM and PM peak hours.

6.3.13 Between 2017 and 2028 the number of vehicles expected to be making this movement increases by 241 vehicles during the AM peak hour and 252 vehicles during the PM peak hour with the total number of vehicles at this junction increasing by 786 during the AM peak hour and 847 during the PM peak hour.

2028 network operation

Woodstock Road/B6003 Stapleford Lane

Table 6.8 - Woodstock Road/B6003 Stapleford Lane 2028

Movement	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	RFC	Queue (PCUs)	Delay (Seconds)	RFC
2028 Base						
Woodstock Road – B6003 Stapleford Lane N/ B6003 Stapleford Lane S	0.7	14	0.42	5.1	197	1.08
B6003 Stapleford Lane N – Woodstock Road/ B6003 Stapleford Lane S	1.6	4	0.34	83.9	201	1.11

6.3.14 As shown in **Table 6.8**, with 2028 flows at the Woodstock Road/Stapleford Lane junction, during the evening peak hour, for vehicles travelling from Stapleford Lane (N) to Woodstock Road or Stapleford Lane (S) or from Woodstock Road to Stapleford Lane in either direction, the junction is over capacity.

6.3.15 This could be due to high traffic flows from Stapleford Lane S to Stapleford Lane N preventing vehicles from turning out of Woodstock Road or turning right from Stapleford Lane N onto Woodstock Road.

6.3.16 For all movements during the morning peak hours, the junction is operating with reserve capacity. Work may be required at this junction in order for it to continue to operate in the future.

Swiney Way/Carter Road (Chetwynd Barracks Main Gate)

Table 6.9 - Swiney Way/Carter Road (Chetwynd Barracks Main Gate) 2028

Movement	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	RFC	Queue (PCUs)	Delay (Seconds)	RFC
2028 Base						
Carter Road – Swiney Way E	0.1	8	0.05	0.1	8	0.1
Carter Road – Swiney Way W	0.2	17	0.17	0.5	17	0.34
Swiney Way E – Swiney Way N/Carter Road	0.1	8	0.06	0	6	0.05

6.3.17 As shown in **Table 6.10**, with 2028 flows, at the Swiney Way/Carter Road junction, there is reserve capacity for all movements during the AM and PM peak hours if the junction were to remain in its current form.

6.3.18 The highest RFC for movements would be from Carter Road to Swiney Way (W) during the PM peak hour, leading to approximately 17 seconds delay.

6.4 Summary

6.4.1 This section demonstrates that traffic growth in Toton is estimated to increase by approximately 13% during the AM peak hour and 12% during the PM peak hour between 2017 and 2028, without the inclusion of further committed housing and employment developments. Traffic flows at local junctions are estimated to increase as a result and, therefore, impact on junction capacity showing that mitigation measures are likely.

6.4.2 However, although it is recognised that additional development in the area could increase traffic growth as a result of the potential extent of development in the area over the forthcoming years, development on the site represents an opportunity to not only improve local transport infrastructure but also to improve the accessibility of the site by modes of travel other than the private car and, therefore, reduce the number of vehicle trips on the local road network.

6.4.3 As the site is taken forward for development and a Transport Assessment is prepared as a supporting document to a planning application, it is recognised that appropriate consideration will need to be given to the cumulative impacts arising from committed developments and other local sites which have the potential to impact on the same sections of transport network, as development at Chetwynd Barracks.

7 Potential development

7.1 Introduction

7.1.1 This section describes the potential for development at Chetwynd Barracks, describing the potential housing numbers, phasing and access strategy and estimated generation, distribution and assignment of development trips.

7.2 Description

7.2.1 As part of the disposal process, the DIO is seeking to promote the site as a strategic housing-led mixed used allocation in the emerging Broxtowe Borough Council (BBC) Part 2 Local Plan.

7.2.2 Development options have been developed in support of the site's promotion and allocation for the following:

> *A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000m² of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial.*

7.2.3 A concept masterplan and schedule (see **Appendix C**) has factored in transport opportunities and constraints in addition to land use, ecology, heritage, drainage and other matters. The schedule provides a broad indication of land use mix which will, inevitably, be reviewed as the site gets taken forward but will meet with objectives of the Council in being a catalyst for bringing people, and jobs, into the area.

7.2.4 The DIO would look to include the Annington homes, immediately to the north of the site, within any development strategy, going forward, in order to maximise the potential for north/south pedestrian and cycle movements. However, this may not be deliverable as the DIO has no control over the land.

7.3 Phasing and access

7.3.1 The concept masterplan covers Phase 1 (2021-2028). This area of the site has a net developable area of 16ha at a net development density of 37.5 dwellings per hectare, resulting in Phase 1 having capacity for up to 600 dwellings.

7.3.2 Early phases of construction will occur in the in the western part of the site. Access to this initial phase of development will, therefore, need to come forward early and it is envisaged that this will be achieved via a new access to be located off the B6003 Stapleford Lane (see **Section 8**).

7.3.3 As the development capacity of the site increases, access options will then utilise the existing main access to the site off Swiney Way with alternative pedestrian and cycle connections also being created around the site. The Royal Navy and Army Reserves access, also located off Swiney Way, would close.

7.4 Considerations for assessment

7.4.1 The development schedule and land use plan for the Chetwynd Barracks site considers minimum (600 dwellings) and maximum (1,600 dwellings) housing growth projections, with

600 homes assumed to be built out during the first phase, i.e. to 2028; the end of the Local Plan period.

7.4.2 Therefore, the total capacity of the site is c.1,600 dwellings, with the first phase of 600 dwellings in the Local Plan period included in the 1,600 dwelling total; the remainder could be built out thereafter.

7.4.3 The consideration of up to 1,600 dwellings creates a comparable case to test what additional mitigation measures may be required to accommodate additional development on the site, above the 600 dwellings.

7.4.4 Consideration has also been given to the estimated trip generation of employment and other commercial uses on site in order to 'future-proof' the site and to ensure a robust strategy is developed.

7.5 Potential trip generation

Introduction

7.5.1 In agreement with the highway authority and Highways England, average trip rates were considered appropriate to estimate the potential trip generation of the site.

7.5.2 TRICS will not endorse any 85th percentile trip rates where less than 20 survey days have been included in the selected set. Furthermore, 85th percentile trip rates are generally used if sites with comparable accessibility, scale and location cannot be found.

7.5.3 Multi-modal total people trip rates extracted from the TRICS database (version 7.3.4) were used to calculate the expected trip generation from the potential development during the AM (08:00-09:00) and PM (17:00-18:00) peak hours.

7.5.4 The trip rate selection parameters used were reflective of a worst case assessment of vehicular trip impact derived from residential and employment uses. The selection parameters were as follows:

- 'Main Land Use': 02 – Employment, and 'Sub Land Use': A – Office, and
- 'Main Land Use': 03 – Residential, and 'Sub Land Use': A – Houses Privately Owned.

7.5.5 It should be noted that these land uses present a guide to the potential trip generation of the site. In reality, once the development is taken forward for planning, the scale and mix of development is likely to include other factors such as the proportion of affordable housing and, therefore, the volume of trips generated will be significantly less than that which is presented herein.

7.5.6 It should also be noted that only employment and residential trips have been considered, given that, as a result of having employment, convenience retail and a primary school on the site, significant trip internalisation is likely to occur as the demand for these services is met on site. This will also likely result in a shift towards travel by more sustainable modes as the need to travel outside of the site is reduced, particularly given the proposed exposure to improved public transport, pedestrian and cycle provision.

7.5.7 Furthermore, as the site is taken forward for development, the provision of a Site-Wide Travel Plan (incorporating workplace and residential travel planning measures and targets) would identify opportunities to promote the use of public transport, cycling and walking, given that the site is well placed to take advantage of existing and proposed future connections.

Potential trips

7.5.8 The multi-modal total people trip rates extracted are presented in **Table 7.1** along with trip generation expected for 600 dwellings, 1,600 dwellings and 5,000m^2 GFA B1 use.

Table 7.1 – Potential Person Trip Generation

Trip Generation	AM Peak			PM Peak		
	Inbound	Outbound	Two way	Inbound	Outbound	Two way
Residential trip rates (per 1 dwelling)	0.176	0.573	0.749	0.477	0.285	0.762
B1 trip rates (per 100m² GFA)	2.456	0.192	2.648	0.159	2.235	2.394
Residential Trip Generation (600 dwellings)	106	344	449	286	171	457
Residential Trip Generation (1,600 dwellings)	282	917	1,198	763	456	1,219
B1 Trip generation (5,000 m² GFA)	123	10	132	8	112	120
Total Trip Generation (600 dwellings and 5,000m² GFA B1)	228	353	582	294	283	577
Total Trip Generation (1,600 dwellings and 5,000m² GFA B1)	404	926	1,331	771	568	1,339

Note: Subject to rounding

7.5.9 **Table 7.1** shows that development of 600 dwellings could generate 449 two-way person trips during the morning peak hour and 457 two-way person trips during the PM peak hour.

7.5.10 Development of 1,600 dwellings is estimated to generate 1,198 two-way person trips during the AM peak hour and 1,219 two-way person trips during the PM peak hour.

Mode Share

7.5.11 2011 Census data for the MSOA Broxtowe 015 was used to convert the person trip generation expected from development into estimated vehicle trips.

7.5.12 The MSOA Broxtowe 015 was then used to represent the expected mode share, distribution and assignment from Chetwynd Barracks, given that the MSOAs main settlement is Toton, where the site is located.

7.5.13 The modal share of travel to work journeys for the Broxtowe 015 MSOA, along with the number of trips estimated from the proposed development, can be seen in **Table 7.2**.

Table 7.2 –Modal share

Mode	Mode Share	AM Peak			PM Peak		
		Inbound	Outbound	Two way	Inbound	Outbound	Two way
Car Driver/ Taxi	74%	170	262	432	218	210	428
Car Passenger	5%	10	16	26	13	13	26
Rail	2%	5	7	12	6	6	12
Bus	7%	16	25	42	21	20	42
Bicycle	4%	9	14	24	12	11	23

Mode	Mode Share	AM Peak			PM Peak		
		Inbound	Outbound	Two way	Inbound	Outbound	Two way
On Foot	6%	15	23	37	19	18	37
Other	1%	3	5	8	4	4	8
Total	100%	228	353	582	294	283	577
Single Car Occupancy	70%	159	246	406	205	197	402

7.5.14 **Table 7.2** shows that the highest percentage of trips made to and from Chetwynd Barracks will be by car with the second highest mode bus

7.5.15 Because the Census data was produced in 2011, use of sustainable modes within the MSOA may now be increased due to the opening of NET phase 2; the extension of Nottingham's tram network, north of the site, into Chilwell, Beeston and Clifton which provides connections into Nottingham.

Net change in traffic flows

7.5.16 In agreement with the highway authority, because the site currently generates vehicle trips during the AM and PM peak hours, the trips generated by development can be offset to create a more realistic trip generation from Chetwynd Barracks as shown in **Tables 7.3 and 7.4**.

Table 7.3 - Vehicle trip generation offseting (based on recorded flows)

Vehicle Trip Generation	AM Peak			PM Peak		
	Inbound	Outbound	Two way	Inbound	Outbound	Two way
Total Trip Generation: 600 dwellings and 5,000m² GFA B1	179	277	456	230	221	452
Total Trip Generation: 1,600 dwellings and 5,000m² GFA B1	317	725	1042	604	445	1048
Existing Trip Generation	104	61	165	73	133	206
Offset Trip Generation: 600 dwellings and 5,000m² GFA B1	75	216	291	157	88	246
Offset Trip Generation: 1,600 dwellings and 5,000m² GFA B1	213	664	877	531	312	842

Note: Subject to rounding

7.5.17 The offset trip generation from Chetwynd Barracks (assuming 600 dwellings and 5,000m² GFA B1 worst case) would be 291 two-way trips during the AM peak hour and 246 two-way trips during the PM peak hour.

7.5.18 The offset trip generation for Chetwynd Barracks (assuming 1,600 dwellings and 5,000m² GFA B1 worst case) would be 877 trips during the AM peak hour and 842 during the PM peak hour.

7.5.19 **Table 7.4** summarises offsetting trip generation, based on 10% of the population of Chetwynd Barracks arriving and departing during the AM and PM peak hours (as described in **Section 3**).

Table 7.4 - Vehicle trip generation offsetting (based on 10% of Chetwynd Barracks arriving and departing during peak hours)

Vehicle Trip Generation	AM Peak			PM Peak		
	Inbound	Outbound	Two way	Inbound	Outbound	Two way
Total Trip Generation: 600 dwellings and 5,000m^2 GFA B1	179	277	456	230	221	452
Total Trip Generation: 1,600 dwellings and 5,000m^2 GFA B1	317	725	1042	604	445	1048
Existing Trip Generation (10% population)	200	117	317	112	204	317
Offset Trip Generation: 600 dwellings and 5,000m^2 GFA B1	-21	160	139	118	17	135
Offset Trip Generation: 1,600 dwellings and 5,000m^2 GFA B1	117	608	725	492	240	732

Note: Subject to rounding

7.5.20 The offset trip generation from Chetwynd Barracks (assuming 600 dwellings and 5,000m² GFA B1 worst case), with 10% of users and residents making vehicle trips during the AM and PM peak hours, would be 139 two-way trips during the AM peak hour and 135 two-way trips during the PM peak hour.

7.5.21 The offset trip generation for Chetwynd Barracks (assuming 1,600 dwellings and 5,000m² GFA B1 worst case) would be 725 trips during the AM peak hour and 732 during the PM peak hour.

7.5.22 It should be noted that as the scheme progresses above 600 dwellings, the number of access options and opportunities for travel by alternative modes will increase as a result of increased exposure to bus, pedestrian and cycle connections (see **Section 8**) and that further netting off of trips would be justified, based on the scale of development and infrastructure provided to support it.

7.6 Distribution and assignment of traffic

7.6.1 The distribution for the proposed development has been calculated using 2011 Census 'Journey to Work' data.

7.6.2 The assignment of the traffic on the road network is based on the most likely route to access the site (determined using Google Maps) and these have been grouped together within the study area (see **Table 7.5**).

Table 7.5 - Distribution and Assignment from 2011 Census Data

Local Planning Authority/MSOA	% of Traffic	Route	Local Planning Authority/MSOA	% of Traffic	Route
Amber Valley	1.35	5	Hinckley and Bosworth	0.14	6
Amber Valley	0.32	2	Leeds	0.11	5
Ashfield	2.62	5	Leicester	0.99	6
Bassetlaw	0.14	5	Luton	0.28	6
Birmingham	0.35	6	Manchester	0.28	5
Blaby	0.60	6	Mansfield	0.39	5
Bolsover	0.35	5	Melton	0.14	3
Bradford	0.11	5	Melton	0.14	6

Local Planning Authority/MSOA		% of Traffic	Route	Local Planning Authority/MSOA	% of Traffic	Route
Broxtowe MSOAs	Broxtowe 001	0.14	5	Milton Keynes	0.25	6
	Broxtowe 002	0.46	5	Newark and Sherwood	0.64	5
	Broxtowe 003	0.28	5	Newark and Sherwood	0.39	1
	Broxtowe 004	0.28	5	North Kesteven	0.11	1
	Broxtowe 007	1.03	1	North West Leicestershire	3.09	6
	Broxtowe 008	0.53	5	Nottingham	5.21	5
	Broxtowe 009	0.50	1	Nottingham	15.92	1
	Broxtowe 010	2.02	1	Nottingham	6.95	3
	Broxtowe 011	4.18	3	Nuneaton and Bedworth	0.14	6
	Broxtowe 012	1.56	3	Oadby and Wigston	0.14	6
	Broxtowe 013	2.06		Rotherham	0.14	5
	Broxtowe 014	3.16	3	Rugby	0.25	6
	Broxtowe 015	4.65		Rushcliffe	2.13	1
	Broxtowe 016	0.57	5	Rushcliffe	3.23	3
Cannock Chase		0.32	6	Sandwell	0.14	6
Charnwood		1.88	6	Sheffield	0.39	5
Chesterfield		0.50	5	Solihull	0.11	6
Coventry		0.11	6	South Cambridgeshire	0.14	6
Derby		6.67	2	South Derbyshire	0.39	2
Derbyshire Dales		0.21	5	South Derbyshire	0.35	6
East Lindsey		0.67	1	South Kesteven	0.14	1
East Staffordshire		0.43	6	Southwark	0.11	6
Erewash		2.06	5	Walsall	0.11	6
Erewash		3.05	2	Warwick	0.11	6
Erewash		6.88	4	Other Destinations	0.11	1
Gedling		1.49	5	Other Destinations	0.32	2
Gedling		1.17	1	Other Destinations	0.71	5
Hillingdon		0.60	6	Other Destinations	2.52	6

7.6.3 **Table 7.5** shows that approximately 21.4% of traffic will stay in Broxtowe District with approximately 6.7% within the vicinity of the site (Broxtowe 013 and Broxtowe 015 MSOAs).

7.6.4 Notably, approximately 28.1% of traffic is expected to travel between the site and Nottingham with other key destinations including Erewash (12.0%), Derby (6.67%) and Rushcliffe (5.35%).

7.6.5 **Table 7.6** summarises the estimated route assignment.

Table 7.6 - Route Assignment from Chetwynd Barracks

Route No.	Route	Main Destinations	%
1	A52 E	Nottingham, Rushcliffe, Gedling	24%

Route No.	Route	Main Destinations	%
2	A52 W	Derby, Erewash	11%
3	A6005 E	Nottingham, Rushcliffe	19%
4	A6005 W	Erewash	7%
5	M1 N	Nottingham, Ashfield, Erewash, Gedling	19%
6	M1 S	North West Leicestershire, Charnwood, Leicester	13%
Within Site Vicinity			7%
Total			100%

7.6.6 As **Table 7.6** shows, the main route for travel to work trips from Chetwynd Barracks, with 24% of the total trips, would be along the A52 E towards Nottingham, Rushcliffe and Gedling.

7.6.7 From Chetwynd Barracks main gate, this would involve vehicles travelling west along Swiney Way, turning north onto Stapleford Lane and then east at Bardills roundabout onto the A52 E.

7.7 Summary

7.7.1 In promoting the Chetwynd Barracks site as a strategic housing-led mixed used allocation in the emerging BBC Part 2 Local Plan, and acting as a catalyst for bringing people, and jobs, into the area, the following is proposed:

> *A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000m² of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial.*

7.7.2 Phase 1 will have capacity for 600 dwellings, to be developed in the western part of the site. It is envisaged that access to which will be achieved via a new access to be located off the B6003 Stapleford Lane (see **Section 8**). As the development capacity of the site increases, access options will then utilise the existing access off Swiney Way with alternative pedestrian and cycle connections also being created around the site.

7.7.3 This assessment has considered development scenarios of 600 and 1,600 dwellings (incorporating the first phase of 600 dwellings) plus employment during 2028; the end of the Local Plan period in order to 'future-proof' the site and to ensure a robust strategy is developed.

7.7.4 The potential trip generation for residential and employment development on the site was estimated using TRICS. It is envisaged that the presence of other land uses on the site and the provision of a Site-Wide Travel Plan will engender site internalisation of trips by all modes of travel and therefore reduce the amount of trips predicted.

7.7.5 As a guide, development of 600 dwellings could generate 449 two-way person trips during the AM peak hour and 457 two-way person trips during the PM peak hour. Development of 1,600 dwellings could generate 1,198 two-way person trips during the AM peak hour and 1,219 two-way person trips during the PM peak hour.

7.7.6 The mode share of the MSOA Broxtowe 015 was used to consider likely distribution and assignment from Chetwynd Barracks of development-generated trips, of which 7% in the MSOA travel by bus.

7.7.7 The vehicle trips generated by development on the site could be offset by the current trip generation of Chetwynd Barracks.

7.7.8 Based on 10% of the population of Chetwynd Barracks arriving and departing during the AM and PM peak hours, it can be argued that development of 600 dwellings and 5,000m² GFA B1 could generate an additional 139 two-way trips during the AM peak hour and an additional 135 two-way trips during the PM peak hour. Assuming 1,600 dwellings and 5,000m² GFA B1 of development, the site could generate an additional 725 trips during the AM peak hour and an additional 732 during the PM peak hour.

7.7.9 It should be noted that as the scheme progresses above 600 dwellings, the number of access options and opportunities for travel by alternative modes will increase as a result of increased exposure to bus, pedestrian and cycle connections and that further netting off of trips would be justified, based on the scale of development and infrastructure provided to support it.

7.7.10 Based on 2011 Census 'Journey to Work' data, it is estimated that 21.4% of development-generated traffic would stay in Broxtowe District, with approximately 6.7% within the vicinity of the site. In addition, approximately 28.1% of traffic is expected to travel between the site and Nottingham with other key destinations including Erewash (12.0%), Derby (6.67%) and Rushcliffe (5.35%).

7.7.11 The main route for these journey to work trips would be along the A52 E towards Nottingham, Rushcliffe and Gedling. From the existing access off Swiney Way, this would involve vehicles travelling west along Swiney Way, turning north onto Stapleford Lane and then east at Bardills roundabout onto the A52 E. However, the pressure on the Banks Road/Swiney Way/B6003 Stapleford Lane junction could be relieved as result of opening up the redundant access point to the west of the site to create a new junction arrangement with Stapleford Lane and Woodstock Road. This is discussed further in **Section 8**.

8 Access & movement strategy

8.1 Introduction

8.1.1 This section describes the proposed Access & Movement Strategy for the site, considering the approach to design and connectivity by all modes of travel.

8.2 Design approach

8.2.1 This Access & Movement Strategy has been developed alongside the concept masterplan and with consideration of the objectives of national and local planning policy.

8.2.2 The key design considerations that have influenced this Access & Movement Strategy are as follows:

- Ensure connectivity to existing pedestrian and cycle infrastructure, enabling clear linkages to be made with local destinations.
- Create a sustainable layout that maximises the accessibility of the site to existing and proposed facilities, especially by modes of travel other than the private car.
- Create north/south and east/west linkages across the site, connecting to Stapleford Lane, Swiney Way, Chetwynd Road and Airedale Court, to enable the site to be stitched into the fabric of the existing settlement.
- Enable the early delivery of housing on the site through the provision of a new junction arrangement with Stapleford Lane and Woodstock Road.
- Minimise car use and maximise the flexibility for bus, pedestrian and cycle use to increase the site's permeability with its surrounds.
- Improve deliverability of the site by providing more route choice by all modes of travel along north/south and east/west axis.

8.2.3 The key to the movement of people is to arrive at a realistic and deliverable series of measures and infrastructure provision that meets the envisaged travel demand. This is increasingly focussed on a holistic approach to the transport network and a recognition that it is impractical to seek to meet demand without imposing some degree of restraint on some parts of the network and trying to encourage easier and more accessible use of other elements.

8.2.4 If an equilibrium can be achieved between car and non-car modes, where the available capacity of all networks is used equitably and efficiently, then sustainability is maximised. This also includes a pragmatic recognition that some car use is a necessity and a social and economic reality. The transition towards an equilibrium approach can be achieved through the layout of development and the facilities that are provided, supplemented by specific measures that are intended to encourage travel choice.

8.2.5 The principles and philosophies set out in national documents *Manual for Streets*[11] and *Manual for Streets 2*[12] would help to frame development layout design, in addition to the *The 6Cs Design Guide.*

[11] WAG, DCLG, DfT (2007). *Manual for Streets*. London: Thomas Telford.

[12] CIHT (2010). *Manual for Streets 2: Wider Application of the Principles*. London: CIHT.

8.2.6 *The 6Cs Design Guide* provides advice on highways and transportation infrastructure for new developments in Nottinghamshire as well as Derbyshire and Leicestershire. It covers transport matters such as parking, site access specifications including visibility splays and the criteria for assessing traffic impacts from developments. The guidance is intended to help '*design development layouts that provide for the safe and free movement of all road users'*.

8.2.7 Design solutions which minimise the potential dominance of the car would be sought, thereby minimising the need for retrospective traffic regulation and enforcement.

8.2.8 For drivers, the impression should be of a series of connected spaces where distinct and comprehensive land uses and activity centres are evident from the outset. This principle will also reinforce truly permeable neighbourhoods that create a positive environment for walking, cycling and public transport, and car drivers feel less confident that they have any sort of status or priority.

8.2.9 Disconnecting car routes through the development will prevent rat-running and aid traffic calming.

8.2.10 The strategy aims to ensure that the site connects the new community with the existing settlement and further afield to Beeston and Nottingham. This will ensure the development does not become an isolated or car dependent. Therefore, the provision of a well-connected, permeable development, with numerous multi-modal links, is considered essential for deliverability.

8.2.11 The need to create strong gateways/entrances and routes into and through the site to achieve the above was recognised in the OPUN design workshop of September 2016.

8.2.12 The workshop identified existing east/west routes through the site (e.g. from Chetwynd Road) as ones that should be retained and developed as primary bus/cycle routes which would also allow for connections with the local road network.

8.2.13 The focus on the strategy will also be on promoting and achieving sustainable transport via a network of robust, safe and legible pedestrian and cycle routes and bus routes that use existing infrastructure, were possible, and connect with local community facilities and services and local bus stops along existing and new desire lines.

8.3 Vehicular access strategy

Introduction

8.3.1 The focus of vehicular access will be on the Swiney Way and Stapleford Lane corridors. Given that Swiney Way currently acts as a through route, providing some relief to the south of Stapleford Lane and High Road, capacity on Swiney Way will likely need to be maximised.

Swiney Way/Carter Road (Chetwynd Barracks Main Gate)

8.3.2 The main access to Chetwynd Barracks is via Swiney Way and would be the best place to provide for an all movements all modes access junction. This could be a signalised junction or a roundabout.

8.3.3 Swiney Way could be diverted through Chetwynd Barracks, which would mean the access route could be reconfigured away from the current highway alignment.

8.3.4 However, the land available at this location is sufficient to provide a variety of access junction options. Though, given the nature of the site and the potential opportunity to increase the future housing yield over several phases, a roundabout would likely be the preferred option. This would be designed to an appropriate scale for the initial proposed development in terms

of capacity and size, but could also be allocated additional land in the vicinity to allow for simple modifications should there be additional future development in the area.

Swiney Way

8.3.5 A second access could be provided at the southernmost part of the Chetwynd Barracks boundary which would help distribute traffic around the network and reduce the load on both site accesses. This access could meet Swiney Way at a priority or signalised junction.

Stapleford Lane/Woodstock Road

8.3.6 The development potential of the site is such that it is likely a second point of access will be required to realise the site's full yield. The preferred option for this access is to connect through the western edge of the site boundary, via the emergency access gate to the east of the site, in order to create a signalised crossroads with Stapleford Lane and Woodstock Road.

8.3.7 Two options have been considered to establish the preferred junction layout, plans for which can be found in **Appendix D**. The preferred option will require the acquisition of a small area of third party land (owned by BBC) to create the optimal alignments on approach. This should be highlighted as a potential risk. However, the land is a small area of grassed verge deemed to be of little value, as such it is assumed at this point that an agreement for its use could be reached.

8.3.8 In addition to the preferred option a further layout has been developed that completely avoids reliance on this third party land. This has been designed to demonstrate the overall feasibility of the access form and location in order to allow for the high development yield scenarios to be feasible (see **Appendix D**).

8.3.9 It should be noted that one of the key benefits of an access at this location is that it allows all development traffic travelling to the north, the majority of the trips, will bypass the Banks Road/Swiney Way/Stapleford Lane junction. This is of particular significance given the predicted capacity restraint at this location, which is expected regardless of development.

8.3.10 The newly created junction would be controlled by signals, which would allow for pedestrian and cycle movements and would pass through the highway land which currently separates Stapleford Lane from its parallel service road and Spinney Crescent. Due to changes to the service roads, turning heads will need to be incorporated.

8.3.11 The designs also consider the Stapleford Lane Improvement Strategy proposals associated with the Land to the west of Toton Lane development. The proposals include the following in proximity of the junction of Stapleford Lane/Woodstock Road:

- Proposed puffin crossing on Stapleford Lane to improve pedestrian safety and also provide breaks in traffic flow to aid vehicular access to priority junctions.
- Central hatched area provides opportunity for some right turning vehicles to wait off-line.
- Footway width increased to allow for better crossing provision.

8.3.12 As the proposed concept plans illustrate, the scheme can be incorporated within the extent of publicly maintainable highway. The holistic approach to connectivity at this location, ensures that safe and secure crossing provision is provided and improved upon whilst enabling management of traffic.

8.3.13 Aside from the obvious benefits of access to the site, the proposals in this location would improve the local area through the creation of improved pedestrian links along key routes

adjacent to schools and for future connectivity with the proposed East Midlands HS2 Growth Hub.

8.3.14 Another key benefit to note is that traffic generated from the site travelling north would not be required to route via the Banks Road/Swiney Way/B6003 Stapleford Lane junction which, therefore, would reduce the pressure on the junction.

Banks Road/Swiney Way/B6003 Stapleford Lane

8.3.15 As part of the Stapleford Lane Improvement Strategy, improvements are proposed at the Banks Road/ Swiney Way/B6003 Stapleford Lane junction. These measures involve upgrading the pedestrian crossing facilities to provide nearside pedestrian heads with on-crossing detection, allowing inter-green periods to be controlled improving efficiency and reducing lost time at the junction.

8.3.16 These measures allow for an overall improvement of junction performance, even with significant additional development. It should, however, be noted that this mitigation is yet to be implemented and as such the benefits are as yet unknown.

8.4 Sustainable travel strategy

Public transport strategy

Introduction

8.4.1 The aim of the public transport strategy is to promote North/South and East/West connectivity through the site which will enable the site to link seamlessly with the surrounding settlement, existing sustainable transport provision (see **Figure 8.1**) and other planned major developments in Broxtowe.

8.4.2 Bus penetration within the site is a key aspect of the Sustainable Transport Strategy. PBA has been in contact with all bus providers to establish the feasibility of re-routing their existing services via the site to deliver improved connectivity and provision. PBA examined existing bus routes and provided plans to the bus providers that illustrated potential routing options via the site. These plans are provided in **Figures 8.2 to 8.6**.

8.4.3 There are a number of bus services operating in Toton and, in order to join up the network ensuring that the site does not remain isolated but, rather, is stitched in to the fabric of the settlement, initial correspondence has been made with local bus operators.

8.4.4 To date, all bus providers have been responsive to further discussions being had and this bodes well for the future development of the site and further enhancing the site's sustainability credentials.

Bus service Y5

8.4.5 Yourbus, who run bus service Y5, has no plans to re-route the Y5 service around Toton, given that they are currently undergoing a re-route around Nottingham and Beeston for this service. However, they will consider re-routing a service if it is felt that it will be beneficial to the route.

Bus service 510

8.4.6 Regarding the potential re-routing of the 510 service, NCC (as operator) has indicated that the costs for re-routing the service would be subject to assessment based on the level of vehicle resource required, including the vehicle size to accommodate the additional demand arising from the development.

8.4.7 The 510 service could be re-routed to serve the development creating a direct link to the tram at the Park and Ride site on Toton Lane. This would be a separate route to the existing 510, but could work to a co-ordinated timetable.

8.4.8 NCC suggest that, following an initial assessment of the site using population projections based on ONS data, an additional population of 1,200 could arise from the first phase of the new development (using a typical mix of housing types). Assuming a 10% take up of public transport, 120 residents would be making trips, with the majority travelling at peak/shoulder-peak times, which would indicate that an additional vehicle recourse would be required.

8.4.9 A typical annual resource cost for a single deck vehicle is around £150,000 net of revenue, with the target that that service/service enhancement achieves break-even before build-out of the development is complete.

8.4.10 Bus stop infrastructure requirements including Real Time Passenger Information (RTPI) would need to be assessed in detail at the time when a planning application is submitted but the provision of RTPI as part of any new service/service re-route would tie-in with provision that exists in parts of Stapleford, Attenborough, Chilwell, Beeston and Toton. For new developments, NCC would expect to see RTPI installed at the developer's cost at all new bus stops throughout a new development to encourage residents to choose sustainable forms of transport. This, along with quality waiting infrastructure (shelter, lighting, raised boarding kerbs, enforceable bus stop clearways, etc.), should assist with modal shift to public transport.

Bus service 536

8.4.11 There is potential for the NCC bus service 536, which currently runs between Beeston and Bramcote Avenue, to be extended. The bus route could continue from Bramcote Avenue via Bramcote Lane and Field Lane to Chetwynd Barracks, affording connections with the tram at both Bramcote Lane and Beeston Centre.

Design considerations

8.4.12 The 1999 Institution of Highways and Transportation[13] (IHT) publication, Guidelines for Planning for Public Transport in Developments suggest that '*the maximum walking distance to a bus stop should not exceed 400m…*'[14] and it is proposed that the number of households that lie within this catchment is maximised within the development.

8.4.13 In the interim, as the site becomes established, it may be prudent to investigate with local bus operators the feasibility of establishing a temporary route through the site that could route via the existing site access off Swiney Way and the proposed new arrangement at the junction of Stapleford Lane and Woodstock Road.

8.4.14 Development presents the opportunity for a new access to be provided off Airedale Court, which has the potential to be utilised by a rerouted Orange bus service, enabling the development site to stitch in with the existing Chilwell settlement which it adjoins.

8.4.15 Following discussions with the highway authority, a bus gate could be located in the eastern part of the site for vehicles accessing via Chetwynd Road. As **Figures 8.2 to 8.6** illustrate, this route has the potential to be utilised by redirected 510, Indigo, Orange, Skylink and Y5 bus routes.

8.4.16 Chetwynd Road is a straight residential street to the east of the site that could be used for bus, cycle and pedestrian access. The gate into the site currently has a double security fence which would lend itself to bus gate conversion. A bus gate would involve buses using a short

[13] Now the Chartered Institution of Highways & Transportation.

[14] *Guidelines for Planning for Public Transport in Developments*, 1999, page 11.

link to travel directly to, and across, an area not open to general through traffic. The bus gate would be identified by signs, the activation of a physical measure (such as traffic signals, barriers, rising bollards etc.), or feature a short section of guideway to prevent other traffic from using the route.

8.4.17 Welbeck Gardens has a pedestrian gate into the east of Chetwynd Barracks. Although no vehicle movements have been permitted here historically, the road is level with the Chetwynd Barracks site and so access could be taken from almost any location along the roads length. The end of Welbeck Gardens could be continued into Chetwynd Barracks. This road would not be suitable for general traffic. However, it could be considered as a route for busses, walking and cycling giving priority to these sustainable modes. Having access for busses at the north of the site could allow the bus route to be configured to help people get up and down the hill that crosses Chetwynd Barracks. This would help deliver accessibility across the site.

8.4.18 The site access roads would be designed to allow access for full sized buses to enable all properties to be served by a local bus service within the 6Cs guidelines, including the provision of bus stop infrastructure facilities.

8.4.19 The detail design for the bus service provision and stop facilities will be subject to discussions between the Council and site developers. The Council's Transport Statement for Funding document, which complements the Council's Planning Obligations Strategy will be used in this process.

8.4.20 New bus stop infrastructure would be installed as part of the development at Chetwynd Barracks to complement the provision of local bus services to serve the site. This includes the below standards at all relevant bus stops:

- Bus Stop Pole incl. Flag
- Bus Shelter
- Solar Lighting in Bus Shelter
- Raised Kerb
- Real Time Displays and Associated Electrical Connections
- Bus Stop Clearway
- Additional Hard Stand (if required)

Pedestrian & cycle strategy

8.4.21 Good pedestrian and cycle infrastructure is a key element in reducing car use and supporting health and wellbeing.

8.4.22 Walk and cycle connections to existing provision, such as local bus stops and Toton Lane Park & Ride and Inham Road tram stops will be established, ensuring that routes are active routes that have natural surveillance from surrounding buildings.

8.4.23 The intention of the Pedestrian & Cycle Strategy (see **Figure 8.7**) is to provide improved opportunities to travel by foot and bicycle and to tie-in and reiterate existing provision; all of which would be augmented by the provision of signing/wayfinding.

8.4.24 Airedale Court provides connection from the north of Chetwynd Barracks to the wider network where the carriageway adjoins with the site's fence line. Because Airedale Court is a residential cul-de-sac, the access would be for pedestrians and cyclists. This would require

work on the south side of Airedale Court to provide a footway/cycleway. The carriageway is wide enough to allow this to be accommodated.

8.4.25 On Grayson Mews, to the south of Chetwynd Barracks, the carriageway continues up to the site boundary. From this point, it may be possible to provide low capacity vehicular access but pedestrian and cycle access would provide mutually beneficial connectivity between facilities within Chetwynd Barracks and existing provision to the south.

8.4.26 On Northfield Crescent, to the northeast of the site, it may be possible to futureproof a pedestrian and cycle connection through the Annington land into the commercial development area up to Toton Lane Park & Ride. This would provide a high quality connection to the Tram link into Nottingham. However, as discussed earlier in this report (see **Section 7**), this may not be achievable as the DIO has no control over the land. It does, however, remain an aspiration.

8.4.27 On Sandhurst Drive and Firth Drive, located to the southeast of the site, there are corridors that could also provide pedestrian and cycle connection into the site.

8.5 Travel planning

8.5.1 Travel plans are a planning requirement for all new developments where there is expected to be a transport impact.

8.5.2 Travel plans identify the opportunities to minimise car use in order to create a sustainable development, in line with national and local policy guidance.

8.5.3 A Travel Plan will be required to demonstrate how car use will be minimised, set challenging targets and identify the measures necessary to achieve those targets. The measures will include specific requirements for, inter alia, public transport facilities, walking and cycling.

8.5.4 Travel plans may be secured by condition or by Section 106 obligations where their provision relate to on-site and off-site improvements or management measures. However, where these relate to off-site provision, or are linked to other travel plans in the area, then it is likely that a planning obligation will be required in order to ensure effective reinforcement of the Plan. Financial bonds will generally be required to ensure that travel plan actions are delivered and performance is achieved.

8.5.5 It is suggested that Site-wide Travel Plan (comprising a residential Travel Plan and a Workplace Travel Plan) will evolve over time in accordance with national and local policy guidance.

8.6 Summary

8.6.1 The Access & Movement Strategy for promoting multi-modal accessibility of the site represents a comprehensive approach that maximises the opportunities to undertake journeys by accessible and sustainable modes.

8.6.2 The Access & Movement Strategy strengthens access to the site and the means by which the scheme will be integrated within the existing settlement, tie-ing in where possible, with existing connections and providing improved connectivity.

8.6.3 In line with national guidance that is documented in the NPPF, *'…development should be located and designed where practical to…give priority to pedestrian and cycle movements, and have access to high quality public transport facilities…'*[15], thereby enabling the use of sustainable transport modes to be maximised. This will be supported by a Site-wide Travel Plan, with robust targets to limit and minimise car use and maximise the opportunities for

[15] NPPF, 2012, paragraph 35.

walking and cycling, development of Chetwynd Barracks will ensure the site is stitched-in to the fabric of the existing settlement, thereby avoiding any barriers to provision.

8.6.4 The Pedestrian & Cycle Strategy ties in with existing provision and with national and local guidance on improving site accessibility and sustainability as links would be well located and designed to be safe and attractive enabling access to bus and tram stops. This would be enhanced through improved bus provision between the site and the surrounding settlement.

8.6.5 The Access & Movement Strategy strengthens existing facilities and enhances integration with established communities as the routes defined in the Strategy serve defined functions and lead users directly to where they want to go.

8.6.6 The Access & Movement Strategy enables people to access more sustainable transport networks, thereby providing a wide range of travel options between the site, employment, retail, education and other local community facilities and services.

8.6.7 It should be noted that changes to vehicle technology are having an effect on highway capacity. The increasing autonomy of vehicles, which is set to increase in the future, is forecast to have the potential to increase network capacity as vehicles can travel closer together, platoon more efficiently, communicate with each other and use road space more effectively. It is considered likely that autonomy will play an increasing part in urban traffic management over the coming decades.

8.6.8 Increased access provision improves site permeability, creates activity at the key interfaces and assists in avoiding concentrations of vehicular movements by dispersing traffic more widely.

8.6.9 This Access & Movement Strategy presents an opportunity for enhancing an already well connected sustainable transport network, thereby improving connectivity to local community facilities and services by credible alternatives to the private car.

9 Potential future implications

9.1 Introduction

9.1.1 This section considers the potential implications of development on the surrounding transport network as a result of developing Chetwynd Barracks and the provision of other significant infrastructure projects in the area (e.g. East Midlands HS2 Growth Hub).

9.2 Change in traffic flows

9.2.1 **Tables 9.1** to **9.12** show the change in flows on the local road network that would result from traffic growth to 2028 and development at Chetwynd Barracks compared to the 2017 and 2028 baselines.

Table 9.1 – Woodstock Road/Stapleford Lane change in flows (PCU)

Change in Vehicle Flows (PCU)	AM Peak			PM Peak		
	Stapleford Lane S	Woodstock Road	Stapleford Lane N	Stapleford Lane S	Woodstock Road	Stapleford Lane N
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Stapleford Lane (S)	0	4	272	0	3	253
Woodstock Road	1	0	18	2	0	6
Stapleford Lane (N)	239	6	0	270	21	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m2 GFA B1						
Stapleford Lane (S)	0	4	574	0	3	403
Woodstock Road	1	0	18	2	0	6
Stapleford Lane (N)	332	6	0	521	21	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Stapleford Lane (S)	0	0	186	0	0	149
Woodstock Road	0	0	0	0	0	0
Stapleford Lane (N)	120	0	0	155	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Stapleford Lane (S)	0	0	487	0	0	299
Woodstock Road	0	0	0	0	0	0
Stapleford Lane (N)	213	0	0	406	0	0

Table 9.2 – Woodstock Road/Stapleford Lane change in flows (%)

Change in Vehicle Flows (%)	AM Peak			PM Peak		
	Stapleford Lane S	Woodstock Road	Stapleford Lane N	Stapleford Lane S	Woodstock Road	Stapleford Lane N
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Stapleford Lane (S)	0	13	41	0	12	30
Woodstock Road	13	0	13	12	0	12
Stapleford Lane (N)	26	13	0	29	12	0

Change in Vehicle Flows (%)	AM Peak			PM Peak		
	Stapleford Lane S	Woodstock Road	Stapleford Lane N	Stapleford Lane S	Woodstock Road	Stapleford Lane N
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m2 GFA B1						
Stapleford Lane (S)	0	13	86	0	12	48
Woodstock Road	13	0	13	12	0	12
Stapleford Lane (N)	36	13	0	56	12	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Stapleford Lane (S)	0	0	25	0	0	16
Woodstock Road	0	0	0	0	0	0
Stapleford Lane (N)	12	0	0	15	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Stapleford Lane (S)	0	0	64	0	0	32
Woodstock Road	0	0	0	0	0	0
Stapleford Lane (N)	20	0	0	39	0	0

9.2.2 **Tables 9.1 and 9.2** show that the highest changes in traffic flows are from Stapleford Lane (S) to Stapleford Lane (N) during the AM peak hour. This indicates the pull of the key employment destinations of Nottingham and Derby via the A52. The change in traffic flows in split broadly the same both directions along Stapleford Lane During the PM peak hour.

Table 9.3 – Banks Road/Swiney Way/Stapleford Lane change in flows (PCU)

Change in Vehicle Flows (PCU)	AM Peak				PM Peak			
	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	26	8	231	0	30	20	216
B6003 Stapleford Lane (S)	22	0	9	41	34	0	12	45
Banks Road	24	11	0	5	11	12	0	4
B6003 Stapleford Lane (N)	160	40	3	0	222	61	26	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	57	8	533	0	45	20	366
B6003 Stapleford Lane (S)	32	0	9	41	60	0	12	45
Banks Road	24	11	0	5	11	12	0	4

Change in Vehicle Flows (PCU)	AM Peak				PM Peak			
	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)
B6003 Stapleford Lane (N)	252	40	3	0	473	61	26	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	19	0	186	0	15	0	149
B6003 Stapleford Lane (S)	12	0	0	0	16	0	0	0
Banks Road	0	0	0	0	0	0	0	0
B6003 Stapleford Lane (N)	120	0	0	0	155	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	50	0	487	0	31	0	299
B6003 Stapleford Lane (S)	22	0	0	0	42	0	0	0
Banks Road	0	0	0	0	0	0	0	0
B6003 Stapleford Lane (N)	213	0	0	0	406	0	0	0

Table 9.4 – Banks Road/Swiney Way/Stapleford Lane change in flows (%)

Change in Vehicle Flows (%)	AM Peak				PM Peak			
	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	49	13	65	0	26	12	40
B6003 Stapleford Lane (S)	29	0	13	13	23	0	12	12
Banks Road	13	13	0	13	12	12	0	12
B6003 Stapleford Lane (N)	52	13	13	0	41	12	12	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								

Change in Vehicle Flows (%)	AM Peak				PM Peak			
	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)	Swiney Way	B6003 Stapleford Lane (S)	Banks Road	B6003 Stapleford Lane (N)
Swiney Way	0	107	13	151	0	39	12	67
B6003 Stapleford Lane (S)	41	0	13	13	41	0	12	12
Banks Road	13	13	0	13	12	12	0	12
B6003 Stapleford Lane (N)	82	13	13	0	87	12	12	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	32	0	47	0	12	0	24
B6003 Stapleford Lane (S)	14	0	0	0	10	0	0	0
Banks Road	0	0	0	0	0	0	0	0
B6003 Stapleford Lane (N)	35	0	0	0	25	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
Swiney Way	0	83	0	122	0	23	0	49
B6003 Stapleford Lane (S)	25	0	0	0	25	0	0	0
Banks Road	0	0	0	0	0	0	0	0
B6003 Stapleford Lane (N)	61	0	0	0	67	0	0	0

9.2.3 **Tables 9.3 and 9.4** show that the highest changes in traffic flows is from Swiney Way to Stapleford Lane (N) during the AM peak hour and vice versa during the PM peak hour. Again, this indicates the pull of the key employment destinations of Nottingham and Derby via the A52.

Table 9.5 - Swiney Way/Carter Road (Chetwynd Barracks Main Gate) change in flows (PCU)

Change in Vehicle Flows (PCU)	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						

Change in Vehicle Flows (PCU)	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
Swiney Way (W)	0	54	92	0	119	65
Carter Road	167	0	33	73	0	1
Swiney Way (E)	53	9	0	64	22	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Swiney Way (W)	0	245	92	0	454	65
Carter Road	542	0	142	341	0	91
Swiney Way (E)	53	64	0	64	119	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Swiney Way (W)	0	44	0	0	113	0
Carter Road	162	0	30	62	0	-4
Swiney Way (E)	0	6	0	0	20	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Swiney Way (W)	0	235	0	0	447	0
Carter Road	537	0	139	329	0	85
Swiney Way (E)	0	61	0	0	116	0

Table 9.6 - Swiney Way/Carter Road (Chetwynd Barracks Main Gate) change in flows (%)

Change in Vehicle Flows (%)	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Swiney Way (W)	0	69	13	0	231	12
Carter Road	434	0	161	80	0	3
Swiney Way (E)	13	37	0	12	101	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Swiney Way (W)	0	312	13	0	881	12
Carter Road	1412	0	696	374	0	218
Swiney Way (E)	13	256	0	12	540	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						

Change in Vehicle Flows (%)	AM Peak			PM Peak		
	Swiney Way (W)	Carter Road	Swiney Way (E)	Swiney Way (W)	Carter Road	Swiney Way (E)
Swiney Way (W)	0	50	0	0	195	0
Carter Road	373	0	131	60	0	-9
Swiney Way (E)	0	22	0	0	79	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Swiney Way (W)	0	265	0	0	773	0
Carter Road	1240	0	606	321	0	183
Swiney Way (E)	0	216	0	0	469	0

9.2.4 **Tables 9.5 and 9.6** show that the highest changes in traffic flows are from the Main Gate to Swiney Way (W) during the AM peak hour and vice versa during the PM peak hour.

9.2.5 The increase in flows at this junction is much higher than other junctions on the network as it has been assumed that all development traffic would use this junction to enter/exit the site. In reality, as a result of internal routing, the provision of a new arrangement at the Woodstock Road/Stapleford Lane junction, new bus, pedestrian and cycle links and the implementation of Site-wide Travel Plan, trip generation via this access would be significantly reduced.

Table 9.7 – Swiney Way/Nottingham Road/Barton Lane change in flows (PCU)

Change in Vehicle Flows (PCU)	AM Peak				PM Peak			
	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	11	70	62	0	20	98	74
Barton Lane	10	0	7	7	20	0	18	17
A6005 Nottingham Road (W)	112	12	0	10	64	14	0	11
Swiney Way	100	14	6	0	84	17	8	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	11	70	89	0	20	98	145
Barton Lane	10	0	7	7	20	0	18	17

Change in Vehicle Flows (PCU)	AM Peak				PM Peak			
	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way
A6005 Nottingham Road (W)	112	12	0	10	64	14	0	11
Swiney Way	186	14	6	0	127	17	8	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	0	0	34	0	0	0	44
Barton Lane	0	0	0	0	0	0	0	0
A6005 Nottingham Road (W)	0	0	0	0	0	0	0	0
Swiney Way	53	0	0	0	43	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	0	0	61	0	0	0	116
Barton Lane	0	0	0	0	0	0	0	0
A6005 Nottingham Road (W)	0	0	0	0	0	0	0	0
Swiney Way	139	0	0	0	85	0	0	0

Table 9.8 – Swiney Way/Nottingham Road/Barton Lane change in flows (%)

Change in Vehicle Flows (%)	AM Peak				PM Peak			
	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	13	13	29	0	12	12	31
Barton Lane	13	0	13	13	12	0	12	12
A6005 Nottingham Road (W)	13	13	0	13	12	12	0	12
Swiney Way	27	13	13	0	25	12	12	0

Change in Vehicle Flows (%)	AM Peak				PM Peak			
	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way	A6005 Nottingham Road (E)	Barton Lane	A6005 Nottingham Road (W)	Swiney Way
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	13	13	41	0	12	12	61
Barton Lane	13	0	13	13	12	0	12	12
A6005 Nottingham Road (W)	13	13	0	13	12	12	0	12
Swiney Way	51	13	13	0	38	12	12	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	0	0	14	0	0	0	17
Barton Lane	0	0	0	0	0	0	0	0
A6005 Nottingham Road (W)	0	0	0	0	0	0	0	0
Swiney Way	13	0	0	0	11	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A6005 Nottingham Road (E)	0	0	0	25	0	0	0	44
Barton Lane	0	0	0	0	0	0	0	0
A6005 Nottingham Road (W)	0	0	0	0	0	0	0	0
Swiney Way	34	0	0	0	23	0	0	0

9.2.6 **Tables 9.7 and 9.8** show that the highest changes in traffic flows, during the AM and PM peak hours, is between Swiney Way and Nottingham Road (E), reflecting the pull of Nottingham city centre.

Table 9.9 - Nottingham Road/High Road change in flows (PCU)

Change in Vehicle Flows (PCU)	AM Peak			PM Peak		
	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	48	92	0	61	79
B6003 High Road	37	0	45	25	0	49
A6005 Nottingham Road (E)	72	10	0	108	16	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	57	92	0	86	79
B6003 High Road	68	0	45	41	0	49
A6005 Nottingham Road (E)	72	10	0	108	16	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	12	0	0	16	0
B6003 High Road	19	0	0	15	0	0
A6005 Nottingham Road (E)	0	0	0	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	22	0	0	42	0
B6003 High Road	50	0	0	31	0	0
A6005 Nottingham Road (E)	0	0	0	0	0	0

Table 9.10 - Nottingham Road/High Road change in flows (%)

Change in Vehicle Flows (%)	AM Peak			PM Peak		
	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))	A6005 Nottingham Road (W)	B6003 High Road	A6005 Nottingham Road (E))
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	17	13	0	17	12
B6003 High Road	27	0	13	31	0	12
A6005 Nottingham Road (E)	13	13	0	12	12	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	21	13	0	24	12
B6003 High Road	49	0	13	50	0	12
A6005 Nottingham Road (E)	13	13	0	12	12	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	4	0	0	4	0
B6003 High Road	12	0	0	17	0	0
A6005 Nottingham Road (E)	0	0	0	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
A6005 Nottingham Road (W)	0	7	0	0	10	0
B6003 High Road	32	0	0	34	0	0
A6005 Nottingham Road (E)	0	0	0	0	0	0

9.2.7 **Tables 9.9 and 9.10** show that the greatest changes in traffic flows, during the Am and PM peak hours, occur from the B6003 High Road to Nottingham Road (W), reflecting the fact that development generated traffic is more likely to use the Swiney Way/Nottingham Road/Barton Lane junction to head toward Nottingham city centre.

Table 9.11 - Bardills roundabout change in flows (PCU)

Change in Vehicle Flows (PCU)	AM Peak				PM Peak			
	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	96	185	26	0	109	202	32
B6003 Toton Lane (S)	122	0	133	31	98	0	117	46
A52 Brian Clough Way (W)	218	107	0	10	218	137	0	8
B6003 Toton Lane (N)	33	47	8	0	17	43	9	0
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	129	185	26	0	199	202	32
B6003 Toton Lane (S)	231	0	326	31	152	0	213	46
A52 Brian Clough Way (W)	218	166	0	10	218	297	0	8
B6003 Toton Lane (N)	33	47	8	0	17	43	9	0
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	43	0	0	0	56	0	0
B6003 Toton Lane (S)	67	0	119	0	54	0	95	0
A52 Brian Clough Way (W)	0	77	0	0	0	99	0	0
B6003 Toton Lane (N)	0	0	0	0	0	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	77	0	0	0	146	0	0
B6003 Toton Lane (S)	175	0	312	0	108	0	191	0
A52 Brian Clough Way (W)	0	136	0	0	0	260	0	0
B6003 Toton Lane (N)	0	0	0	0	0	0	0	0

Table 9.12 - Bardills roundabout change in flows (%)

Change in Vehicle Flows (%)	AM Peak				PM Peak			
	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)	A52 Brian Clough Way (E)	B6003 Toton Lane (S)	A52 Brian Clough Way (W)	B6003 Toton Lane (N)
2017 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	24	13	13	12	25	12	12
B6003 Toton Lane (S)	28	0	126	13	27	0	66	12
A52 Brian Clough Way (W)	13	46	13	13	12	45	12	12
B6003 Toton Lane (N)	13	13	13	0	12	12	12	12
2017 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	32	13	13	12	46	12	12
B6003 Toton Lane (S)	54	0	309	13	42	0	120	12
A52 Brian Clough Way (W)	13	71	13	13	12	98	12	12
B6003 Toton Lane (N)	13	13	13	0	12	12	12	12
2028 Base - 2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	9	0	0	0	12	0	0
B6003 Toton Lane (S)	14	0	100	0	13	0	48	0
A52 Brian Clough Way (W)	0	29	0	0	0	29	0	0
B6003 Toton Lane (N)	0	0	0	0	0	0	0	0
2028 Base - 2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1								
A52 Brian Clough Way (E)	0	17	0	0	0	30	0	0
B6003 Toton Lane (S)	36	0	262	0	27	0	96	0
A52 Brian Clough Way (W)	0	52	0	0	0	76	0	0
B6003 Toton Lane (N)	0	0	0	0	0	0	0	0

Note: The percentage increase in vehicles making U-turns during the 2017 base year is not reflected in the change in PCUs (shown in Table 9.11), given that this only represents a small volume of vehicles undertaking this manoeuvre.

9.2.8 **Tables 9.11 and 9.12** show that the greatest change in traffic flows, during both AM and PM peak hours, occurs between Toton Lane (S) and the A52 westbound. This reflects that the majority of vehicles are heading out from Chilwell towards the M1 and to key employment destinations such as Derby.

9.3 Junction operation 2028

Banks Road/Swiney Way/B6003 Stapleford Lane

9.3.1 It is evident that, even without undertaking any modelling, mitigation measures will need to be investigated at this junction, given that the junction is predicted to be over capacity in 2026, without development.

9.3.2 It is envisaged that the mitigation measures proposed by the Land to the west of Toton Lane application will improve overall improvement of junction performance, even with significant additional development.

9.3.3 The extent of highway boundary at the junction would suggest that infrastructure improvements could be made in proportion to future routing arrangements of development traffic.

Swiney Way/Carter Road (Chetywnd Barracks Main Gate)

Table 9.13 - Swiney Way/Carter Road (Site Access) 2028 Base + Dev Junctions 9

Movement	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	RFC	Queue (PCUs)	Delay (Seconds)	RFC
2028 Base + Development 600 dwellings and 5,000 m^2 GFA B1						
Carter Road – Swiney Way E	0.3	18	0.22	0.1	9	0.10
Carter Road – Swiney Way W	3.4	60	0.80	1.2	26	0.56
Swiney Way E – Swiney Way N/Carter Road	0.1	8	0.07	0.1	7	0.08
2028 Base + Development 1,600 dwellings and 5,000 m^2 GFA B1						
Carter Road – Swiney Way E	93.3	3278	2.74	49.9	1895	2.03
Carter Road – Swiney Way W	331.0	3247	2.76	160.8	1837	2.06
Swiney Way E – Swiney Way N/Carter Road	0.3	11	0.22	0.5	12	0.34

9.3.4 The junction is estimated to operate within capacity with the 2028 Base Year with low-yield development scenarios. However, the junction fails in the 2028 Base Year with high-yield development scenario, with RFC values in excess of 2 on the minor arm in both the AM and PM time periods.

9.3.5 However, it was expected that the existing access layout would not be adequate given the significant flows associated with the high-yield development scenario.

9.3.6 Land available at this location, both client owned and adopted highway, is considered sufficient to provide a variety of access junction options to accommodate the proposed development flows.

9.3.7 Given the nature of the site and the potential opportunity to increase the future housing yield over several build out phases, a roundabout would likely be the preferred option. This would

be designed to an appropriate scale for the initial proposed development in terms of capacity and size, but would allocate adjacent land to allow for future modifications should there be need for additional capacity in the future.

9.3.8 The principal objective of roundabout design is

> *'…to minimise delay for vehicles whilst maintaining the safe passage of all road users through the junction. This is achieved by a combination of geometric layout features that, ideally, are matched to the flows in the traffic streams, their speed, and to any local topographical or other constraints such as land availability that apply…'*[16]

Swiney Way/A6005 Nottingham Road

9.3.9 The trip distribution and assignment exercises used to estimate the routing of development traffic show that all additional development traffic will travel along Nottingham Road east, towards Nottingham. This means the only affected turning movements are left from Swiney Way to Nottingham Road east and right from Nottingham Road east to Swiney Way.

9.3.10 Broadly, the percentage of development traffic at this junction in a 2028 future year, including the Toton Lane development, is approximately 10% for a 600 dwelling scheme and 21% for a 1,600 dwelling scheme. Though it should be noted that these proportions will include an amount of double counting of the traffic associated with the existing uses at Chetwynd Barracks.

9.3.11 Possible implications of the traffic increase, with or without development, would likely include increased delay at this junction, particularly for those turning right from Nottingham Road to Swiney Way, as it is understood this movement is currently opposed by the west-east straight ahead movement. However, a right-turn filter signal is present. Therefore, it is a likely that the signal controller could be further optimised to account for changing turning proportions.

9.3.12 Similarly, the left-turn from Swiney Way to Nottingham Road also features a filter signal allowing for early-release/late finish of the priority for this phase. However, it should be noted that the distance from the stop line on this arm to the exit of the roundabout to the north is approximately 80m in length. Observed mean-max queues of approximately eight vehicles with an absolute maximum recorded at 16 vehicles in the PM peak. This suggests that this storage may be insufficient for queuing vehicles in the existing condition and, in future years, this could affect the operation of the preceding junction.

9.3.13 It should be made clear that this issue would likely arise regardless of development at the Chetwynd Barracks site. Possible measures taken to mitigate the effects of traffic growth should first centre on a review of the signal controller to understand if further optimisation is possible.

9.3.14 Further to this, increased queueing along Swiney Way could lead to safety concerns at the preceding roundabout. However, there are several options to mitigate these impacts, firstly there may be scope to increase storage capacity at the junction through localised widening, though this would be dependent on third-party land constraints. Secondly it may be beneficial to signalise and coordinate the preceding junctions to ensure only the amount of traffic capable of being discharged is a single signal cycle is allowed to queue.

[16] TD 16/07, 2007, paragraph 1.13.

9.4 Proposed transport infrastructure

East Midlands HS2 Growth Hub

9.4.1 The East Midlands HS2 High Speed railway will run to the east of Toton, linking London to Leeds by 2033. Toton will be the location of a new East Midlands hub station for this railway which will support over 1,500 new jobs in and around the station and serve the cities of Derby, Nottingham and Leicester[17].

9.4.2 The HS2 Hub Station will be built on existing railway land and will be the most connected station on the high speed network outside of London.

9.4.3 The Station has potential for connectivity through:

- heavy rail, including dedicated shuttle and classic compatible services – to reduce the number of journeys to the station made by private car, fast, reliable rail services to the hub station that don't divert existing long distance classic rail services, would be essential,
- strategic tram (NET) extensions or Bus Rapid Transit linkages, and
- bus/taxi, cycling and pedestrian access from surrounding communities – HS2 development may sever rights of way, such as footpaths, bridleways and cycleways but new crossings or temporary access would be provided where practicable, subject to discussions with the relevant authorities.

9.4.4 For vehicle traffic to the East Midlands Hub Station, Highways England, HS2 and BBC are working to find direct access from the A52 to mitigate pressure on strategic and local roads; an area-wide 'Mass Transit Strategy' that would help to reduce the number of journeys made by the private car.

9.4.5 The East Midlands HS2 Growth Hub proposals may require temporary or permanent re alignment of roads such as:

- Station Road,
- A6005 Nottingham Road,
- the A52,
- B5010 Derby Road,
- the M1, and
- additional minor roads.

9.4.6 Highways England has indicated that only a site access to the proposed HS2 station at Toton (via the A52) and associated improvements on the link between Bardills roundabout (A52/B6003 signalised junction) and M1 J25 were being looked at this moment in time.

9.4.7 Highways England has only recently begun preliminary designs for the site access to the proposed HS2 station at Toton and, therefore, no modelling has yet to be undertaken. Although, the access is likely to be grade-separated and assessments of impact and final design will consider all wider developments that are proposed in the area.

[17] HS2 Phase 2 East Midlands Hub Station Factsheet

9.4.8 It is important to note that the site should be substantially, or completely, constructed by the time the HS2 station opens.

Strategic Road Network

9.4.9 Highways England are planning a number of junction improvements (comprising widening and signalisation) on the A52 to the south and east of Nottingham, including some of the junctions near Gamston. All improvements are estimated to finish around 2025.

9.4.10 Developments coming forward within Rushcliffe were all contributing proportional amounts to these improvements, based on the anticipated impact of each development.

9.5 Future assessment

9.5.1 It is recommended that, as the site gets taken forward for planning, the GNTM and Highways England Vissim Models are used to test the potential development impact on the strategic road network.

9.5.2 Highways England, when dealing with schemes that are predicted to have an impact on the strategic road network, would request a proportional contribution from a development to any mitigation measures that may be required.

9.5.3 Use of both models would involve determining the level of vehicle trip generation for the scale of development for which planning permission is being sought, and the level of TEMPro growth that should be applied, and then providing these to NCC and Highways England so that they can be run through the models.

9.6 Summary

9.6.1 Qualitative and quantitative analysis provides an indication of where potential impact is likely and where mitigation measures/financial contributions may be required.

9.6.2 It is clear that with development on the site, large percentage changes in traffic flows are expected to occur as a result of development.

9.6.3 However, as the Access & Transport Movement Strategy suggests, development of the site represents an opportunity for enhancing an already well connected sustainable transport network, thereby improving connectivity to local community facilities and services by credible alternatives to the private car.

9.6.4 Mitigation measures will also require routing arrangements to be established, based on the mix of housing and its location within the site. In addition, the provision of a new access via Stapleford Lane will enable pressure to be taken off the main site access off Swiney Way and off the Banks Road/Swiney Way/B6003 Stapleford Lane junction.

9.6.5 Consideration will need to be given to the implications arising as a result of the HS2 station at Toton. This will have associated infrastructure requirements in the area and will change patterns of movement. However, development at the Chetwynd Barracks site would be built out before HS2 is completed.

9.6.6 What HS2 will provide is further enhanced services in the locality, enabling the stop at Toton to be connected to what is hoped will be an already joined up and connected network by the time HS2 is completed.

9.6.7 Clearly, as the site gets taken forward for planning, the GNTM and Highways England Vissim Models will need to be used in order to test the potential impact of development on the strategic road network. This will also impact on the local network assessments and patterns of

traffic distribution and assignment and will also be dependent on the quantum and mix of housing that is taken forward.

10 Summary and conclusion

10.1 Introduction

10.1.1 This section summarises this Transport & Movement Strategy and draws a conclusion on the principles of development on the site.

10.2 Summary

10.2.1 The Defence Infrastructure Organisation (DIO) is seeking to promote Chetwynd Barracks (the site) as a strategic housing allocation in the emerging Broxtowe Borough Council (BBC) Part 2 Local Plan.

10.2.2 Peter Brett Associates LLP (PBA), working on behalf of JLL as lead consultant, has prepared this Transport & Movement Strategy in support of the sites promotion and allocation for the following:

> *A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sqm of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial.*

10.2.3 Allocation of Chetwynd Barracks for development would help address the transport issues raised in the context of national and local policies, due to the site's proximity to a variety of public transport links and a range of community facilities and services. This has the potential for reducing the need to travel by private car and encourage the use of sustainable transport alternatives.

10.2.4 Chetwynd Barracks occupies a prominent and strategic position between the A52, the M1 and the A6005 Nottingham Road, facilitating access to local destinations, such as Stapleford, Bramcote, Long Eaton and Beeston, and those further afield.

10.2.5 Approximately 3,000 people live and work on site, plus approximately 167 civilians. The number of trips generated by the site during peak hours was recorded on 17th January 2017. This showed that approximately 165 trips were recorded during the morning peak hour and 206 two way trips during the evening peak hour.

10.2.6 However, the number of trips generated fluctuates depending on site activity. Therefore, the average number of trips at the site was recalculated based on data from the application that was submitted for the redevelopment of the former RAF Lyneham. Based on counts undertaken at the main gate, approximately 10% of the population could be considered to arrive and depart during network peak hours.

10.2.7 Using 10% as a proxy for the number of site users making vehicle trips at peak times, the vehicle trip generation at Chetwynd Barracks on days with no training would be approximately 317 two way trips during the morning and evening peak hours. It is considered that this vehicle trip generation is more of a realistic and robust figure that can be considered to be generated by the site during peak hours.

10.2.8 The site is also situated in a desirable location, given its proximity to a range of local community facilities and services, such as schools, open spaces, retail and health provision; all of which are accessible from the site by foot and by bicycle.

10.2.9 Indeed, the situation of the site within an existing residential area enables integration with an established community; access from the site to which would be significantly enhanced via the proposed connections to existing pedestrian, cycle and bus provision.

10.2.10 Chetwynd Barracks is currently accessed off Swiney Way, which forms a link between the B6003 Stapleford Lane and the A6005 Nottingham Road. Access to the A52 and M1 of the strategic road network, via Stapleford Lane, is also easily achievable.

10.2.11 Assessment of traffic surveys undertaken on the local road network in January 2017 determined the AM and PM peak hours as 08:00-09:00 and 17:00-18:00, respectively.

10.2.12 Consideration of junction operation on the local road network suggests that the trip attractors of Derby and Nottingham, and proximity of the t5en site to the M1, is such that the local road network experiences significant traffic volumes and constraints on capacity as a result of natural growth during the AM and PM peak hours.

10.2.13 However, measures are proposed at the Banks Road/Swiney Way/B6003 Stapleford Lane junction would allow for an overall improvement of junction performance, even with significant additional development.

10.2.14 Further afield, Bardills roundabout has recently been upgraded with MOVA and lane widening as part of a package of improvement measures at the junction. Highways England are also looking at improving the mainline capacity on the A52 to help facilitate movement as part of their normal programme of works.

10.2.15 Of those accidents that have been recorded on the local road network, none were fatal, with the highest number of collisions occurring at Bardills roundabout and its approaching arms. However, the review has indicated that there appears no reason why the development potential of the site could not be realised.

10.2.16 The site lies within recommended walk distance to bus stops that provide access to local destinations and to destinations further afield, such as Nottingham and Beeston.

10.2.17 Attenborough Rail Station and tram services to the north of the site means that public transport can easily be accessed from Chetwynd Barracks and can therefore be considered a reasonable alternative to the private car, particularly when taking into account the frequency of these services.

10.2.18 The site is connected to a comprehensive network of PRoWs and cycle routes, enabling direct access to local town centres and to the local community facilities and services. Connecting with existing provision would complete the existing pedestrian and cycle network, ensuring that pedestrians and cyclists could access key destinations in all directions.

10.2.19 The site is clearly well-connected by all modes of travel. Opportunities exist to access local community facilities and services by modes of travel other than the private car which, in line with the NPPF, enhances the sustainable credentials of the site. It also means that any enhancements proposed by the scheme will be more sustainable in the long term, given that they would strengthen existing facilities rather than seek to introduce and sustain new services.

10.2.20 It is considered that the site is excellently located to be accessed by modes of travel other than the private car and presents an opportunity to improve existing pedestrian and cycle provision. Furthermore, development at this location is in line with current national guidance, whereby *'…developments should be located and designed where practical to…give priority to pedestrian and cycle movements, and have access to high quality public transport*

facilities...'[18] as the site enables the use of sustainable transport modes in the locality to be maximised.

10.2.21 Traffic growth in Toton is estimated to increase by approximately 13% during the AM peak hour and 12% during the PM peak hour between 2017 and 2028. These growth factors include projections of traffic generated by housing and employment in the area and were used to demonstrate the potential impact at local junctions and where mitigation measures are likely.

10.2.22 As the site is taken forward for development and a Transport Assessment is prepared as a supporting document to a planning application, it is recognised that appropriate consideration will need to be given to the cumulative impacts arising from committed developments in the area, as well as other relevant local sites benefitting from as yet unimplemented planning approval, and which have the potential to impact on the same sections of transport network.

10.2.23 Significantly, development on the site represents an opportunity to not only improve local transport infrastructure but also to improve the accessibility of the modes of travel other than the private car

10.2.24 Phase 1 will have capacity for 600 dwellings, to be developed in the western part of the site. It is envisaged that access to which will be achieved via a new access to be located off the B6003 Stapleford Lane. As the development capacity of the site increases, access options will then utilise the existing access off Swiney Way with alternative pedestrian and cycle connections also being created around the site.

10.2.25 This assessment has considered development scenarios of 600 and 1,600 dwellings (incorporating the first phase of 600 dwellings) plus employment during 2028; the end of the Local Plan period in order to 'future-proof' the site and to ensure a robust strategy is developed.

10.2.26 The potential trip generation for residential and employment development on the site was estimated using TRICS. It is envisaged that the presence of other land uses on the site and the provision of a Site-Wide Travel Plan will engender site internalisation of trips by all modes of travel and therefore reduce the amount of trips predicted.

10.2.27 As a guide, development of 600 dwellings could generate 449 two-way person trips during the AM peak hour and 457 two-way person trips during the PM peak hour. Development of 1,600 dwellings could generate 1,198 two-way person trips during the AM peak hour and 1,219 two-way person trips during the PM peak hour.

10.2.28 The mode share of the MSOA Broxtowe 015 was used to consider likely distribution and assignment from Chetwynd Barracks of development-generated trips, of which 7% in the MSOA travel by bus.

10.2.29 The vehicle trips generated by development on the site could be offset by the current trip generation of Chetwynd Barracks. Based on 10% of the population of Chetwynd Barracks arriving and departing during the AM and PM peak hours, it can be argued that development of 600 dwellings and 5,000m² GFA B1 could generate an additional 139 two-way trips during the AM peak hour and an additional 135 two-way trips during the PM peak hour. Assuming 1,600 dwellings and 5,000m² GFA B1 of development, the site could generate an additional 725 trips during the AM peak hour and an additional 732 during the PM peak hour.

10.2.30 It should be noted that as the scheme progresses above 600 dwellings, the number of access options and opportunities for travel by alternative modes will increase as a result of increased

[18] NPPF, 2012, paragraph 35.

exposure to bus, pedestrian and cycle connections and that further netting off of trips would be justified, based on the scale of development and infrastructure provided to support it.

10.2.31 Based on 2011 Census 'Journey to Work' data, it is estimated that 21.4% of development-generated traffic would stay in Broxtowe District, with approximately 6.7% within the vicinity of the site. In addition, approximately 28.1% of traffic is expected to travel between the site and Nottingham with other key destinations including Erewash (12.0%), Derby (6.67%) and Rushcliffe (5.35%).

10.2.32 The main route for these journey to work trips would be along the A52 E towards Nottingham, Rushcliffe and Gedling. From the existing access off Swiney Way, this would involve vehicles travelling west along Swiney Way, turning north onto Stapleford Lane and then east at Bardills roundabout onto the A52 E. However, the pressure on the Banks Road/Swiney Way/B6003 Stapleford Lane junction could be relieved as result of opening up the redundant access point to the west of the site to create a new junction arrangement with Stapleford Lane and Woodstock Road.

10.2.33 The Access & Movement Strategy for promoting multi-modal accessibility of the site represents a comprehensive approach that maximises the opportunities to undertake journeys by accessible and sustainable modes. It strengthens access to the site and the means by which the scheme will be integrated within the existing settlement, tie-ing in where possible, with existing connections and providing improved connectivity.

10.2.34 In line with national guidance that is documented in the NPPF, *'…development should be located and designed where practical to…give priority to pedestrian and cycle movements, and have access to high quality public transport facilities…'*[19], thereby enabling the use of sustainable transport modes to be maximised. This will be supported by a Site-wide Travel Plan, with robust targets to limit and minimise car use and maximise the opportunities for walking and cycling, development of Chetwynd Barracks will ensure the site is stitched-in to the fabric of the existing settlement, thereby avoiding any barriers to provision.

10.2.35 The Pedestrian & Cycle Strategy ties in with existing provision and with national and local guidance on improving site accessibility and sustainability as links would be well located and designed to be safe and attractive enabling access to bus and tram stops. This would be enhanced through improved bus provision between the site and the surrounding settlement.

10.2.36 The Access & Movement Strategy strengthens existing facilities and enhances integration with established communities as the routes defined in the Strategy serve defined functions and lead users directly to where they want to go. It also enables people to access more sustainable transport networks, thereby providing a wide range of travel options between the site, employment, retail, education and other local community facilities and services.

10.2.37 It should be noted that changes to vehicle technology are having an effect on highway capacity. The increasing autonomy of vehicles, which is set to increase in the future, is forecast to have the potential to increase network capacity as vehicles can travel closer together, platoon more efficiently, communicate with each other and use road space more effectively. It is considered likely that autonomy will play an increasing part in urban traffic management over the coming decades.

10.2.38 Increased access provision improves site permeability, creates activity at the key interfaces and assists in avoiding concentrations of vehicular movements by dispersing traffic more widely.

[19] NPPF, 2012, paragraph 35.

10.2.39 This Access & Movement Strategy presents an opportunity for enhancing an already well connected sustainable transport network, thereby improving connectivity to local community facilities and services by credible alternatives to the private car.

10.2.40 It is clear that with development on the site, large percentage changes in traffic flows are expected to occur as a result of development. However, as the Access & Transport Movement Strategy suggests, development of the site represents an opportunity for enhancing an already well connected sustainable transport network, thereby improving connectivity to local community facilities and services by credible alternatives to the private car.

10.2.41 Mitigation measures will also require routing arrangements to be established, based on the mix of housing and its location within the site. In addition, the provision of a new access via Stapleford Lane will reduce the pressure on the main site access junction off Swiney Way and at the Banks Road/Swiney Way/B6003 Stapleford Lane junction.

10.2.42 Consideration will need to be given to the implications arising as a result of the East Midlands HS2 Growth Hub. This will have associated infrastructure requirements in the area and will change patterns of movement. However, development at the Chetwynd Barracks site would be built out before this is completed.

10.2.43 The East Midlands HS2 Growth Hub will provide further enhanced services in the locality, enabling the stop at Toton to be connected to what is hoped will be an already joined up and connected network by the time HS2 is completed.

10.2.44 Clearly, as the site gets taken forward for planning, the GNTM and Highways England Vissim Models will need to be used in order to test the potential impact of development and committed developments on the strategic road network. This will also impact on the local network assessments and patterns of traffic distribution and assignment and will also be dependent on the quantum and mix of housing that is taken forward.

10.3 Conclusion

10.3.1 At the heart of the National Planning Policy Framework (NPPF) is a presumption in favour of sustainable development which can, in part, be delivered by promoting sustainable transport and that '*development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe'*.

10.3.2 One of the core land-use planning principles, described in the NPPF, is that planning should actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are, or can be made, sustainable. Indeed, encouraging new developments in accessible locations allows a better uptake of sustainable transport modes.

10.3.3 This report has determined that the site can be delivered from 2021 up to 2028, with appropriate mitigation measures, for low (600 dwellings) and high (1,600 dwellings) housing growth projections which would act as a catalyst for bringing people, and jobs, into the area.

10.3.4 Development would maximise the value of the East Midlands HS2 Growth Hub, given the proximity of the site to the proposed new rail hub. It would allow the site to be 're-stitched' back into the surrounding settlement; enhanced by new, bus, pedestrian, cycle and road connections.

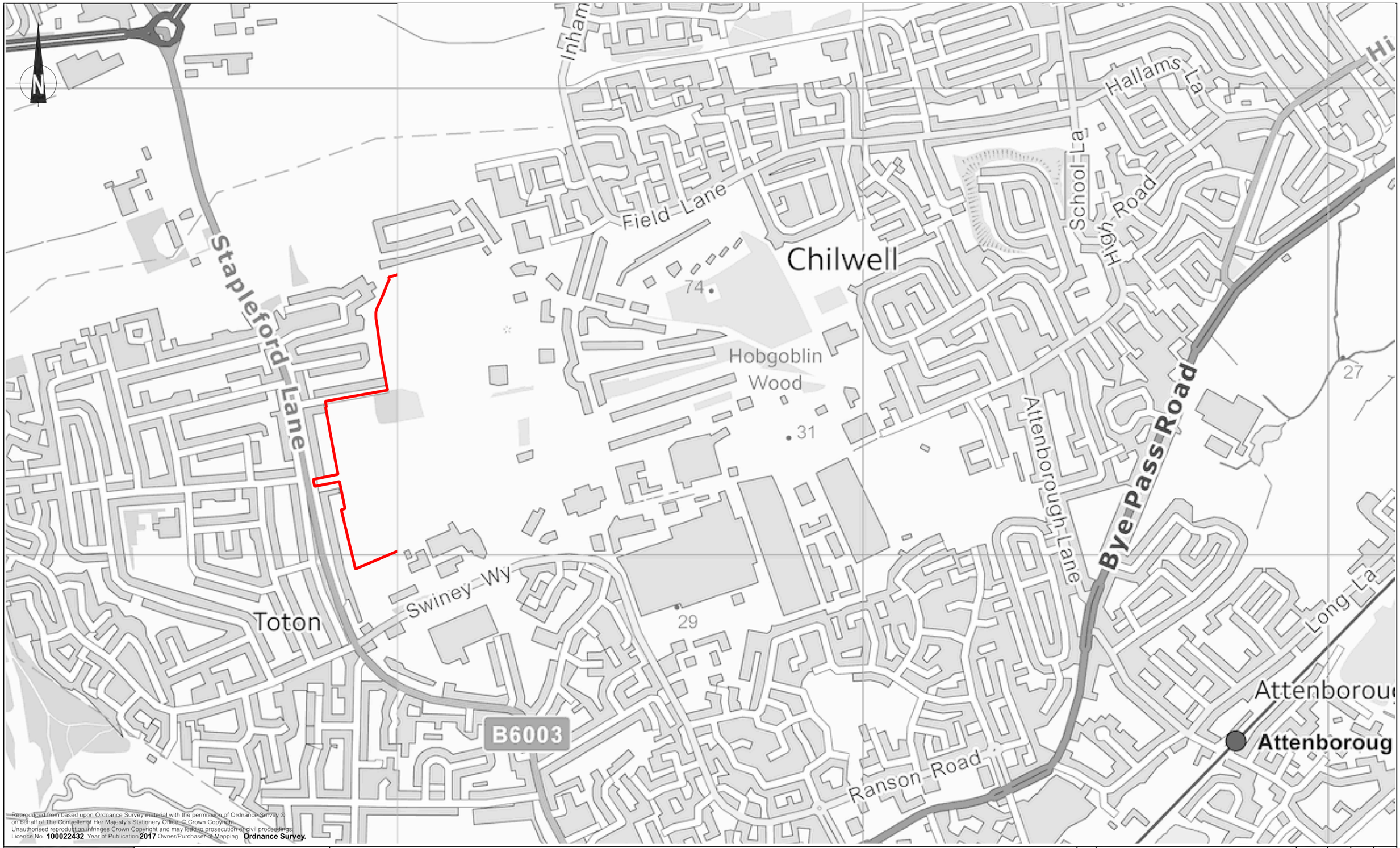
10.3.5 Development would also provide the opportunity to create an improved environment for pedestrians and cyclists by promoting north/south and east/west connectivity with the surrounding settlement.

10.3.6 Therefore, the site is located where the potential to reduce the need to travel by private car and encourage the use of sustainable transport alternatives, backed up by appropriate mitigating measures, can be achieved. Furthermore, the site is situated where opportunities exist to integrate with strategic transport infrastructure and development proposals, which will help to maximise its sustainable development potential.

10.3.7 Development would also see the creation of new employment opportunities and retail provision with a new local centre in site to meet the needs of new residents and neighbours in the surrounding settlement.

10.3.8 Given that housing demand needs to be addressed, this report demonstrates that the location of Chetwynd Barracks offers the best opportunity to manage the situation with the greatest likelihood that modes other than the car will be readily available and likely to be the mode of choice for a significant number of journeys during the Plan period and beyond.

Appendix A Figures



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Indicative Site Location

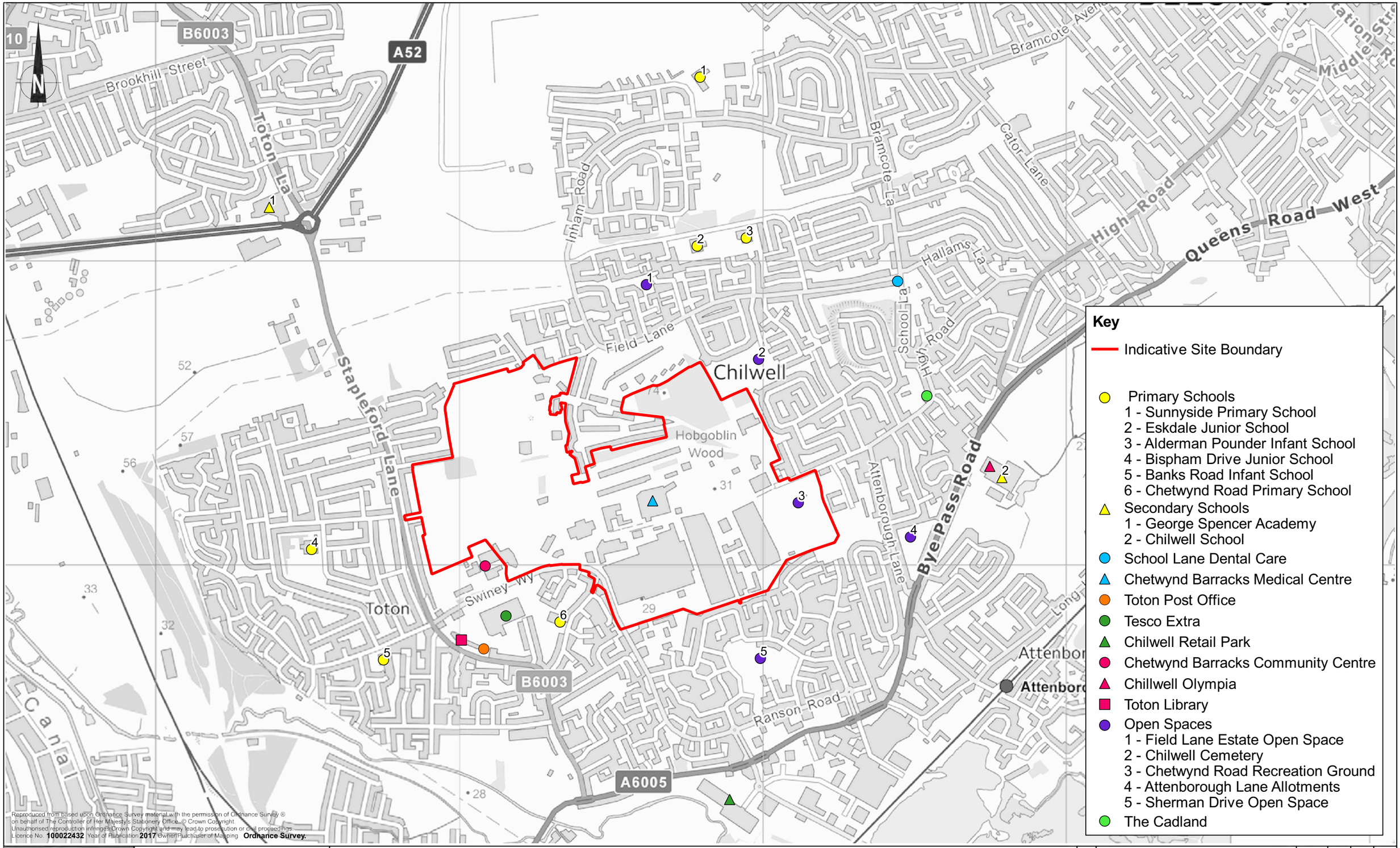
Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**
A3 Scale: **1:7500**
Design **-** Drawn **ES**
Chkd **MR** Appd **XX**

Drawing Number: FIGURE 3.1

Revision: -



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com
© Peter Brett Associates LLP
BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Local Community Facilities and Services

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**		Drawing Number: FIGURE 3.2	Revision -
A3 Scale: **1:11500**			
Design **-**	Drawn **ES**		
Chkd **MR**	Appd **XX**		

peterbrett

Offices throughout the UK and Europe

www.peterbrett.com

BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Acceptable Walk Distances

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: XX.XX.XXXX

A3 Scale: 1:35.000

Design XX | Drawn ES | Chkd MR | Appd XX

Drawing Number: FIGURE 3.3

Revision: -

pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defense Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
5km Cycle Distance

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: XX.XX.XXXX

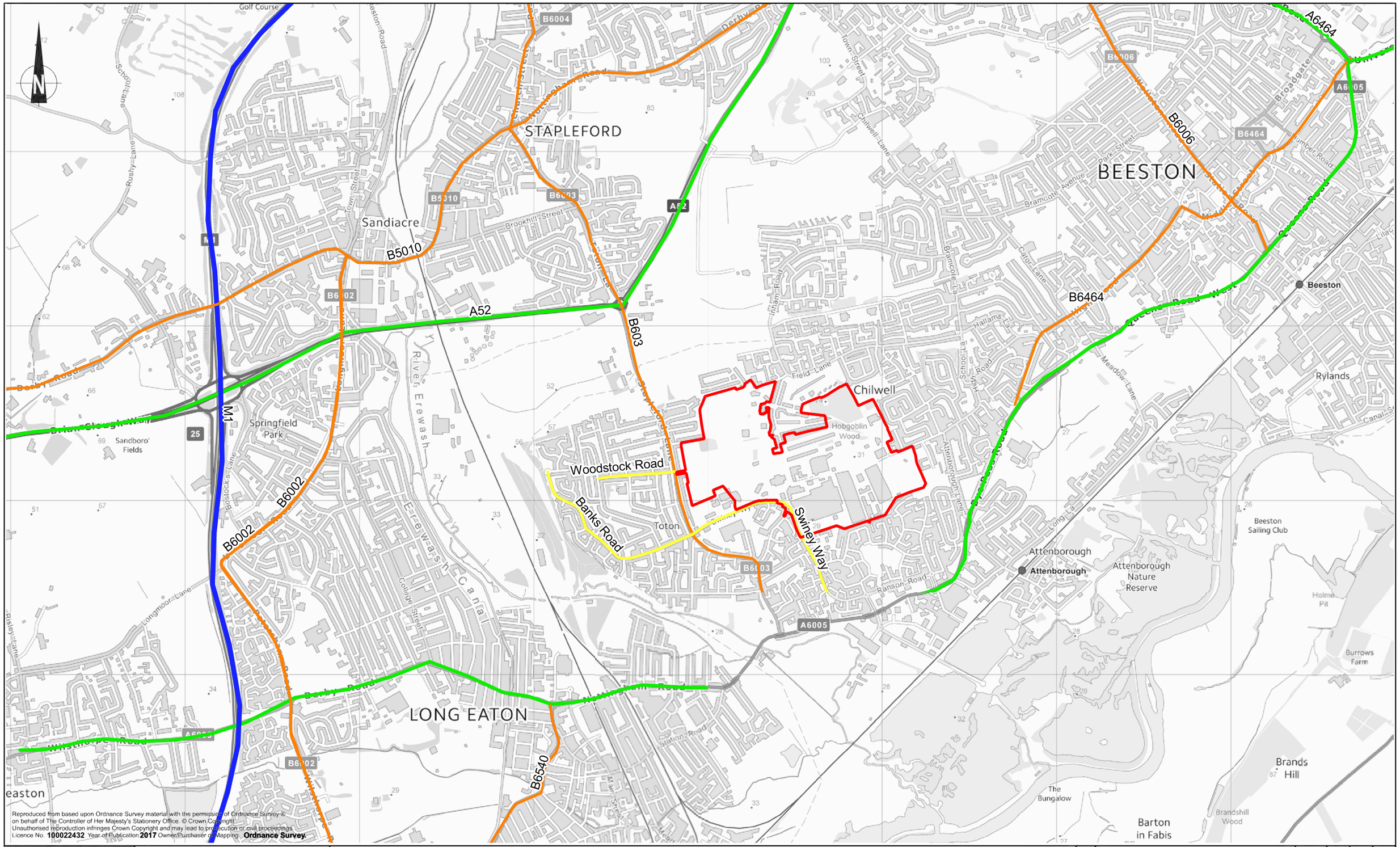
A3 Scale: 1:48000

Design XX | Drawn ES

Chkd MR | Appd XX

Drawing Number: FIGURE 3.4

Revision: -



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

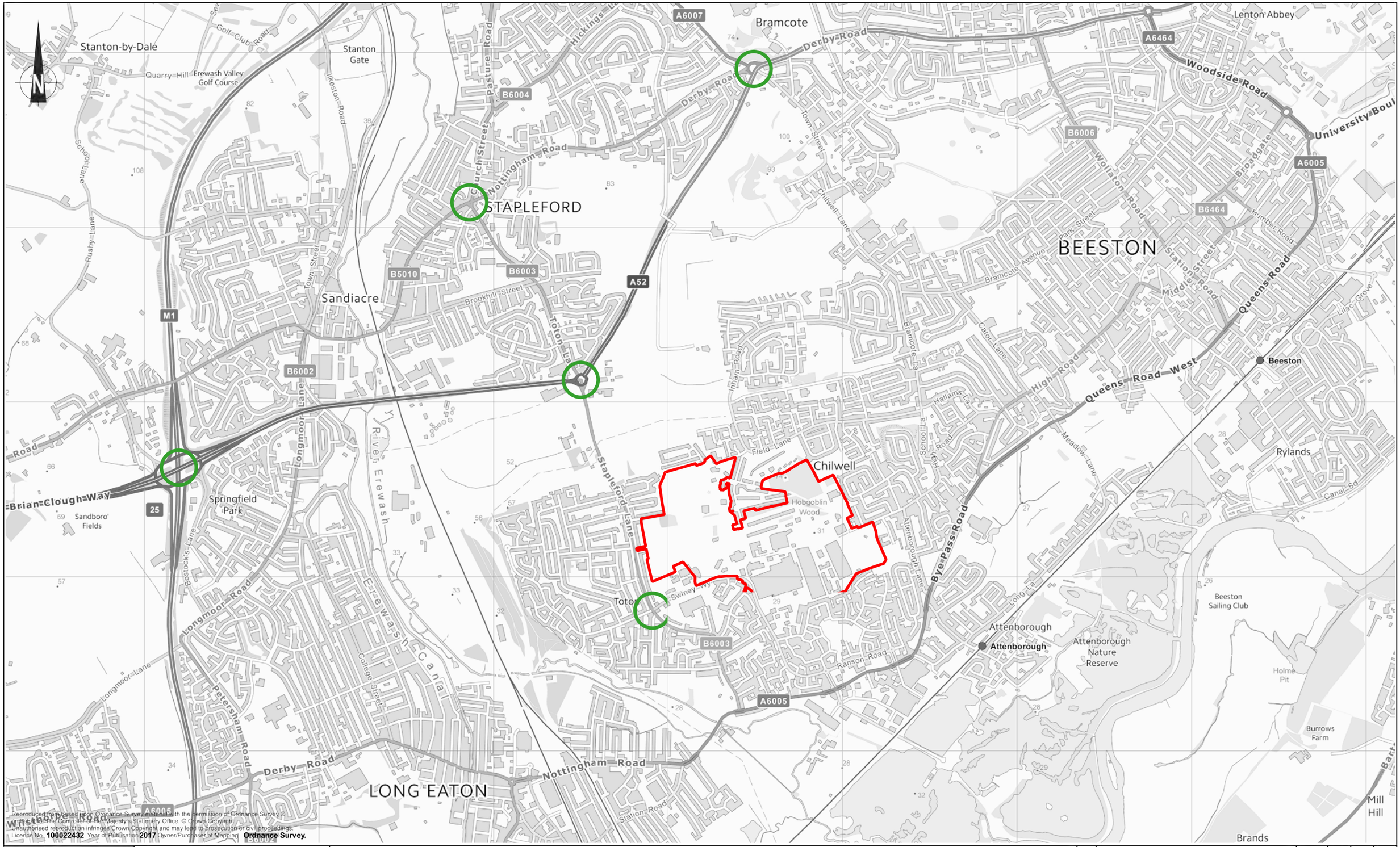
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Local Highway Network

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**		Drawing Number: FIGURE 4.1	Revision -
A3 Scale: **1:20000**			
Design **-**	Drawn **ES**		
Chkd **MR**	Appd **XX**		



peterbrett
Offices throughout the UK and Europe
www.peterbrett.com
© Peter Brett Associates LLP
BIRMINGHAM
[redacted]

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

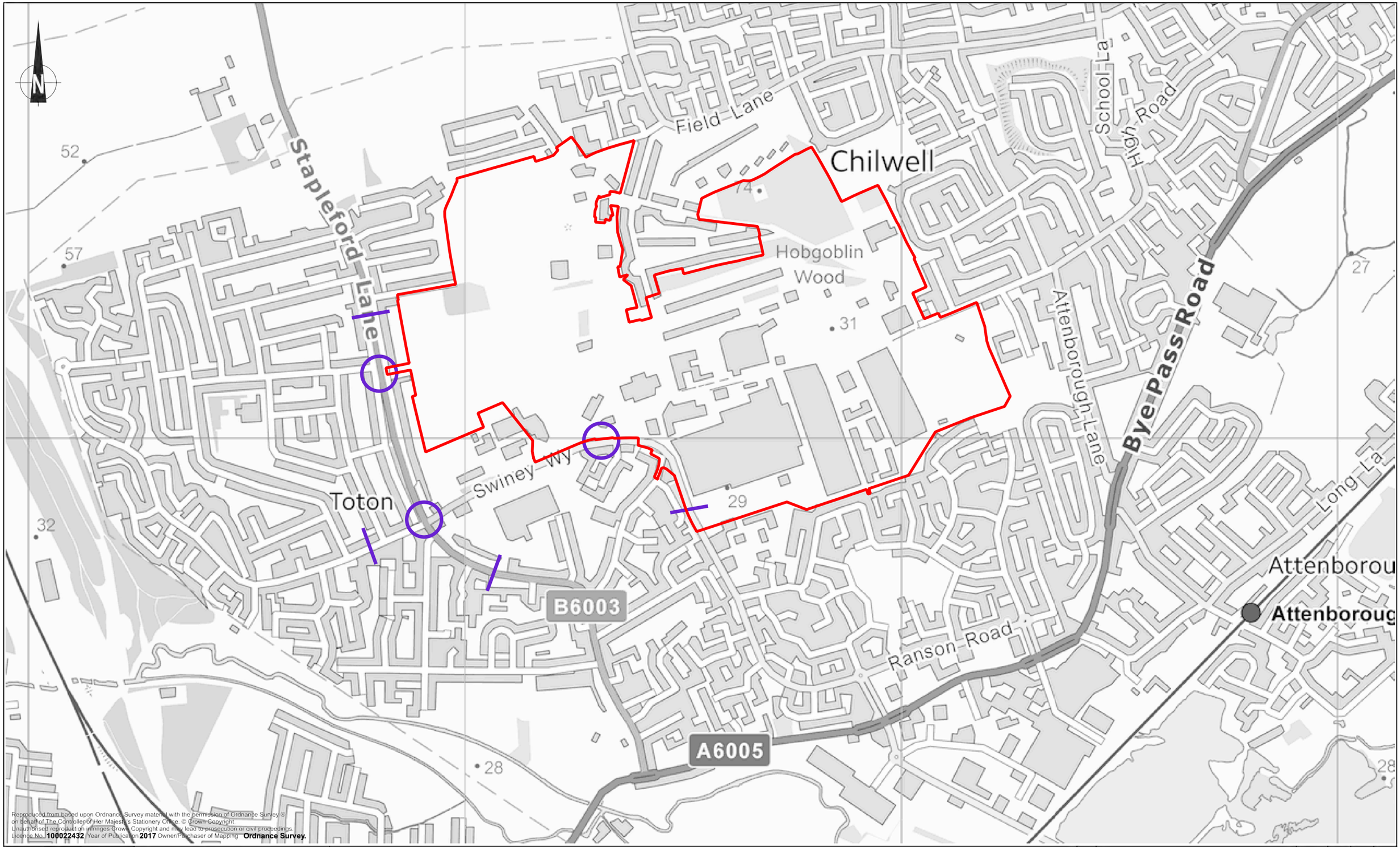
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Land to the West of Toton Lane, Stapleford, Nottinghamshire
12-00585-OUT
Junction Assessment Locations

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**		Drawing Number: FIGURE 4.2	Revision -
A3 Scale: **1:20000**			
Design **-**	Drawn **ES**		
Chkd **MR**	Appd **XX**		



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Traffic Survey Locations

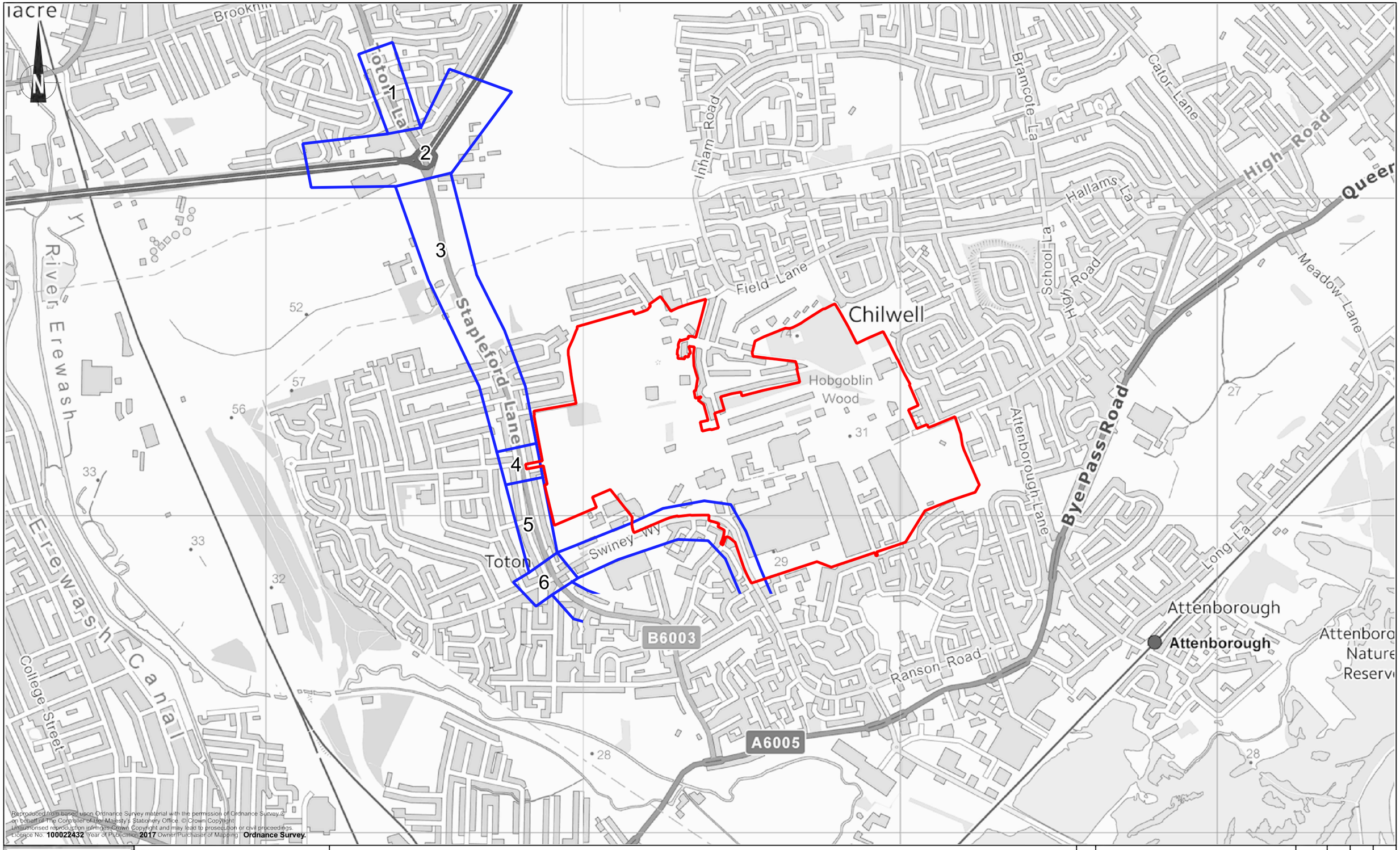
Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**
A3 Scale: **1:8000**
Design **-** Drawn **ES**
Chkd **MR** Appd **XX**

Drawing Number: FIGURE 4.3

Revision: -



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defense Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
PIC Areas

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: **INFORMATION**

Date of 1st Issue: **XX.XX.XXXX**
A3 Scale: **1:11000**
Design **XX** Drawn **ES**
Chkd **MR** Appd **XX**

Drawing Number: **FIGURE 4.4**

Revision: **-**

pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Public Transport Network

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: XX.XX.XXXX		Drawing Number: FIGURE 5.1	Revision -
A3 Scale: 1:15000			
Design -	Drawn ES		
Chkd MR	Appd XX		

pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Pedestrian and Cycle Network

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: XX.XX.XXXX

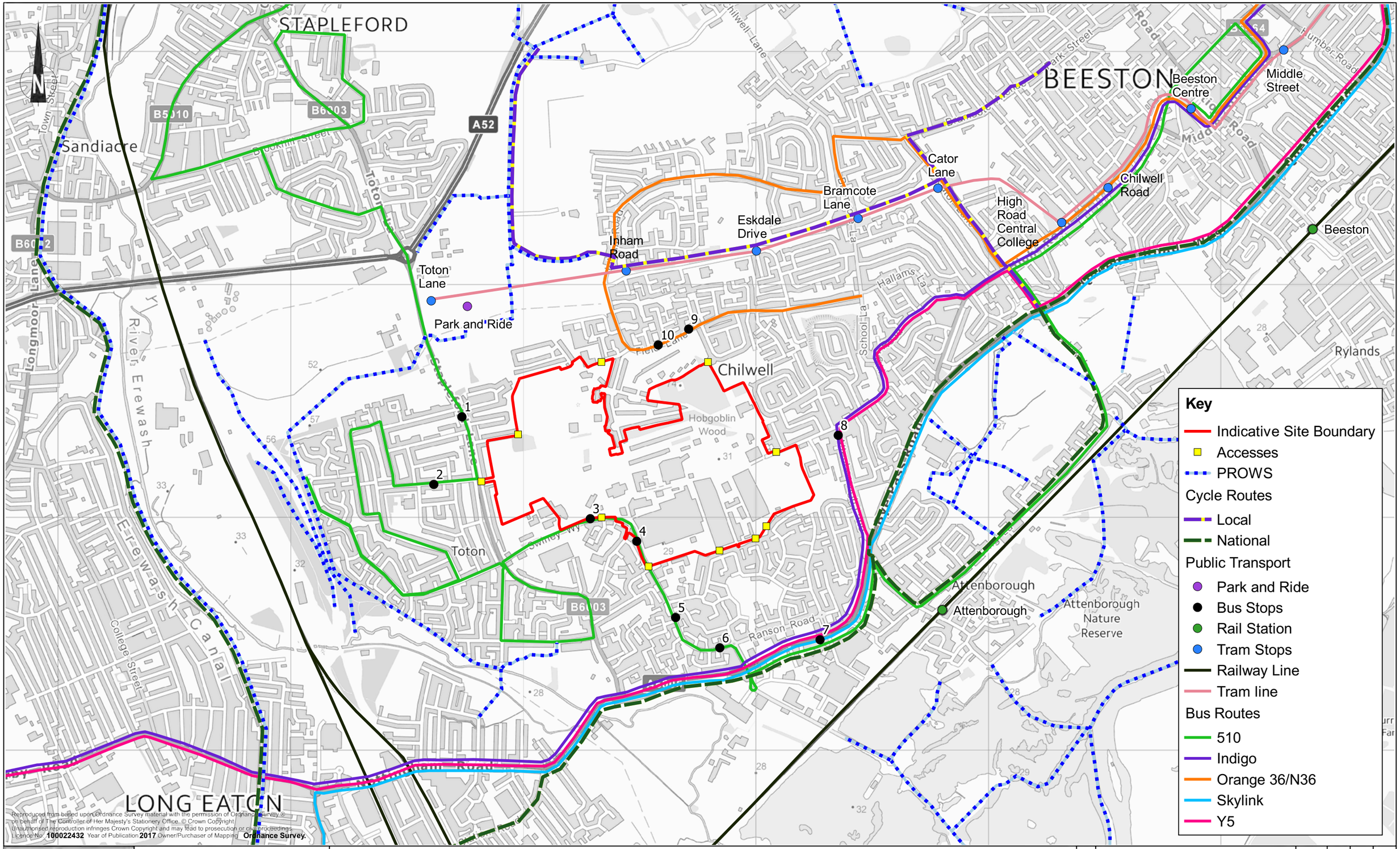
A3 Scale: 1:14000

Design - | Drawn ES

Chkd MR | Appd XX

Drawing Number: FIGURE 5.2

Revision: -



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com
© Peter Brett Associates LLP
BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

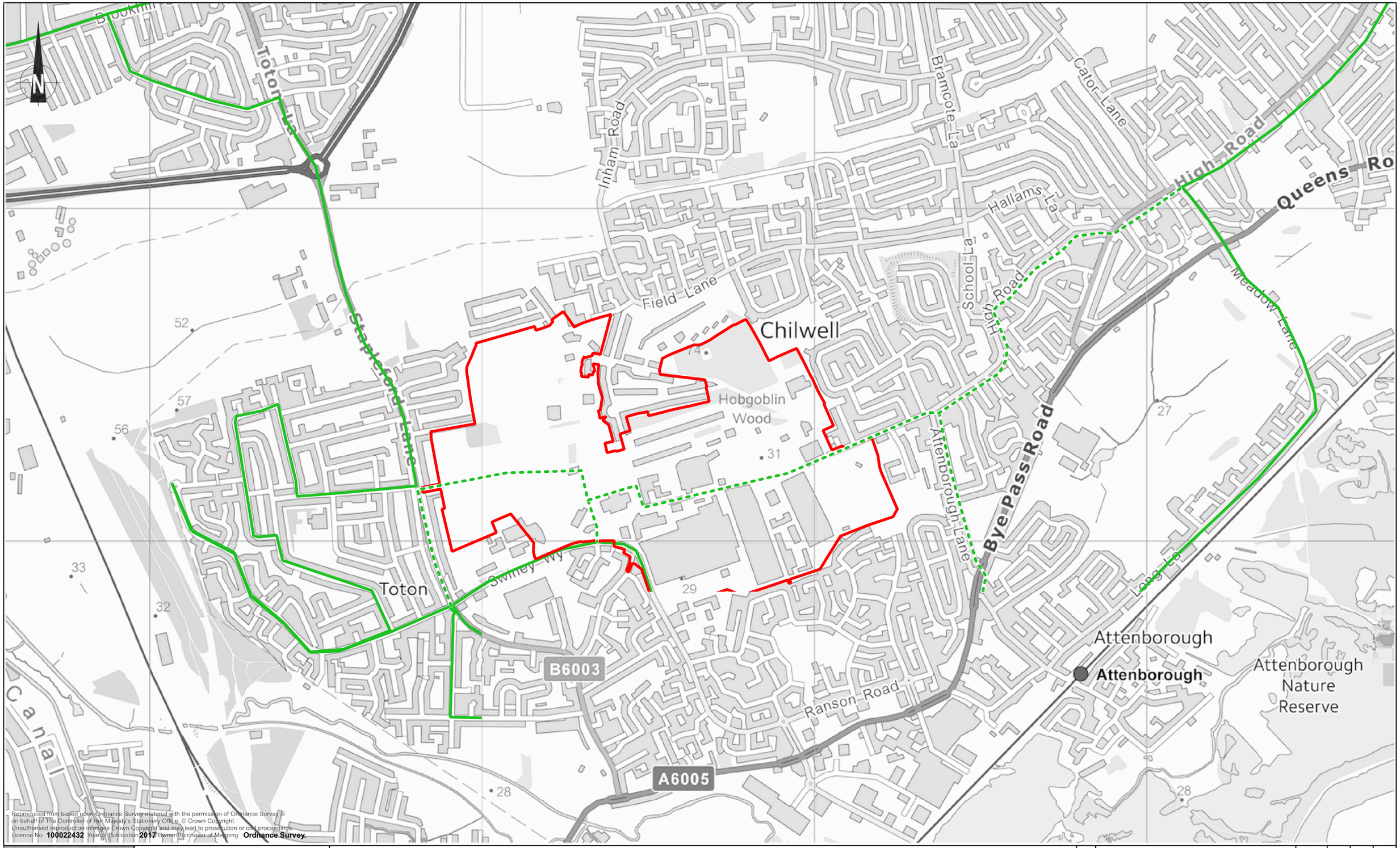
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Sustainable Transport Links

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: **INFORMATION**

Date of 1st Issue: **XX.XX.XXXX**		Drawing Number: FIGURE 8.1	Revision -
A3 Scale: **1:11500**			
Design **-**	Drawn **ES**		
Chkd **MR**	Appd **XX**		



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks Potential Bus Route 510

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**

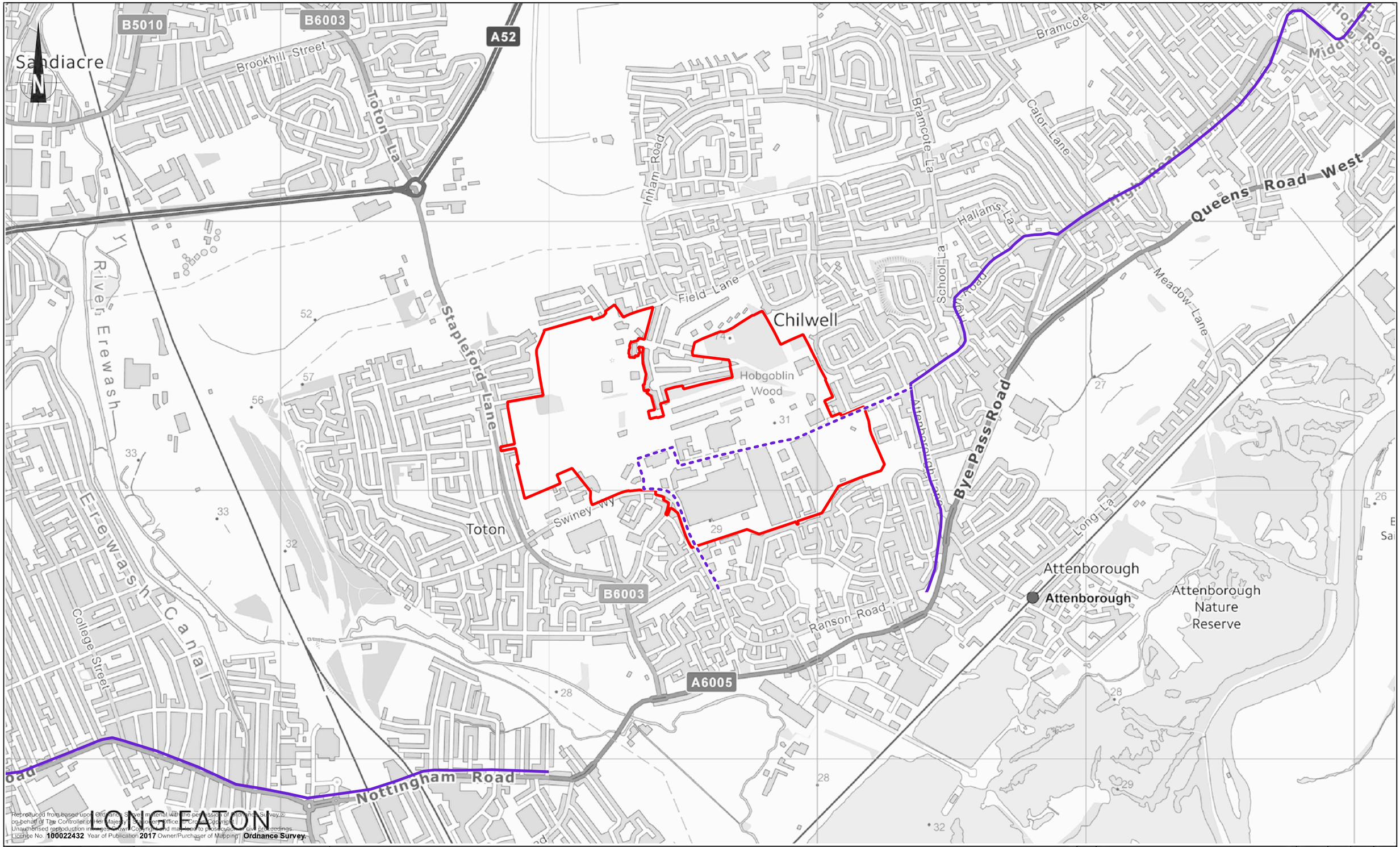
A3 Scale: **1:10500**

Design **XX** Drawn **ES**

Chkd **MR** Appd **XX**

Drawing Number: FIGURE 8.2

Revision: -



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks Potential Bus Route Indigo

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**			
A3 Scale:	**1:13.000**		
Design **XX**	Drawn **ES**		
Chkd **MR**	Appd **XX**		

Drawing Number: FIGURE 8.3

Revision: -

pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Potential Bus Route
Orange 36/ N36

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: **XX.XX.XXXX**		Drawing Number: FIGURE 8.4	Revision -
A3 Scale: **1:15000**			
Design **XX**	Drawn **ES**		
Chkd **MR**	Appd **XX**		

pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com

BIRMINGHAM [redacted]

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

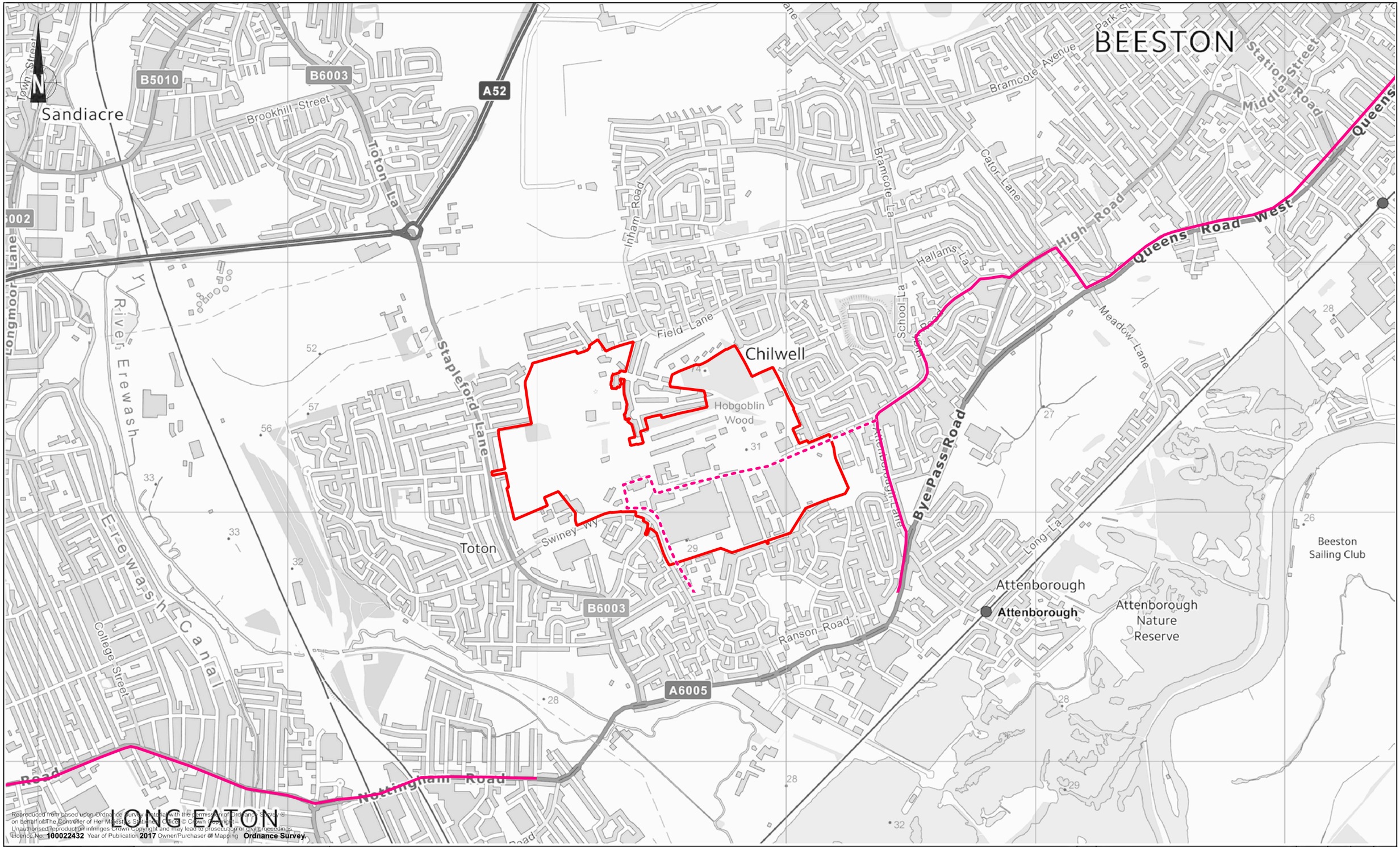
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Potential Bus Route
Skylink

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue: XX.XX.XXXX		Drawing Number: FIGURE 8.5	Revision -
A3 Scale: 1:14000			
Design XX	Drawn ES		
Chkd MR	Appd XX		



pba peterbrett
Offices throughout the UK and Europe
www.peterbrett.com
© Peter Brett Associates LLP
BIRMINGHAM
T [redacted]

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Potential Bus Route
Y5

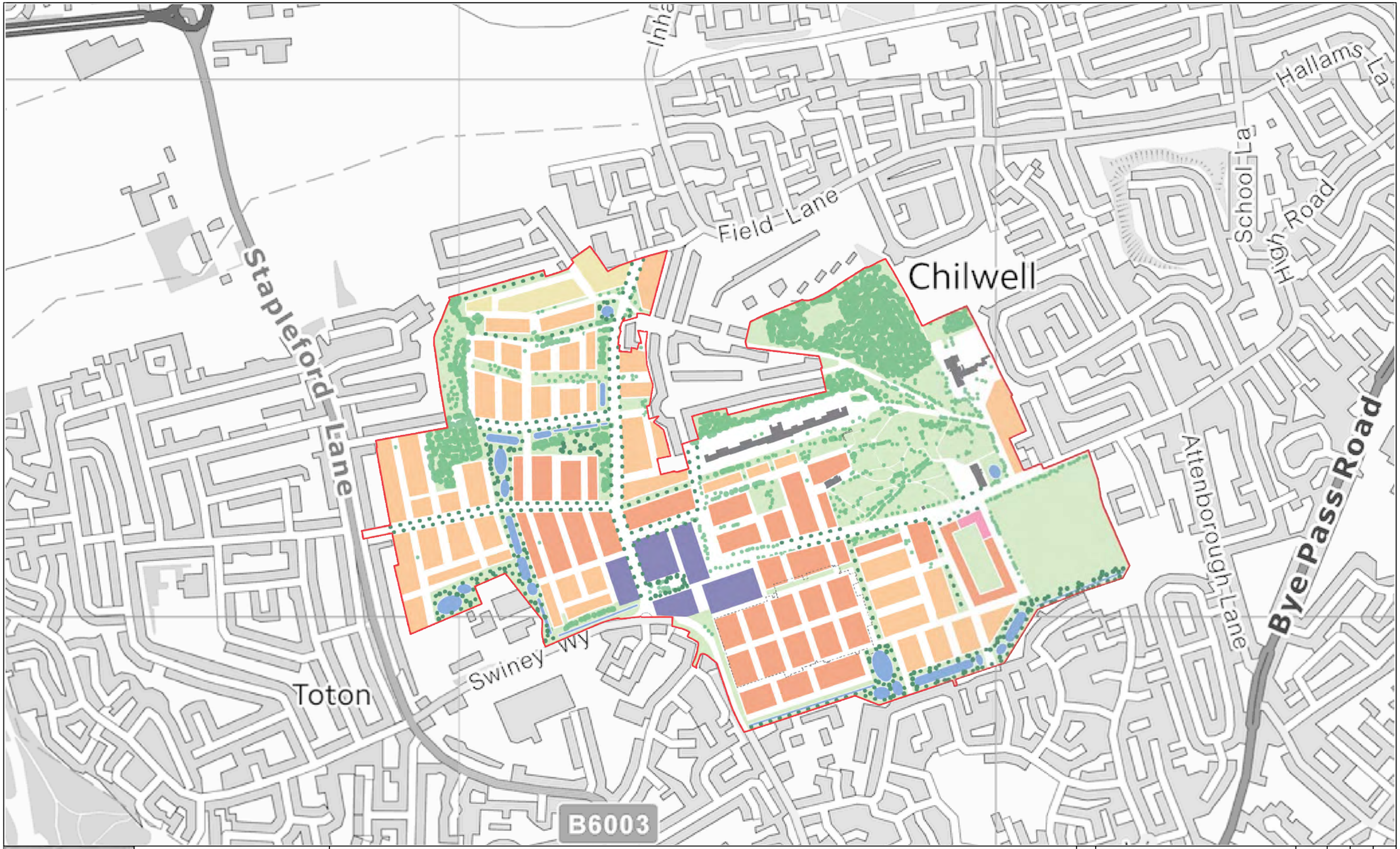
Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue:	XX.XX.XXXX		
A3 Scale:	1:14000		
Design	XX	Drawn	ES
Chkd	MR	Appd	XX

Drawing Number: FIGURE 8.6

Revision: -



pba peterbrett

Offices throughout the UK and Europe

www.peterbrett.com

[redacted]

Client

Defence Infrastructure Organisation

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Chetwynd Barracks
Walk and Cycle Connections

Mark	Revision	Date	Drawn	Chkd	Appd

Drawing Status: INFORMATION

Date of 1st Issue:	XX.XX.XXXX		
A3 Scale:	1:6.500		
Design	XX	Drawn	ES
Chkd	MR	Appd	XX

Drawing Number: FIGURE 8.7

Revision: -

Appendix B PIC Records

Key

- Slight
- Slight involving pedestrian
- Serious
- Fatal

Rev Status	Description	Drawn	Chkd	Auth	Date

Road Injury Accident Data Severity Plot

Property No.	Project No.
	DR3630

Title: Toton Area Road Network 01/01/2011 - 31/10/2016

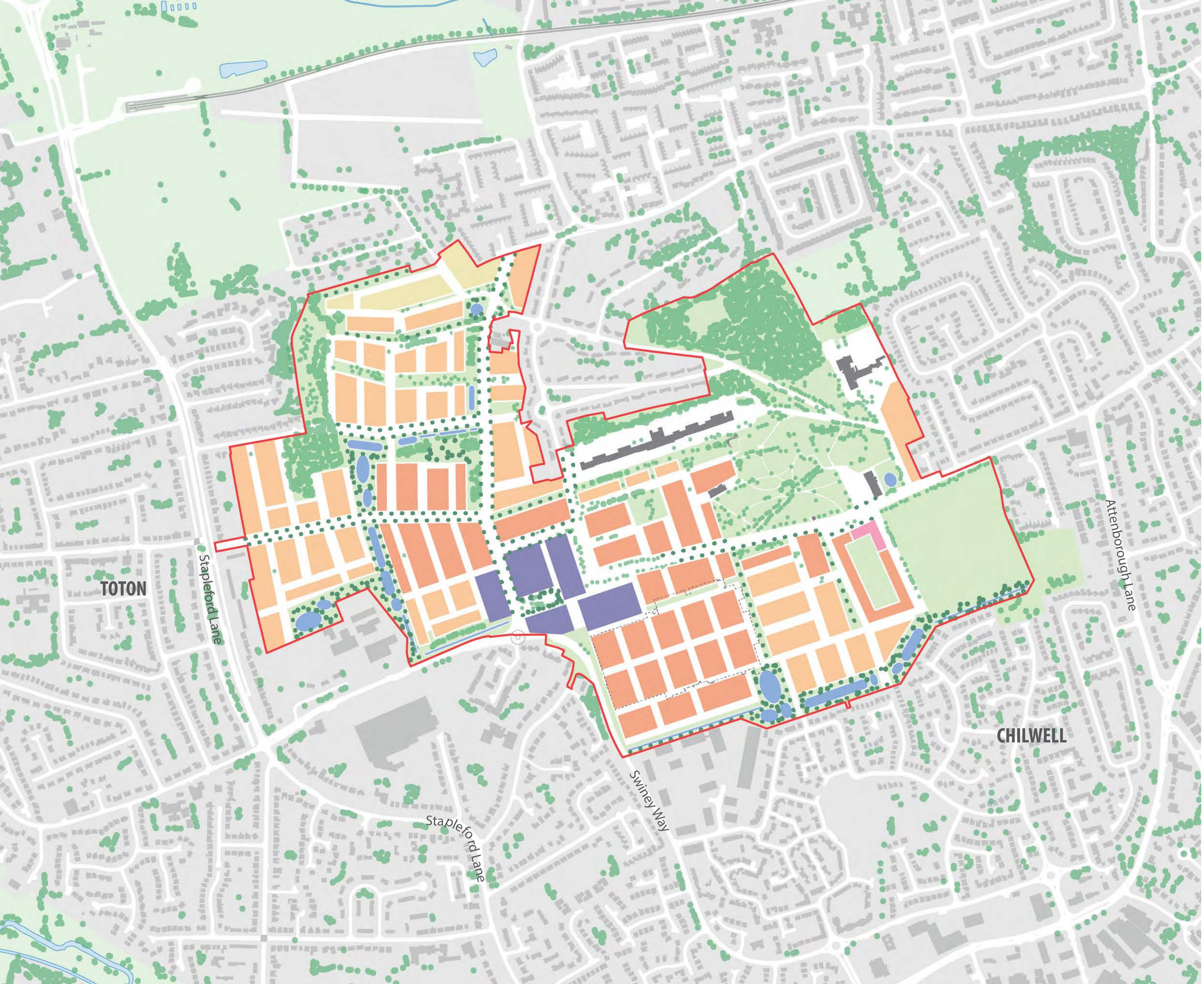
Scale	Drawn	Date
NTS	D.Carter	7.2.16
	Chkd	Date
	Auth	Traced

Drawing No. Rev

[redacted]

A3

Appendix C Concept Masterplan



The contractor is responsible for checking dimensions, tolerances and references. Any discrepancy to be verified with the Architect before proceeding with the works. Where an item is covered by drawings to different scales the larger scale drawing is to be worked to.

Do no scale drawing. Figured dimensions to be worked to in all cases.

Key

- Site boundary
- Medium density housing
- Low density housing
- Very low density housing
- Green space
- Local centre with high density housing
- School
- Retained/potentially retained buildings
- Retained/potentially retained underground tunnel
- Building memory to be retained
- Existing woodland and trees
- Proposed trees and other planting
- SUDS features

Rev	Date	Description	Dwn	Ckd
0	16/12/16	First issue	SJ	KR
B	24/01/17	Concept changed with tree information	SJ	KR
C	02/02/17	Numerous minor alterations to parcels	KR	KR
D	22/02/17	Numerous minor alterations to parcels	AH	KR
E	03/03/17	Numerous minor alterations to parcels	AH	KR

CHETWYND BARRACKS

PROPOSED CONCEPT MASTERPLAN

AA6584 - SK08 **REV E**

INFORMATION

Drawn AH Checked KR Date 03/03/17 Scale @ A1 NTS

PRP

Appendix D Stapleford Lane/Woodstock Road

Mark	Revision	Date	Drawn	Chkd	Appd
A	AMENDMENTS FOLLOWING DESIGN REVIEW	24.01.17	IE	MR	

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

PRELIMINARY

CHETWYND BARRACKS, TOTON

SITE ACCESS OPTION
STAPLEFORD LANE

Client

Defence Infrastructure Organisation

Date of 1st Issue	Designed	Drawn
18.01.2017	IE	IE
A3 Scale	**Checked**	**Approved**
1:500	MR	

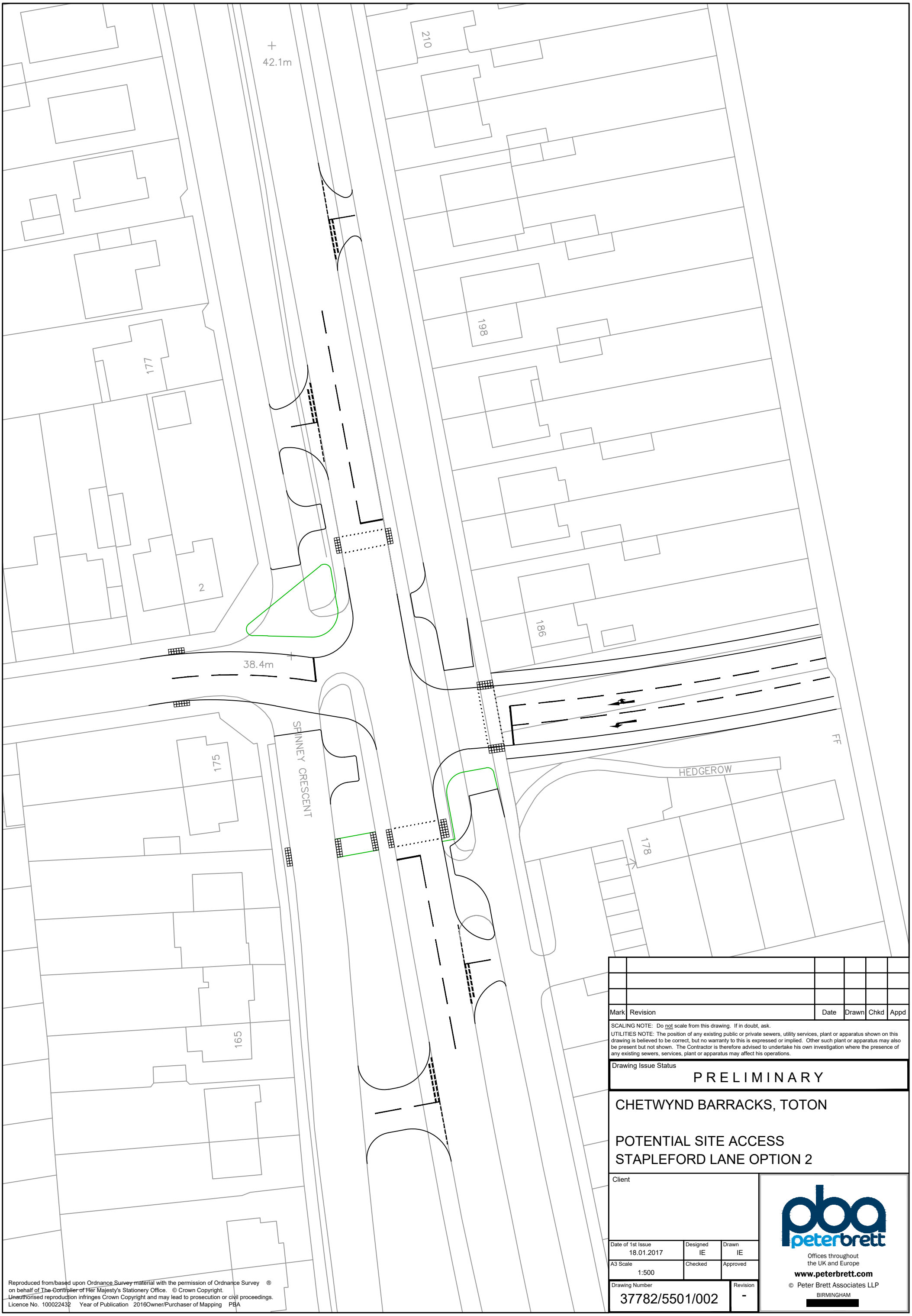
Drawing Number	Revision
37782/5501/001	A

pba peterbrett

Offices throughout the UK and Europe

www.peterbrett.com

BIRMINGHAM



Mark	Revision	Date	Drawn	Chkd	Appd

SCALING NOTE: Do not scale from this drawing. If in doubt, ask.

UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake his own investigation where the presence of any existing sewers, services, plant or apparatus may affect his operations.

Drawing Issue Status

PRELIMINARY

CHETWYND BARRACKS, TOTON

POTENTIAL SITE ACCESS
STAPLEFORD LANE OPTION 2

Client

Date of 1st Issue	Designed	Drawn
18.01.2017	IE	IE
A3 Scale	Checked	Approved
1:500		

Drawing Number	Revision
37782/5501/002	-

pba peterbrett

Offices throughout the UK and Europe

www.peterbrett.com

BIRMINGHAM [redacted]

Chetwynd Barracks

Flood Risk and Surface Water Drainage Technical Note

On behalf of Defence Infrastructu re Orga nis ation

Project Ref: 37782/4001/001 | Rev: - | Date: April 2017

[redacted]

Document Control Sheet

Project Name: Chetwynd Barracks
Project Ref: 37782
Report Title: Flood Risk and Surface Water Technical Note
Doc Ref: 37782/4001/001
Date: April 2017

	Name	Position	Signature	Date
Prepared by:	Natalie Yates	Graduate Engineer	[redacted]	April 2017
Reviewed by:	Amy Hensler	Senior Associate	Amy Hensler	April 2017
Approved by:	Tim Allen	Partner	[redacted]	April 2017
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved

Contents

Figures

Tables

Appendices

1 Introduction

Peter Brett Associates LLP (PBA) has been instructed by the Defence Infrastructure Organisation (the Client) to establish the baseline flood risk and surface water drainage information for Chetwynd Barracks in order to identify the existing constraints and opportunities for a strategic housing-led mixed used allocation on the site. The work undertaken will provide evidence in support of site allocation, along with guiding the initial masterplanning process.

This Flood Risk and Surface Water Technical Note will:

- provide background site information;
- outline the key local planning policy documents applicable to the site;
- present outcomes of consultation with key stakeholders;
- outline the development proposals for the site at this initial stage;
- set out the site's existing hydrological context;
- assess the baseline flood risk from a range of sources; and
- outline the results from a preliminary assessment of the surface water drainage regime and potential attenuation requirements on site.

2 Background

Site Description

Chetwynd Barracks is located in Chilwell, Nottinghamshire and is centred at approximate National Grid Reference 450468E 335273N (**Figure 1**). The site is an operational military barracks, scheduled for closure in 2021.

The site currently comprises military buildings and associated military land use, access roads, recreational space and a woodland area. The site covers a total approximate area of 75.45 hectares. Primary access to the site is currently from Swiney Way along the southwestern boundary of the site. Secondary access points are provided from Staplefield Lane to the west and Chetwynd Road to the east.

Existing photogrammetric data was obtained for the site, as topographic survey has not yet been undertaken. OS mapping of the site indicates that the site is located on a hillside and this is corroborated by the photogrammetric data. The northern edge of the site is located at approximately 66m AOD and slopes down to approximately 30m AOD along the site's southern boundary with an average slope of approximately 1 in 24 (some areas of the site slope down more steeply than others).

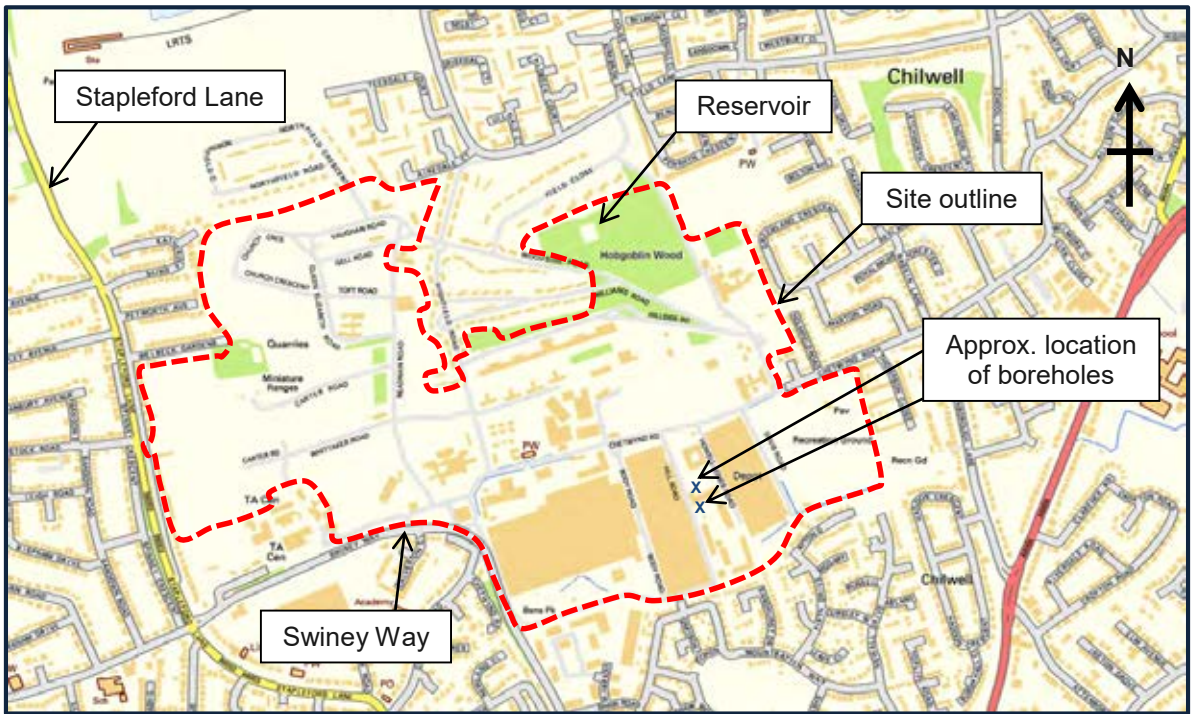


Figure 1 – Site location plan

3 Local Planning Policy Documents

The assessment of flood risk along with the drainage requirements at the site has been completed by a review of, and in accordance with, the following policy and guidance:

- National Planning Policy Framework (NPPF), (2012);
- Planning Practice Guide (PPG), (2014) including climate change guidance released February 2016;
- Greater Nottingham Strategic Flood Risk Assessment (SFRA) Non-Technical Summary (Nottingham City Council, 2008);
- Nottinghamshire County Council's (NCC's) Guidance Note on the Validation Requirements for Planning Applications;
- Nottinghamshire Preliminary Flood Risk Assessment (NCC, 2011);
- Nottinghamshire Level 1 Minerals SFRA Update (NCC, 2015);
- Nottinghamshire Local Flood Risk Management Strategy 2016-2021 Final Draft for Consultation (NCC, 2015); and
- Greater Nottingham Strategic Flood Risk Assessment Partnership Technical Report (Broxtowe Borough Council, 2008).

The following key stakeholders have been consulted to obtain flood risk and existing drainage information for the site:

- Environment Agency (EA);
- Severn Trent Water (STW);
- Nottingham County Council (NCC); and
- Broxtowe Borough Council (BBC).

All correspondence and associated data received from the key stakeholders are presented in **Appendix A**.

4 Development Proposals

The proposals for the Chetwynd Barracks site are for a sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sqm of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial is proposed for the site.

The proposed concept masterplan is shown in **Figure 2** (and a copy provided in **Appendix B**) and will be used within the site appraisal process for Broxtowe Borough Council's emerging Part 2 Local Plan. A first phase of 600 homes is anticipated, with this taking the western part of the site. This development will cover the latter part of the plan period to 2028.

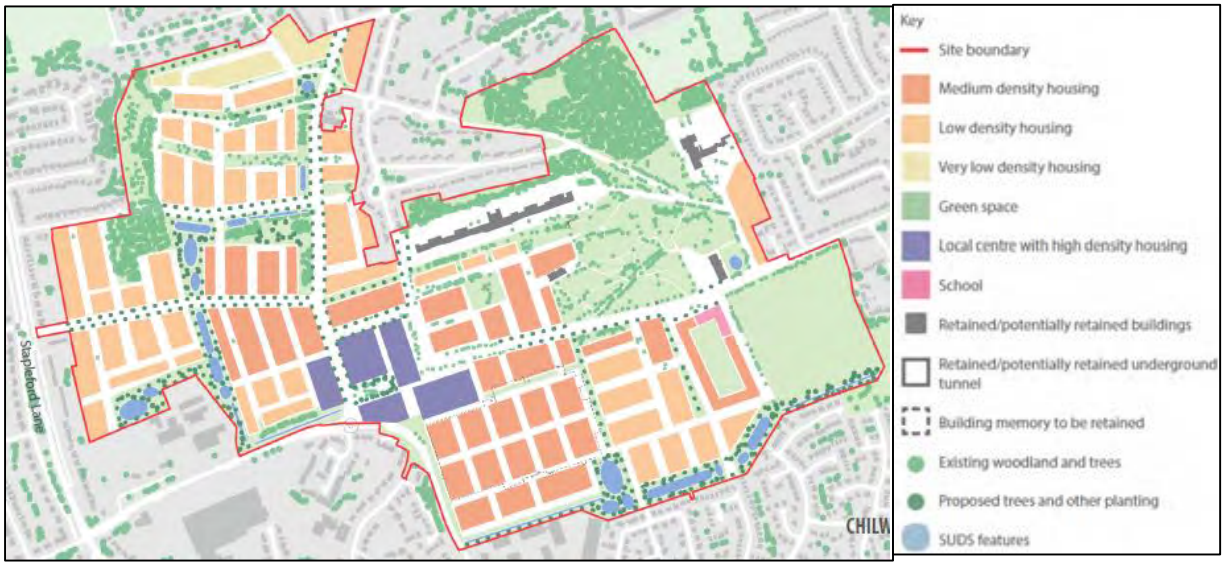


Figure 2 – Proposed Concept Masterplan (dwg no AA6584-SK08 Rev E)

5 Hydrological Context and Existing Drainage

OS mapping shows that there are several watercourses in the vicinity of the site. The River Erewash (Main River) flows in an easterly direction approximately 700m to the south of the site. The River Erewash joins the River Trent approximately 1.5km to the south of the site.

Severn Trent Water (STW) Asset Plans indicate that there are two branches of a culverted ordinary watercourse (with small sections of open channel, albeit covered with grills) which flow through the southern part of the site. The channels combine into one culverted channel and flow in an easterly direction downstream of the site through Chilwell Manor Golf Club. The watercourse is understood to flow into the ponds at Attenborough Nature Reserve, approximately 800m to the south of the site.

The STW Asset Plans are reproduced within **Appendix A** and photographs of the watercourse are presented in **Appendix C**. **Figure 3** is a sketch plan showing the location of the open and culverted sections of the channel, along with STW surface water sewers which connect into the watercourse as indicated on the STW Assets Plans. It is likely that the private surface water drainage system on site outfalls into the watercourse. However, this is not shown on the STW Asset Plans and there is no topographic survey, drainage survey or existing drainage plans at this stage which could confirm this.

Two boreholes are located within the south of the site and are used to obtain a non-potable supply of water for the site. The water is stored within the small reservoir located within the northeast of the site (**Figure 1**).

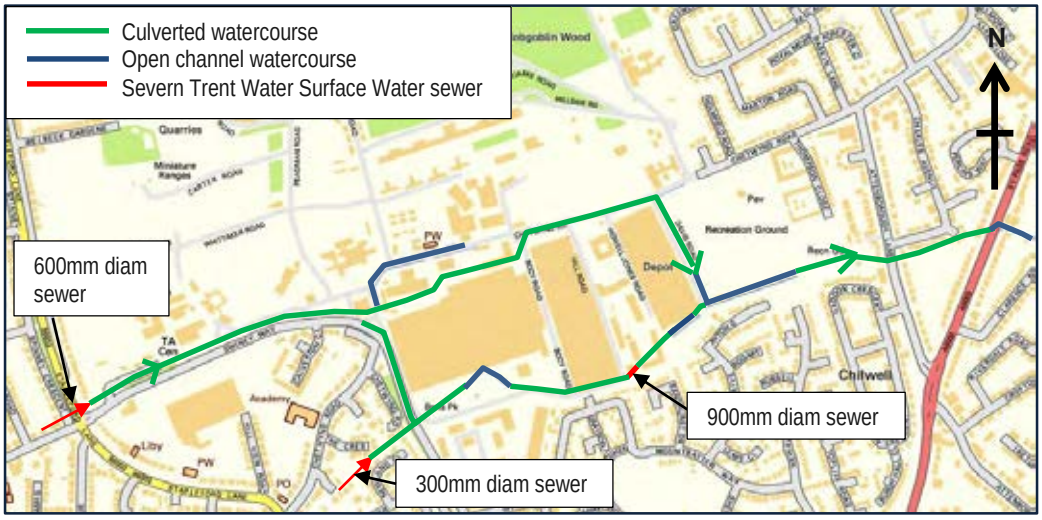


Figure 3 – Existing watercourses in the vicinity of the site

6 Assessment of Flooding

Fluvial Flooding

An extract of the EA's detailed Flood Map is shown in **Figure 4** (all correspondence, data and mapping is included in **Appendix A**). The Flood Map shows the site to be located entirely within Flood Zone 1, with less than a 1 in 1,000 annual probability of flooding (<0.1% AEP). The 1 in 1,000 year floodplain (i.e. extent of Flood Zone 2) associated with the flood extents from the River Trent and River Erewash, extends up to the southern site boundary.

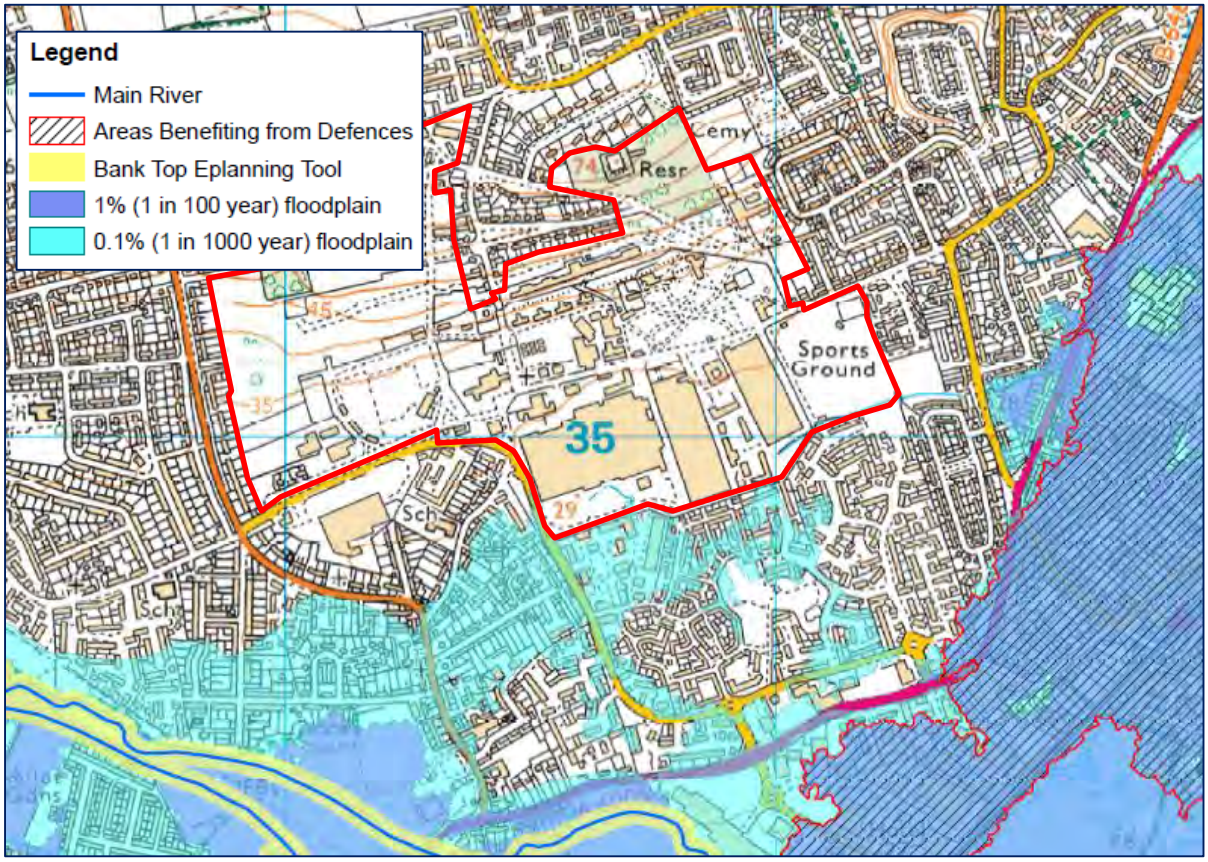


Figure 4 – EA Detailed Flood Map (dated 29th November 2016)

The EA's Flood Zone maps do not include floodplain data for the minor watercourse that flows through the southern part of the site. The watercourse forms part of the STW sewer network and is likely to have a flashy response to rainfall events, due to the urban nature of the catchment.

Further data will be required to quantify the risk associated with the culverted watercourses (topographical survey, channel survey, CCTV survey) and this should be considered further within a Flood Risk Assessment which will be required later on in the planning process when securing outline planning permission for the proposals to ensure that the development is safe and will not increase flood risk to third parties.

Surface Water Flooding

The surface water flood risk map covering the site is shown in **Figure 5**. The majority of the site is shown to be at 'very low' risk of surface water flooding with less than a 1 in 1,000 annual probability of flooding (<0.1% AEP).

Some small areas within the southern part of the site are shown to be at low to high risk of surface water flooding. However, these are likely to relate to topographic low spots or areas of inadequate drainage rather than overland flow routes through the site. A drainage strategy will be required as part of any outline planning application which will set out recommendations to control and manage surface water runoff from the site in line with current policy and guidance. Existing overland flows and any areas with poor drainage would be considered within the Drainage Strategy.

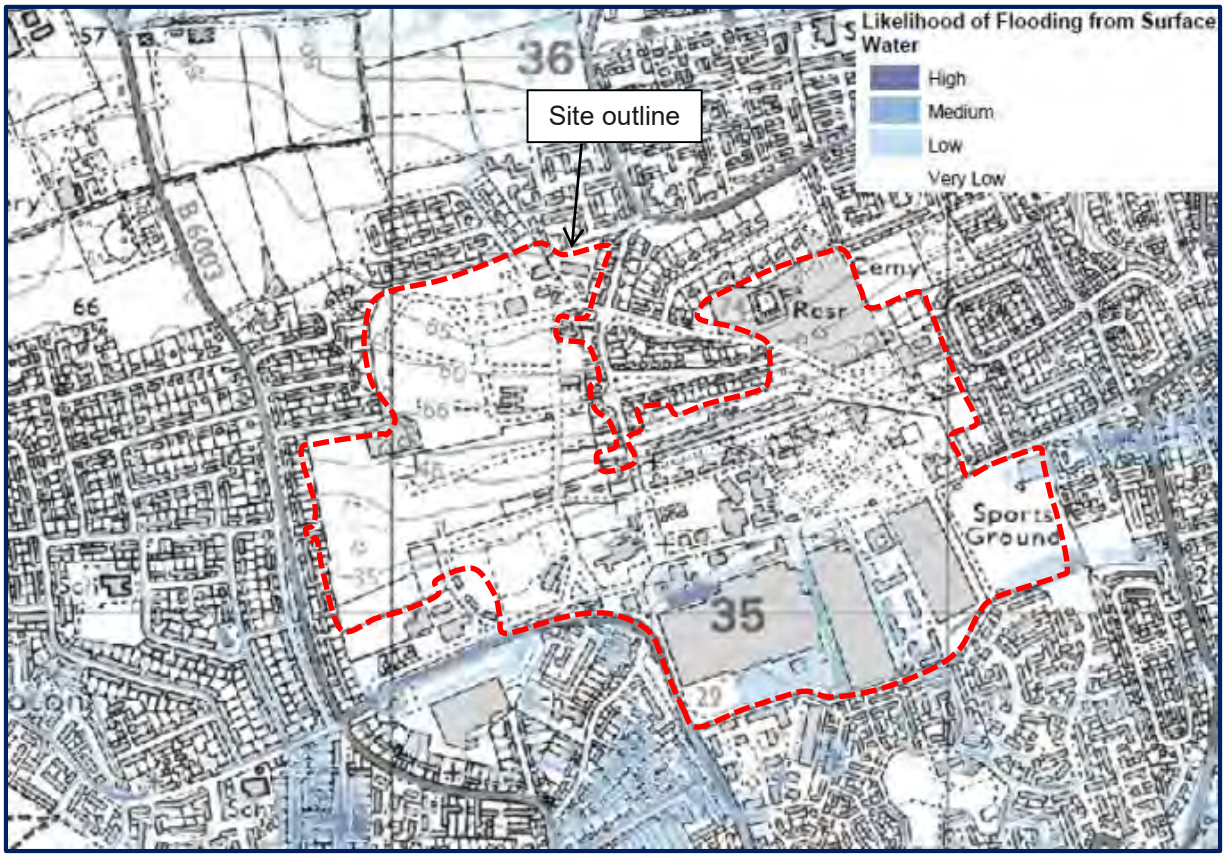


Figure 5 – EA surface water flood map

Reservoir Flooding

Online EA flood mapping indicates that the site is not at risk from reservoir flooding.

Ground water Floodin g

The 'Areas Susceptible to Groundwater Flooding' map presented in the PFRA suggests that the site could be at a >=75% risk of groundwater flooding.

However, this map is low resolution and exact identification of the site's location is not possible. The PFRA states, "*this map is not intended to be used to identify actual areas where groundwater might flow or pond and it is not sensible to attempt to analyse this data for the number of properties at risk, as not all the properties in each 1km square will be susceptible and there is no probability information attached to this data*".

The PFRA (2011) also states that there is little instance of groundwater flooding in Nottinghamshire. Stakeholder consultation has confirmed that there are no known incidences of groundwater flooding in the vicinity of the site.

Sewer Flooding

Correspondence with STW confirms that there has been no sewer-related flooding within the site boundary. However, STW confirm that there have been two incidents of foul water flooding approximately 100m west of the western site boundary and one incident of foul water flooding approximately 300m south of the western site boundary. Correspondence with STW is reproduced within **Appendix A**.

Historical Flooding

Historical flood mapping indicates that there are no records of historic flooding within the site boundary or immediate site vicinity. In addition, the EA states that they have no records of historic fluvial flooding at the site.

Summary of Flood Risk

The site is generally considered to be at a low risk of flooding from all sources with small isolated areas potentially at risk of surface water flooding (which can be managed through the proposed surface water drainage strategy). However, the flood risk from the culverted watercourses in the southern part of the site has not been quantified at this stage. A channel survey of the watercourse (and potentially CCTV survey) would be required in order to undertake a quantitative assessment of flood risk on site. For example, simple channel capacity calculations or hydraulic modelling, if required to support the Flood Risk Assessment to be completed in support of any future planning application to ensure that development is safe and does not increase flood risk to third parties.

7 Sequential Test

NPPF PPG 'Flood Risk and Coastal Change' Table 2 confirms the *'Flood risk vulnerability classification'* of a site, depending upon the proposed usage. This classification is subsequently applied to PPG Table 3 to determine whether:

- The proposed development is suitable for the Flood Zone in which it is located; and
- Whether an Exception Test is required for the proposed development.

The proposed residential development is classed as 'More Vulnerable' development and commercial elements, such as the retail development within the local centre and B Class employment use, would be classed as 'Less Vulnerable' development.

All new development on site would be located entirely within Flood Zone 1.

NPPF Sequenti al Test

The NPPF follows a sequential risk-based approach in determining the suitability of land for development in flood risk areas, with the intention of steering all new development to the lowest flood risk areas.

The site is located within Flood Zone 1 and, as such, all new development would be located within Flood Zone 1. Table 3 of the PPG states that all flood risk vulnerability classifications are considered appropriate within Flood Zone 1. The proposed development is therefore appropriate in terms of flood risk and neither the Sequential Test or Exception Test are required.

8 Preliminary Surface Water Drainage Options

To assist with the identification and assessment of constraints and to inform preliminary masterplanning activities, an initial review of surface water attenuation requirements using a conventional on-site surface water management system of attenuation basins and swales has been undertaken.

As topographical survey data is not available for the site, a high level review of potential drainage sub-catchments within the site has been estimated from photogrammetry data (6 sub-catchments derived as shown on **Figure 6**). A preliminary assessment of the likely volume of surface water storage to be provided within each sub-catchment and the 'footprint' of the associated surface water balancing features has been undertaken using the following parameters:

- FEH rainfall data for the wider catchment area encompassing the site.
- The existing greenfield runoff rate (Q100) calculated using the Microdrainage WinDes Rural Runoff Calculator (7.5l/s/ha). This is indicative at this stage as an estimate of the existing brownfield runoff rate and existing drainage regime (i.e. number, size, location of existing outfall connections) is not known. Storage requirements calculated using greenfield run-off rates are therefore likely to be an over-estimate. Further survey work (as outlined in Section 9) would allow for the assessment of allowable discharge rates limited to 30% of the existing brownfield rate (in line with local policy requirements) which may be less conservative and therefore result in reduced surface water storage requirements.
- Provision of attenuation features capable of storing run-off up to the 1 in 100 year event plus a 20% allowance for climate change (in accordance with the revised climate change allowances dated February 2016).
- Land use budget based on following impermeability fractions:
  - High Density Residential – 90%
  - Medium Density Residential – 75%
  - Low Density Residential – 60%
  - Local Centre and Employment– 90%
- Land use balance is yet to be confirmed and, therefore, these estimates provide an indication of impermeable areas only.
- Assumes no infiltration potential as ground conditions and likelihood of contaminated land likely to be unsuitable.
- Quick Storage Estimates using WinDes Microdrainage 2015.

The approximate basin/attenuation feature sizes are based on the following design criteria:

- 0.5m freeboard;
- 1m storage depth;
- 1 in 3 minimum side slope;
- Flat ground (as topographic survey data not available); and
- Minimum 4m buffer around basin.

Table 1 provides a summary of the potential volume of surface water storage to be accommodated within each catchment, based on the assumed impermeable areas and allowable discharge rate

quoted above. The approximate footprint of each pond is based on the 'average' storage requirement estimated using the Micro Drainage Quick Storage module. An allowance for earthworks has not been included as topographical survey data is not available (assumes flat site in location of storage areas).

The calculations also assume that gravity connections to the culverted watercourses are possible and that at least 1m depth of storage can be provided. Topographical survey data, existing drainage plans/surveys, CCTV survey will be required to verify the depth of storage that can be provided (achieving appropriate cover over pipework).

The indicative masterplan has taken into account these initial high level storage estimates to ensure adequate space is allocated for SuDS measures. For sub-catchment 3 (local centre and high density housing), surface water attenuation is proposed to be provided below ground in storage tanks/crates. A copy of the masterplan is included in **Appendix B**. Where land is proposed to be retained as open space, the surface water drainage/runoff regime would be not altered, such that balancing ponds would not be required. Sub-catchment 1 and 2 represent the first phase of development of up to 600 houses, which can be built within the plan period (i.e. to 2028). This phase has been designed to include attenuation basins.

Sub-catchment	Proposed Impermeable Area (ha)	Maximum Allowable Discharge (l/s)	Average Storage Requirement (100 year+20% CC) (m^3)
1	3.83	28.7	2325
2	9.39	70.4	5700
3	6.95	52.1	4400
4	3.87	29	2350
5	5.33	39.9	3450
6	0.44	5	230

Table 1 - Indicative storage areas

Figure 6 – Sub-catchment and indicative attenuation basin locations

9 Assumptions and Further Work Required

The assessment completed to date is preliminary only and suitable to inform the initial masterplanning development and site allocation process. Further survey data is required to confirm the level of flood risk and revise the surface water drainage requirements. In order to complete a Flood Risk Assessment suitable to inform an outline planning application, the following items will need to be considered:

- Flood risk from all sources is considered to be low. However, online EA fluvial flood risk mapping does not indicate the risk of flooding from the culverted watercourse flowing through the site. A channel survey of the watercourse would therefore be required in order to undertake a quantitative assessment of flood risk on site, e.g. simple channel capacity calculations or hydraulic modelling, if required.

- The Attenborough Gravel Pits SSSI lies approximately 800m to the southeast of the site and the drain that runs through the site is linked to a system of drains and watercourses that discharge into this SSSI. Therefore, development of the site and any proposed modifications to the culverted watercourses may need to be supported by a Water Framework Directive assessment to ensure that there are no adverse impacts on water quality within the SSSI.

- It is likely that a minimum buffer of 4m from the top of bank would be required between open sections of the watercourse and the proposed development. It is also likely that an easement would be required adjacent to the culverted sections of the watercourse. The buffer zones would allow maintenance activities to be carried out on the watercourse and reduce the risk of flooding to the development. The inclusion of the buffer should be considered early on in the masterplanning process.

- The assessment has assumed that a connection via gravity would be possible from the proposed basins to the culverted watercourses. It would, therefore, be necessary to obtain a topographical survey of the site, including invert levels of the culverted watercourse and amount of cover provided, to confirm whether or not a gravity connection from the attenuation basins to the watercourse would be possible.

- Although the site is predominantly brownfield land, the potential attenuation requirements were derived using greenfield run-off rates, subsequently producing potentially conservatively high storage volumes and basin sizes. The existing brownfield run-off rate for each sub-catchment could be determined if details regarding the existing surface water outfalls into the watercourse were obtained, e.g. number of outfalls, sizes and locations. Following further survey work of the drainage on-site, it is likely that discharge rates could be limited to 30% of the existing brownfield rate and, therefore, may be less conservative than using the greenfield run-off rate, thereby potentially reducing the storage volumes (and size of basins) required.

- It should also be noted that the pond sizing estimates have been based on assuming flat ground. The land-take associated with these features when proposed slopes/earthworks required are taken into consideration will, therefore, need to be revised.

- The STW Asset Plans do not provide detail of surface water infrastructure within the site boundary as this is privately owned. Drainage plans of the private system within the site boundary should, therefore, be obtained to confirm the details of surface water outfalls into the culverted watercourse.

- It would be highly beneficial to obtain CCTV survey of the culverted watercourse to assess the current condition of the culvert and to identify any areas in which capacity could be reduced, e.g. blockage or broken culvert. Surface water outfalls into the watercourse could also be assessed in further detail.

- The online soil map of the area indicates that the entire site is underlain by soils with impeded drainage. It has, therefore, been considered that infiltration is unlikely to be a viable option to manage surface water run-off and a high level review of attenuation storage requirements has been undertaken. It will be necessary to undertake infiltration testing on site to the BRE365 standard to provide evidence that infiltration would not be a viable option (this can be carried out post outline planning application stage).

- It should also be noted the new climate change allowances (February, 2016) in relation to rainfall intensity range from 20% to 40%. The estimates so far have been based on a 20% climate change allowance. Sensitivity testing will need to be completed with the 40% climate change allowance to confirm that the increase does not cause flooding of the system/site.

- Further consideration to fluvial flood risk at the site should be given if surface water runoff were to be managed using an on-line storage solution, i.e. by opening up the entire channel length. Flood risk could be increased at the site if this option is chosen and would, therefore, be subject to further consideration through a hydraulic modelling study.

10 Conclusions and Recommendations

Overall, the risk of flooding from all sources on site is low. Online EA mapping does not represent the risk of flooding from the ordinary watercourse flowing through the site due to the small catchment area. It is recommended that topographic survey of the site and channel survey of the watercourse is obtained in order to assess flood risk from the watercourse.

New development on site would be located entirely within Flood Zone 1, following the sequential approach, by steering new development into areas with the lowest probability of flooding. All vulnerability classifications are considered to be acceptable in Flood Zone 1; the Sequential Test and the Exception Test would, therefore, not be required.

A high level review of potential attenuation requirements has been undertaken. The site has been split into six sub-catchments and indicative surface water storage requirements have been calculated for each.

A full Flood Risk Assessment will be needed in the future to support any planning application, with further survey work and assessment required, as outlined in Section 9.

At this stage, there is no reason why the site should not be allocated from a flood risk / surface water drainage perspective and there are no significant constraints that have been identified.

Appendix A Stakeholder Correspondence

[redacted]

Our Ref: EMD-29758

Your Ref:

Date: 06/12/2016

Dear [redacted]

Enquiry regarding Product 4 – Chetwynd Barracks site in Chilwell, Nottinghamshire

Thank you for your enquiry which was received on 17/11/2016.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

I enclose Product 4 data for the above site as per your enquiry.

Please refer to Open Government Licence which explains the permitted use of this information.

Further details about the Environment Agency information supplied can be found on the GOV.UK website:

https://www.gov.uk/browse/environment-countryside/flooding-extreme-weather

If you have requested this information to help inform a development proposal, then you should note the information on GOV.UK on the use of Environment Agency Information for Flood Risk Assessments

https://www.gov.uk/planning-applications-assessing-flood-risk
https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely

[redacted]
Customers & Engagement Officer
East Midlands

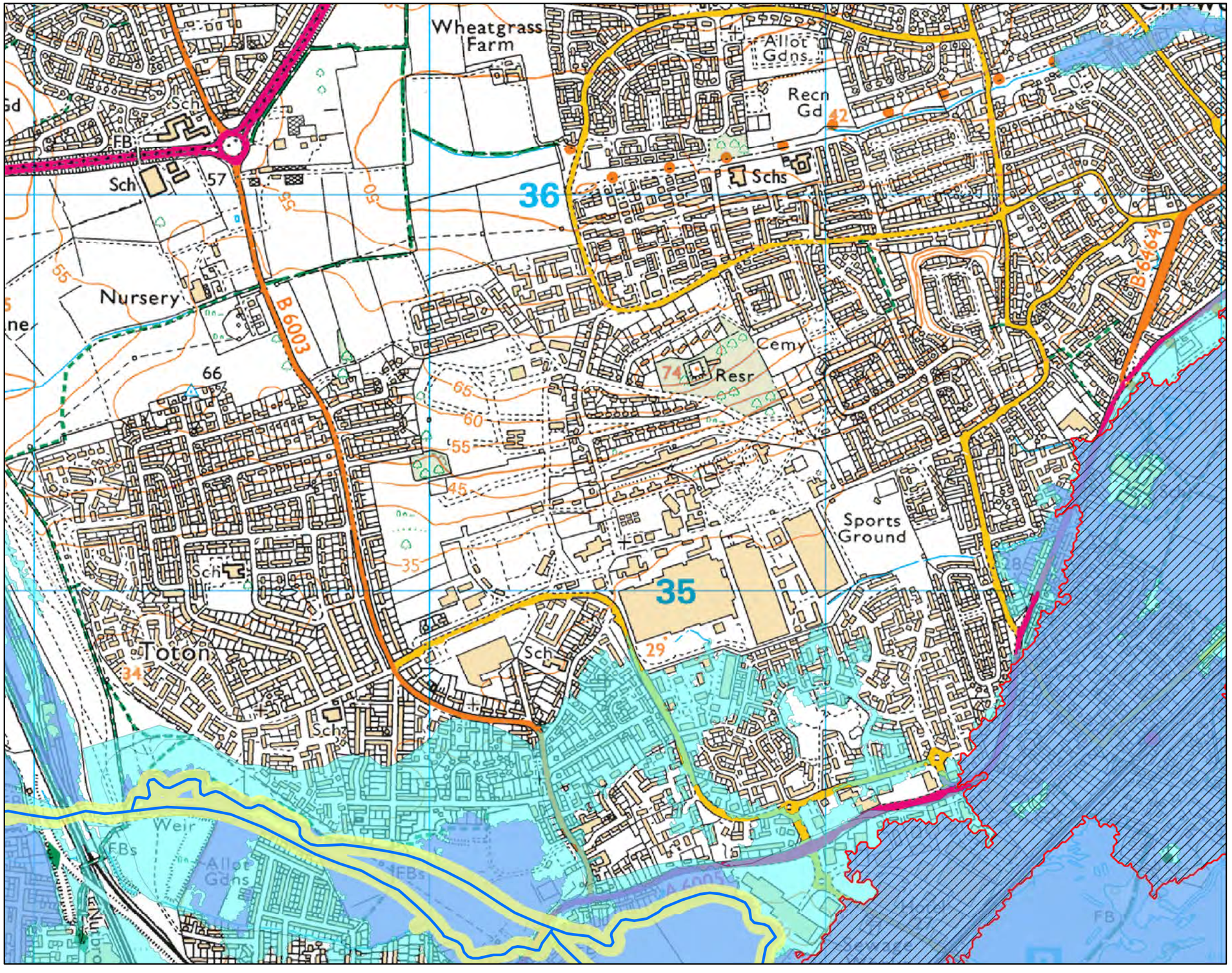
Environment Agency, [redacted]

For further information please contact the Customers & Engagement Team on [redacted]

[redacted]

Environment Agency, [redacted]

Detailed FRA/FCA Map centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Environment Agency

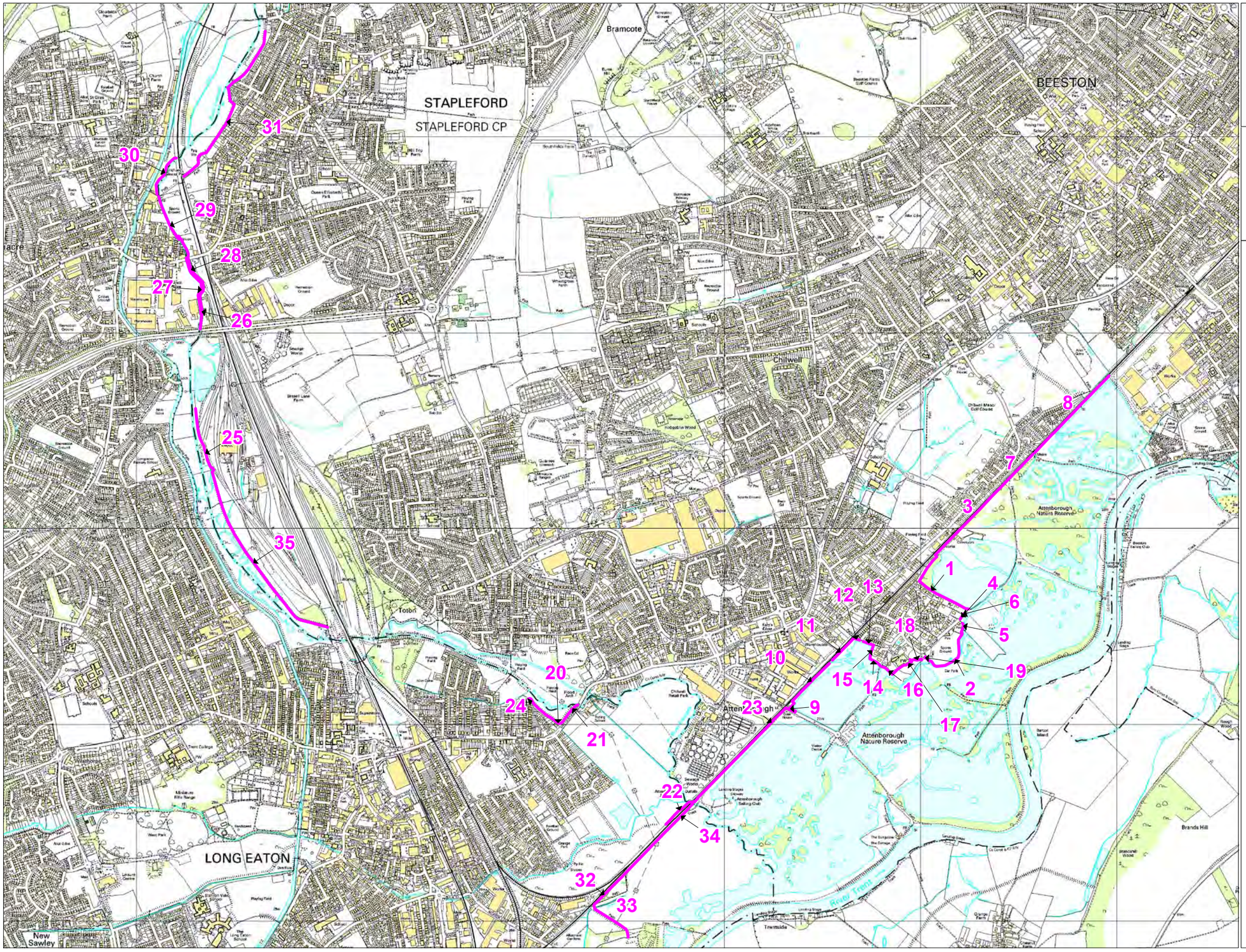
Scale 1:10,000

N W E S

Legend

- Main River
- Areas Benefiting from Defences
- Bank Top Eplanning Tool
- 1% (1 in 100 year) floodplain
- 0.1% (1 in 1000 year) floodplain

Defences Map centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Environment Agency

Scale 1:20,000

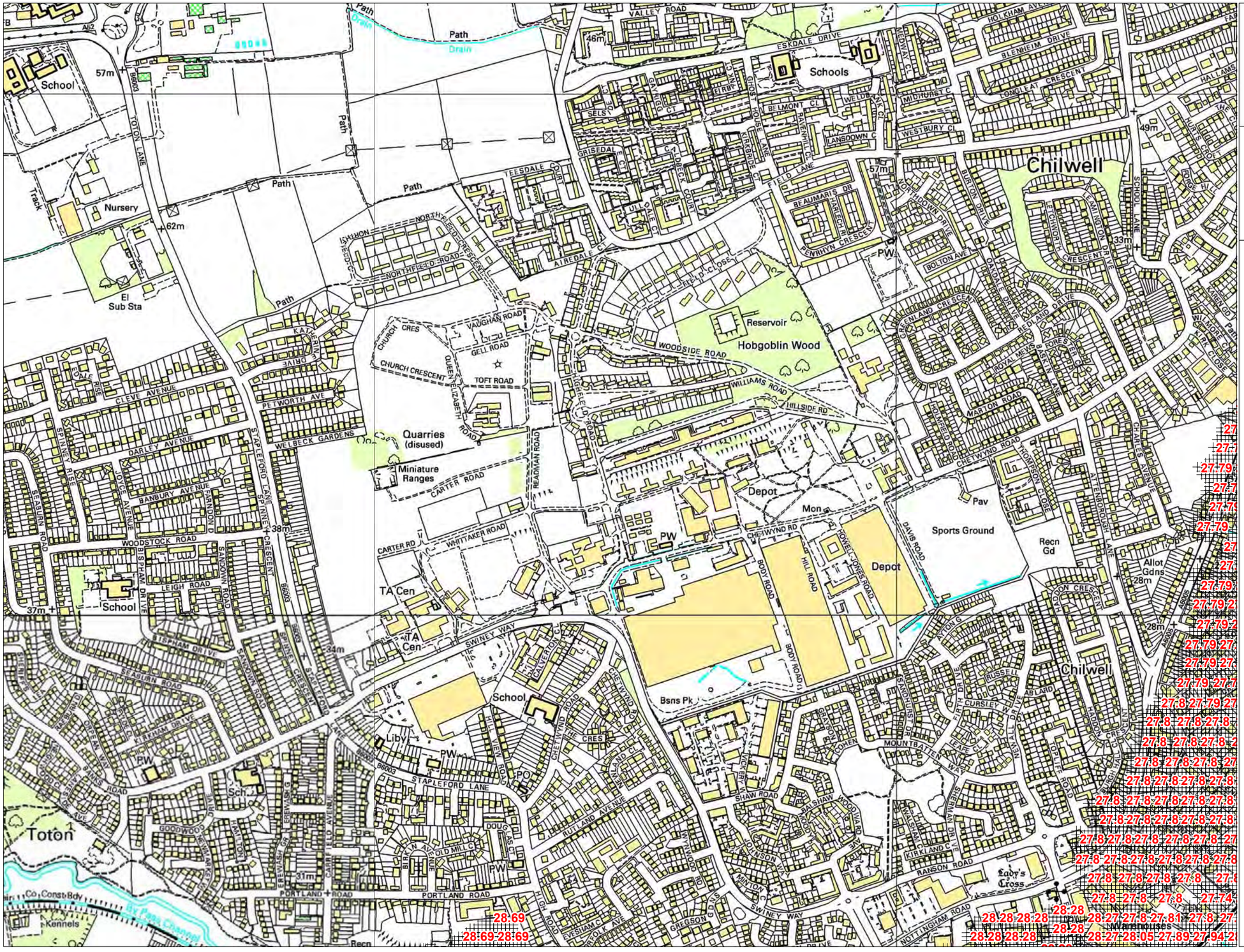
N
W E
S

Legend

Flood Defence Locations

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

Floodplain Heights centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Environment Agency

Scale 1:7,500

N
W E
S

Legend

x.xx — 1 in 1000 year Floodplain Level (mAOD)

Source: Greater Nottingham SFRA, B&V, October 2010

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

Floodplain Heights centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]

Environment Agency

Scale 1:7,500

N
W E
S

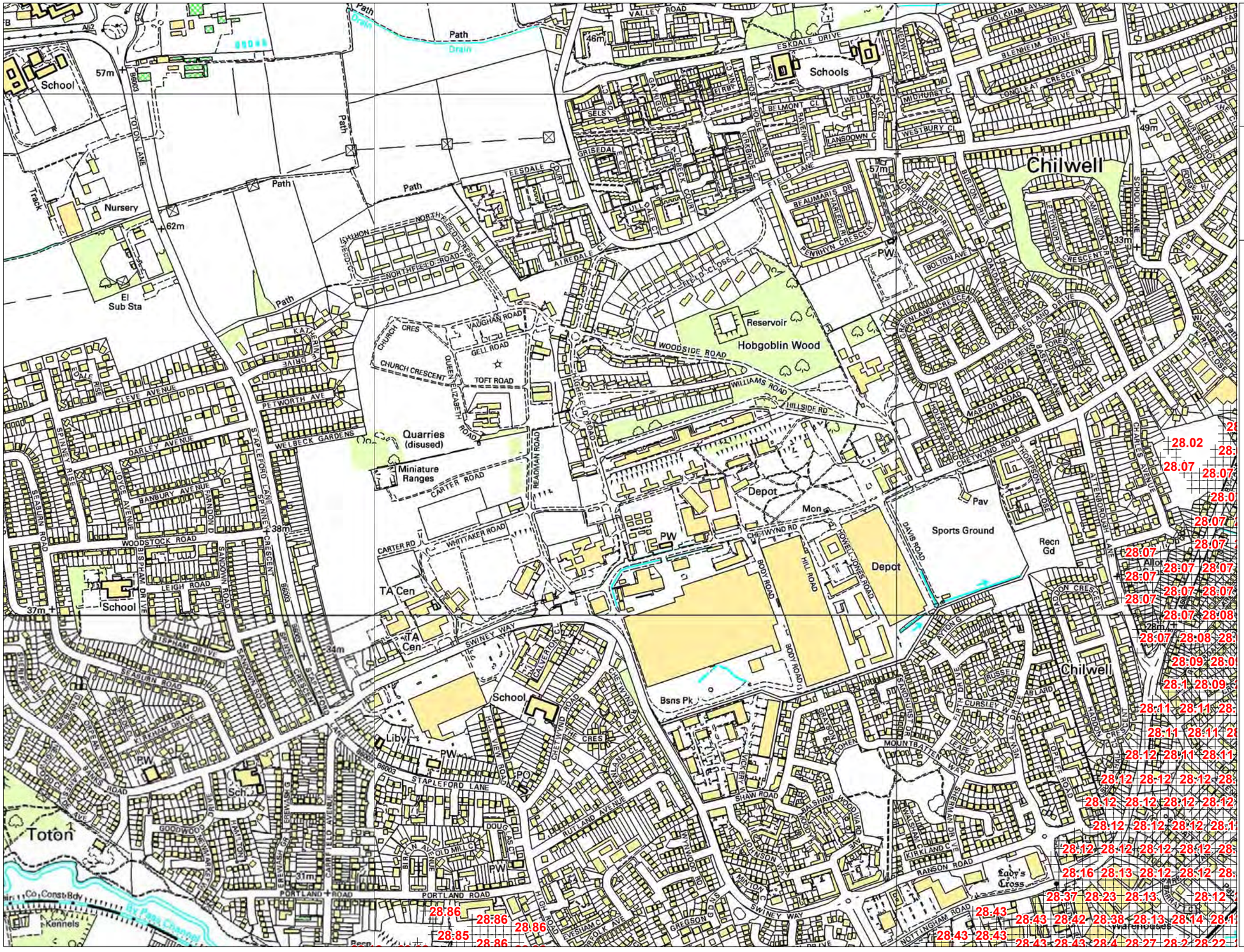
Legend

x.xx — 1 in 1000 year Floodplain Level (mAOD)

Source: River Erewash SFRM2 Study, Hyder 2013

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

Floodplain Heights centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Environment Agency

Scale 1:7,500

N
W E
S

Legend

x.xx — 1 in 100 year (including 50% climate change forecast) Floodplain Level (mAOD)

Source: Greater Nottingham River Trent Climate Change Scenario, Environment Agency 2016

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

Floodplain Heights centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]

Environment Agency

Scale 1:7,500

N
W E
S

Legend

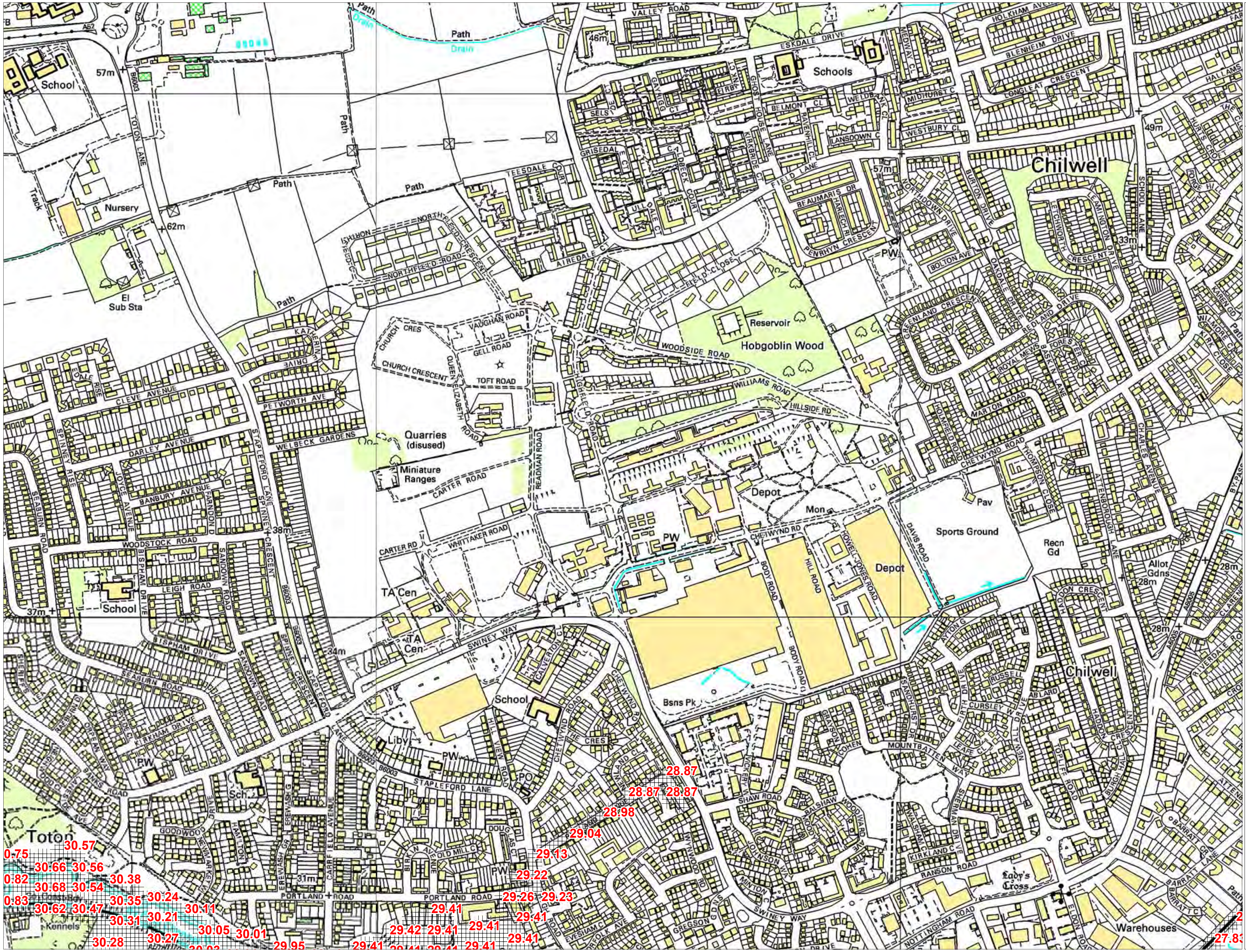
x.xx **1 in 100 year (including 20% climate change forecast) Floodplain Level (mAOD)**

Source: River Erewash SFRM2 Study, Hyder 2013

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

[redacted]

Floodplain Heights centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Scale 1:7,500

N W E S

Legend

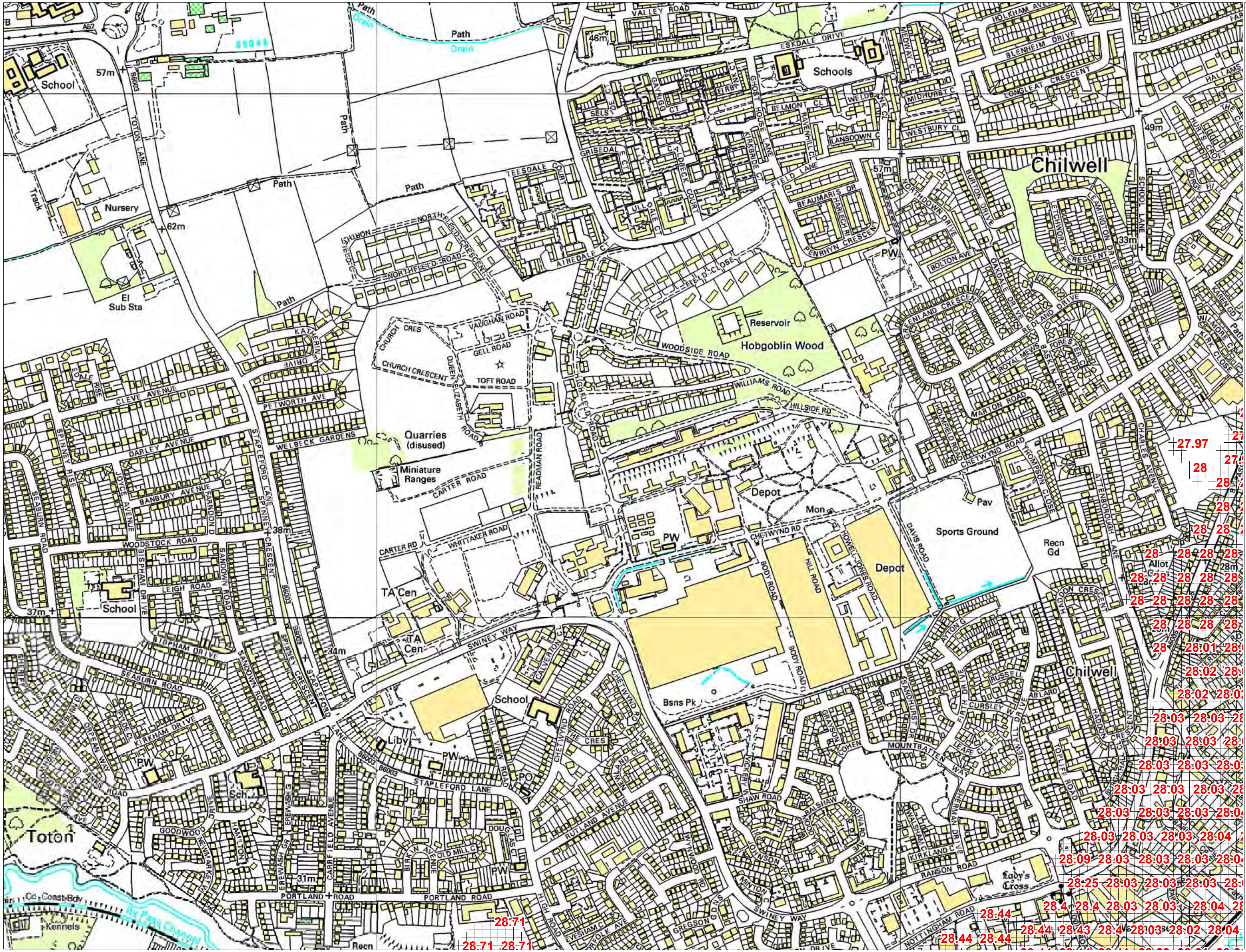
x.xx 1 in 100 year Floodplain Level (mAOD)

Source: River Erewash SFRM2 Study, Hyder 2013

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

[redacted] [redacted]

Breach Floodplain Heights centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Scale 1:7,500

N
W E
S

Legend

x.xx 1 in 100 year (including 30% climate change forecast) Modelled Breach Floodplain Level (mAOD)

Source: Greater Nottingham River Trent Climate Change Scenario, Environment Agency 2016

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

[redacted]

Risk of Flooding from Surface Water centred on Highfield Road, Chilwell – created 29 November 2016 Ref [EMD29758]

Environment Agency

Scale 10,000

N
W E
S

Likelihood of Flooding from Surface Water

- High
- Medium
- Low
- Very Low

Likelihood of Flooding from Surface Water

High:	Greater than or equal to 1 in 30 (3.3%) chance in any given year
Medium:	Less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance in any given year
Low:	Less than 1 in 100 (1%) but greater than or equal to 1 in 1,000 (0.1%) chance in any given year
Very Low:	Less than 1 in 1,000 (0.1%) chance in any given year

This information is shown on the Risk of Flooding from Surface Water map on our website.

EMD29758 - River Trent

The following information, including the modelled extents mapping, has been produced including the effect of any local defences.

Node point reference	Location	5% (1 in 20 year) modelled level (mAOD)	5% (1 in 20 year) modelled flow (m^3/s)	1% (1 in 100 year) modelled level (mAOD)
405013200	SK 51906 33377	27.56	576.93	28.03
405011730	SK 52609 34236	26.95	611.49	27.48
405010670	SK 53026 35096	26.67	462.86	27.31

Source: Greater Nottingham SFRA, Black and Veatch, October 2010

Node point reference	Location	1% (1 in 100 year) modelled flow (m^3/s)	0.1% (1 in 1000 year) modelled level (mAOD)	0.1% (1 in 1000 year) modelled flow (m^3/s)
405013200	SK 51906 33377	606.18	28.46	629.71
405011730	SK 52609 34236	678.39	28.03	699.61
405010670	SK 53026 35096	475.64	27.89	526.57

Source: Greater Nottingham SFRA, Black and Veatch, October 2010

Node point reference	Location	1% + 20% flow (1 in 100 year plus climate change) modelled level (mAOD)	1% + 20% flow (1 in 100 year plus climate change) modelled flow (m^3/s)
405013200	SK 51906 33377	28.31	612.27
405011730	SK 52609 34236	27.87	689.84
405010670	SK 53026 35096	27.73	493.82

Source: Greater Nottingham SFRA, Black and Veatch, October 2010

Please note: The flows provided represent **in channel flow only** and do not take into account flow on the floodplain.

EMD29758 - River Erewash
The following information, including the modelled extents mapping, has been produced including the effect of any local defences.

Node point reference	Location	20% (1 in 5 year) modelled level (mAOD)	20% (1 in 5 year) modelled flow (m^3/s)	10% (1 in 10 year) modelled level (mAOD)
EREW03_82	SK 48336 36245	34.73	25.71	34.94
EREW03_70	SK 48333 35287	32.42	25.74	32.60
EREW03_46	SK 49365 34514	29.93	13.92	30.08
EREW03_21	SK 50670 34228	27.85	20.99	27.88

Source: River Erewash SFRM2 Study, Hyder, 2013

Node point reference	Location	10% (1 in 10 year) modelled flow (m^3/s)	5% (1 in 20 year) modelled level (mAOD)	5% (1 in 20 year) modelled flow (m^3/s)
EREW03_82	SK 48336 36245	30.79	35.23	39.11
EREW03_70	SK 48333 35287	30.76	32.85	35.05
EREW03_46	SK 49365 34514	16.69	30.32	21.23
EREW03_21	SK 50670 34228	21.97	27.93	22.86

Source: River Erewash SFRM2 Study, Hyder, 2013

Node point reference	Location	2% (1 in 50 year) modelled level (mAOD)	2% (1 in 50 year) modelled flow (m^3/s)	1.33% (1 in 75 year) modelled level (mAOD)
EREW03_82	SK 48336 36245	35.49	47.55	35.56
EREW03_70	SK 48333 35287	33.02	39.15	33.05
EREW03_46	SK 49365 34514	30.52	25.63	30.57
EREW03_21	SK 50670 34228	27.98	23.15	28.00

Source: River Erewash SFRM2 Study, Hyder, 2013

Node point reference	Location	1.33% (1 in 75 year) modelled flow (m^3/s)	1% (1 in 100 year) modelled level (mAOD)	1% (1 in 100 year) modelled flow (m^3/s)
EREW03_82	SK 48336 36245	50.09	35.66	54.13
EREW03_70	SK 48333 35287	40.71	33.08	43.40
EREW03_46	SK 49365 34514	26.87	30.63	28.35
EREW03_21	SK 50670 34228	23.20	28.03	22.90

Source: River Erewash SFRM2 Study, Hyder, 2013

Node point reference	Location	0.5% (1 in 200 year) modelled level (mAOD)	0.5% (1 in 200 year) modelled flow (m^3/s)	0.1% (1 in 1000 year) modelled level (mAOD)
EREW03_82	SK 48336 36245	35.93	63.60	36.71
EREW03_70	SK 48333 35287	33.28	53.68	33.83
EREW03_46	SK 49365 34514	30.88	34.18	31.00
EREW03_21	SK 50670 34228	28.13	23.59	28.36

Source: River Erewash SFRM2 Study, Hyder, 2013

Node point reference	Location	0.1% (1 in 1000 year) modelled flow (m^3/s)	1% + 20% flow (1 in 100 year plus climate change) modelled level (mAOD)	1% + 20% flow (1 in 100 year plus climate change) modelled flow (m^3/s)
EREW03_82	SK 48336 36245	80.82	35.90	62.34
EREW03_70	SK 48333 35287	79.55	33.25	52.31
EREW03_46	SK 49365 34514	42.80	30.85	32.50
EREW03_21	SK 50670 34228	23.40	28.15	23.21

Source: River Erewash SFRM2 Study, Hyder, 2013

Please note: The flows provided represent **in channel flow only** and do not take into account flow on the floodplain.

On 19th February 2016, the Flood risk assessments: climate change allowances' was published on www.gov.uk website. It has replaced previous guidance Climate Change Allowances for Planners.

The climate change guidance can be found at: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances
If your RFI is to assist with a Flood Risk Assessment (FRA) for a future planning application, please review this guidance to consider which allowances should be used for your site.

EMD29758 Historic Information
We have no records of historic fluvial flooding at this location. However, we would advise that this does not mean there has never been historic flooding in this location or that the area is automatically free from a risk of flooding. We do not claim that all flood events have been recorded.

EMD29758 Surface water map
Enclosed is a map showing the risk of flooding from surface water for this area, produced in partnership with Local Authorities. Surface water flood risk is widely distributed and can happen far from rivers and the sea. It's sometimes hard to say whether you're in an area at risk of flooding from surface water because surface water flooding can follow many more paths and can be affected by very small features such as kerb height and even speed bumps. We recommend you consider not only whether your property is shown in or near an area at risk, but also the broader scale and pattern of surface water flooding shown in the area. You may also wish to view this and other flood risk maps on our website.

Whether your property is at risk will depend on the accuracy of the mapping in this area, and on the details of your property – for example, how waterproof the structure is, the levels of doors and airbricks, and whether you have installed any flood resilience measures such as airbrick covers and flood boards.
If you require information on what is being done to manage surface water flood risk in the local area, please contact Nottinghamshire County Council.

Information Warning

Please note:

- It is not possible to say for certain what the flood risk is but we use the best information available to provide an indication so that people can make informed choices about living with or managing the risks. The information we supply does **not** provide an indicator of flood risk at **an individual property / site level**.

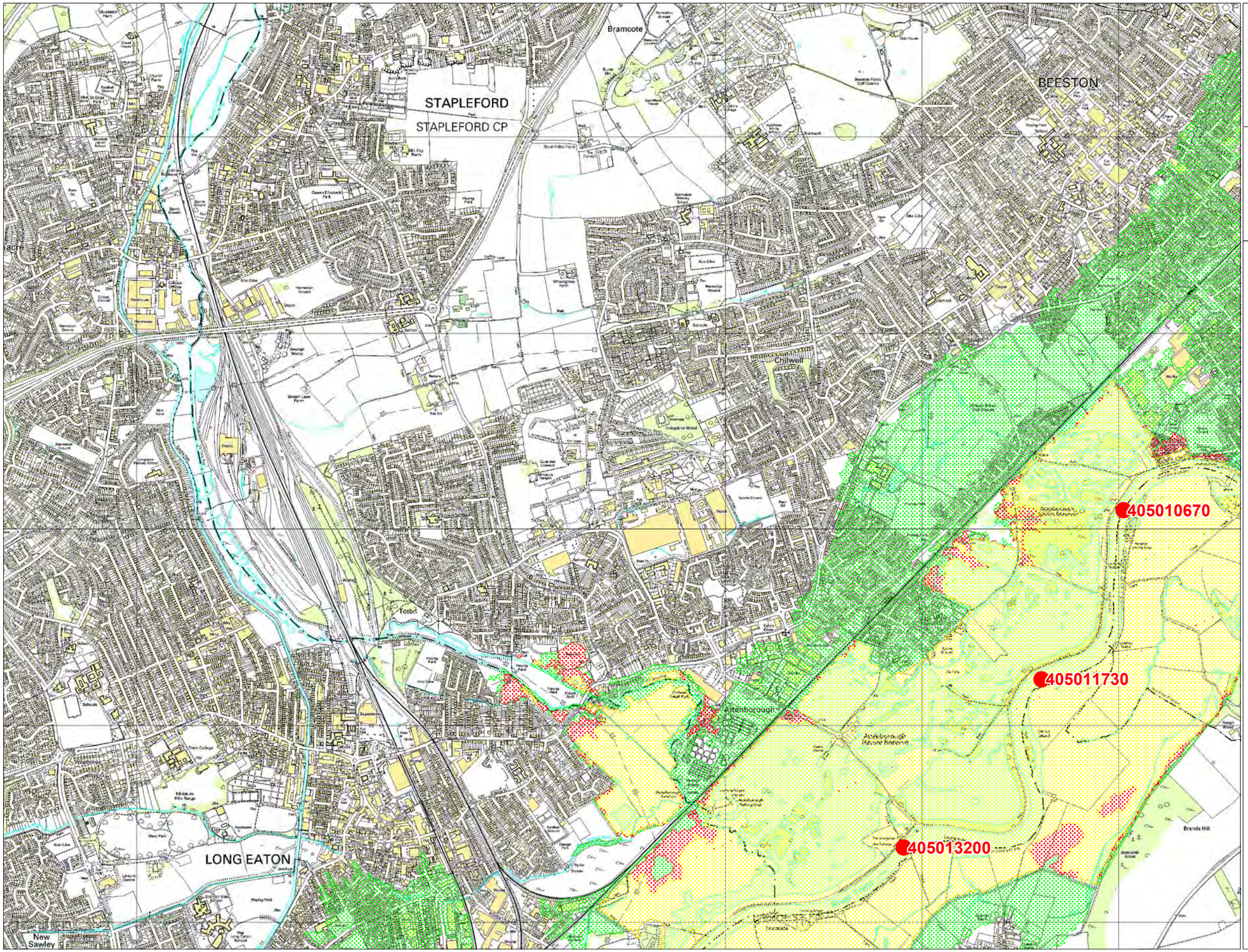
- The flood risk information provided on the attached Surface Water map does not cover other sources of flooding such as from rivers and sea.

EMD29758 Defence Information

Asset ID	Asset Reference	Design Standard	D/S Crest Level (mAOD)	U/S Crest Level (mAOD)	Overall Condition Grade
1	37075	100	28.05	28.05	2
2	405632	100	28.13	28.13	2
3	405692	100	n/a	n/a	2
4	405650	100	28.13	28.13	2
5	405640	100	28.13	28.13	2
6	405673	100	28.13	28.13	4
7	414127	N/A	n/a	n/a	2
8	414137	N/A	n/a	n/a	2
9	405593	100	28.41	28.41	2
10	414236	N/A	n/a	n/a	2
11	405595	100	28.41	28.41	2
12	405598	100	28.27	28.41	3
13	405602	100	28.27	28.27	2
14	405603	100	28.27	28.27	2
15	415176	N/A	n/a	n/a	2
16	405607	100	28.18	28.18	2
17	405621	100	28.18	28.18	2
18	405624	100	28.25	28.25	2
19	405628	100	28.13	28.13	2
20	39660	25	28.83	28.71	3
21	22710	25	29.36	28.83	2
22	183989	100	28.63	28.63	3
23	37073	100	28.56	28.56	2
24	129998	25	28.71	29.22	3

25	55792	100	33.59	33.53	2
26	48996	100	34.85	35.61	3
27	39164	100	35.61	35.63	3
28	79536	25	35.883	36.50	2
29	54409	25	36.664	36.664	3
30	39165	25	36.48	37.20	3
31	71592	100	37.32	37.82	3
32	182143	100	28.77	28.77	2
33	55232	100	28.77	28.77	2
34	182142	100	28.93	28.67	2
35	39661	100	33.43	33.59	3

Modelled Extents Map centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Environment Agency

Scale 1:20,000

N
W E
S

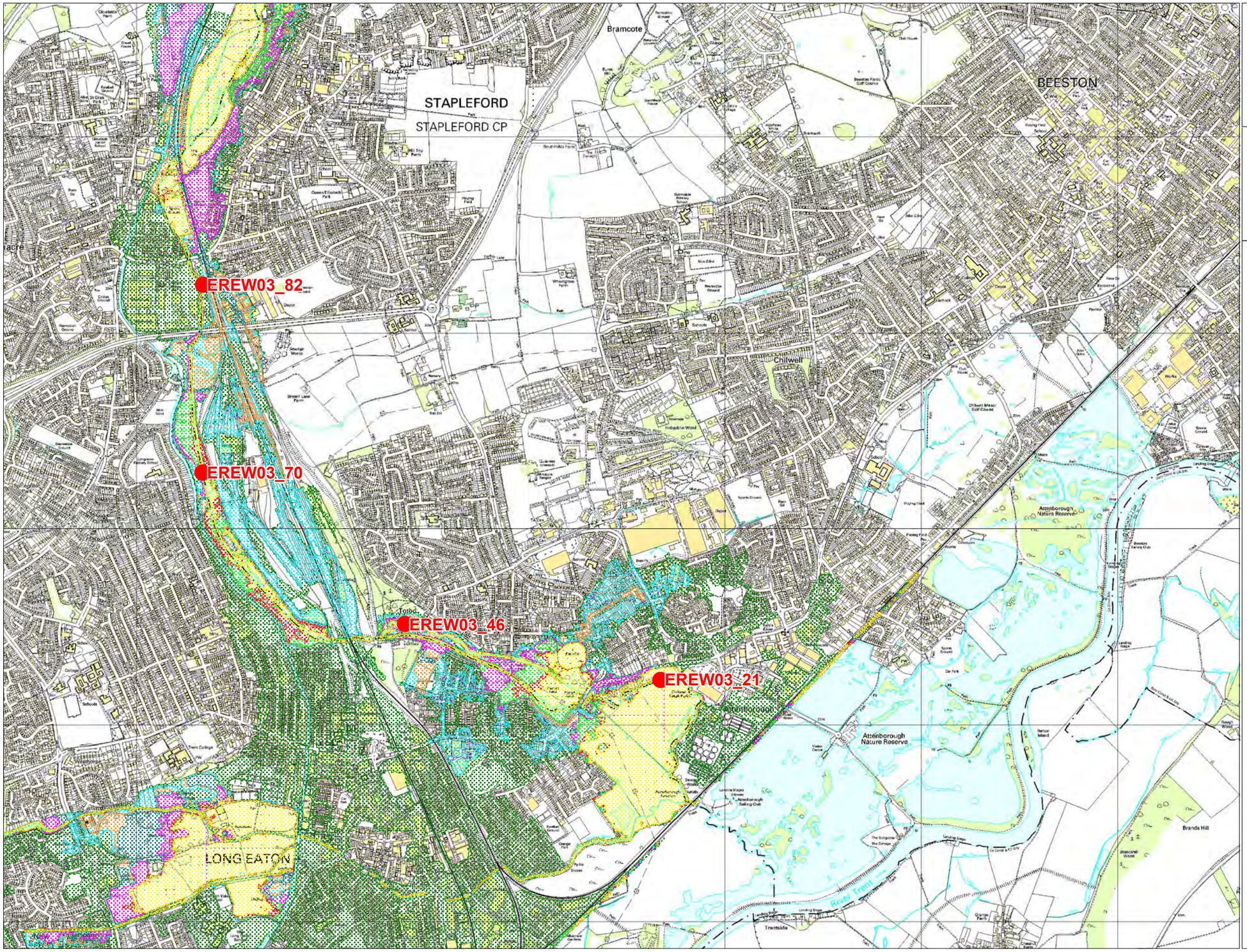
Legend

- 1 in 20 year Modelled Extent
- 1 in 100 year Modelled Extent
- 1 in 1000 year Modelled Extent
- Modelled Node

Source: Greater Nottingham SFRA, B&V, October 2010

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

Modelled Extents Map centred on Highfield Road, Chilwell - created 29 November 2016 Ref: [EMD29758]



Environment Agency

Scale 1:20,000

N
W E
S

Legend

- 1 in 5 year Modelled Extent
- 1 in 10 year Modelled Extent
- 1 in 20 year Modelled Extent
- 1 in 50 year Modelled Extent
- 1 in 75 year Modelled Extent
- 1 in 100 year Modelled Extent
- 1 in 100 year Modelled Extent (including climate change forecast)
- 1 in 200 year Modelled Extent
- 1 in 1000 year Modelled Extent
- Modelled Node

Source: River Erewash SFRM2 Study, Hyder 2013

A Strategic Flood Risk Assessment may be available, providing further information for this site. Please contact your Local Planning Authority to access this information as it will need to be considered within any Flood Risk Assessment submission.

[redacted]

From: [redacted]

Sent: 14 December 2016 15:49

To: [redacted]

Subject: RE: Chetwynd Barracks, Nottinghamshire Flood Risk Data Request (Our ref: 37782)

Follow Up Flag: Flag for follow up

Flag Status: Flagged

Dear [redacted],

Further to your request please see below for a response. Answers that can be provided by the Council have been provided below in red. Please note that the technical details of flooding issues will need to be redirected to Nottinghamshire County Council. I would be happy to forward your request to them, alternatively you can contact them directly at enquiries@nottscc.gov.uk

1. Details of any historic flooding in the vicinity of the site (to include written reports, photographs, flood extent outlines, duration, return period, etc. and commentary on the source/mechanisms of flooding and antecedent conditions).

2. Information regarding any remedial works undertaken to alleviate flooding in the vicinity of the site.

3. Details of any formal or 'de facto' flood defences located within or immediately upstream/downstream of the site (for example, standards of protection, crest levels, ownership, condition and maintenance arrangements) and any areas benefitting from defences.

4. Details of local hydraulic features/controls and hydrological influences that are known or considered to exert a controlling influence upon local flood hydraulics (for example, condition, capacity, design standard, ownership and maintenance arrangements).

5. Details of any flooding/capacity "hot-spots" and potential sources of flooding.

6. Details of any flood risk reports undertaken by Broxtowe Borough Council i.e. Surface Water Management Plans, Strategic Flood Risk Assessments. –

Greater Nottingham Strategic Flood Risk Assessment Technical Report Volume 1 - General

Greater Nottingham Strategic Flood Risk Assessment Technical Report Volume 2 - Broxtowe

Greater Nottingham Strategic Flood Risk Assessment Non-Technical Summary

7. Any further details of the ordinary watercourse along the south eastern boundary and the section of drain to the west of this watercourse within the southern part of the site.

Groundwater

8. Details of any known groundwater flooding issues.

Surface Water

9. Details of any known surface water flooding at the site or nearby.

10. Details of any known capacity issues in the local highways drainage or local public surface/foul water sewer systems.

11. Details of any specific surface water / SuDS requirements as outlined in local policy documents.

Aligned Core Strategy Policy 1:

6. Development will be supported that adopts the precautionary principle, that avoids areas of current and future flood risk, which, individually or cumulatively does not increase the risk of flooding elsewhere and, where possible, reduces flood risk.

7. Where no reasonable site within Flood Zone 1 is available, allocations in Flood Zone 2 and Flood Zone 3 will be considered on a sequential basis.

8. Where it is necessary to apply the Exception Test, the following factors will be taken into account when considering if development has wider sustainability benefits to the community that outweigh flood risk:

a) there are exceptional and sustainable circumstances for locating the development within such areas, including the necessary re-use of
brownfield sites; and
b) the risk can be fully mitigated by engineering and design measures.

9. Where appropriate, further guidance on the application of the sequential and Exception Test will be set out in part 2 Local Plans.

10.All new development should incorporate measures to reduce surface water runoff whilst managing surface water drainage in a sustainable manner, and Sustainable Drainage Systems should be incorporated into all new development unless it can be demonstrated that such measures are not viable or technically feasible.

12. Details of any emerging policy or guidance regarding flood risk or surface water drainage that should be taken into account, particularly with regards to adoption or approval processes, SuDS drainage requirements etc.

I hope that this answers your enquiry. However, please contact me if I can be of any further help.

Regards

[redacted]

Broxtowe Borough Council
Legal and Planning Services
Council Offices, Foster Avenue
Beeston, Nottinghamshire, NG9 1AB
Tel: 0115 9177777
Fax: 0115 9173131
www.broxtowe.gov.uk

From: Natalie Yates [redacted]
Sent: 17 November 2016 11:14
To: Customerservices
Subject: Chetwynd Barracks, Nottinghamshire Flood Risk Data Request (Our ref: 37782)

Dear Sir/Madam,

Peter Brett Associates LLP (PBA) has been instructed to assess flood risk at the Chetwynd Barracks site in Chilwell, Nottinghamshire. The site covers an area of approximately 75.45 hectares and is located at NGR 450468E 335273N.

Please find attached a Data Request document, outlining information we require to assess flood risk at the site. I would appreciate it if you could pass this on to the relevant flood risk or environment department. If you have any questions please feel free to contact me using the details below.

Kind regards,

[redacted]
Graduate Engineer
For and on behalf of Peter Brett Associates LLP - Birmingham

t [redacted]
[redacted]
w peterbrett.com

_

Sarah Kirby

From: [redacted]
Sent: 17 November 2016 14:49
To: [redacted]
Subject: Re: Chetwynd Barracks, Nottinghamshire Flood Risk Data Request (Our ref: 37782)
Attachments: 37782 Chetwynd Barracks- STW Data Request 161117.pdf

Dear Ms Yates,
Thank you for your enquiry.
We have no record of sewer-related flooding on your site, or within 500m of the given grid reference. However, this a large site, and we do have a record of three incidents of foul flooding off the site, Two of these are about 100m west of the western site boundary, and one is about 300m south of the western site boundary.

regards,
[redacted]
Asset Protection waste Water

[redacted]

Natalie Yates [redacted]

17/11/2016 11:17

cc:
Subject: Chetwynd Barracks, Nottinghamshire Flood Risk Data Request (Our ref: 37782)

Dear Sir/Madam,

Peter Brett Associates LLP (PBA) has been instructed to assess flood risk at the Chetwynd Barracks site in Chilwell, Nottinghamshire. The site covers an area of approximately 75.45 hectares and is located at NGR 450468E 335273N.

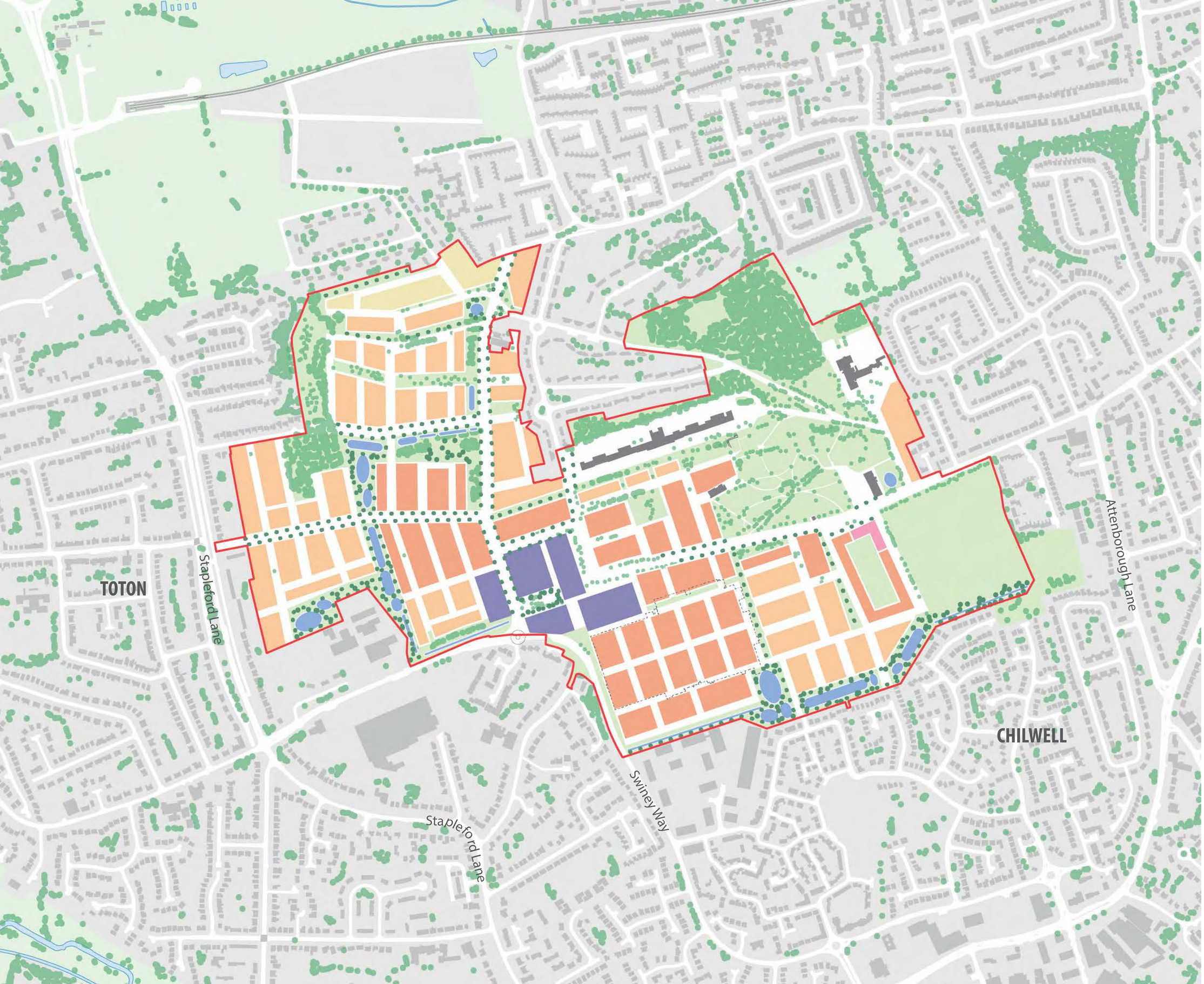
Please find attached a Data Request document, outlining information we require to assess flood risk at the site.

Kind regards,

[redacted]
For and on behalf of Peter Brett Associates LLP - Birmingham

t [redacted]
w peterbrett.com

Appendix B Concept Masterplan



The contractor is responsible for checking dimensions, tolerances and references. Any discrepancy to be verified with the Architect before proceeding with the works. Where an item is covered by drawings to different scales the larger scale drawing is to be worked to.

Do no scale drawing. Figured dimensions to be worked to in all cases.

Key

- Site boundary
- Medium density housing
- Low density housing
- Very low density housing
- Green space
- Local centre with high density housing
- School
- Retained/potentially retained buildings
- Retained/potentially retained underground tunnel
- Building memory to be retained
- Existing woodland and trees
- Proposed trees and other planting
- SUDS features

Rev	Date	Description	Dwn	Ckd
0	16/12/16	First issue	SJ	KR
B	24/01/17	Concept changed with tree information	SJ	KR
C	02/02/17	Numerous minor alterations to parcels	KR	KR
D	22/02/17	Numerous minor alterations to parcels	AH	KR
E	03/03/17	Numerous minor alterations to parcels	AH	KR

CHETWYND BARRACKS

PROPOSED CONCEPT MASTERPLAN

AA6584 - SK08 **REV E**

INFORMATION

Drawn AH Checked KR Date 03/03/17 Scale @ A1 NTS

PRP

Appendix C Site Photographs

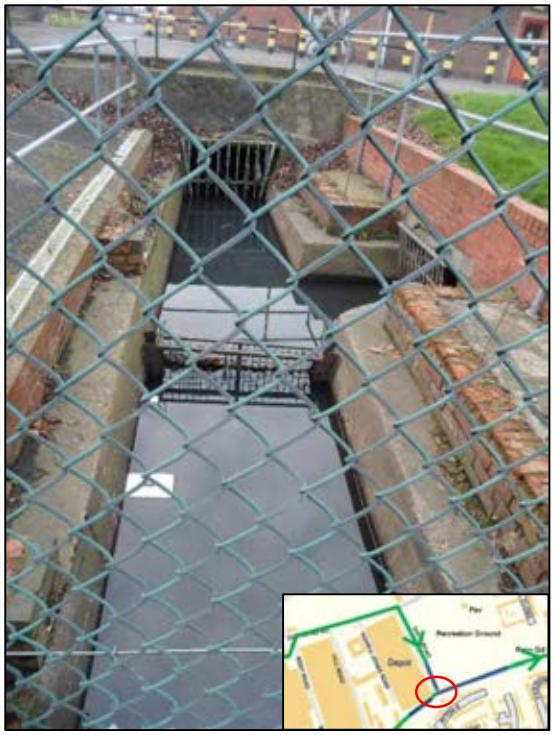
Appendix C Site Photographs

Open section of the watercourse to the south of the depot

Open section of the watercourse flowing into a culverted section

Manhole covers to the north of the Recreation Ground

Open section of the watercourse to the south of the military buildings



Open section of the watercourse to the south west of the Recreation Ground

Culverted section of the watercourse to the south west of the Recreation Ground

Open section of the watercourse flowing from west to east along the southern boundary of the Recreation Ground

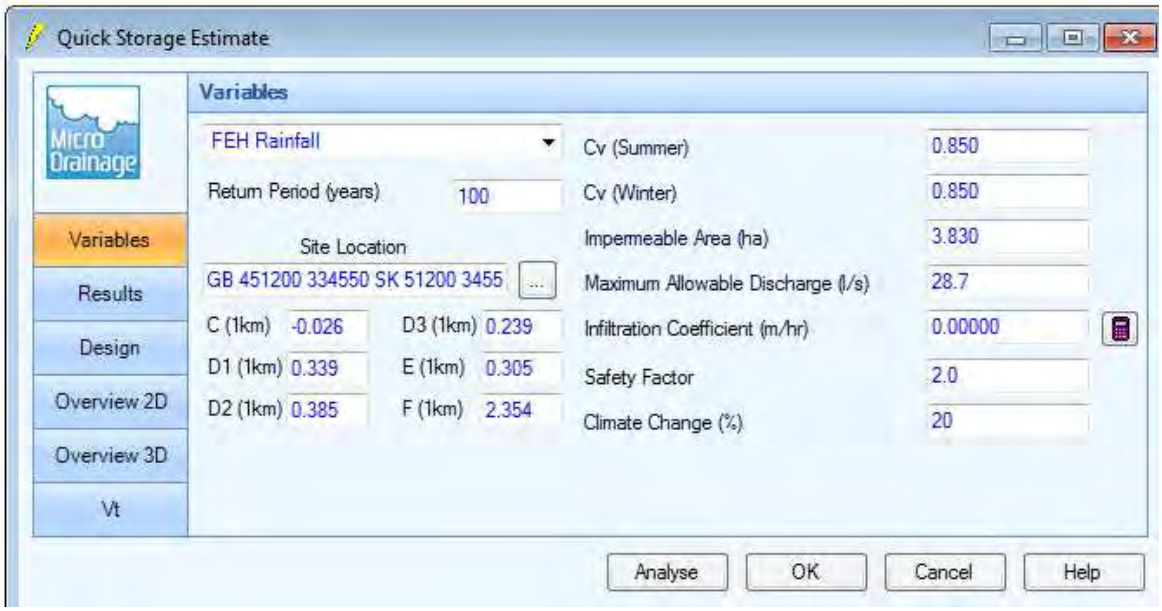
Culverted section of the watercourse parallel to Chetwynd Road

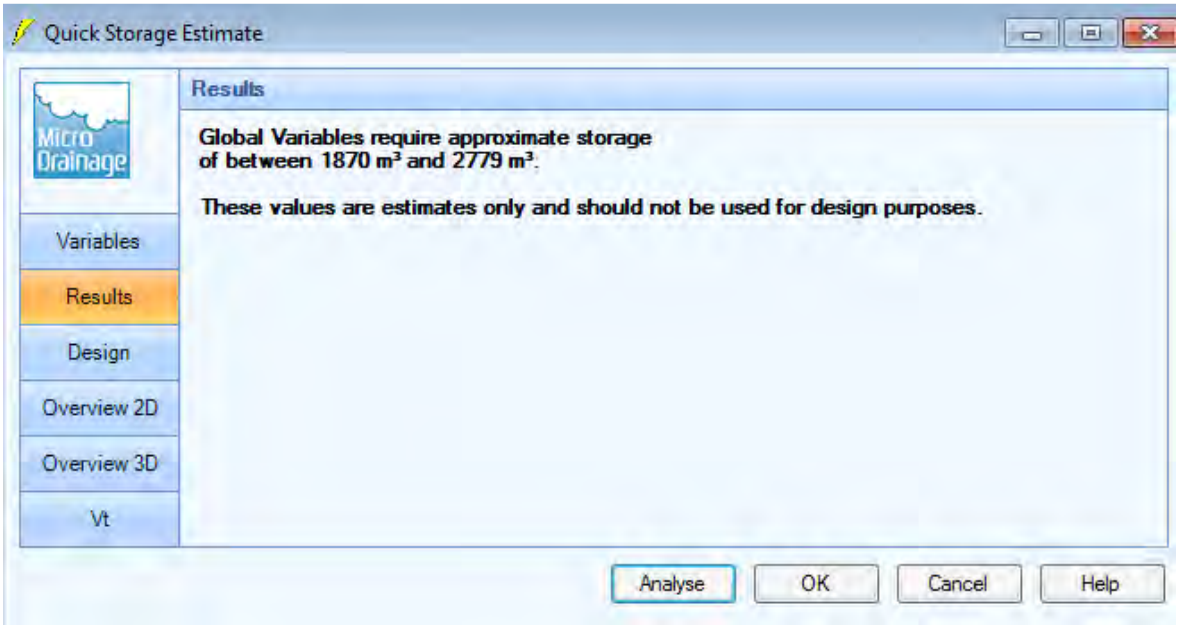
Appendix D Indicative Surface Water Micro Drainage Calculations

37782 Chetwynd QSE

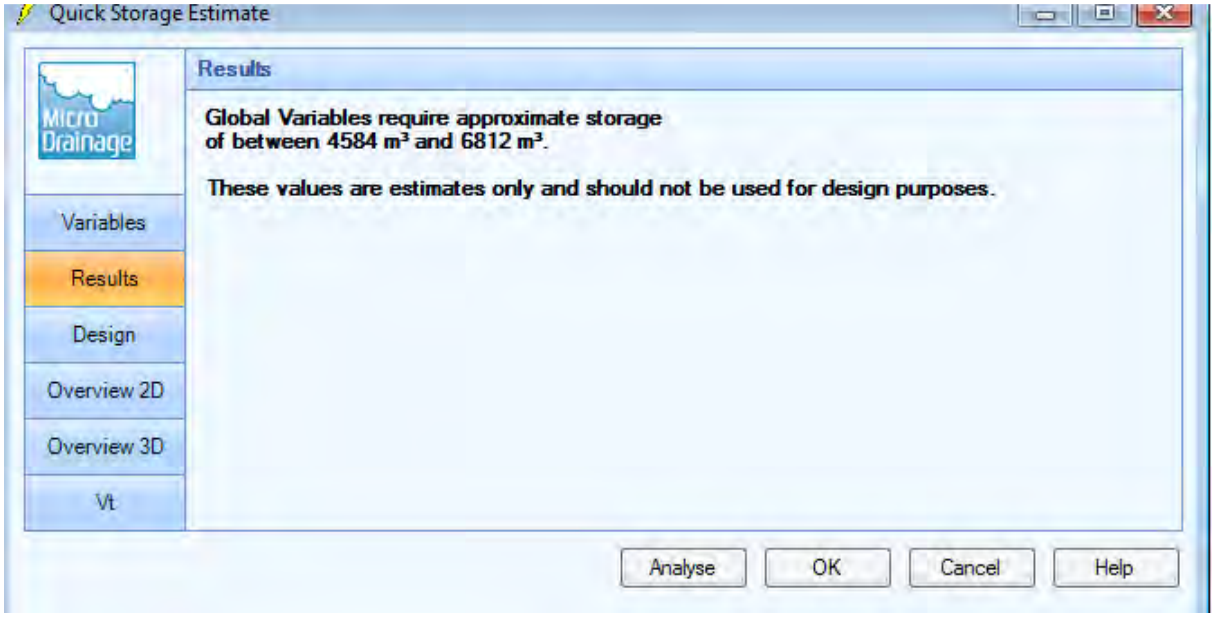
QSE for 100yr + 20% CC

Catchment 1 – 100yrGRO 7.5l/s/ha

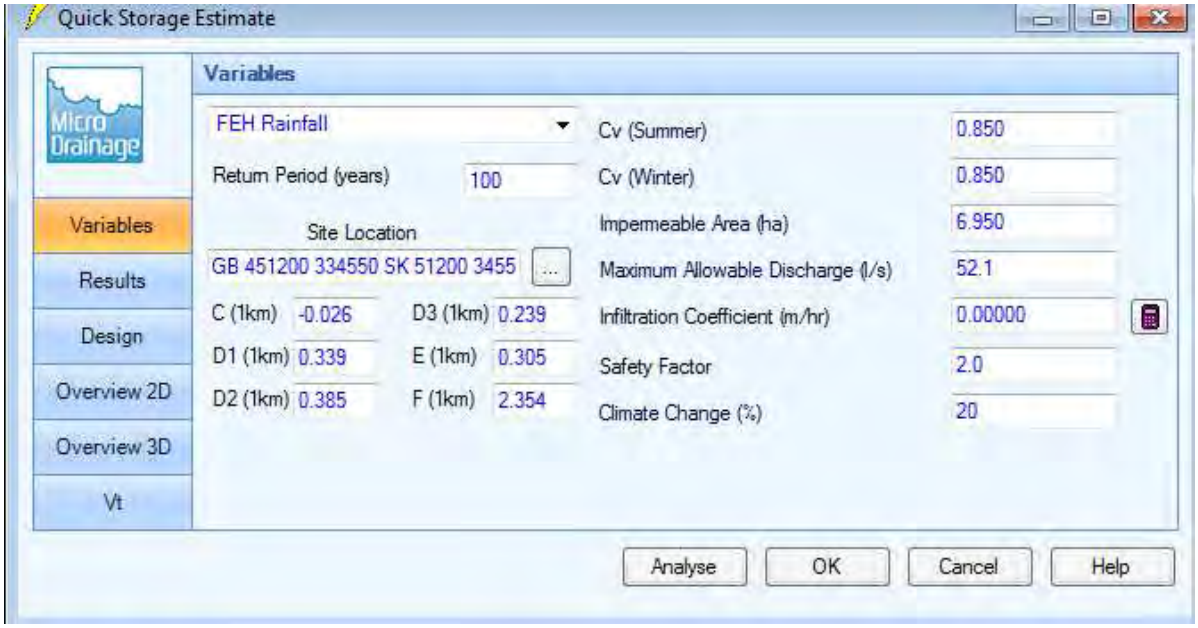


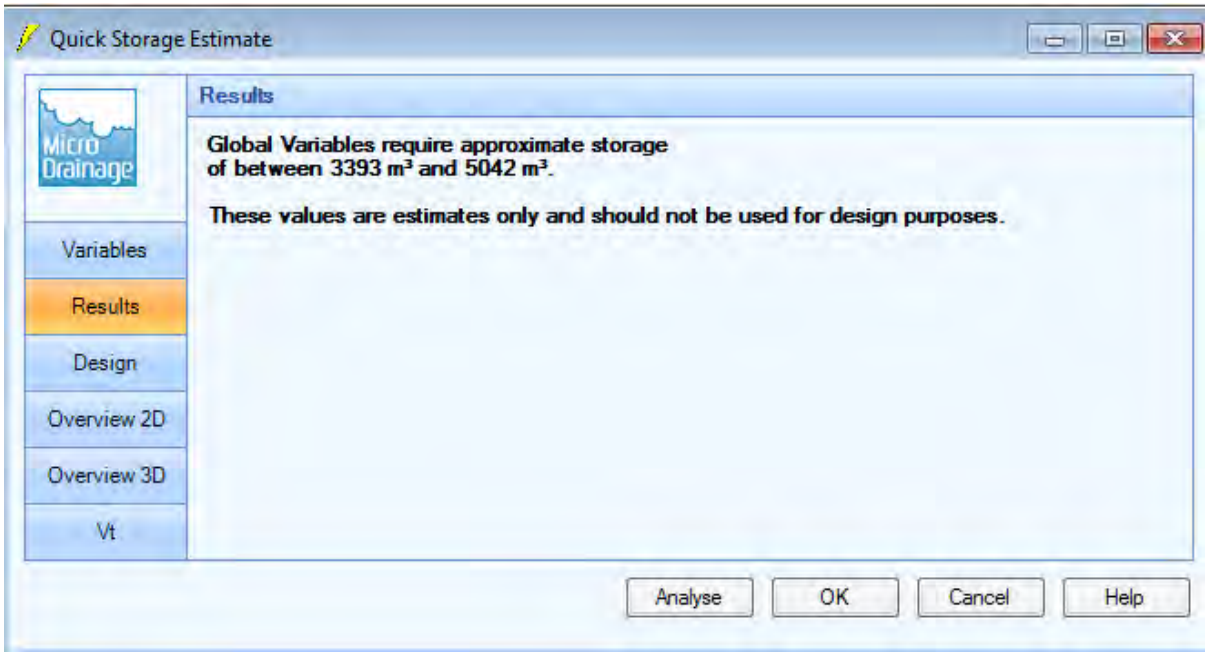


Catchment 2 - 100yrGRO 7.5l/s/ha

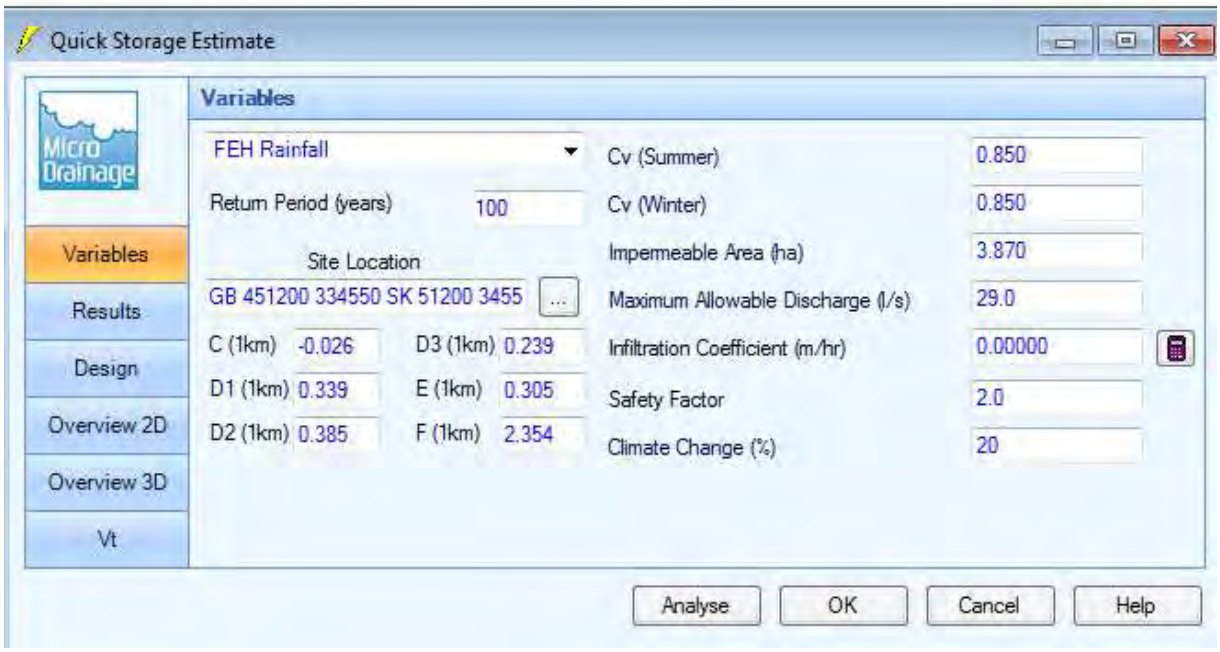


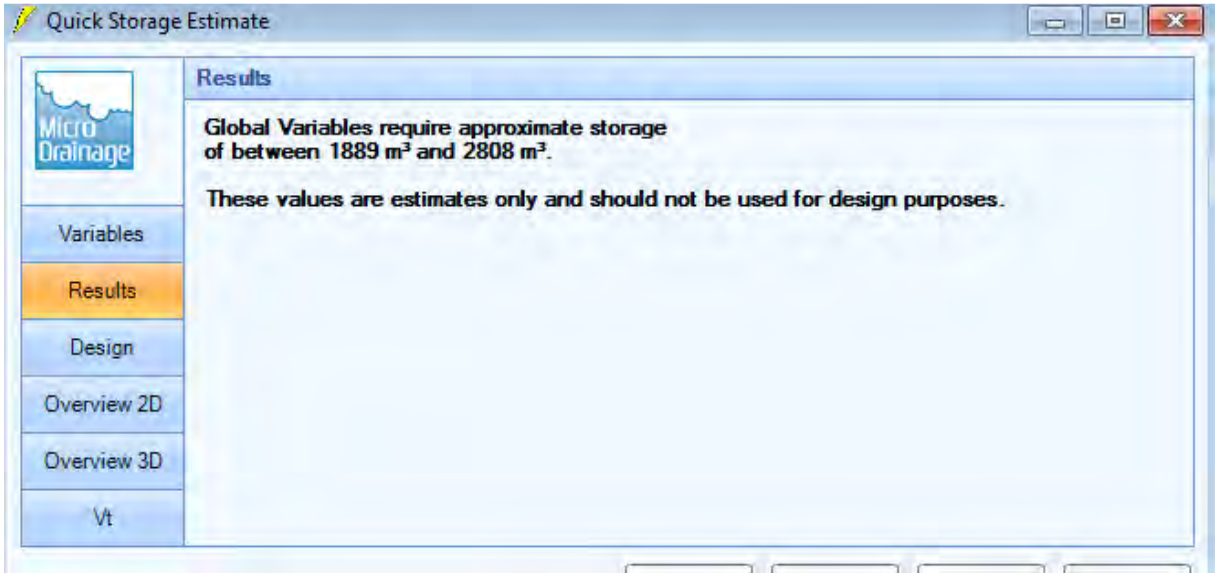
Catchment 3 - 100yrGRO 7.5l/s/ha



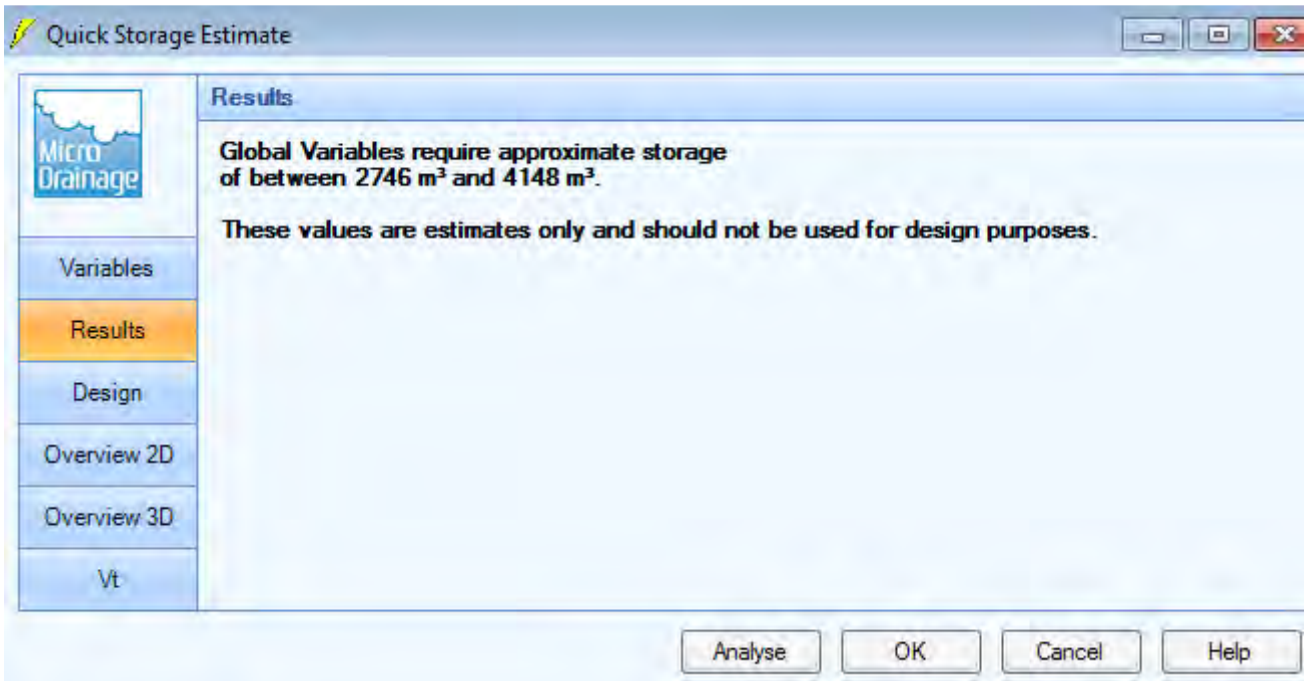


Catchment 4 - 100yrGRO 7.5l/s/ha

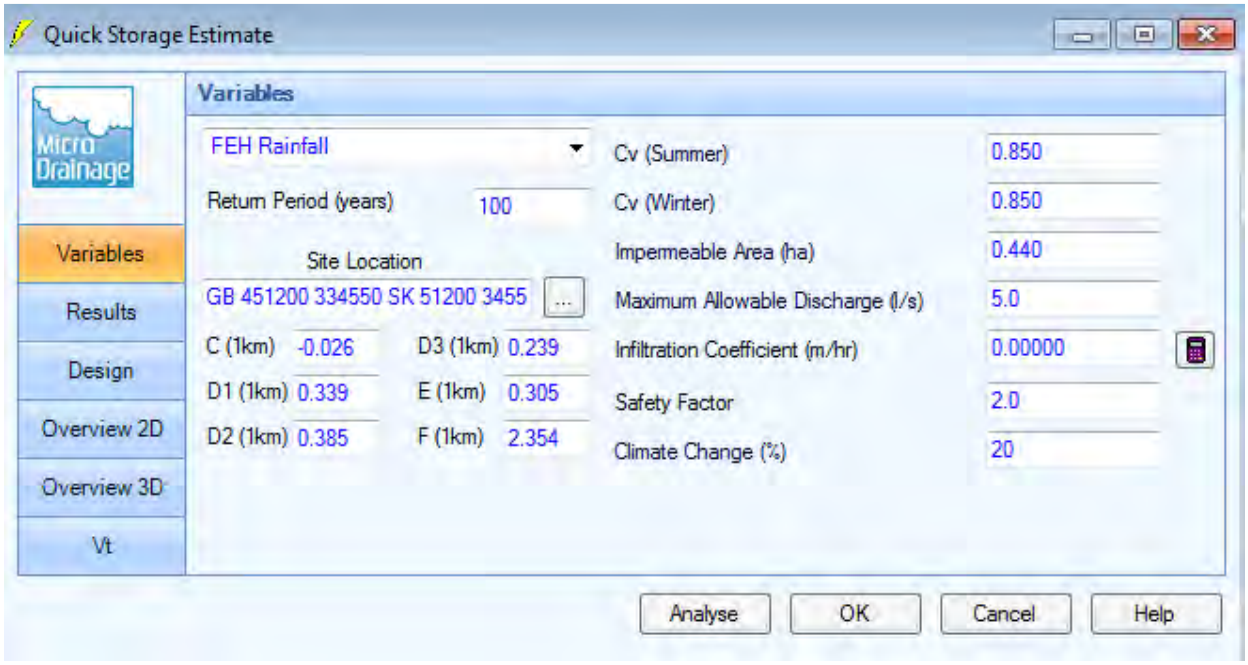


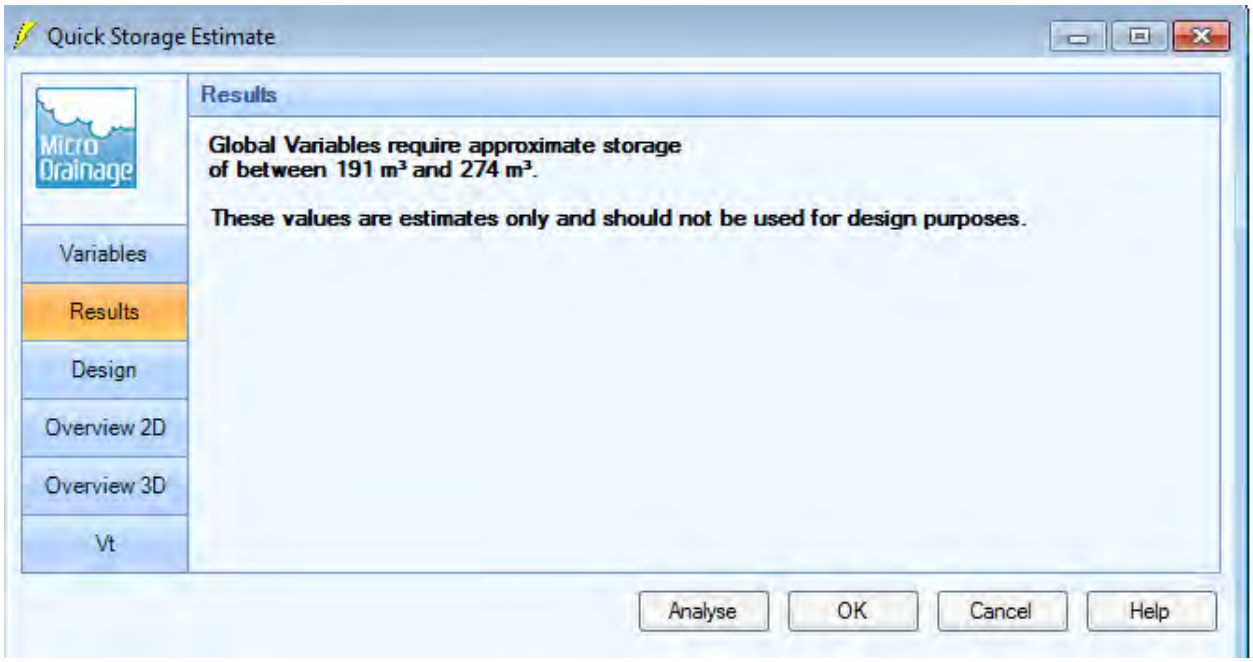


Catchment 5 - 100yrGRO 7.5l/s/ha

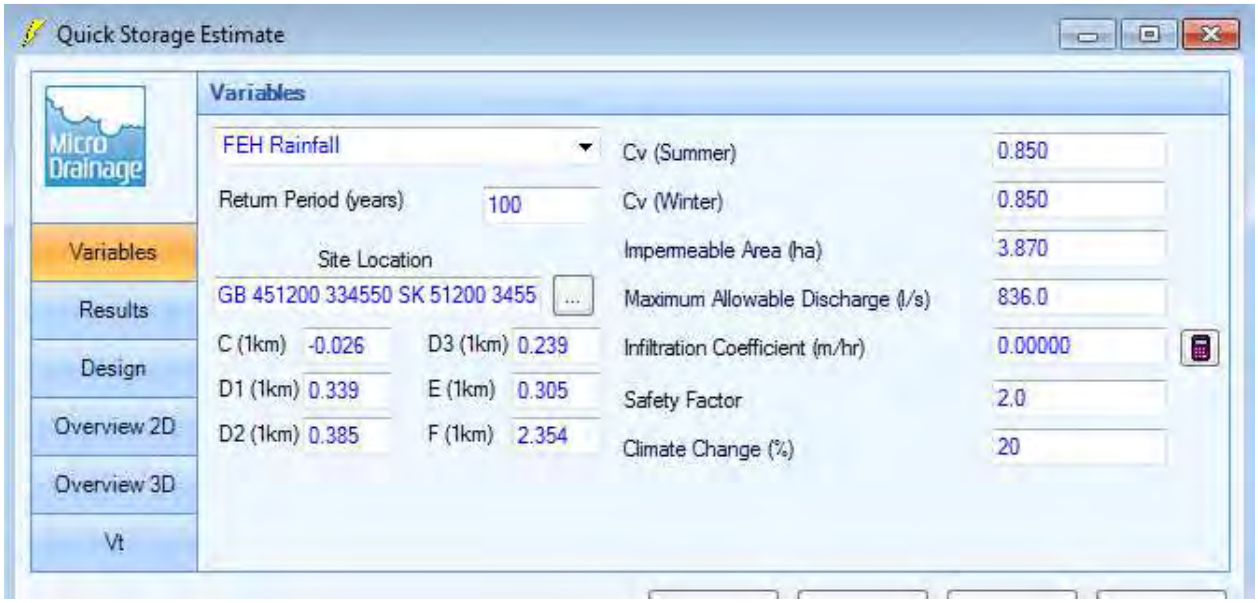


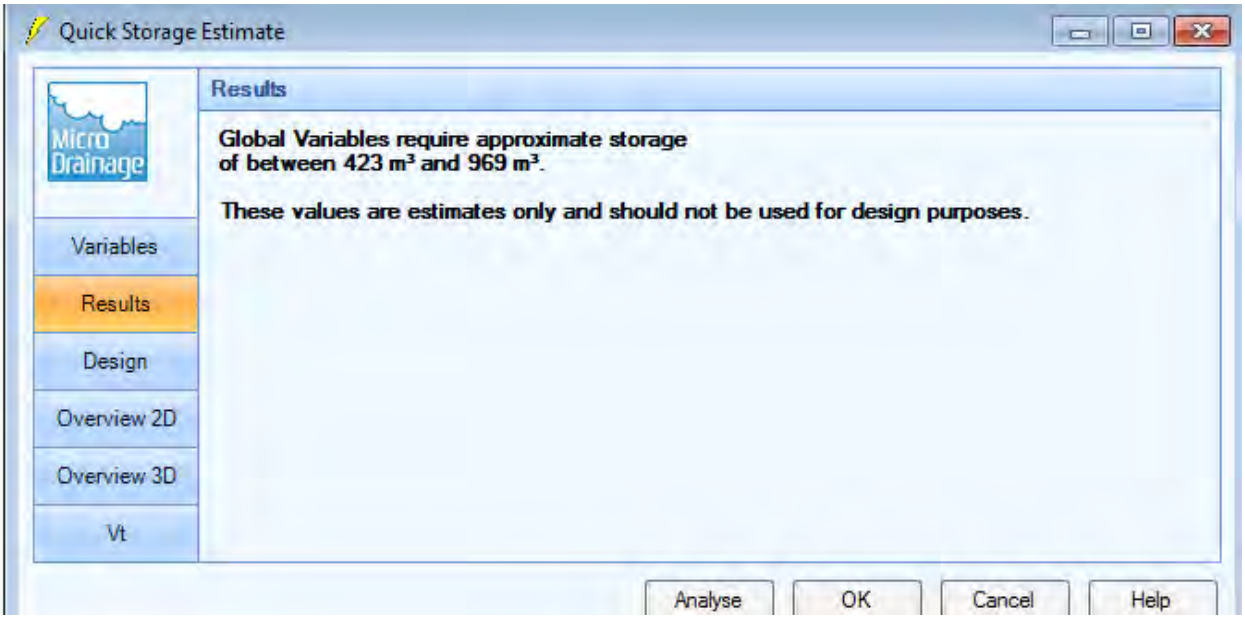
Catchment 6 - 100yrGRO 7.5l/s/ha



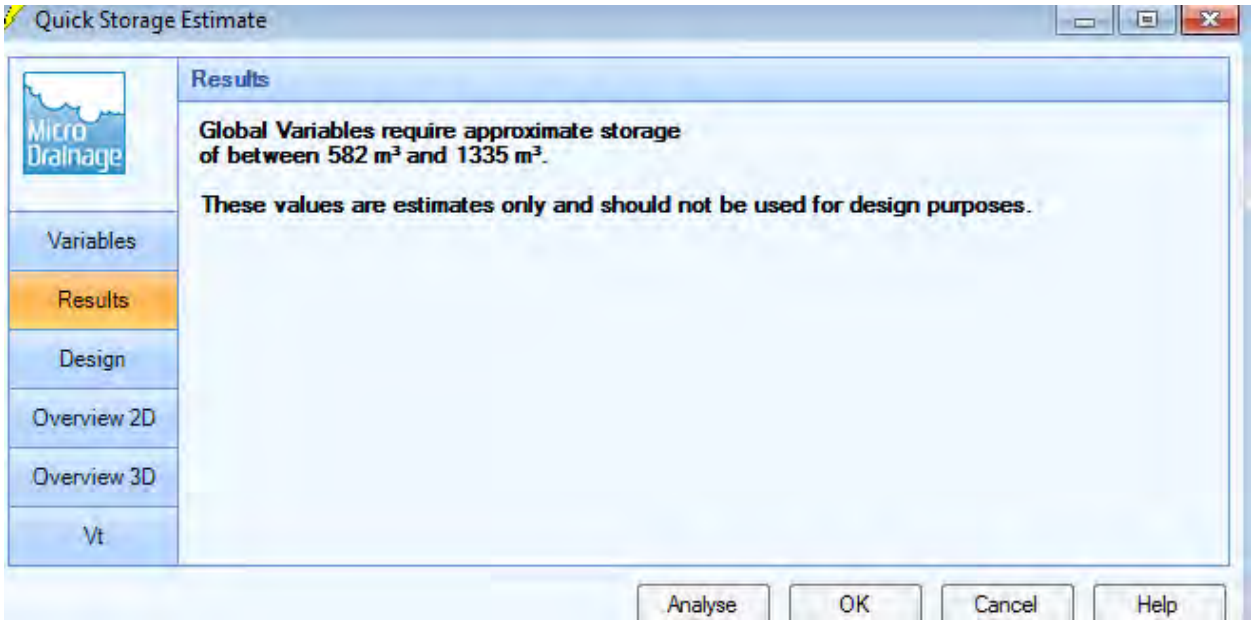


Catchment 4 – restricted to 30yr BF 216l/s/ha





Catchment 5 – restricted to 30yr BF – 216l/s/ha



37782 Chetwynd

As no information on existing drainage regime - assume GRO as worst case

Indicative SW storage requirements **Q100**

Sub-catchment	Total Area (ha)	100yr GRO rate (l/s/ha)	Proposed Imp Area (ha)	Allowable discharge rate (l/s)	Max Storage Requirement 100yr + 20% CC (m3/s)	Min Storage Requirement 100yr + 20% CC (m3/s)	Average Storage Requirement 100yr + 20% CC (m3/s)
1	10.1	7.5	3.83	28.69	2779	1870	2325
2	17.5	7.5	9.39	70.43	6812	4584	5698
3	10.9	7.5	6.95	52.09	5402	3393	4398
4	7	7.5	3.87	29.03	2808	1889	2349
5	8	7.5	5.33	39.94	4148	2746	3447
6	0.59	7.5	0.44	3.30	274	191	233
	54.09						

Assume following imp area:

High density resi	90% imp
Medium density resi	75% imp
Low density resi	60% imp
Local centre	90% imp

Chetwynd Barracks

Technical Appraisal: Ecology

On behalf of **Defence Infrastructure Organisation**

Project Ref: 37782 | Rev: AA | Date: March 2017

[redacted]

Document Control Sheet

Project Name: **Chetwynd Barracks**
Project Ref: **37782**
Report Title: **Ecology Technical Appraisal**
Doc Ref: **Chetwynd Barracks_Ecology TA_v1**
Date: **March 2017**

	Name	Position	Signature	Date
Prepared by:	Becky Blamey	Senior Ecologist	BB	March 2017
Reviewed by:	Sian Mitchell	Senior Associate	SM	March 2017
Approved by:	Tim Allen	Partner	TA	March 2017
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved

Contents

Figures

Appendices

Executive Summary

The Defence Infrastructure Organisation (DIO) are seeking allocation of a site (the 'Site) at Chilwell, near Nottingham within the Broxbourne Borough Local Plan (**Figure 1**). A masterplan has been developed to support allocation and this allows for up to 1,600 residential units with associated community, retail, and transport infrastructure development.

Peter Brett Associates LLP (PBA) was instructed by the DIO to complete an ecological appraisal of the masterplan to inform site allocation. A high level desk study and an extended Phase 1 habitat survey were completed to establish ecological features associated with the site. This information has formed the basis of this ecological appraisal and, along with a review of planning policies and legislation relating to protected and notable species, has provided the framework against which a scheme for the Site has been developed and the masterplan then appraised. With respect to ecology, the masterplan has been developed with regard to the following high level objectives:

i. Retain, protect, restore and maintain ecologically valuable habitat and facilitate permeability across the Site and into the wider area;

ii. Ensure there is no overall loss of ecologically valuable habitat, and where possible, provide ecological enhancements or biodiversity gain; and

iii. Prevent isolation of any habitat on and immediately off Site, and in doing so, contribute to a comprehensive green infrastructure network.

No effects upon European or internationally designated sites are anticipated as a result of redevelopment as no such sites are present within 10km of the Site boundary. Attenborough Pits Site of Special Scientific Interest (SSSI) and Toton Fields Local Nature Reserve (LNR) are located 800m and 550m respectively from the Site boundary. These sites support valued aquatic habitats such that changes to water quality and/or discharge water rates have the potential to have an impact. However, the masterplan allows for delivery of appropriate surface water flood management such that no adverse effects are anticipated. The Local Plan indicates that there is a non-statutory designated site (a Site of Importance for Nature Conservation, or SINC) east of Hobgoblin Wood (the woodland parcel in the north east part of the Site). Retention within the masterplan of Hobgoblin Wood and appropriate construction etiquette will enable the avoidance of construction related pollution effects on the SINC. Specification of measures at the detailed design stage will also enable the avoidance or mitigation of impacts on the SINC resulting from recreational pressure.

The Site currently comprises woodland, hedgerows, mature trees, grassland and a range of manmade habitats including buildings, hardstanding and concrete lined ditches. These habitats can be expected to support a range of protected or notable species. The masterplan allows for the retention of those habitats assessed as being of greatest ecological value including, the largest woodland parcels, a majority of the key hedgerows, and matures trees. Jointly these create a robust network that connects habitats within the Site and wider environment (**Figure 2**) such that conditions for protected and notable species likely to be associated with the Site will be maintained and potentially enhanced.

The high level objectives identified to guide development of a policy compliant scheme for Site are met by the masterplan which retains key ecological features, enhancing their value by creating a coherent network of habitat relevant to species likely to be present. As such there is no reason relating to ecological matters that prevent allocation of the Site for redevelopment in the manner and scale anticipated.

This Executive Summary contains an overview of the key findings and conclusions. However, no reliance should be placed on any part of the Executive Summary until the whole of the report has been read.

1 Introduction

1.1 Overview

1.1.1 Peter Brett Associates LLP (PBA) was instructed by the Defence Infrastructure Organisation (DIO) to inform masterplan design development and provide an Ecological Technical Appraisal to support the allocation of Chetwynd Barracks within the emerging Part 2 Local Plan.

1.2 Site Location

1.2.1 The Site is located at Chilwell near Nottingham at central grid reference SK506352 (see **Figure 1**). It comprises Chetwynd Barracks, which is located to the north of the River Trent and its associated flooded gravel pits at Attenborough. The Site is bordered by residential development to the west, south and east and farmland to the north. There are also woodland stands, to the west of the Site, associated with the River Erewash and Toton Sidings.

1.3 Project Background

1.3.1 The Site is proposed for disposal with an estimated date of 2021. As part of the process, the DIO is seeking to promote the Site as a strategic housing-led mixed used allocation in the emerging Broxtowe Borough Council (BBC) Part 2 Local Plan.

1.3.2 Initial work has been completed to inform masterplan design, culminating in DIO's proposal for BBCs allocation within the local plan of: *"a sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sqm of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial."*

1.3.3 The August 2016 BBC document 'Broxtowe Borough Council Site Allocations: Potential Additional Sites' includes Chetwynd Barracks on account of a 'significant change in circumstances'. The document states the Site has development potential for:

- 800 dwellings (as set out in the government's Ministerial Statement);
- significant provision of Green Infrastructure within the Site linking to Green Infrastructure required as part of the Strategic Location for Growth (SLG).
- retention and enhancement of wildlife corridors including Hobgoblin Wood;
- possibility of making existing 'restricted access' sports pitch publically accessible;
- employment development – links to potential HS2 station and associated employment in SLG;
- small scale neighbourhood centre (i.e. small parade of shops), which could be most appropriately accommodated near to the existing Tesco Extra retail store; and
- enhancement of the Listed Memorial and adjacent memorial garden with possibility to make this publically accessible.

1.4 Appraisal Objectives

1.4.1 This document sets out an ecological Technical Appraisal of the proposed masterplan (PRP drawing number AA6584-SK08, Revision E, 03/03/2017) and is prepared to inform allocation in the emerging Part 2 Local Plan.

1.4.2 This appraisal therefore sets out:

- a high level description of the ecological baseline for the Site,
- initial consideration of the potential for constraints and opportunities associated with redevelopment of the Site; and
- an appraisal of the masterplan with respect to high level ecological considerations.

2 Methodology

2.1 Overview

2.1.1 The section below sets out the methodology used to inform the Technical Appraisal of the Site and proposed masterplan.

2.2 Desk Study

2.2.1 A desk-based review exercise was conducted using open-access resources to identify relevant existing ecological data in relation to the Site and its surrounds. This included consideration of:

- Information relating to statutory designated sites within a 2km radius of the Site (extended to 10km for European or internationally designated sites) as held on the Multi-Agency Geographic Information for the Countryside (MAGIC) website;
- Information on non-statutory designated sites within a 2km radius of the Site, as identified from the Local Plan;
- Habitats listed in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006), and ancient woodland parcels within a 2km radius of the Site as held by MAGIC;
- Records held on MAGIC for European Protected Species (EPS) licences granted within 1 km of the Site;
- Natural England's Impact Risk Zones (IRZs) covering the Site as held by MAGIC;
- Aerial photography of the Site and its surrounds; and
- Nottinghamshire Biodiversity Action Plan (BAP) to establish local biodiversity priorities.

2.3 Walkover Survey

2.3.1 An ecological walkover survey of the Site was undertaken on 23rd January 2017 by Natalie White, MCIEEM. During the site visit weather conditions were overcast (100% cloud), with fog and light rain towards end of survey, average 2-3 ºC.

2.3.2 Habitat types and dominant or characteristic plant species were identified and mapped having regard to the Phase 1 habitat survey methodology (JNCC, 2010). Where appropriate target notes were made of any feature likely to comprise an ecological constraint or opportunity relevant to development of the masterplan.

2.3.3 The survey was extended to include an assessment of the potential of the Site to support protected or notable species (with notable species including those identified as Species of Principal Importance and known as 'Priority Species' via the provisions of Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006).

2.4 Limitations

2.4.1 The walkover survey was completed outside the optimal period for habitat and vegetation surveys (typically April to September) such that some plant species may not have been evident at the time of survey. However, dominant or characteristic vegetation stands and habitat types were recorded based on the species visible. Previous survey information was also reviewed to determine whether any additional plant species are likely to be present within

the area during the growing season. As such, it is considered that sufficient ecological information was collected to ensure the masterplan has been adequately informed by relevant ecological constraints and opportunities.

2.5 Report Qualification

2.5.1 The survey described and the reporting was undertaken in accordance with the best practice methodologies current at the time of commissioning, in accordance with the Code of Professional Conduct of the Chartered Institute of Ecology and Environmental Management (CIEEM). Site circumstances, scientific knowledge or methodological requirements can change during the course of a project and these external factors may impact on the scope of subsequent work requirements.

2.5.2 This report does not purport to provide detailed, specialist legal advice. Where legislation is referenced, the reader should consult the original legal text and/or the advice of a qualified environmental lawyer.

3 Baseline Ecological Conditions

3.1 Overview

3.1.1 This section of the report provides the results of the desk study and a brief summary of the habitats within the Site. Consideration is then given to the potential for these habitats or features to support protected or notable species. For each potential ecological receptor high level constraints and opportunities, likely to be relevant to redevelopment of the Site, are outlined.

3.2 Detailed Consideration

Statutory Designated Sites

European and Internationally Designated Sites

3.2.1 No European or Internationally designated sites lie within a 10 km radius of the Site. The River Trent lies 1.6km south of the Site although series of linked, flooded gravel pits are located 0.8km south of the Site. Downstream, the River Trent flows into the Humber Estuary which is designated as a Special Area of Conservation (SAC) and Ramsar (and also a Site of Special Scientific Interest (SSSI)). This SAC is primarily designated for the estuary, sandbank, salt meadow, and mudflat habitats, with a further Annex I habitats and species which are present as qualifying features, but not a primary reason for designation. Similarly, the Ramsar criteria includes the estuarine habitats, marine mammal species (grey seal *Halichoerus grypus*), and bird populations. The SAC and Ramsar are located a minimum of 90km[1] downstream (north-east) of the Site. Whilst adverse impacts resulting from pollution are possible, these are considered extremely unlikely to impact upon the designation criteria of the protected areas on account of the dilution effect likely to result from the intervening length of watercourse. Furthermore, standard and good practice construction etiquette and appropriate drainage design will reduce the likelihood of adverse effects further, such that no further appraisal is considered necessary to inform allocation.

UK Statutory Designated Sites - Sites of Special Scientific Interest

3.2.2 The Attenborough Gravel Pits SSSI lies circa 0.8 km south of the Site. This SSSI is a '*nationally important site for its lowland eutrophic open waters with emergent vegetation, wet floodplain woodland, unimproved floodplain grassland, a rich assemblage of breeding birds associated with lowland open waters and their margins, and wintering shoveler Anas clypeata and bittern Botaurus stellaris'*.

3.2.3 The most recent SSSI condition assessment confirms the habitats within the SSSI are variously in favourable, unfavourable – recovering, and unfavourable condition. The 'adverse condition reasons' include freshwater pollution resulting from discharge and agriculture / run off.

3.2.4 Natural England's Impact Risk Zone (IRZs) relating to the SSSI overlap the Site; these IRZs seek to flag where there is the potential for adverse effect on a designated area as result of development. Furthermore, they highlight planning scenarios where the local planning authority is required to consult with Natural England. In this scenario, residential development over 100 units is flagged as the threshold for the southern part of the Site. As such, Natural England can be expected to take the view that there is potential for redevelopment of the Site

[1] Calculated by measuring along the line of the River, but not including each meander.

to result in adverse effects upon the SSSI through changes to the quality and volume of discharge water.

3.2.5 The SSSI receives protection under the Wildlife and Countryside Act 1981 (as amended). Policy provision for the protection of designated areas for nature conservation from adverse effects of development is provided by the National Planning Policy Framework (NPPF), with also direct mention made within Policy 17 of the Local Plan which states these sites, *'will be protected in line with the established hierarchy of designations…'.*

UK Statutory Designated Sites - Local Nature Reserves

3.2.6 There are four Local Nature Reserves (LNRs) within a 2km radius of the Site. These include King Georges Park; Manor Farm, Long Eaton; Toton Fields; and Fox Covert. The closest of these is Totton Fields (c. 550 m south west of the Site), which is adjacent to the River Erewash with wetland species, wet grassland and young woodland, and which is designated for the diverse aquatic flora present. Given the nature of the key features of the LNR, without mitigation there is potential for the Toton Fields LNR to be adversely affected as a result of changes to the freshwater water condition or volume.

3.2.7 LNRs are designated by Local Authorities under the National Parks and Access to the Countryside Act 1949. This provides a statutory mechanism for selection, but in practice these sites are subject to a degree of protection via local planning policies, as described above.

Non – Statutory Designated Sites

3.2.8 Review of the Local Plan indicates that the closest non-statutory designated site (Site of Importance for Nature Conservation (SINC)) is outside of the Site boundary, immediately east of Hobgoblin Wood (location shown on **Figure 2**). Further areas of non-statutory designated sites fall within the 2km radius. Redevelopment within the Site has the potential to adversely affect the SINC as a result of increased recreational pressure during operation or pollution during the construction stage.

3.2.9 Non-statutory designated sites have no legal status, but are afforded protection through the planning system. The NPPF, Core Strategy Part 1 Local Plan Policy 17 and the Natural Environment and Rural Communities (NERC) Act are of direct relevance to these sites; with Local Plan Policy 17 stating *'designated…local sites of biological importance for nature conservation will be protected'*, and *'development on or affecting other non-designated sites or wildlife corridors with biodiversity value will only be permitted where it can be demonstrated that the need for the development outweighs any harm caused by the development and that adequate mitigation measures are put in place'.*

On-Site Habitats

3.2.10 The Site supports semi-natural habitat in the form of species poor semi-improved grassland (western extent of the Site), improved and amenity grassland (scattered throughout the Site), semi-natural woodland (primarily in the north east and northwest corners of the Site), plantation woodland, hedgerows (species rich and species poor, intact, and some with trees) and mature trees and tree lines. Other small pockets of semi-natural habitat included ruderal vegetation, running water (concreted ditch) and scrub. The remainder of the Site comprises buildings, roads, hardstanding and bare ground. The section below describes the most valuable habitats and the opportunities or constraints likely to relevant to redevelopment of the Site.

Woodland

3.2.11 There is woodland on the Site in a number of locations. The two largest areas of woodland; Hobgoblin Wood and the parcel in the northwest corner of the Site are likely to qualify as a

Habitat of Principal Importance (HPI) under the NERC Act 2006. These also represent some of the most mature habitats on Site, and those of greatest ecological value, both intrinsically and for their potential to support protected or notable species (see below).

3.2.12 The LPA have a duty under the NERC Act to consider the presence of HPI within the Site when exercising their duties. Further protection is afforded by the NPPF and Local Plan Policy 17 through reference to 'biodiversity'. Redevelopment of the Site provides opportunities to better manage and protect key areas of woodland on Site, but in the absence of avoidance or mitigation, could also result in their loss, isolation or degradation.

Hedgerows

3.2.13 The hedgerows on Site are in varied condition. Some may qualify as 'Important' hedgerows under the Hedgerow Regulations, as HPI under the NERC Act, and / or as Nottinghamshire Biodiversity Action Plan (BAP) habitat. As such they may be afforded protection through the NPPF and Local Plan Policy 17. Some of the hedgerows on Site will have high intrinsic ecological value and also provide key habitat for protected or notable species, and act as a conduit for species dispersal across the Site and into the wider area.

3.2.14 The LPA have a duty to consider those hedgerows which qualify as either Important, HPI or a local biodiversity priority. In the absence of careful design, protection and mitigation, redevelopment could result in the loss, damage or isolation of the hedgerows within the Site. However, it also introduces the opportunity to strengthen and enhance these habitats, creating a robust ecologically functional habitat network.

Mature Trees

3.2.15 There are a large number of mature trees within the Site, notably within Memorial Park, along hedgerows and adjacent to the recreation ground. Whilst these are not afforded protection either legally or through the NERC Act, they are of intrinsic ecological value, and valuable contributors to the 'biodiversity' of the Site. As such, Policy 17 of the Local Plan provides indirect protection to the mature trees within the Site through *'protecting, restoring, expanding and enhancing existing areas of biodiversity interest'.*

3.2.16 Redevelopment within the Site has potential for the loss or deterioration of individual trees, with further scope to compromise the functionality of tree lines and ecological connectivity. There is limited scope for short term enhancement of trees, with respect to their ecological rather than arboricultural value. However, the planting of new trees will allow more diverse and more coherent networks to establish over time.

Grassland

3.2.17 The grassland on Site includes areas of low value amenity/improved grassland and species poor semi-improved grassland; none of the areas are botanically diverse or have notable intrinsic ecological value. However, they have some importance in providing habitat suitable for protected or notable species, primarily common species of reptile.

3.2.18 Redevelopment of the Site therefore offers potential for biodiversity gain through the creation of species rich, well managed grassland areas.

Waterbodies and Watercourses

3.2.19 Aquatic habitat on Site is limited to a small number of ditches which flow along concrete channels. As such their ecological value is currently limited and redevelopment of the Site therefore affords the opportunity to enhance the quality, quality and nature of aquatic habitat.

Man Made Habitats

3.2.20 The buildings, large areas of hardstanding and bare ground on Site have no intrinsic ecological value. However, the buildings include features that may be used by protected species, most notably roosting bats or nesting birds. The masterplan is only appraised in **Section 4** with respect to the protected or notable species these man made habitats have the potential to support.

Protected or Notable Species

3.2.21 Habitats within the Site have the potential to support protected or notable species. In this context, notable species are those which receive no legal protection, but are either a Species of Principal Importance (SPI) under the NERC Act, or are a priority species under the Nottinghamshire BAP. The presence or potential presence of these species within the Site or its immediate vicinity will be a material consideration for the LPA when either approving land allocation or determining a planning application. Local Plan Policy 17 makes reference to the 'protection' of Nottinghamshire priority species, as well as those species of conservation importance in the UK. A summary of all relevant legislation and planning policy is contained within **Appendix A**.

3.2.22 To date, no targeted species survey work has been completed. However, the potential for habitats to support protected or notable species was considered as part of the site survey. This is outlined below, along with an indication of the scope for biodiversity gain and adverse effects to result from redevelopment.

Bats

3.2.23 Habitats suitable for roosting (summer day roosting and winter hibernation), foraging and commuting bats are present within the Site. Bats and their roosts are legally protected under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). Some species of bats are an SPI, and they are also a Nottinghamshire BAP priority species group. As such, bats can be expected to be a material consideration within the planning process.

3.2.24 There are opportunities for enhancement of the Site through redevelopment both with respect to the availability of roosting features, and the quality and quantity of foraging and commuting habitat. Conversely, in the absence of protection, mitigation or compensation there is also scope for redevelopment of the Site to result in the loss, isolation or degradation of such features, and the killing or injury of bats.

Dormice

3.2.25 Woodland and hedgerows within the Site are suitable for dormice, although it is not known whether this species are present within the local area. As for bats, dormice and their habitat are legally protected. They are also a SPI, meaning they too are a material consideration within the planning process.

3.2.26 If dormice are present, there is potential for adverse impacts on dormice to result from redevelopment from the loss, isolation or degradation of habitats, and the killing or injury of animals. Conversely there are also opportunities for biodiversity gain through the enhancement of connections across Site and within the wider landscape, and management of habitats to optimise vegetation species composition and structure for dormouse.

Great Crested Newt

3.2.27 The Site provides suitable terrestrial habitat for this species, although it is not known whether they are present within the local area. No suitable breeding habitats are present within the

Site. Great crested newts and their habitat are legally protected; as such this species could be a material consideration within the planning process.

3.2.28 If present, there is scope for the loss of terrestrial habitat from the Site, potential isolation of breeding populations (off site), and the killing or injury of great crested newts. However, given the absence of suitable breeding habitat within the Site there is also scope for significant enhancement of the Site for this species through the provision of connected, suitable breeding and terrestrial habitat.

Breeding Birds

3.2.29 The buildings, hedgerows, mature trees and woodland provide suitable habitat for breeding birds. All nesting birds are legally protected under the Wildlife and Countryside Act 1981 (as amended), with some species also SPI, or of national conservation concern. In the absence of avoidance, mitigation or compensation, redevelopment of the Site has the potential to reduce the number, diversity and suitability of habitats for breeding birds and to damage or destroy active nests. There are also opportunities to enhance and manage habitats within the Site through, for example, provision of species specific nesting habitats, and vegetation selected for its structure and suitability for foraging birds.

Reptiles

3.2.30 Areas of long grassland within the Site (predominantly the margins of grassland within the east and west of the Site), provide suitable habitat conditions for reptiles. Reptiles are legally protected from intentional killing and injury under the under the Wildlife and Countryside Act 1981 (as amended). In the absence of avoidance and mitigation, redevelopment has the potential to adversely affect this species group, and result in the isolation, killing or injury of individuals. Given the limited extent and generally poor quality of suitable habitat within the Site, there is scope for biodiversity gain with respect to reptiles through the provision of targeted management, and habitat enhancement.

Badgers

3.2.31 The woodland within the Site is suitable for badger setts, with the grassland also suitable for badger foraging. Both badgers and their setts are legally protected under the Protection of Badgers Act (1992). Badgers are however protected not for reasons of rarity or conservation concern, but to prevent suffering or persecution. In the absence of avoidance or mitigation, redevelopment has the potential to damage or destroy setts, isolate, lose or degrade habitat which badgers use, and kill or injure animals. There is also however scope for redevelopment proposals to increase the suitability of the Site for badger through the provision of strengthened links to the wider environment, and on-site linkages between areas of suitable habitat.

4 Appraisal

4.1 Overview

4.1.1 This section identifies the key aims of the masterplan with respect to ecological features likely to be associated with the Site. It then sets out a high level appraisal of the likely effects of redevelopment of the Site, with reference to the masterplan and having regard to the constraints and opportunities identified in **Section 3**.

4.1.2 This appraisal has been informed by high level information and initial site survey only. Further survey and assessment will be required to inform detailed design, and the specification of avoidance, mitigation and compensation measures proportionate to the effects of the final scheme.

4.2 Masterplan Context

4.2.1 National and local planning policies, and relevant biodiversity legislation have formed the basis of the appraisal set out below. They will also provide the guiding principles for the LPA when determining the suitability of the Site for allocation and, at a later date, when planning permission is considered. A summary of the relevant policies and legislation is provided within **Appendix A**.

4.2.2 To meet the aims of the planning policies contained within **Appendix A**, the masterplan has been developed having regard to the following high level objectives:

i. Retain, protect, restore and maintain ecologically valuable habitat and facilitate permeability across the Site and into the wider area;

ii. Ensure there is no overall loss of ecologically valuable habitat, and where possible, provide ecological enhancements or biodiversity gain; and

iii. Prevent isolation of any habitat on and immediately off Site and, in doing so, contribute to a comprehensive green infrastructure network.

4.3 Masterplan Appraisal

Designated Sites

4.3.1 To avoid effects upon the SSSI and LNR, the masterplan has been designed following advice from flooding and drainage consultants and has the capacity to provide a detailed drainage system. This will prevent significant deterioration in the quality and quantity of discharge water into the River Erewash, River Trent or Attenborough Gravel Pits and, as such, will ensure the SSSI is not impacted as a result of development.

Non-Statutory Designated Sites

4.3.2 Adverse impacts upon the SINC are possible through pollution during construction or increased recreational pressure. Retention of Hobgoblin Wood within the masterplan significantly reduces the likelihood of construction stage pollution effects upon the adjacent SINC by providing a physical barrier to particulate, nutrient and surface water pollution. Specification of appropriate pollution prevention techniques for any work required in close proximity to the SINC will ensure residual effects are also avoided. Detailed design will enable the specification of any physical barriers or management measures that may be necessary to avoid adverse effects on the SINC through increased recreational pressure.

Habitats

Overview

4.3.3 The masterplan allows for the retention of a majority of the habitats of greatest ecological value within the Site, meeting Aims i and ii above. These comprise the large woodland parcels, line of trees mature trees within the eastern part of the Site, and some of the potentially 'Important' hedgerows. Examples of retained habitats are shown on **Figure 2**.

4.3.4 The masterplan has been developed having regard to Aim iii and creates a robust habitat network that facilitates permeability for both people and species (Aims i and iii).

4.3.5 The masterplan also seeks to achieve all three Aims by responding to the current distribution of ecologically valuable habitats within the Site through:

- Siting predominantly very low, low and some medium density housing on the northern and western Site boundaries in close proximity to either retained ecologically valuable habitats or connections to the wider environment; and
- Siting predominantly high and medium density housing over habitats of low ecological value (Figure **2**).

4.3.6 The following section appraises the masterplan with respect to each key habitat identified in **Section 3**.

Woodland

4.3.7 The masterplan has retained the two key areas of mature woodland; Hobgoblin Wood and the parcel in the north west corner of the Site. Furthermore, the narrow woodland strip along the northern boundary of the centre of the Site, and smaller parcels of plantation woodland are retained within the masterplan. The remaining small areas which are lost represent small, immature or isolated parcels of a predominantly plantation woodland of comparatively low ecological value.

4.3.8 The masterplan specifically creates a network of new hedgerow and tree links which connect parcels of retained woodland within the Site and to the wider environment. Detailed design provides the opportunity to enhance the retained woodland parcels by specifying appropriate management regimes for implementation as part of redevelopment.

Hedgerows

4.3.9 The masterplan has allowed for the retention of a majority of the key hedgerows within the Site. Of those hedgerows that are lost, the majority are species poor, or in isolated lengths. The masterplan has also allowed for the enhancement of retained features through the provision of supplementary planting and/or new hedgerow and tree links; jointly creating a more robust network of linked habitat within the Site.

Mature Trees

4.3.10 The mature trees within Memorial Park around the recreational ground, along the south western boundary, and within some hedgerows have all been retained within the masterplan. These represent the most significant, mature or well-connected stands of trees within the Site.

4.3.11 In addition, a significant number of new trees are provided, allowing retained woodland, hedgerows and treelines to be effectively connected and form part of a robust ecological network within the Site.

Grassland

4.3.12 The masterplan shows the grassland to the west of the Site to be lost. However, this is not botanically valuable and does not represent a significant loss. New, small areas of grassland creation are anticipated within the west and south of the Site. In association with the SUDS networks, retention of the Memorial Park and Recreation Ground open grassland areas, and with a beneficial management regime in place, the changes to the type and distribution of grassland across the Site is not considered significant.

Waterbodies and Watercourses

4.3.13 Two main areas of SUDS are provided within the masterplan which, assuming they are designed so as to maximise ecological value, have the potential to deliver ecological enhancement and contribute significantly to the network of semi natural habitats across the Site.

Protected Species

Bats

4.3.14 Retention of key woodland parcels, hedgerows and mature trees, in combination with the provision of new trees and hedgerows within the Site compensates for the loss of isolated, small or immature habitat suitable for bats. Provided the retained, and newly created habitats are protected from damage and managed effectively with regards lighting, these could also represent an enhancement of the existing Site for foraging and commuting bats given the coherent network they represent. Whilst it is also likely that buildings and trees with potential for roosting bats will be lost, there is capacity to mitigate and compensate for this loss through the provision of targeted features within retained or new buildings, and/or trees.

Dormice

4.3.15 The parcels of retained woodland and hedgerows represent the most suitable and significant habitat for dormice within the Site. The provision of new and supplemented hedgerows and tree corridors will compensate for the loss of small, immature or isolated woodland parcels and stretches of hedgerow. Furthermore, if planting plans seek to optimise species composition and structure, redevelopment could provide an enhancement of the Site for dormice. The masterplan also provides strengthened links to the wilder environment, which could facilitate the dispersal of this species to / from the Site in the event the species is present in the local area.

Great Crested Newts

4.3.16 Creation of the two areas of SUDS within the masterplan could, assuming they are designed with ecological consideration, represent a significant enhancement for breeding great crested newts. Given also the allocation within the masterplan for ecologically sensitive landscaping surrounding the SUDS features, redevelopment could also constitute enhancement of the Site for terrestrial phase great crested newts. The network of semi-natural habitat across the Site and into the wider area could facilitate the natural colonisation of the Site by this species, in the event that the species is not present currently.

Breeding Birds

4.3.17 Retention of key woodland parcels, hedgerows and mature trees, in combination with the provision of new trees and hedgerows within the Site compensates for the loss of small, immature or isolated woodland parcels, trees and hedgerows suitable for breeding birds. If created habitats are designed to provide suitable cover and structure for breeding birds, and offer a degree of protection from disturbance, these habitats could also represent an

enhancement of the existing Site for breeding birds. The loss of buildings that provide suitable bird nesting habitat could also be compensated for by the provision of features suitable for nesting within new buildings. These could also constitute an enhancement if nesting features for target species of conservation concern are specifically selected for inclusion.

Reptiles

4.3.18 The loss of the small area of habitat suitable for reptiles is not considered significant given the creation of suitable alternative habitat and potential for the enhancement of existing areas, including the recreational ground. Appropriate management of new habitat for the benefit of reptiles also has the potential to enhance the suitability of the Site for reptiles.

Badgers

4.3.19 Detailed design will enable the specification of any measures that will ensure legal compliance during construction. Whilst full compensation of lost foraging and commuting habitat is not essential for badgers, the creation of more a comprehensively interlinked network of trees, hedgerows and woodland as part of the masterplan compensates for the loss of small or isolated habitat parcels. Redevelopment could result in an enhancement of the Site for badger on account of the stronger links to the wider environment, assuming networks are designed and managed with a view to providing sufficient cover at ground level, and a degree of protection from disturbance.

5 Conclusions

5.1.1 An ecological desk study and extended Phase 1 habitat survey have been completed to establish a high level ecological baseline. This, along with a review of key planning policies relating to ecological resources, has informed the high level ecological objectives below, which in turn have guided development of a masterplan for the Site:

i. Retain, protect, restore and maintain ecologically valuable habitat and facilitate permeability across the Site and into the wider area;

ii. Ensure there is no overall loss of ecologically valuable habitat, and where possible, provide ecological enhancements or biodiversity gain; and

iii. Prevent isolation of any habitat on and immediately off Site, and in doing so, contribute to a comprehensive green infrastructure network.

5.1.2 An assessment of key ecological features, including designated areas, habitat and protected species, and consideration of the masterplan has jointly informed an ecological appraisal of the suitability of the Site for redevelopment. The appraisal concluded:

- No European designated sites are likely to be adversely affected by redevelopment of the Site.
- Effects on Attenborough Gravel Pits SSSI and Toton Fields LNR can reasonably be expected to be avoided or mitigated through surface water management and drainage design.
- Retention within the masterplan of Hobgoblin Wood, at the north eastern corner of the Site, and appropriate construction etiquette will enable the avoidance of construction related pollution effects on the SINC. Specification of measures at the detailed design stage will also enable the avoidance or mitigation of impacts on the SINC resulting from recreational pressure.
- Woodland parcels, hedgerows, and mature scattered trees comprise the most important ecological features on the Site. These are largely retained, and losses of less valued habitat areas can be mitigated by the creation of a robust, ecologically functional network comprising new hedgerows, tree planting and sympathetic inclusion of SUDS features.
- Protected and notable species, including bats, reptiles, breeding birds and badger, can reasonably be expected to be present. The Site may also support dormice and great crested newt if these species are present in the local area. The masterplan addresses impacts on the habitats that have the potential to support these species through provision of an extensive and coherent habitat network across the Site and into the wider area.

5.1.3 The high level objectives identified to guide development of a policy compliant scheme for Site are met by the masterplan which retains key ecological features, enhancing their value by creating a coherent network of habitat relevant to species likely to be present. As such there is no reason relating to ecological matters that prevent allocation of the Site for redevelopment in the manner and scale anticipated.

6 References

Broxtowe Borough Council (2016). Broxtowe Borough Council Site Allocations: Potential Additional Sites.

Broxtowe Borough Council, Gedling Borough Council and Nottingham City Council (2014). Greater Nottingham: Broxtowe Borough, Gedling Borough and Nottingham City Aligned Core Strategies Part 1 Local Plan (Adopted September 2014).

Department for Communities and Local Government (2012). National Planning Policy Framework.

HMSO (Her Majesty's Stationary Office) (1949) National Parks and Access to the Countryside Act

HMSO (1981): Wildlife and Countryside Act (as amended by the Countryside and Rights of Way Act 2000).

HMSO (1992): The Protection of Badgers Act.

HMSO (2006): Natural Environment and Rural Communities Act.

HMSO (2010): The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitat Regulations).

Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC.

Multi-Agency Geographic Information for the Countryside. Date Accessed: March 2017, http://www.magic.gov.uk/.

Office of the Deputy Prime Minister (ODPM) (2005): Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System.

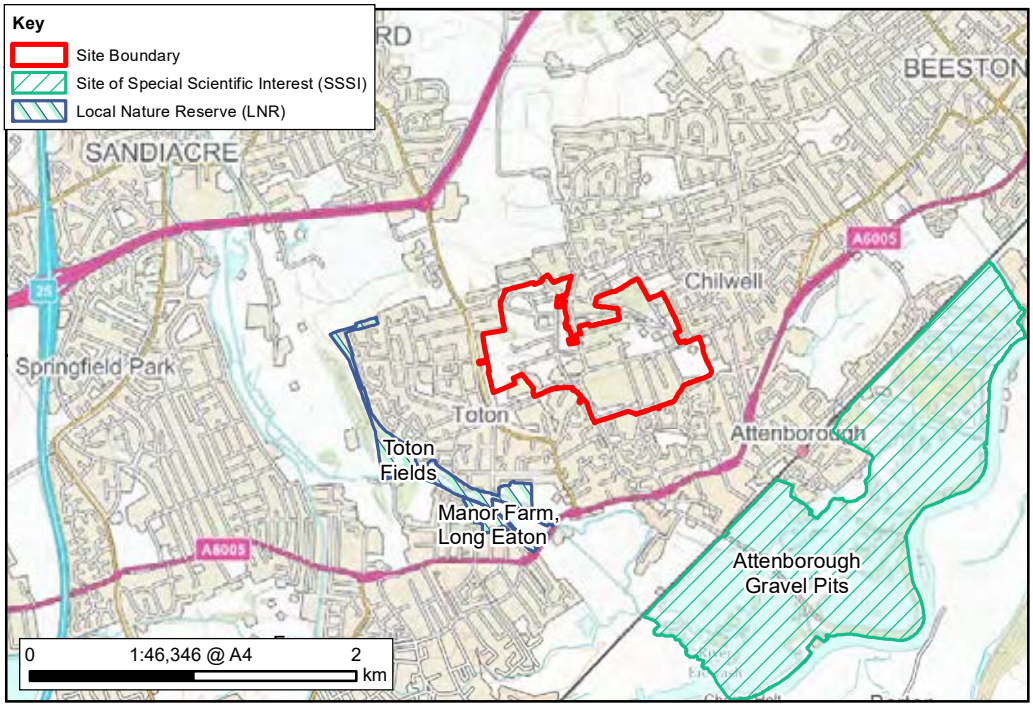
PRP (2017). Chetwynd Barracks Proposed Concept Masterplan. Drawing Number AA6854 – SK08, Revision D. 22/02/2017.

Stace, C. (2010). New Flora of the British Isles. Third Edition. Cambridge University Press.

The Nottinghamshire Biodiversity Action Group (1998). Local Biodiversity Action Plan for Nottinghamshire.

7 Figures

Document Path: Z:\Projects\37782\MXD\Figure 1.mxd



peterbrett

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

07/03/2017

Drawn: BB

Checked: SM

CHETWYND BARRACKS

Site Location Plan

N

Figure 1 | Rev A

Figure 2: Ecology: Masterplan Consideration

Key Aims of the Masterplan for Ecology:
i.Retain, protect, restore and maintain ecologically valuable habitat, and facilitate permeability across the Site and into the wider area;
ii.Ensure there is no overall loss of ecologically valuable habitat, and where possible, provide ecological enhancements or biodiversity gain; and
iii.Prevent isolation of any habitat on / off Site, and in doing so, contribute to a comprehensive green infrastructure network.

Retention of existing hedgerow

Retention of Hobgoblin Wood

Key
- Site boundary
- Medium density housing
- Low density housing
- Very low density housing
- Green space
- Local centre with high density housing
- School
- Retained/potentially retained buildings
- Retained/potentially retained underground tunnel
- Building memory to be retained
- Existing woodland and trees
- Proposed trees and other planting
- SUDS features

Retention of existing mature woodland

Non-statutory designated site

Retention of mature tree line within Memorial Park

Stapleford Lane

Creation of SUDS features that provides a key ecological corridor, as well as green infrastructure networks

Siting higher density development within areas of current low ecological value

Creation of SUDS features that provides a key ecological corridor, as well as green infrastructure networks

Key to Ecological Annotation of Masterplan:

- Retention or Creation of Ecological Network within the Site
- Retention or Creation of Ecological Connections to / from the Site
- Retention or Creation of Ecological 'Stepping Stone'

Chetwynd Barracks		pba peterbrett	Client: Defence Infrastructure Organisation	1:6,858,445 @ A3 30/03/17 Drawn: BB Checked: SM	Ecology: Masterplan Consideration Figure 2 | Rev A

Document Path: Z:\Projects\37782\MXD\Figure 2.mxd

Appendix A Relevant Legislation and Planning Policy

A.1 Overview

A.1.1 This section briefly summarises the relevant national and local planning policies and legislation pertaining to habitats and species mentioned within this report. Please note that the following text does not constitute legal advice.

A.2 National Planning Policy Framework

A.2.1 The National Planning Policy Framework (NPPF) was published in March 2012. This document states that, "*the planning system should contribute to and enhance the natural and local environment by:*

- *Protecting and enhancing valued landscapes, geological conservation interests and soils;*
- *Minimising impacts on biodiversity and providing net gains in biodiversity, where possible contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; and*
- *Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability".*

Planning – land allocation and policies

A.2.2 The NPPF states that *'in preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.'*

A.2.3 Local planning authorities are advised in paragraph 113 to '*set criteria-based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.'*

A.2.4 In paragraph 111, the NPPF refers to brownfield land as follows: *'planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value.'*

A.2.5 Local planning authorities are advised further to *'set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure…'*

A.2.6 The NPPF also states that*, "to minimise impacts on biodiversity and geodiversity, planning policies should:*

- *Plan for biodiversity at a landscape-scale across local authority boundaries;*
- *Identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife*

corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;

- *Promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets; and identify suitable indicators for monitoring biodiversity in the plan; and*

- *Where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas."*

Planning applications and biodiversity

A.2.7 *"When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:*

- *If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*

- *Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;*

- *Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; and*

- *Opportunities to incorporate biodiversity in and around developments should be encouraged".*

A.2.8 The Government Circular 06/2005 remains valid and Paragraph 99 provides guidance stating *"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the Proposed Development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision".*

A.3 Local Planning Policy

7.1.1 At a local level, the guiding policies for development are contained within the Greater Nottingham: Broxtowe Borough, Gedling Borough and Nottingham City Aligned Core Strategies Part 1 Local Plan (adopted September 2014). Of relevance to ecology are Policy 16: Green Infrastructure, Parks and Open Space and Policy 17: Biodiversity.

A.3.1 **Policy 16: Green Infrastructure, Parks and Open Space** states that:

- *'A strategic approach to the delivery, protection and enhancement of Green Infrastructure will be taken, through the establishment of a network of regional and sub-regional Green Infrastructure corridors and assets (as shown on the Key Diagram), particularly focusing on links between Nottingham and Derby, together with corridors and assets of a more local level which will be defined through part 2 Local Plans.*

- *The approach will require that:*

a) *existing and potential Green Infrastructure corridors and assets are protected and enhanced. Priority for the location of new or enhanced strategic Green Infrastructure will be given to locations for major residential development identified in Policy 2, the Strategic River Corridors of the Trent, Erewash and Leen rivers, canal corridors, Greenwood Community Forest, and Urban Fringe areas;*

b) *where new development has an adverse impact on Green Infrastructure corridors or assets, alternative scheme designs that have no or little impact should be considered before mitigation is provided (either on site or off site as appropriate). The need for and benefit of the development will be weighed against the harm caused;*

c) *developments proposed through the Core Strategies should enhance the Strategic Green Infrastructure network (either on site or off site or through contributions as appropriate). Non-strategic sites will be assessed through part 2 Local Plans;*

d) *links to and between the Green Infrastructure network will be promoted to increase access, especially in areas of identified deficit, for recreational and non-motorised commuting purposes, and to allow for the migration of species; and*

e) *Landscape Character is protected, conserved or enhanced where appropriate in line with the recommendations of the Greater Nottingham Landscape Character Assessment. Criteria for the assessment of proposals and any areas of locally valued landscape requiring additional protection will be included in part 2 Local Plans.*

- *New or enhanced Green Infrastructure corridors and assets should be as inclusive as possible, multifunctional and look to make provision for more than one of the following:*

  a) *access to employment and leisure facilities and to Green Infrastructure corridors or assets and the countryside;*

  b) *physical activity and wellbeing opportunities for local residents such as formal sports provision;*

  c) *educational resource for local residents;*

  d) *biodiversity opportunities;*

  e) *tackling and adapting to climate change;*

  f) *enhancement of landscape character;*

  g) *protection or enhancement of heritage assets; and*

  h) *opportunities for sustainable leisure and tourism.*

- *Parks and open space should be protected from development and deficiencies addressed in part 2 Local Plans. Exceptions may be made if the development is a small part of the Green Infrastructure network and will not be detrimental to its function, or the development is a use associated with parks and open spaces or if none of the above apply the park or open space is shown to be underused or undervalued. Alternative scheme designs that have no or little impact should be considered before mitigation is provided (either onsite or off site or through contributions as appropriate). Where parks or open spaces are under used or undervalued, the reasons for this should be explored and where possible addressed prior to alternative uses being permitted.'*

A.3.2 **Policy 17: Biodiversity** states that:

- '*Biodiversity will be increased over the plan period by:*

a) *protecting, restoring, expanding and enhancing existing areas of biodiversity interest, including areas and networks of habitats and species listed in the UK and Nottinghamshire Biodiversity Action Plans;*
b) *ensuring that fragmentation of the Green Infrastructure network is avoided wherever possible and improvements to the network benefit biodiversity, including at a landscape scale, through the incorporation of existing habitats and the creation of new habitats;*
c) *seeking to ensure new development provides new biodiversity features, and improves existing biodiversity features wherever appropriate;*
d) *supporting the need for the appropriate management and maintenance of existing and created habitats through the use of planning conditions, planning obligations and management agreements; and*
e) *ensuring that where harm to biodiversity is unavoidable, and it has been demonstrated that no alternative sites or scheme designs are suitable, development should as a minimum firstly mitigate and if not possible, compensate at a level equivalent to the biodiversity value of the habitat lost.*

- *Designated international, national and local sites of biological or geological importance for nature conservation will be protected in line with the established hierarchy of designations and further sites will be designated where they meet the relevant national or local criteria.*

- *Development on or affecting other non-designated sites or wildlife corridors with biodiversity value will only be permitted where it can be demonstrated that the need for the development outweighs any harm caused by the development and that adequate mitigation measures are put in place.'*

A.4 Species and Habitats of Principal Importance

A.4.1 The NPPF (paragraph 117) indicates that local authorities should take measures to *"promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species"* linking to national and local targets through local planning policies. Priority species are those species shown on the England Biodiversity List published by the Secretary of State in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Planning authorities have a duty under Section 40 of the NERC Act to have regard to priority species and habitats in exercising their functions including development control and planning.

A.5 UK Biodiversity Action Plans

A.5.1 The UK Biodiversity Action Plan (UK BAP) 2011 is a policy first published in 1994 to protect biodiversity and stems from the 1992 Rio Biodiversity Earth Summit. The policy is continuously revised to combine new and existing conservation initiatives to conserve and enhance species and habitats, promote public awareness and contribute to international conservation efforts. Each plan details the status, threats and unique conservation strategies for the species or habitat concerned, to encourage spread and promote population numbers.

A.5.2 Species or habitats identified as priorities under the UK Biodiversity Action Plan receive some status in the planning process through their identification as Species/Habitats of Principal Importance in England and Wales, under the Natural Environment and Rural Communities (NERC) Act 2006 (as amended).

A.5.3 Current planning guidance in England, the National Planning Policy Framework, does not specifically refer to Species or Habitats of Principal Importance, though it includes guidance for conservation of biodiversity in general. Supplementary guidance is available online at http://planningguidance.planningportal.gov.uk/blog/guidance/ and this guidance indicates that it is '*useful to consider*' the potential effects of a development on the habitats or species on the Natural Environment and Rural Communities Act 2006 section 41 list.

A.6 Local Biodiversity Strategy

A.6.1 Habitat Action Plans and Species Action Plans are contained within the Nottinghamshire Biodiversity Action Plan; this includes, of relevance:

- Hedgerows: Including ancient and / or species rich hedgerows; and
- Bats.

A.7 Ecological Enhancements

A.7.1 The Natural Environment and Rural Communities Act (2006) states that a public authority must, "*in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity; Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat".* DEFRA issued further guidance on implementation of this act in the document; Guidance for Local Authorities on Implementing the Biodiversity Duty (May 2007), which notes that "*Conserving biodiversity includes restoring and enhancing species populations and habitats, as well as protecting them".*

A.7.2 In England, the National Planning Policy Framework (NPPF), issued in March 2012, states that the planning system should contribute to "*minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures".* It also states that "*opportunities to incorporate biodiversity in and around developments should be encouraged".*

A.8 European Legislation

Bats, Dormice and Great Crested Newts

A.8.1 The original (1994) "Habitat Regulations" transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law. The Conservation of Habitats and Species Regulations 2010 (as amended) consolidates the various amendments that have been made to the Regulations.

A.8.2 "European protected species" (EPS) are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (as amended). These habitats and species are subject to the provisions of Regulation 41 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
- Possess or control any live or dead specimens or any part of, or anything derived from an individual of these species
- deliberately disturb wild animals of any such species
- deliberately take or destroy the eggs of such an animal, or
- intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

A.8.3 For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- to impair their ability to survive, to breed or reproduce, or to rear or nurture their young,
- or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- to affect significantly the local distribution or abundance of the species to which they belong.

A.8.4 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied:

- The proposal is necessary *'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'*
- *'There is no satisfactory alternative'*

A.8.5 The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".

A.9 National Legislation

Badgers

A.9.1 Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended) against damage or destruction of a sett, or disturbance, death or injury to the badgers. The Act defines a sett as "any structure or place which displays signs indicating current use by a badger". The definition of current use is subject to considerable debate. Natural England have produced guidance on the definition of current use. (*Badgers and Development – A guide to best practice and development. Natural England 2011*). Given the ambiguity surrounding the definition in all circumstances we would recommend an assessment of current use is always undertaken by a qualified ecologist. Natural Resources Wales (NRW) have a slightly different definition of current use. Please see the NRW website for further information. Penalties for offences against badgers or their setts include fines of up to £5,000 and/or up to six months in prison.

A.9.2 Disturbance of badgers could be caused by any digging activity or scrub clearance within 30 metres of an occupied sett and therefore every case needs to be assessed individually. Felling of trees close to a badger sett may also cause disturbance in some situations. Some activities such as pile driving may cause disturbance at even greater distances, and should be discussed with Natural England or NRW.

A.9.3 Licences are issued by Natural England (or NRW in Wales) to allow the disturbance of badgers, and the destruction of their setts in certain circumstances, in relation to development. Full planning permission must be obtained before a licence application will be considered. Although licences can be applied for at any time of year, disturbance of badgers or exclusion of badgers from a sett can only take place between 1 July and 30 November, to avoid the breeding season when dependant young may be underground. This restriction may be relaxed in some cases where a sett is seasonal and badgers can be shown to be absent from a sett at that time of year.

A.9.4 This report contains information of a confidential nature relating to the location of badger setts. Public access to this data should be restricted to those who have a legitimate need to assess the information and to know the exact situation of the setts rather than simply that badgers are present.

Amphibians

A.9.5 Great Britain supports seven native amphibian species. The four most widespread species; smooth and palmate newts, common frog, and common toad, receive partial protection under the Wildlife and Countryside Act 1981 (as amended) which prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy. The great crested newt, pool frog and natterjack toad are also fully protected in England and Wales under the Conservation of Habitats and Species Regulations 2010 (as amended). Penalties for offences against amphibian species include fines of up to £5,000 and/or up to six months in prison.

A.9.6 Four amphibian species (great crested newt, pool frog, common toad, natterjack toad) are listed as priority species under the UK Biodiversity Action Plan, and are therefore considered to be Species of Principal Importance in England and Wales (excluding the pool frog, which does not occur in Wales) under the Natural Environment and Rural Communities (NERC) Act 2006. All public bodies including local and regional authorities have a duty under this legislation to have regard for the conservation of biodiversity.

Reptiles

A.9.7 All six native reptile species receive protection under the Wildlife and Countryside Act 1981 (as amended). The four more common species (common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera* berus and grass snake *Natrix natrix*) receive partial protection which makes it an offence to intentionally kill or injure a reptile. The two other reptile species (smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis*), both of which are rare with very restricted UK ranges receive full protection under the Conservation of Habitats and Species Regulations 2010 (as amended). Penalties for offences against reptile species include fines of up to £5,000 and/or up to six months in prison.

A.9.8 Works such as site clearance or topsoil stripping which could result in killing or injury of reptiles could be considered result in an offence unless measures are taken to minimise the risk of this occurring. Any inadvertent impacts on common reptile species despite these mitigation measures being in place would be considered an 'incidental result of an otherwise lawful operation' which 'could not reasonably have been avoided' and therefore not an offence. Works which could affect smooth snakes or sand lizards, or their habitats, would need to take place under licence from Natural England or Natural Resources Wales. However, sites supporting smooth snakes or sand lizards are very rarely affected by development proposals.

A.9.9 In practice, mitigation for impacts of development on common reptiles generally comprise one or more of the following techniques: displacement, in which reptiles are encouraged to move to suitable retained habitat by changing the management of areas affected by development; exclusion, where reptile-resistant fencing is provided between a development site and suitable retained habitat allowing reptiles to be trapped from the development footprint and released elsewhere on the site; and translocation, where animals are trapped from a development site and released on another suitable site nearby. Reptile mitigation proposals, particularly those involving translocation of animals, should be agreed in advance with the local planning authority.

Birds

A.9.10 All British birds, their nests and eggs (with certain exceptions) are protected under the Wildlife & Countryside Act 1981 (as amended) which makes it an offence to: intentionally kill, injure or take a wild bird; intentionally take, damage or destroy nests which are in use or being built; intentionally take or destroy birds' eggs; or possess live or dead wild birds or eggs. A number of species receive additional protection through inclusion on Schedule 1 of the Wildlife and Countryside Act; for these it is also an offence to intentionally or recklessly disturb birds while nest building, or at a nest containing eggs or young, or to disturb the dependant young of such a bird. Penalties for offences against bird species include fines of up to £5,000 and/or up to six months in prison.

A.9.11 General licences for control of some bird species are issued by Natural England and Natural Resources Wales in order to prevent damage or disease, or to preserve public health or public safety, but it is not possible to obtain a licence for control of birds or removal of eggs/nests for development purposes. Consequently, if nesting birds are present on a development site when works are programmed to start it is usually necessary to delay works, at least in the areas supporting nests, until any chicks have fledged and left the nest. It is usually possible, once chicks have hatched, for an experienced ecologist to predict approximately when they are likely to fledge, in order to inform programming of works on site.

Chetwynd Barracks

Air Quality

On behalf of Defence Infrastructu re Orga nis ation

Project Ref: 37782/3002| Rev: Issued | Date: March 2017

[redacted]

Document Control Sheet

Project Name: Chetwynd Barracks, Nottingham
Project Ref: 37782/3002
Report Title: Air Quality Constraints
Doc Ref: Issued
Date: March 2017

	Name	Position	Signature	Date
Prepared by:	Ana Gomes	Graduate Air Quality Scientist	[redacted]	March 2017
Reviewed by:	Graham Harker	Senior Associate	[redacted]	March 2017
Approved by:	David Walker	Director	[redacted]	March 2017
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
Draft	March 2017	Draft for client comment	AG	GH	DPW
Issued	March 2017	With comments included	AG	GH	DPW

Contents

Tables

Appendices

1 Introduction

1.1 Introd uction

1.1.1 This note identifies the potential air quality constraints relating to the Chetwynd Barracks development, located to the south west of Nottingham. It considers local, national and regional policy, existing air quality conditions in the area, existing local sources of pollutants and any significant emissions relating to the proposed development in order to identify the likely constraints and mitigation measures which would be required.

1.1.2 The Chetwynd Barracks development is intended to comprise:

"A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sqm of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial."

1.1.3 The development schedule and land use plan for the Chetwynd Barracks site considers minimum (600 dwellings) and maximum (promotes a development with a capacity of up 1,600 dwellings) housing growth projections, and associated commercial uses, with 600 homes assumed to be built out during the first phase, i.e. to 2028, which coincides with the Local Plan period.

2 Policy

2.1 National Policy

2.1.1 The National Planning Policy Framework (NPPF) was published in March 2012 (Department for Communities and Local Government, 2012). This sets out the Government's planning policies for England and how they are expected to be applied. In relation to conserving and enhancing the natural environment, paragraph 109 states that;

"*The planning system should contribute to and enhance the natural and local environment by… preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability."*

2.1.2 Paragraph 124, also states that;

"Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan."

2.1.3 Paragraph 203 goes on to say;

"Local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition."

2.2 Planning Practice Guidance

2.2.1 Planning Practice Guidance (PPG) was published in March 2014 to support the NPPF. Paragraph 001, Reference 32-001-20140306 of the PPG provides a summary as to why air quality is a consideration for planning:

"… Defra carries out an annual national assessment of air quality using modelling and monitoring to determine compliance with EU Limit Values. It is important that the potential impact of new development on air quality is taken into account in planning where the national assessment indicates that relevant limits have been exceeded or are near the limit… The local air quality management (LAQM) regime requires every district and unitary authority to regularly review and assess air quality in their area. These reviews identify whether national objectives have been, or will be, achieved at relevant locations, by an applicable date… If national objectives are not met, or at risk of not being met, the local authority concerned must declare an air quality management area and prepare an air quality action plan… Air quality can also affect biodiversity and may therefore impact on our international obligations under the Habitats Directive… Odour and dust can also be a planning concern, for example, because of the effect on local amenity."

2.2.2 Paragraph 002, Reference 32-002-20140306, of the PPG concerns the role of Local Plans with regard to air quality;

"… Drawing on the review of air quality carried out for the local air quality management regime, the Local Plan may need to consider;

- *the potential cumulative impact of a number of smaller developments on air quality as well as the effect of more substantial developments;*

- *the impact of point sources of air pollution...; and*

- *ways in which new development would be appropriate in locations where air quality is or likely to be a concern and not give rise to unacceptable risks from pollution. This could be through, for example, identifying measures for offsetting the impact on air quality arising from new development including supporting measures in an air quality action plan or low emissions strategy where applicable."*

2.2.3 Paragraph 005, Reference 32-005-20140306, of the PPG identifies when air quality could be relevant for a planning decision;

"… When deciding whether air quality is relevant to a planning application, considerations could include whether the development would;

- *Significantly affect traffic in the immediate vicinity of the proposed development site or further afield. This could be by generating or increasing traffic congestion; significantly changing traffic volumes, vehicle speed or both; or significantly altering the traffic composition on local roads. Other matters to consider include whether the proposal involves the development of a bus station, coach or lorry park; adds to turnover in a large car park; or result in construction sites that would generate large Heavy Goods Vehicle flows over a period of a year or more;*

- *Introduce new point sources of air pollution. This could include furnaces which require prior notification to local authorities; or extraction systems (including chimneys) which require approval under pollution control legislation or biomass boilers or biomass-fuelled CHP plant; centralised boilers or CHP plant burning other fuels within or close to an air quality management area or introduce relevant combustion within a Smoke Control Area;*

- *Expose people to existing sources of air pollutants. This could be by building new homes, workplaces or other development in places with poor air quality;*

- *Give rise to potentially unacceptable impact (such as dust) during construction for nearby sensitive locations; and*

- *Affect biodiversity. In particular, is it likely to result in deposition or concentration of pollutants that significantly affect a European-designated wildlife site, and is not directly connected with or necessary to the management of the site, or does it otherwise affect biodiversity, particularly designated wildlife sites."*

2.2.4 Paragraph 007, Reference 32-007-20140306, of the PPG provides guidance on how detailed an assessment needs to be;

"Assessments should be proportionate to the nature and scale of development proposed and the level of concern about air quality, and because of this are likely to be locationally specific."

2.2.5 Paragraph 008, Reference 32-008-20140306, of the PPG provides guidance on how an impact on air quality can be mitigated;

"Mitigation options where necessary will be locationally specific, will depend on the proposed development and should be proportionate to the likely impact… Examples of mitigation include;

- *the design and layout of development to increase separation distances from sources of air pollution;*

- *using green infrastructure, in particular trees, to absorb dust and other pollutants;*

- *means of ventilation;*

- *promoting infrastructure to promote modes of transport with low impact on air quality;*
- *controlling dust and emissions from construction, operation and demolition; and*
- *contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development."*

2.2.6 Paragraph 009, Reference 32-009-20140306, of the PPG provides guidance on how considerations about air quality fit into the development management process by means of a flowchart. The final two stages in the process deal with the results of the assessment;

"Will the proposed development (including mitigation) lead to an unacceptable risk from air pollution, prevent sustained compliance with EU limit values or national objectives for pollutants or fail to comply with the requirements of the Habitats Regulations." If Yes:

"Consider how the proposal could be amended to make it acceptable or, where not practicable, consider whether planning permission should be refused."

2.3 Local Policy

2.3.1 The emerging Local Plan has been undertaken in two parts:

- Part 1 of the Local Plan (the Core Strategy) already established and sets the strategic vision, aims and objectives for the borough as a whole until 2028.
- Part 2 of the Local Plan is currently being prepared and will deliver the strategic aims and objectives as set out in the Core Strategy.

2.3.2 The first part of the Local Plan is the Aligned Core Strategy which was adopted in September 2014 and sets the vision, objectives, spatial strategy and the strategic policies for the Borough up to 2028.

2.3.3 Policy 1 on Climate Change states:

"3.1.6 The Local Plan needs to ensure the use and development of land will help slow down the rate of climate change and be resilient its effects. In this respect the Aligned Core Strategies' task is to:

- *… reduce pollution to levels that do not damage natural systems*
- *help improve air quality …"*

3 Baseline Conditions

3.1 Monito ring

3.1.1 Broxtowe Borough Council (BBC has investigated air quality within its area as part of its responsibilities under the LAQM regime. To date, BBC has designated four Air Quality Management Areas (AQMAs) for exceedance of the annual mean NO_2 objective. The proposed site is not located within an AQMA. The closest AQMA to the Site within BBC is located approximately 3.5 km north of the Site.

3.1.2 BBC deploys NO_2 diffusion tubes at a number of locations (**Figure 1)**. The closest and most representative monitoring locations are described in **Table 3.1** below.

Table 3.1: Measured NO_2 Annual Mean Concentrations (2011-2015)

Site ID	Site Type	Within AQMA	Annual Mean (µg/m^3)				
			2011	2012	2013	2014	2015
BX07 31 Hickton Drive	R	N	-	25	27	26	26
BX03, Chilwell Olympia School	UB	N	21	22	22	21	20
BX04, 167 Derby Road	R	N	-	**42**	38	**42**	**41**
BX15, 9 Bembridge Court	R	N	31	32	32	28	31
BX20, Opp Sherwin Arms, Derby Road	R	N	33	31	22	34	31
BX23, Broxtowe Borough Council Offices	R	N	-	22	22	23	21
BX24, 113 Wollanton Road	R	N	-	34	32	32	29
BX31, 170 Derby Road	R	N	-	37	39	37	38
Objective		**40**					

2011 - 2015 data taken from the BBC Annual Status Report, 2016
Exceedances of the objective in bold; R= Roadside; UB=Urban Background

3.1.3 Measured concentrations at the closest monitoring locations to the development site, BX07 and BX03, have been well below the relevant objective for the past 5 years.

3.1.4 The monitoring location BX04 was affected by changes to road traffic in the area in 2015 as a result of road works and therefore further monitoring is necessary to understand whether or not there will be an exceedance at this location in the future.

3.2 Backgroun d Con centratio ns

3.2.1 In addition to these measured concentrations, estimated background concentrations for the Site have been obtained from the national maps provided by Defra (Defra, 2016) (shown in **Table 3.2**). The background concentrations are all well below the relevant objectives.

Table 3.2: Estimated Annual Mean Background Concentrations

Year	Annual Mean (µg/m^3)			
	NO_x	NO_2	PM_{10}	$PM_{2.5}$
2016	26.7	18.1	15.4	11.0
Objective	**-**	**40**	**40**	**25**

3.2.3 The monitoring data for site BX03 is reasonably consistent with the predicted background concentration from the Defra maps, which indicates that the background map data is likely to be representative of background concentrations in the area.

3.3 Designated Sites

3.3.1 There are a number of designated ecological sites within the district (**Figure 1**). Attenborough Gravel Pit Site of Special Scientific Interest (SSSI) is approximately 800m to the south of the Site. Toton Fields and Manor Farm, Long Eaton Local Nature Reserves (LNR) are located approximately 500m southwest of the Site.

4 Potential Effects

4.1 Pollutants

4.1.1 The principal air pollutants of concern with respect to the development will be:

- nitrogen dioxide (NO_2);
- fine airborne particles (PM_{10} and $PM_{2.5}$); and
- dust.

4.1.2 The main source of these pollutants are likely to be road vehicles (nitrogen dioxide, PM_{10} and $PM_{2.5}$) and construction activities (dust and PM_{10}). Professional experience indicates that other sources of pollutants will not be significant from this type of development.

4.2 Construction Effects

4.2.1 Construction phase effects have the potential to extend up to 350m from the Site. When considering the potential impacts of dust during construction it is normal practice to undertake a qualitative assessment of the risk of dust impacts. This is commonly undertaken in accordance with relevant guidance issued by the Institute of Air Quality Management (IAQM). The assessment concentrates on the risk of adverse dust impacts occurring, with the aim to identify appropriate mitigation to reduce the risk. Mitigation would be secured by condition and, with mitigation in place, the effects of construction dust are not significant.

4.3 Operational Effects

4.3.1 Operational phase effects will be associated with road traffic emissions. Traffic from the proposed development has the potential to impact on existing residential receptors in the vicinity of the Site and existing traffic can affect the proposed development site itself.

4.3.2 Environmental Protection UK (EPUK) and the IAQM have published the 'Land-Use Planning and Development Control: Planning for Air Quality' (May 2015) guidance to ensure air quality is adequately considered in the land-use planning and development control process (Moorcroft and Barrowcliffe *et al*, 2015). The indicative criteria for requiring an air quality assessment include:

a. A change in Light Duty Vehicles (LDVs) flows of more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA or more than 500 AADT elsewhere.

b. A change in Heavy Duty Vehicles (HDVs) flow of more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere.

4.3.3 For ecological sites the indicative criteria are stipulated in the Design Manual for Roads and Bridges (DMRB). The threshold is an increase in more than 1,000 vehicles a day on roads within 200m of the designated sites.

4.3.4 The above criteria are for when an assessment may be required. If traffic from a development exceeds these levels, then it does not necessarily mean that a modelling assessment is required, only that air quality impacts of traffic require consideration. The DMRB specifies a minimum change in traffic levels of 1,000 AADT before an assessment is necessary.

4.3.5 The predicted increase in AADT as a result of the development is presented in **Table 4.1.**

Table 4.1: AADT Generation brought about by completion of the proposed development

Link	AADT					
	2017 Base	2028 Base	Development Flows (600 Dwellings)	Development Flows (1,600 Dwellings)	2028 Base + Dev. (600 dwellings)	2028 Base + Dev. (1,600 dwellings)
Swiney Way	7,691	8,644	2,959	6,866	11,603	15,511
Stapleford Lane	12,519	14,071	2,349	5,452	16,420	19,523
Banks Road	2,600	2,922	0	0	2,922	2,922

4.3.6 The minimum growth projection (600 dwellings) is predicted to generate an additional 2,959 and 2,349 two-way vehicle movements per day on Swiney Way and Stapleford Lane, respectively. The maximum growth projection (1,600 dwellings) is predicted to generate 6,866 and 5,452 two-way vehicle movements per day on Swiney Way and Stapleford Lane, respectively. Currently, there are no AQMAs in the vicinity of the Site, and emissions of oxides of nitrogen from the vehicle fleet are predicted to reduce significantly over the time period that the development will be built out. Given the nature of the road network and air quality in the area, the increase in development traffic is unlikely to have a significant effect, but will require an assessment to be undertaken.

4.3.7 Traffic on Stapleford Lane will split when it meets the A52 to the north, with some of the traffic impacting on the Bramcote Island where monitoring location BX04 is located. The impact of development traffic at this location will need to be assessed, but as emissions of oxides of nitrogen are anticipated to reduce in the future, the impacts are unlikely to be significant.

4.3.8 The Attenborough Gravel Pit SSSI is located more than 200m from the A6005 Nottingham Road and, therefore, the potential operational effects on the designated site are considered negligible.

4.3.9 The Toton Fields and Long Eaton LNRs southern boundary are adjacent to the A6005 Nottingham Road. Development traffic flows along the A6005 Nottingham Road may surpass the 1,000 vehicles a day threshold. Given the air quality in the area, the increase in development traffic is unlikely to have a significant effect, however, should the development generate an additional 1,000 vehicles a day on the road surrounding the designated site, the impact on this site should be considered.

4.4 Suitability of the Site

4.4.1 Measured NO_2 concentrations and background concentrations for the Site are well below the objective (**Table 3.1** and **3.2**). Pollutant concentrations at the development site are likely to be similar to the Defra background concentrations, as the Site is away from main roads. Therefore, the Site is judged to be suitable for residential development without the need for mitigation against poor air quality.

5 Summary

5.1.1 The construction works have the potential to create dust. During construction it is recommended that a package of mitigation measures is put in place to minimise the risk of elevated PM_{10} concentrations and dust nuisance in the surrounding area. With mitigation in place the construction impacts are judged to be not significant.

5.1.2 The proposed development is expected to increase the traffic flows on the local road network. Measured NO_2 and background concentrations are well below national objectives in the immediate vicinity of the Site and therefore traffic from the development will not have a significant impact on local air quality. The impact of development traffic on the A52 Bramcote Island will need to be assessed, but assuming that NO_x emissions reduce as anticipated, then the impact will not be significant. The impacts on the Toton Fields and Long Eaton LNRs should be considered if the traffic flows along the A6005 Nottingham Road surpass the 1,000 vehicles a day threshold, but are unlikely to have a significant effect given the air quality of the area.

5.1.3 The Site is, therefore, considered suitable for residential development without the need for mitigation against poor air quality.

5.1.4 Overall, it is concluded that air quality will not pose a constraint to the proposed development.

Appendix A References

Broxtowe Borough Council (2016). 2016 Air Quality Annual Status Report (ASR) for Broxtowe Borough Council.

Department of the Environment, Food and Rural Affairs (Defra) in partnership with the Scottish Executive, The National Assembly for Wales and the Department of the Environment for Northern Ireland (2016a). '*Local Air Quality Management Technical Guidance, LAQM.TG(16)'.* HMSO, London.

Department of the Environment, Food and Rural Affairs (Defra) (2016b). '*2013 Based Background Maps for NO_x, NO_2, PM_{10} and $PM_{2.5}$'.* Available: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2013

Department of the Environment, Transport and the Regions (DETR, 2007) in Partnership with the Welsh Office, Scottish Office and Department of the Environment for Northern Ireland (2007). '*The Air Quality Strategy for England, Scotland, Wales, Northern Ireland'* HMSO, London.

Department for Communities and Local Government (2012). '*National Planning Policy Framework'*. Available at:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Environment Act 1995, Part IV.

Moorcroft and Barrowcliffe *et al* (2015). '*Land-use Planning & Development Control: Planning for Air Quality*' The Institute for Air Quality Management, London

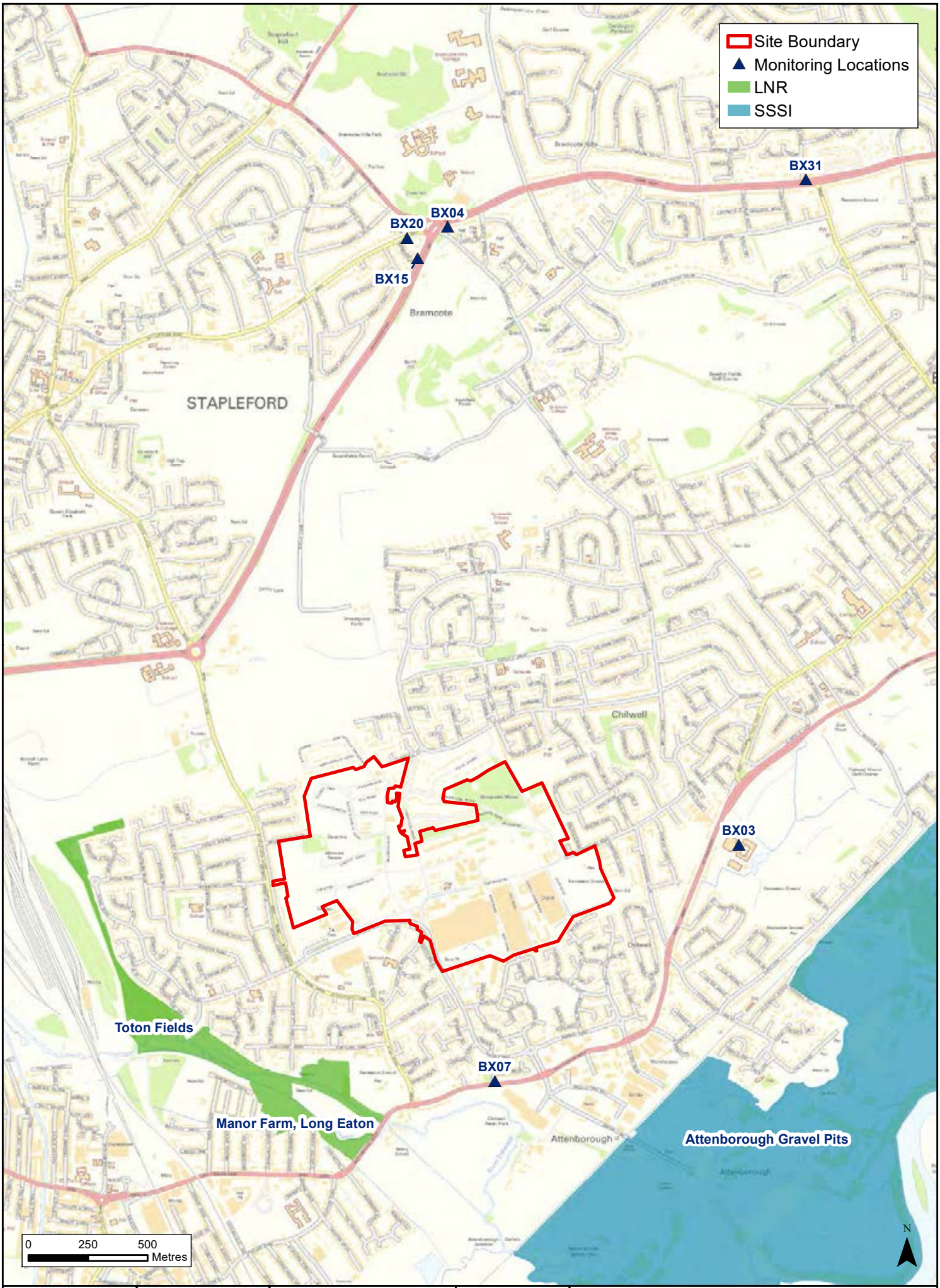
Statutory Instrument 2000, No 921, '*The Air Quality (England) Regulations 2000'* HMSO, London.

Statutory Instrument 2002, No 3034, '*The Air Quality (England) (Amendment) Regulations 2002'* HMSO, London.

Statutory Instrument 2010, No. 1001, '*The Air Quality Standards Regulations 2010'* HMSO, London

The Highways Agency (2007). 'Design Manual for Roads and Bridges, Volume 11, Section 3, Part I, HA 207/07 Air Quality'. Available at:
http://www.standardsforhighways.co.uk/dmrb/vol11/section3/ha20707.pdf

Appendix B Figures



pba peterbrett	Defence Infrastructure Organisation		1:20,000 @ A4 29/03/2017 Drawn: AG Checked: GH	**Chetwynd Barracks** Air Quality Monitoring Locations and Designated Sites Figure 1 | Rev C

Chetwynd Barracks, Chilwell, Nottinghamshire

Ground Conditions Desk Study

(Ground Stability & Phase 1 Contaminated Land)

On behalf of Defence Infrastructure Organisation

Project Ref: 37782-001 | Rev: A | Date: April 2017

[redacted]

Document Control Sheet

Project Name: Chetwynd Barracks, Chilwell, Nottinghamshire
Project Ref: 37782
Report Title: Ground Conditions Desk Study (Ground Stability & Phase 1 Contaminated Land)
Doc Ref: R001
Date: April 2017

	Name	Position	Signature	Date
Prepared by:	Lawrence Truslove	Principal Engineer	***L. Truslove***	***05/04/17***
Reviewed by:	Richard Thomas	Senior Consultant	***R. Thomas***	***05/04/17***
Approved by:	Tim Allen	Partner	***pp. M. Rennie***	***05/04/17***
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
-	05/04/17	First Issue	LT	RT	MR

Contents

Figures

Tables

Appendices

1 Introduction

1.1 Brief and Purpose of Work

1.1.1 Peter Brett Associates LLP (PBA) has been commissioned by Defence Infrastructure Organisation (DIO) (the Client) to carry out a Ground Conditions Desk Study to inform the master planning process, and support the allocation of the site for a proposed predominantly residential development on land Chetwynd Barracks, Chilwell, Nottinghamshire.

1.1.2 This desk study report encompasses ground stability and contaminated land considerations. It presents the data collected as part of the desk study work and includes a preliminary ground stability risk assessment and Phase 1 (or Tier 1) qualitative contaminated land risk assessment.

1.1.3 The aim of this report is to assess the potential geoenvironmental and geological risks present at the study site and thereby to meet the requirements of the National Planning Policy Framework (NPPF, 2012) Clauses 120, 121 and 122.

1.1.4 Under the definition 'Site Investigation Information' given in the NPPF, the Ground Conditions Desk Study is also the minimum requirement under the NPPF to support any planning application on a site that might be potentially affected by contamination and ground instability.

1.1.5 Attention is drawn to the final section of this report which provides advice for readers of this report.

1.2 Objectives

1.2.1 The objectives of this study are to review readily available information from published sources and public databases to identify the likely ground conditions present at the Site so that:

- Any potential geoenvironmental hazards and constraints to the proposed future development from past land use contaminative activity or due to natural geological conditions that can be identified;
- In terms of the known risk factors for ground instability associated with landsliding and the natural geology of the Site, the potential risk of occurrence can be identified at the earliest possible stage in the development process; and
- Due account can be taken of any constraints imposed by other potential geotechnical hazards with regards to risk of subsidence arising from artificial cavities, natural cavities, and adverse foundation conditions.

1.3 Scope of Work

Ground Stability Desk Study

1.3.1 The study is a minimum requirement of the National Planning Policy Framework and includes the assessment of potential hazards arising from artificial cavities, natural cavities, coal and non-coal (underground) mining/ extraction activities, landsliding, clay shrinkage and swelling, and adverse foundation conditions (ranging from soft weak compressible materials and running sand to hard strong rocks).

1.3.2 Published geological information has been obtained and reviewed, together with data from public databases and client supplied reports.

Contaminated Land Desk Study

1.3.3 The principal components of this assessment are generally as detailed in Section 6.2 of BS10175:2011 and guidance given in CLR 11 Model Procedures for the Management of Contaminated Land (EA, 2004). CLR 11 sets out a process based on a tiered risk assessment with increasing level of detail required to progress through the tiers. Due regard is also paid to guidance detailed in the Nottinghamshire Land Quality Group's publication 'A Guide to Developing Land Within Nottinghamshire: Guidance for Land Owners and Developers (NLQG, 2013).

1.3.4 In order to identify the current conditions and land use on the Site and in the surrounding area, readily available information in the public domain has been obtained and reviewed, and a site reconnaissance has been carried out. This report presents a review of the acquired information, together with the developed preliminary conceptual site model (CSM) and the associated Tier 1 risk assessment. This element of the study has been carried out in accordance with PBA's 'Methodology for Ground Condition Assessment', a copy of which is included in **Appendix A**.

1.4 Site Location and Setting

1.4.1 The Site covers approximately 74.5 hectares (ha) and comprises the Chetwynd Barracks military base. The Site lies in the suburb of Chilwell approximately 8km south-west of Nottingham city centre. The approximate Ordnance Survey (OS) National Grid Reference (NGR) of the Site is SP 505 352 (450520E, 335250N).

1.4.2 The site is bordered by residential estates generally.

1.4.3 A map showing the Site and its general location is presented as **Figure 1** and a plan showing the general setting of the site and salient local features is presented as **Figure 2**.

1.5 Proposed Development

1.5.1 A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sq.m of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial.

1.6 Sources of Information

1.6.1 The following sources of information were used in the preparation of this report:

- British Geological Survey (BGS) mapping – Extracts from the BGS Digital geological map of Great Britain at 1:50,000 scale;
- Historical borehole records obtained through the BGS web-hosted 'Onshore borehole records' portal (www.bgs.ac.uk/data/boreholescans);
- Ground stability and data on other potential geological hazards that may give rise to adverse foundation or construction conditions supplied by the BGS from their National Geoscience Information Service;

- Ground stability information was obtained from the Natural Cavity and Artificial non-coal (underground) mining cavity databases managed and enhanced by Peter Brett Associates LLP;
- Historical and current Ordnance Survey mapping (1:10,000 scale, 1:2,500 scale);
- Internet searches on the local history of the area;
- Current and recent-past satellite imagery accessed through the web-hosted Google Earth and Bing maps portals;
- A Landmark Information Group (LIG) Envirocheck (environmental data) report (LIG, 2017);
- Review of public register environmental database information on the Environment Agency website through the 'my backyard' portal, and the Multi-Agency Geographic Information for the Countryside (MAGIC) webhosted database;
- Review of Environment Agency (EA) public register databases accessed through the 'What's in Your Backyard' portal;
- Previous geoenvironmental reports covering the Site; and
- A site visit undertaken by PBA in January 2017 to undertake a walkover inspection.

1.7 Previous Reports

1.7.1 The client has provided the following reports for use in the preparation of this report:

- A&C (1998) - Land Quality Assessment Phase Two: Intrusive Investigation Land Quality Statement, Chilwell Station. Aspinwall and Company Ltd. (A&C) for Defence Estate Organisation, December 1998 (ref. GR2713B).
- SKM (2011) - Land Quality Assessment Report Phase 1: Desk Study, Chetwynd Barracks. SKM Enviros (SKM) for Defence Estates, February 2011.

2 Review of Third Party Reports

2.1 A&C (1998) - Phase Two: Intrusive Investigation

2.1.1 The report presents the results of a Phase 2 intrusive investigation carried out by A&C in May 1998 conducted following a Phase 1 desk study. The objective of the work was to allow a more detailed risk assessment of those areas of the site identified by the desk study as being the greatest sources of potential environmental risk to sensitive receptors.

2.1.2 The intrusive investigation work comprised 38 no. trial pits and 15 no. boreholes and covered the whole site with the majority of the exploratory holes located on the southern parts of the site. The ground investigation work also included a radiological survey of four areas, three of which (Areas 2, 3 and 4) are within the present study Site boundary. A copy of Figures 2 and 3 from the report, that show the radiological survey areas and exploratory hole locations are presented in **Appendix B** along with the exploratory hole logs.

2.1.3 The radiological survey targeted areas where the desk study had identified potential activities involving the maintenance or disposal of equipment containing luminescing paints. Area 2 was a former Royal Electrical and Mechanical Engineers workshop (building 178), Area 3 another former workshop (building 181) and Area 4 was a site where waste materials were burned historically.

2.1.4 The investigation did not record any significantly elevated levels of radioactivity in the soil on the study Site in Areas 2, 3 and 4.

2.1.5 The investigation tested 113 soil samples for metals, 25 samples for hydrocarbons, 6 samples for asbestos and 3 for common compounds found in explosives. The results recorded locally elevated levels of a range of potential contaminants in a small number of samples in the Made Ground generally, when compared with the assessment criteria in use at the time. The elevated contaminants were heavy metals (arsenic, cadmium, lead, boron, copper, nickel and zinc), polyaromatic hydrocarbons, and sulphide.

2.1.6 The investigation tested 13 groundwater samples for a range of potential contaminants. Elevated levels of hydrocarbons, ammoniacal nitrogen, sulphide, nitrate and nitrite were recorded in a small number of the samples, when compared with the assessment criteria in use at the time. A copy of Figures 4 and 5 from the report, that record the soil and groundwater contaminants that were found to be elevated at each exploratory hole are presented in **Appendix B**.

2.1.7 Asbestos cement material was recorded in the Made Ground in one location (TP10) in the centre of the site at approximate grid reference 450765E, 335330N. None of the three soil samples tested for explosive residues in the vicinity of the 1918 explosion at the Site (refer to Section 3.3) recorded any elevated levels of the explosive compounds tested for.

2.1.8 The report concludes that the geoenvironmental risks were assessed as either negligible or low for future redevelopment of the site provided that identified hotspots of contamination were remediated.

2.2 SKM (2011) - Phase 1 Land Quality Assessment Report

2.2.1 This report comprises a contaminated land desk study of the Site that culminated in a risk assessment for the continued usage of the site as a military establishment. The work was based on; a site walkover survey, study of information supplied by the DIO and publically available information. Summary figures from the report detailing the site layout in 2011 and the identified Potential Sources of Contamination (PSC) are included in **Appendix B**.

2.2.2 The report identified a number of current (in 2011) and historical PSC, including:

Current (2001)

- Made Ground across the site, including ash beneath building 177;
- Garages and maintenance buildings, associated stores and vehicle wash-down area (paints, oils, solvents, fuels);
- Armoury and EOD tunnel store (UXO, explosives residue);
- Areas used for temporary waste storage e.g. hazardous waste compound (paints, solvents, oils);
- Leakages from current underground (POL point) and above ground (waste oil tank) tanks or spillages during filling operations (hydrocarbons);

Historical

- Historical ranges (Unexploded Ordnance (UXO), explosives residues, metals);
- Armoury and former areas used for shell filling and storage (UXO, explosive residue);
- Leakages from historical underground and above ground tanks or spillages during filling operations (hydrocarbons); and
- Low level radioactivity associated with the former REME workshop (radium and other radionuclides).

2.2.3 The report concluded that there were no significant environmental constraints to the continued occupation of the site for military use and that no remediation was necessary.

3 Land Use Information

3.1 Introd uction

3.1.1 This section presents a summary of current and historical land uses on and immediately adjacent to the Site. Land use is used to inform the hazard identification element of the contaminated land risk assessment. For the purposes of this report “on-site” is defined as within the Site boundary shown in **Figure 2** of this report.

3.1.2 The current land use information is based on:

- Review of current Ordnance Survey mapping;
- Review of current and recent-past satellite imagery accessed through the web-hosted Google Earth and Bing maps platforms; and
- A site walkover carried out by an engineer from PBA in January 2017. [Photographs taken during the site walkover are included in **Appendix C**, with the location and direction of view of each shown on **Figure 2**].

3.1.3 The historical land use information is based on:

- Review of historical Ordnance Survey mapping supplied by the Client (**Appendix D**);
- Client supplied geoenvironmental reports; and
- Internet searches on the local history of the area.

3.2 Site Description a nd Current Land Use

On Site

3.2.1 The Site comprises an irregularly shaped parcel of land occupied by the Chetwynd Barracks military base. The Site houses storage depots, workshops and administration buildings for several army units as well as open space (grassland) areas and a sports ground. For the purposes of site description, the Site can be split into two parts (a smaller Southern area and a large Northern area) that are separated by the Chetwynd Road that runs through the Site.

Southern Area

3.2.2 This area is generally flat, standing at approximately 30m A.O.D. and it is largely covered by hardstanding comprising macadam or concrete surfacing, with occasional grassed areas. An eastward flowing drain crosses the southern side of this area in a combination of concrete lined channel and culvert. The area includes two large depot and workshop buildings and several other smaller workshop and administration buildings. The parcel of land also includes a sports field on the eastern side and other uses including:

- Workshop and maintenance buildings (Photographs 1 and 2);
- A vehicle washing area;
- A fuel filling station with underground fuel tanks (Photograph 3);
- Waste oil tanks (Photographs 4 and 5);

- Above ground stores for jerry cans and drums of fuel and oil (Photograph 6) and a waste storage area including chemical drums (Photograph 7); and
- A modern storage building for radioactive materials, chemicals and flammable gases.

Northern Area

3.2.3 North of Chetwynd Road the Site is occupied by; administration and accommodation buildings, a large area of open space occupied by grassland on the western half of the area and a wood (Hobgoblin Wood) on the north-eastern corner. Hobgoblin Wood contains a covered reservoir and disused above-ground water tanks. Topographically the northern edges of the Site and the area adjacent to Chetwynd Road are generally flat with the land between these areas sloping downhill to the south. The steepest slopes occur across the centre of the Site and have required several of the buildings to be constructed on terraces cut into the slope (Photographs 8, 9 and 10). Other features of note identified by the walkover survey include:

- A pile of waste soil on the western part of the Site (Photograph 11);
- An underground armoury/explosive store on the eastern part of the Site (Photograph 12); and
- A small chemical store (Photograph 13) close to the armoury tunnel entrance.

Off Site

3.2.4 The current off site land uses immediately surrounding the Site are summarised below:

- North, East and West - Residential properties.
- South - Supermarket, offices and residential properties.
- South-west - Territorial Army Centre.

3.3 Historical Land Use

On Site

3.3.1 The Site was generally occupied by farm land until the construction of the National Shell Filling Factory on the south-eastern and central parts of the site in 1916. The current underground armoury/ explosive store is understood to date from 1916 and to comprise a series of tunnels cut into the bedrock that run northwards towards and possibly beneath parts of Hobgoblin Wood. The artillery shell filling factory suffered significant damage as the result of a large explosion in July 1918. The shell filling ceased at the end of WWI and the factory was converted to a depot handling returned war materiel. In the mid 1930's the army centralised its Mechanical Transport Supply operations at the Site. During WWII the Site became a major vehicle and spares depot for the Royal Army Ordnance Corps and included the Royal Electrical and Mechanical Engineers (REME) central workshop. After WWII the Central Ordnance Depot Chilwell was established at the Site and the REME workshop remained. The depot was closed in 1985, however, the Site continued to be used by various army units until the present day.

3.3.2 The first historical map to record development of the Site is dated 1938 and it shows three large buildings on the southern side of the Site that coincide with Buildings 158, 177 and 178 (see **Figure 2**). The three buildings were served by railway sidings served by 1 km long spur linking them with the civilian railway network. The smaller administration and other buildings adjacent to the north of the three large buildings are present at that time as is the reservoir on

the northern side of the Site and the sports ground on the eastern side of the Site. The construction of the shell factory and depot buildings resulted in the infilling or culverting of the two drain courses that previously crossed the southern side of the Site (see **Figure 2**).

3.3.3 Later in the 1960's a large number of small buildings were constructed on the western parts of the site around the various roadways that that are now surrounded by grassland. Around this time the compliment of personnel at the Site was reported to have peaked at around 5,000 so it is likely that these small buildings were accommodation blocks. Later in the 1970's and 1980's these small buildings gradually disappear. The tanks next to the reservoir are first shown on the mapping in the 1960's as are the two rifle ranges and the two disused stone quarries on the western side of the Site.

3.3.4 In the late 1970's the railway lines were removed from the Site and it is understood that building 178 was demolished in 2008. No further significant changes are shown on the historical maps and satellite imagery dated 2001 to 2010 shows very little change at the Site.

Off Site

3.3.5 The surrounding area was farm land with isolated farmsteads and wooded areas until the encroachment of residential estates in the mid to late 20th century. The supermarket and Territorial Army Centre were constructed in the 1990's on parts of the former Chetwynd Barracks site. The land adjacent to the south is presently occupied by offices and residential estates which were constructed in the early 2000's also on part of the former Chetwynd Barracks site.

4 Environmental Setting

4.1 Introd uction

4.1.1 Information on the geological and environmental setting of the site is used in the Hazard Assessment section of the Phase 1 (or Tier 1) contaminated land risk assessment to identify potential pathways and receptors.

4.2 Geolog y

General

4.2.1 A geological map (comprising extracts from the BGS Digital geological map at 1:10,000 scale) is included in **Appendix E**. This includes geological layers comprising: artificial ground and landslip deposits, superficial (drift) geology and solid (bedrock) geology. A summary is given below:

Table 4.1 - Summary of Site Geology

Item	Details
Superficial Deposits Present on site	Alluvium and River Terrace Deposits (Beeston Sand and Gravel, Hemmington and Holme Pierrepont Sand and Gravel Members).
Bedrock Deposits Outcropping on site	Triassic aged strata of: • Gunthorpe Member, overlying • Radcliffe Member, overlying • Tarporley Siltstone Formation. Bedrock strata in the area dip at around 2° to the south-east[1].
Faults[2]	The Site lies in an upthrown block between a pair of parallel north-west to south-east trending faults. The unnamed fault to the south lies approximately 50m from the south-western site boundary and the Chilwell Fault to the north crosses the north-eastern tip of the site.
Artificial Ground	Made Ground is recorded locally on the northern parts of the Site around the reservoir and the western end of Hobgoblin Wood. No other artificial ground is mapped within 250m.
Landsliding	None recorded on site or within 250m.
Borehole Records	Numerous on site, refer to *Borehole Records* section below.
1. From Figure 9 of BGS Technical Report WA/90/01 (BGS, 1990). 2. From Figure 10 of BGS Technical Report WA/90/01 (BGS, 1990).	

4.2.2 The BGS (1990) describe the bedrock deposits as comprising:

- Gunthorpe Member (GM) - ‘Interlayered red-brown and grey-green mudstone, siltstone and very fine-grained sandstone’;
- Radcliffe Member (RM) - ‘Well-laminated red-brown, pink and grey-green mudstone and siltstone with subordinate fine-grained sandstone’; and
- Tarporley Siltstone Formation (TSF) - ‘Interbedded fine to medium grained sandstone, siltstone and mudstone’.

4.2.3 The digital geological mapping splits the TSF into separate deposits of 'Sandstone' and 'Mudstone, Siltstone and Sandstone'.

4.2.4 The bedrock geology is overlain over the southern half of the site by a ribbon of Alluvium, associated with the watercourse that historically ran through the Site and by River Terrace Deposits. The River Terrace Deposits comprise the Beeston Sand and Gravel Member that outcrops adjacent to the northern side of the Alluvial tract and the Hemmington and Holme Pierrepont Sand and Gravel Members that outcrop adjacent to its southern side.

4.2.5 The BGS (1990) describe the Superficial Deposits as typically comprising:

- Alluvium - 'Silts and clays overlying sand and gravel'.
- Beeston Sand and Gravel - 'Interbedded sand and well-rounded gravel'.
- Hemmington Member - 'A lower unit of planar cross-bedded gravel (up to 5m) and an upper unit of overbank silt (up to 2m)'.
- Holme Pierrepont Sand and Gravel - 'Current-bedded sand and gravel, with impersistent silt or silty clay beds'.

Borehole Records

4.2.6 The records of boreholes sunk on the study site as part of the 1998 A&C ground investigation are included in **Appendix B** along with a drawing showing their approximate locations. The BGS' web-hosted 'Onshore borehole records' database contains the records of 18 other boreholes sunk on the Site. The records are reproduced in **Appendix E** along with a drawing showing their approximate locations. A summary of the findings of these boreholes is given below.

- Made Ground thickness range:
  - Northern Area of the Site - Up to 0.9m bgl.
  - Southern Area of the Site - Up to 2.6m bgl.
- Superficial deposits thickness:
  - Northern Area of the Site - Up to 5.4m bgl.
  - Southern Area of the Site - Up to 9.25m bgl.

4.2.7 North of Chetwynd Road the Made Ground comprises reworked topsoil or subsoil containing fragments of brick, metal and plastic. South of Chetwynd Road the Made Ground is similar but also contains large amounts of ash and clinker. It is possible that the ash and clinker was imported and used to raise site levels and regrade the Site to create flat areas to construct the original shell factory buildings.

4.2.8 The superficial deposits are mainly sands and gravels with occasional clay and silt strata and in the southern Area in one exploratory hole (TP19) a 200mm thick stratum of peat is recorded.

4.2.9 The near surface bedrock strata comprise very weak mudstones and sandstones that are weathered to silty clays and sands near surface.

4.3 Naturally Occurring Geological Hazards

Radon

4.3.1 The mapping in the BRE document 'Radon: Guidance on protective measures for new buildings' (BRE, 2015) indicates that the study site lies in an area where radon protection measures are not required.

Third Party Database Searches

4.3.1 An assessment of certain potential geological hazards that may give rise to adverse foundation or construction conditions, as supplied by the BGS from their National Geoscience Information Service, is included in the Envirocheck report (LIG, 2017) (**Appendix F**). The assessment is generated automatically based on digital geological maps and the scope and the accuracy is limited by the methods used to create the dataset and it is therefore only indicative for the search area.

4.3.2 The information contained in the Envirocheck report has been reviewed and where considered necessary reassessed considering the specific information available for the Site. The modified assessment of the potential for geological hazards to be present on the Site is summarised below.

Table 4.2 - Summary of Site Geological Hazards

Hazard	Envirocheck Hazard Potential	PBA Opinion/ Comment
Collapsible Ground	No Hazard to Very Low	On the basis of the available data, PBA concur with this designation. The geological formations present are not known for their propensity to collapse settlement.
Compressible Ground	No Hazard to Moderate	The Moderate risk is considered to apply to the Alluvium that routinely contains soft clays and occasional organic strata both of which will settle when loaded. The Made Ground will also present a Moderate hazard due to its unconsolidated nature. The granular strata and the bedrock are expected to be of very low compressibility.
Ground Dissolution	No Hazard	On the basis of the available data, PBA concur with this designation. The geological formations present are not known for their propensity to dissolve.
Potential for Landslide Ground	Very Low to Moderate	The Moderate risk applies to the more steeply sloping areas of the site that coincide with the outcrops of the Gunthorpe and Radcliffe Formations that weather to a clay soil near surface. The steep cut and fill slopes associated with regrading parts of the site to construct buildings are also considered to be at a Moderate risk of slope instability.
Running Sand Ground	No Hazard Low to Low	The historical boreholes sunk on site record significant thicknesses of sand and gravel deposits on the southern parts of the Site. Therefore, the hazard should be considered Low to Moderate if excavations below the water table are proposed and very low if they are not.
Shrinking or Swelling Clay Ground	No Hazard Very Low	PBA disagree with the designation because geological mapping indicates that clay soils in the form of Alluvium and the weathered Gunthorpe and Radcliffe Formations are present. Therefore, the hazard should be considered as potentially Moderate where these formations are present.

Artificial (Non-Coal Mining) and Natural Cavities

4.3.3 Consideration is given to cavities because they have ground stability implications and they have the potential to form preferential pathways for contaminant migration.

4.3.4 A search of the PBA Natural Cavities Database indicated that there are no natural cavity locations recorded within 2000m of the site centre. The nearest recorded natural cavity location is 2.6km from the site centre bearing north-east.

4.3.5 A search of the PBA (Non-Coal) Mining Cavities Database indicated that there is no recorded man made cavity locations within 2000m of the site centre. The nearest recorded man made cavity location is 4.7km from site centre bearing south-east.

4.3.6 Whilst they are not recorded as mining cavities the armoury/ explosive store tunnels present on Site do constitute artificial cavities that have the potential to become unstable in the future and will need to be taken into account during redevelopment of the Site.

Coal Mining Cavities

4.3.7 The Coal Authority Interactive Map Viewer (http://mapapps2.bgs.ac.uk/coalauthority/home.html) indicates that the study site lies within an area that does not require a coal mining search. This is because the site is not underlain by the coal bearing rocks.

4.4 Controlled Waters – Ground water

4.4.1 Table 4.3 summarises information recorded in the Envirocheck report and from review of Environment Agency website regarding the hydrogeology of the site and groundwater vulnerability.

Table 4.3 - Summary of Hydrogeology and Groundwater Vulnerability Related Information

Item	Details
Aquifer Classification	- Alluvium - Secondary A Aquifer[1]. - Various River Terrace Deposits - Secondary A Aquifer[1]. - Gunthorpe and Radcliffe Formations - Secondary B Aquifers[2]. - Tarporley Siltstone Formation - Secondary A & B Aquifer.
Groundwater Vulnerability	High.
Depth to Groundwater	Variable depending on ground elevation and topography.
Groundwater Flow Direction	Regionally to be generally to the south towards the River Erewash or River Trent. Locally, likely be towards the on site watercourses (see Section 4.5).
Groundwater Quality	No recent data available.
Source Protection Zone	None within 1km.
Licensed Discharge Consents	None within 500m.
Licensed Abstractions	None within 1km.
Recorded Pollution Incidents	No significant or major incidents within 500m.

1. Secondary A Aquifer - Defined by the EA as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'.
2. Secondary B Aquifer - Defined by the EA as predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

4.4.2 The presence of a Secondary aquifers underlying the study site requires groundwater to be taken forward to the Tier 1 assessment as a potential receptor.

4.5 Controlled Waters – Surface Waters

4.5.1 Table 4.4 summarises the information recorded in the Envirocheck report with respect to the general hydrology of the Site.

Table 4.4 - Summary of Surface Water Related Information

Feature/ Parameter	Details
Tributaries of River Trent	A partly culverted drain runs eastward through the southern side of the Site. The drain is a tributary of the River Trent.
Water Quality	No recent data available.
Licensed Abstractions	None within 1km.
Recorded Pollution Incidents	No significant or major incidents with 1 km.
Licensed Discharge Consents	None on Site. Several within 500m for storm water or sewage overflow to tributaries of the River Trent.

4.6 Environmental Data Searches

4.6.1 Table 4.5 below summarises environmental information recorded in the Envirocheck Report (see **Appendix F**), the Environment Agency 'What's in my Backyard?' portal

Table 4.5 - Summary of Environmental Information

Category	Details
Landfills and Waste	There are no known Landfills or Licenced Waste Management Facilities within 500m of the Site.
Pollution Incidents	There are no significant major or pollution incidents recorded within 500m of the Site.
Fuel Stations	Three sites within 250m. One current site at the supermarket site 158m south and two obsolete sites 152m to the south-east and 228m to the north-west. Refer to *Off-Site PSC* below.

4.7 Ecological Systems

4.7.1 The interactive map on the MAGIC website (www.magic.gov.uk) indicates that there are no local or national nature reserves, Ramsar sites, Sites of Special Scientific Interest (SSSI) or Special Areas of Conservation present within 500m of the Site. The Attenborough Gravel Pits SSSI lies approximately 800m to the south-east of the Site and the drain that runs through the Site is linked to a system of drains and watercourses that discharge into this SSSI. A pollutant linkage is therefore deemed to exist between the Site and the SSSI. Ecological systems will therefore be taken forward to the Tier 1 assessment as a potential receptor.

4.8 Ancient Monuments

4.8.1 According to the MAGIC website (www.magic.gov.uk) there are no world heritage sites or scheduled monuments within 500m of the study site. These have therefore been eliminated as potential receptors for the purposes of ground condition assessment.

4.9 Unexploded Ordnance Threat

4.9.1 A Preliminary Unexploded Ordnance (UXO) Threat Assessment report has been produced for the Site in accordance with the recommendations of CIRIA report C681 (CIRIA, 2009) and is included in **Appendix G**.

4.9.2 The report concludes that whilst the WWII bombing density was very low locally, the site was identified by the Luftwaffe as a bombing target and the site was a military facility that both manufactured and stored ordnance and therefore there is a **Very High Probability of UXO Encounter** at the Site. The report recommends that a Detailed UXO Threat and Risk Assessment is carried out.

5 Preliminary Ground Stability Assessment

5.1 Introd uction

5.1.1 National Planning Policy Framework (NPPF) Clause 121 requires an assessment for a site potentially at risk from ground instability. The aspects considered with regards to ground instability are related to:

a. Ground instability due to unstable slopes;

b. Ground movements (subsidence) due to artificial cavities, natural cavities, coal and non-coal (underground) mining/ extraction activities, landsliding, clay shrinkage and swelling; and

c. Adverse foundation conditions (ranging from soft weak compressible materials and running sand sediments to hard strong rocks).

5.1.2 Consideration is given below to the risk of these potential causes of instability arising from existing ground conditions across the site, as identified by the data review. Comments are also provided on likely development requirements to mitigate ground conditions. As this stability appraisal has been based on publically available information obtained as part of a desk based data collection the comments made herein should therefore be considered as preliminary.

5.2 Unstable Slop es

Current Instability

5.2.1 The Site varies from flat ground to naturally relatively steeply sloping in some areas and the walkover survey has identified areas of artificially steepened slopes associated with cut and fill earthworks to create development platforms in the Payne Road area of the Site and around the entrance to the tunnels beneath Hobgoblin Wood.

5.2.2 The geological mapping does not record any landsliding on or in the vicinity of the study site and the walkover survey did not find any evidence of current ground instability at the study site generally.

5.2.3 However, relatively steeply sloping ground in conjunction with mapped areas of Radcliffe and Gunthorpe Formation strata, that weather to clay soils, are present on the northern side of the Site around Williams Road and Hobgoblin Wood. These areas have resulted in them being classified by the BGS as being of ‘Low’ or ‘Moderate’ Potential for Landslide Ground Instability.

Future Slope Instability

5.2.4 Development of any sloping site has the potential to cause slope instability. This can occur through one or more of the following activities:

- Steepening existing slopes or cutting new steep slopes;
- Forming permanent or temporary excavations in the ground;
- Altering the groundwater regime beneath the site, by localising water infiltration at balancing ponds and swales or via soakaways;

- Loading slopes by the placement of fill material to create development platforms; and
- Poor construction of earthworks resulting in unstable slopes in filled material.

5.2.5 To reduce the risks of future slope instability to a very low level a thorough ground investigation should be carried out to provide an accurate ground model for the site and to supply geotechnical properties for design of slopes and earthworks. The investigation should target the Low and Moderate landslide risk areas and the other areas of steeply sloping or terraced ground if construction is proposed in these areas. The investigation would need to be designed, managed and reported upon by a suitably qualified geotechnical engineer or engineering geologist. The investigation work should be preceded by a geomorphological mapping exercise to check for signs of latent slope instability such as solifluction lobes.

5.3 Natural and Artificial Cavities

5.3.1 The PBA managed Natural Cavities and (Non-Coal) Mining Cavities databases contain no records within 2km of the site centre and the Coal Authority does not identify the site to be within a coal mining affected area. Geological mapping indicates that the superficial and near surface bedrock deposits likely to be present beneath the study site do not contain any mineral of sufficient economic value to require underground working to exploit it. Therefore, the risk of instability from natural cavities and artificial cavities for the exploitation of minerals is considered to be very low and to pose no potential hazard to development.

5.3.2 The armoury/ explosive store tunnels beneath the Site should at this stage, in the absence of plans showing their exact locations and extents, be considered to be a localised hazard to development of the Site. The risks that potential future instability of these tunnels pose to future development of the Site can only be assessed once their lateral and vertical extents and stability have been recorded by a detailed survey and geotechnical assessment. There remains a possibility that there are other underground openings at the site for military use not directly connected to the known “armoury” tunnel network.

5.4 Ground Movements (subsidence) due to Clay-soils or Potential Adverse Foundation Conditions

5.4.1 The BGS mapping and previous ground investigation work (see **Appendices B and E**) infers that the majority of the site is directly underlain predominantly granular soils of the Tarporley Siltstone Formation and various River Terrace Deposits. Clay soils are also present associated with weathered Gunthorpe and Radcliffe Formation soils and Alluvium. The desk study has also identified that widespread deposits of Made Ground are present across the Site and that these are likely to be thickest where cut and fill earthworks has taken place and on the southern parts of the Site.

5.4.2 Therefore, the presence of clay soils and the potential for compressible ground and running sands will require consideration.

General presence of ‘Clay soils’

5.4.3 Clay soils will be present near the surface on the southern part of the Site associated with the deposits of Alluvium and on the northern parts of the Site associated with the Gunthorpe and Radcliffe Formations. All clay soils are to a varying degree susceptible to shrinkage and swelling due to both seasonal effects and due to the effect of trees and other vegetation. Standard geotechnical classification tests are likely to classify the clays of the Gunthorpe and Radcliffe Formations as low to intermediate plasticity (BGS, 1990) (low to medium volume change potential soils) (BRE, 1993). Alluvial clays can vary widely in their plasticity from low to potentially high plasticity (low to high volume change potential).

5.4.4 Design and construction protocols to manage the risk of shrinkage/ swelling movements on clay soil sites are well established with published guidelines produced by the Building Research Establishment and National House Building Corporation (NHBC) (NHBC, 2016). Adherence to these published guidelines, including guidelines on new proposed landscape plantings, should ensure no increased risk to structures or foundations as result of a clay soil classification of the site.

Potential Adverse Foundation Conditions

Made Ground

5.4.5 The presence of widespread Made Ground and possible changeable ground conditions over short distances between the Made Ground and natural soils give rise to potential adverse foundation conditions. Soft compressible and poorly consolidated Made Ground has the potential for unacceptably high magnitudes of total and/or differential settlement to take place when loaded by foundations and therefore foundations will require deepening to bear in suitable natural ground beneath the fill material.

Alluvium

5.4.6 The alluvial soils have been proven by ground investigation to be 'soft', to contain locally loose granular soils, and have been shown at one location to contain highly compressible peat. Furthermore, given their position topographically on the study site they are likely to be water-bearing. The potential implications of significant thicknesses of alluvial soils could be increased in-ground costs during development. These could be associated with the potential requirement for foundations to be deepened to bear in a competent stratum, and for foundation and service trenches to require full side support and dewatering. However, it should be noted that the Alluvium is mapped as being localised to a narrow strip on the southern part of the Site.

Granular Soils

5.4.7 On the lower lying southern parts of the Site the ground investigation has confirmed the laterally extensive granular soils to depths in excess of 9m bgl. These are present on the low lying southern parts of the site where shallow groundwater is present and running sand may be a hazard. Therefore, excavations for foundations or service trenches will require full side support to remain stable and at relatively shallow depths are likely to require dewatering.

5.5 Geotechnical Investigation

5.5.1 An intrusive geotechnical investigation will be required in due course to provide site specific information to assist in the temporary and permanent works design of foundations and infrastructure. Specifically, the investigation work should:

- Record the composition, thickness and geotechnical properties of the Made Ground.
- Record the lateral and vertical extents, soil types and geotechnical properties of all of the superficial geological formations present.
- Record the lateral extents, soil types and geotechnical properties of all of the bedrock geological formations present.
- Record the groundwater levels across the site generally but particularly in the lower lying parts of the Site where the thickest Made Ground and the granular soils of the Alluvium and River Terrace Deposits are present.

5.5.2 The geotechnical investigations should be carried out in accordance with current best practice and the requirements of BS5930: 2015 Code of practice for ground investigations.

6 Tier 1 Contamination Risk Assessment

6.1 Introduction

6.1.1 A Tier 1 qualitative contamination risk assessment has been undertaken for the study site. The methodology and criteria adopted by PBA for the preliminary geoenvironmental risk assessment is presented in **Appendix A**.

6.1.2 When there is a pollutant linkage (and therefore some measure of risk) it is necessary to determine whether the risk matters and therefore whether further action is required. PBA provide an estimation of the level of risk but do not comment on whether or not it is an unacceptable risk because the significance or acceptability of a risk depends on the individual stakeholder. Risk estimation involves predicting the likely consequence (what degree of harm might result) and the probability that the consequences will arise (how likely the outcome is).

6.2 Conceptual Site Model

6.2.1 The Tier 1 Preliminary Risk Assessment includes the development of a conceptual site model (CSM). The CSM describes the types and locations of potential contamination sources, the identification of potential receptors and the identification of potential transport/migration pathways.

6.3 Hazard Identification Based on Potentially Contaminative Land Uses

On Site

6.3.1 The Site has been in constant use since 1916 first as an artillery shell filling factory and then as a military base containing an ordnance depot and large engineering workshop as well as numerous accommodation and administration buildings.

6.3.2 One Site wide hazard has been identified in the form of contaminants in the general deposits of Made Ground that are likely to be present across the Site associated with its occupation as a military base for over 100 years.

6.3.3 A number of localised hazards have been identified associated with PSC, these are:

- The shell filling factory on the southern part of the Site where chemicals associated with explosives would have been stored.
- The large explosion that occurred at the shell filling factory in 1918 that could have released contaminative materials into the ground and spread them to nearby areas.
- The historical REME workshop is understood to be underlain by a significant thickness of ash fill and contaminative materials (such as paints, fuels, oils and other chemicals) were used in the workshop and at other general historical and current workshop areas.
- Various waste oil tanks on the southern part of the Site.
- The fuel filling station on the south-eastern part of the Site and it associated underground storage tanks of petrol and diesel.
- The location of the former underground paraffin tank on the southern side of the Site.
- The vehicle washing area on the on the south-eastern part of the Site where cleaning chemicals are used.

- The pile of soil of unknown origin on the western part of the Site that could contain material excavated from anywhere on the Site.
- The areas used for burning on the western side of the Site where ash residues can be expected.
- The historical and current rifle ranges on the western side of the Site where UXO and chemicals associated with explosives could be present.
- The location of the former fuel pump adjacent to Chetwynd Road where it is likely that underground fuel tanks were present historically.
- The waste store on the southern side of the Site where drums of chemicals were observed during the site walkover.
- The chemical store observed during the site walkover adjacent to the armoury tunnel.
- The storage compound for cans of fuel and drums of oil.
- The store for chemical and radioactive materials adjacent to Chetwynd Road.
- The armoury/ explosive storage tunnels.
- Alluvium underlying the site that has the potential to generate soil gases in organic strata.

6.3.4 For the study site the potential for the identified current and historical on site land uses to generate significant contamination is considered to be Low generally and locally Moderate at the locations of the identified localised PSC and are assigned hazard classifications are 2 and 3 respectively (out of 5), as defined in Table 1 of the PBA Assessment Methodology (see **Appendix A**).

Off Site

6.3.5 The surrounding area is characterised by very low risk current land uses generally comprising predominantly residential estates and some offices and commercial property. Historically, the area was farm land with the exception of the land immediately to the south that was historically part of the Ordnance Factory and later the Chetwynd Barracks site before being sold off and redeveloped for commercial or residential end use in the early 2000's. This relatively recent development of the former military land for residential end use would have been preceded by geoenvironmental investigation and, if necessary remediation, overseen by the local authority contaminated land officer. It is therefore assumed that this land now represents a very low risk to potential receptors on the study Site and is assigned a hazard classification of 1 (out of 5) as defined in Table 1 of the PBA Assessment Methodology (see **Appendix A**).

Summary of Potential Sources of Contamination (PSC)

6.3.1 PSC identified on the site or within the vicinity of the Site with plausible pollutant linkages to the study site are described on Table 6.1.

Table 6.1 - Summary of Identified PSC

PSC Reference	Description	Potential Contaminants
1	On Site - Contaminants in the General Made Ground - Site Wide.	Ground investigation has confirmed the presence of asbestos, heavy metals and hydrocarbons locally.
2	On Site - Former Shell Factory - Localised.	Explosives chemicals (trinitrotoluene, ammonium nitrate).
3	On Site - Former REME workshop - Localised.	Possible asbestos, heavy metals (from ash underlying the building), hydrocarbons (from fuels and oils), radioactivity (associated with luminescent paints).
4	On Site - General Historical and Current Workshops - Localised.	Possible asbestos, hydrocarbons (from fuels and oils and waste oil tanks), radioactivity (associated with luminescent paints).
5	On Site - Former and Current Fuel Filling Stations - Localised.	Hydrocarbons.
6	On Site - Former underground paraffin tank - Localised.	Hydrocarbons.
7	On Site - Fuel and Oil Storage Compound.	Hydrocarbons.
8	On Site - Vehicle washing Area - Localised.	Heavy metals and organic chemicals, surfactants.
9	On Site - Soil Pile - Localised.	Possible asbestos, heavy metals and hydrocarbons.
10	On Site - Burning Area - Localised.	Possible asbestos, heavy metals and hydrocarbons.
11	On Site - Explosive Storage Tunnels - Localised.	Explosives chemicals (trinitrotoluene, ammonium nitrate, RDX, HMX, PETN).
12	On Site - Rifle Ranges - Localised.	Possible heavy metals and hydrocarbons.
13	On Site - Waste and Chemical Stores - Localised.	Possible heavy metals, hydrocarbons and various organic and inorganic chemicals.
14	On Site - Radioactive Materials and Chemical Store - Localised.	Radioactivity, various organic and inorganic chemicals.
15	On Site - Alluvium – Localised.	Potential for soil gas (carbon dioxide, methane) generation within natural Alluvium.
16	On Site - Explosion at Former Shell Factory.	Potential for the explosion to have forced explosive chemicals into the ground and to have spread them more widely by the blast. Potential for the explosion to have released other contaminants by damaging pipework or tanks etc. Potential contaminants are; explosives chemicals, heavy metals, hydrocarbons and various organic and inorganic chemicals.

6.4 Hazard Assessment

6.4.1 In order to determine whether the identified hazards pose a risk it is necessary to identify the presence of potential receptors and pathways by which they can be exposed to the hazard.

Identification of Potential Receptors

6.4.2 Details of the potential receptors considered and whether or not the receptor is plausible are presented in the following table:

Table 6.2 - Identification of Potential Receptors

Receptor Type	Plausible Receptor (Y/N)	Sensitivity/ Value
Humans [Current users]	Yes - The site is currently a military facility.	High / 4
[Future occupiers]	Yes - Residential use proposed.	Very High / 5
[Construction & maintenance workers]	Yes - Workers will be present during construction and occasionally future maintenance.	High / 4
[Neighbouring resident]	Yes - Residential properties adjacent.	Very High / 5
Controlled Waters [Surface water]	Yes - Drain tributary of the River Trent runs through the Site.	Moderate / 3
[Groundwater]	Yes - Secondary A aquifers underlie the site.	Low / 2
Buildings / Services	Yes - Residential buildings with services are proposed.	Very Low / 1
Property: Including buildings.	Yes - Local buildings replaceable.	Very Low / 1
Ecological Systems *	Yes - On Site drain discharges into SSSI downstream of the Site.	High / 4
Designated archaeological sites (other than listed buildings) and other ancient monuments*	No - None within 1km.	-
*[1] Internationally or nationally designated sites (as defined in the statutory guidance (Draft Circular on Contaminated Land, DETR, 2000)) "in the local area" will be identified as potential ecological receptors.		

Identification of Potential Pathways and Pollutant Linkages

6.4.3 Table 2 in the PBA methodology describes possible pathways for each receptor type. Each of these possible pathways is then considered when assessing the possible pollutant linkage. The assessment of the potential pollutant linkages identified using information on potential sources, receptors and exposure pathways is presented as Table 1 (site wide) and Table 2 (localised) within **Appendix H**.

6.5 Risk Estimation

6.5.1 When there is a pollutant linkage (and therefore some measure of risk) it is necessary to determine whether the risk matters and therefore whether further action is required. Risk estimation involves predicting the likely consequence (what degree of harm might result) and the probability that the consequences will arise (how likely the outcome is).

6.5.2 The tables in **Appendix H** present assessments of consequence and probability for each potential pollutant linkage identified. Based on the information available, and assuming a worst case scenario, the estimated risks have been designated as follows:

Table 6.3 - Estimated Risks

Receptor Type	On Site - Site Wide Hazard (PSC 1) (see Table 1 in Appendix H)	On Site - Localised Hazards (PSCs 2 to 16) (see Table 2 in Appendix H)
Human Health Current Users (Military personnel living and working on Site)	Very Low	Very Low
Human Health Future Users (Residential Properties)	Low	Moderate
Human Health Off-Site (Residential Properties)	Very Low	Low
Human Health (Construction Workers)	Moderate/ Low	Moderate/ Low
Groundwater	Low	Moderate/ Low
Surface Water	Low	Low
Buildings / Services	Very Low	Very Low
Property	Very Low	Very Low
Ecological Systems	Very Low	Very Low

6.5.3 The risks to current site users are assessed as Very Low because contaminants in the ground and groundwater on the higher risk parts of the Site are generally sealed beneath hardstanding. During the construction phase there is an enhanced short term risk associated with the PSC's to construction workers from contact with the soil which is assessed as Moderate/ Low. In the long term post construction there are theoretical risks to future occupiers of the site that are assessed as Low to Moderate and to buildings, services and property on the site and ecological systems off site that are assessed as Very Low and to groundwater and surface waters that range from Low to Moderate/ Low.

6.5.4 A moderate risk is defined as 'It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.'

6.5.5 A low risk is defined as 'It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.'

6.5.6 A very low is defined as 'There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe'.

6.6 Risk Evaluation

6.6.1 Possible pollutant linkages are determined using professional judgement. If a linkage is considered possible, it is considered that this represents a potentially 'unacceptable risk' and therefore requires further consideration. This may be through remediation or mitigation or through further tiers of assessment.

6.6.2 The estimated risks ranging from Low to Moderate for the various identified receptors should be reduced to Very Low with the adoption of basic mitigation measures. Prior to construction such measures would be expected to include further intrusive geoenvironmental investigation and risk assessment and if necessary remediation of identified contamination. During construction such measures would include the use of dust suppression during excavation.

6.7 Confidence and Uncertainty

6.7.1 The assessment presented herein is based on publically available land use data, client supplied ground investigation and desk study data and a site reconnaissance. There may be conditions and potential sources of contamination present on site that have not been identified as part of the current study. The ground condition data and risk assessment given in this report is qualitative in nature.

6.7.2 The site contains site wide and localised potential sources of contamination and therefore site specific data from an intrusive ground investigation will be required in due course as part of the development process. This will provide information on near-surface ground conditions and allow refinement as required of the outline conceptual model.

6.7.3 Given the known history of the site, the site setting, scale of the identified PSCs and risk levels identified in the preliminary Tier 1 risk assessment, it is anticipated that the requirement to carry out the Phase 2 intrusive investigation (and associated quantitative risk assessment) can be satisfactorily dealt with through the conditions of a planning consent.

7 Conclusions and Recommendations

7.1 Conclusions

7.1.1 The study site is occupied by a military base that was previously the site of an artillery shell filling factory, maintenance workshops and an ordnance depot. There was a major explosion at the shell filling factory in 1918.

7.1.2 The study site is directly underlain by deposits of Alluvium, River Terrace Deposits and the Radcliffe, Gunthorpe and Tarporley Siltstone Formations. All of these deposits are classified as Secondary aquifers.

7.1.3 A UXO threat assessment report found that there is a very high probability of UXO encounter at the Site due to the former use of the site as a shell filling factory and store for munitions. The report recommends that a detailed UXO threat and risk assessment is carried out.

Ground Stability

7.1.4 Parts of the Site are relatively steeply sloping and underlain by clay soils that has resulted in their classification as being at Low and Moderate risk from landside ground instability. Other localised areas that have steep slopes associated with historical regrading of sloping ground will also be at increased risk of future instability.

7.1.5 Tunnels excavated beneath the site for munitions storage present a ground stability risk locally.

7.1.6 The presence of granular soils and shallow groundwater in the Alluvium and River Terrace Deposits will result in a risk of running sand conditions developing in excavations into these formations.

7.1.7 Parts of the study site are underlain by clay soils that will need to be taken into account in foundation design.

7.1.8 The presence of potentially low strength Alluvium and widespread Made Ground means that where these deposits are present compressible ground can be expected.

7.1.9 Highly compressible peat has been recorded on site locally in the Alluvium.

7.1.10 The risk of mining or natural cavities being present at the site is considered to be very low.

7.1.11 It is considered that the ground stability risks identified should not preclude development of the site because they can be successfully minimised or eliminated by the application of routine mitigation measures during design and construction work.

Potential Land Contamination

7.1.12 Numerous on site potential sources of contamination with pollutant linkages to the study site have been identified associated with the historical and current usage of the site as a military depot and shell factory. Most of these are located on the southern part of the Site.

7.1.13 No significant off site potential sources of contamination have been identified.

7.1.14 Potential pollutant linkages have been identified using the information on potential sources (contaminant types), receptors and exposure pathways. The estimated risks for the identified pollutant linkages that exist locally on the site are:

- The risks to current site users are assessed as Very Low because contaminants in the ground and groundwater on the higher risk parts of the Site are generally sealed beneath hardstanding.

- During the construction phase there is an enhanced short term risk associated with the PSC's to construction workers from contact with the soil which is assessed as Moderate/ Low.

- In the long term post construction there are theoretical risks to future occupiers of the site that are assessed as Low to Moderate, to off site residential properties as Very Low to Low, to buildings, services and property on the site and ecological systems off site that are assessed as Very Low and to groundwater and surface waters that range from Low to Moderate/ Low.

7.1.15 The estimated risks for the various identified receptors should be reduced to Very Low with the adoption of mitigation measures. Prior to construction such measures would be expected to include further intrusive geoenvironmental investigation and risk assessment and if necessary remediation of identified contamination. During construction such measures would include the use of dust suppression during excavation.

7.2 Recommendations

Geotechnical Investigation

7.2.1 A geotechnical ground investigation should be undertaken following planning consent as part of the development delivery process to provide site wide information for foundation and infrastructure design. In particular, the investigation should provide information on the following:

- Record the composition, thickness and geotechnical properties of the Made Ground.

- Record the lateral and vertical extents, soil types and geotechnical properties of all of the superficial geological formations present.

- Record the lateral extents, soil types and geotechnical properties of all of the bedrock geological formations present.

- Record the groundwater levels across the site generally but particularly in the lower lying parts of the Site where the thickest Made Ground and the granular soils of the Alluvium and River Terrace Deposits are present.

7.2.2 The investigation should also provide on this clay soil site some soil plasticity data to assist with the design of foundations in the presence of trees and hedgerows to be retained or where new landscape planting is proposed.

7.2.3 The geotechnical investigations should be carried out in accordance with current best practice and the requirements of BS5930: 2015 Code of practice for ground investigations.

Geoenvironmental Investigation

7.2.4 A Phase 2 intrusive (geoenvironmental) ground investigation will be required to fully characterise the ground conditions at the site and to target the identified PSCs. In particular, this work should provide information on the following:

- A general site wide investigation including a programme of chemical analysis of soil and groundwaters generally.

- A targeted investigation of the identified PSC's including chemical analysis of soil and groundwaters.
- Testing for explosive residues in the soil on the southern parts of the site associated with the former shell filling factory and the factory explosion.
- Testing for asbestos containing materials in the Made Ground generally.
- A soil gas monitoring programme targeting any significant thicknesses of Made Ground and Alluvium if it is proposed to construct buildings over them.

7.2.5 The work should be carried out in accordance with BS10175:2011+A1:2013 Investigation of potentially contaminated sites – code of practice.

8 References

A&C, 1998. Chilwell Station Establishment Development Plan. Land Quality Assessment Phase 2: Intrusive Investigation Land Quality Statement. Report Ref GR2713B. December 1998. Aspinwall & Company Ltd.

SKM, 2011. Chetwynd Barracks Land Quality Assessment Report Phase 1 Desk Study. February 2011. SKM Enviros.

BGS, 1990. British Geological Survey Technical Report WA/90/1 - Nottingham: A geological background for planning and development. British Geological Survey. 1991.

BRE, 1993. Digest 240. Low-rise buildings on shrinkable clay soils: Part 1. BRE, Watford.

BRE, 2015. Radon: Guidance on protective measures for new buildings'. Building Research Establishment, 2015.

BS 5930: 2015 Code of practice for ground investigations. British Standards Institution.

BS 10175:2011+A1:2013 Investigation of potentially contaminated sites – Code of Practice. British Standards Institution.

EA, 2004. CLR 11 Model procedures for the management of contaminated land. Department of the Environment Contaminated Land Report.

LIG, 2017. Envirocheck report No 114077061_1_1, dated 13th February 2017. Supplied by the Landmark Information Group.

NHBC, 2016. National House Building Council Technical Standards 2014.

NPPF, 2012. Department for Communities and Local Government. National Planning Policy Framework. March 2012.

9 Essential Guidance for Report Readers

This report has been prepared within an agreed timeframe and to an agreed budget that will necessarily apply some constraints on its content and usage. The remarks below are presented to assist the reader in understanding the context of this report and any general limitations or constraints. If there are any specific limitations and constraints they are described in the report text.

1 The opinions and recommendations expressed in this report are based on statute, guidance, and best practise current at the time of its publication. Peter Brett Associates LLP (PBA) does not accept any liability whatsoever for the consequences of any future legislative changes or the release of subsequent guidance documentation, etc. Such changes may render some of the opinions and advice in this report inappropriate or incorrect and the report should be returned to us and reassessed if required for re-use after one year from date of publication. Following delivery of the report PBA has no obligation to advise the Client or any other party of such changes or their repercussions.

2 Some of the conclusions in this report may be based on third party data. No guarantee can be given for the accuracy or completeness of any of the third party data used. Historical maps and aerial photographs provide a “snap shot” in time about conditions or activities at the site and cannot be relied upon as indicators of any events or activities that may have taken place at other times.

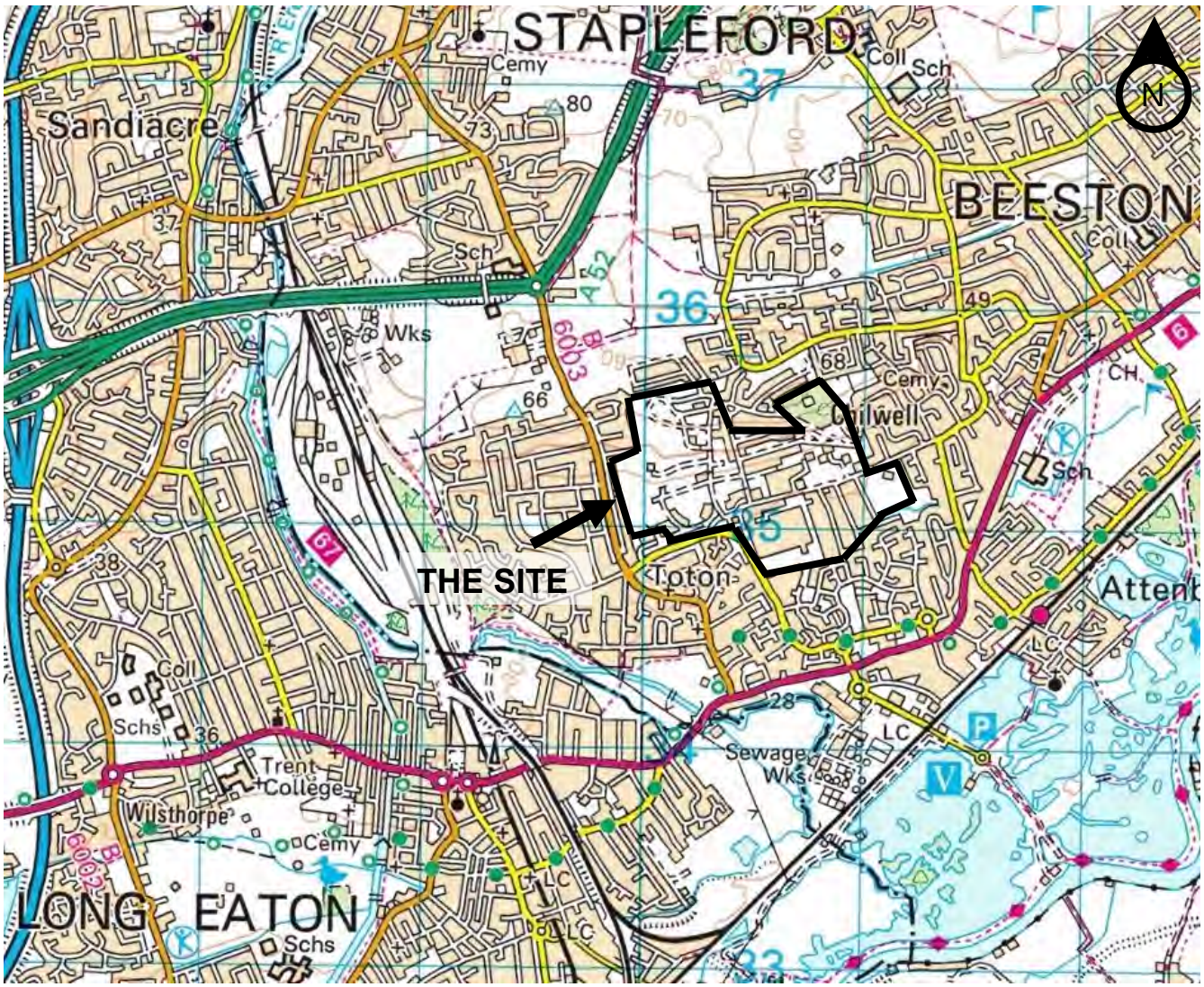
3 The conclusions and recommendations made in this report and the opinions expressed are based on the information reviewed. There may be ground conditions at the site that have not been disclosed by the information reviewed. Such undisclosed conditions cannot be taken into account in any analysis and reporting.

4 It should be noted that groundwater levels, groundwater chemistry, surface water levels, surface water chemistry, soil gas concentrations and soil gas flow rates can vary due to seasonal, climatic, tidal and man made effects.

5 This report has been written for the sole use of the Client stated at the front of the report in relation to a specific development or scheme. The conclusions and recommendations presented herein are only relevant to the scheme or the phase of project under consideration. This report shall not be relied upon or transferred to any other party without the express written authorisation of PBA. Any such party relies upon the report at its own risk.

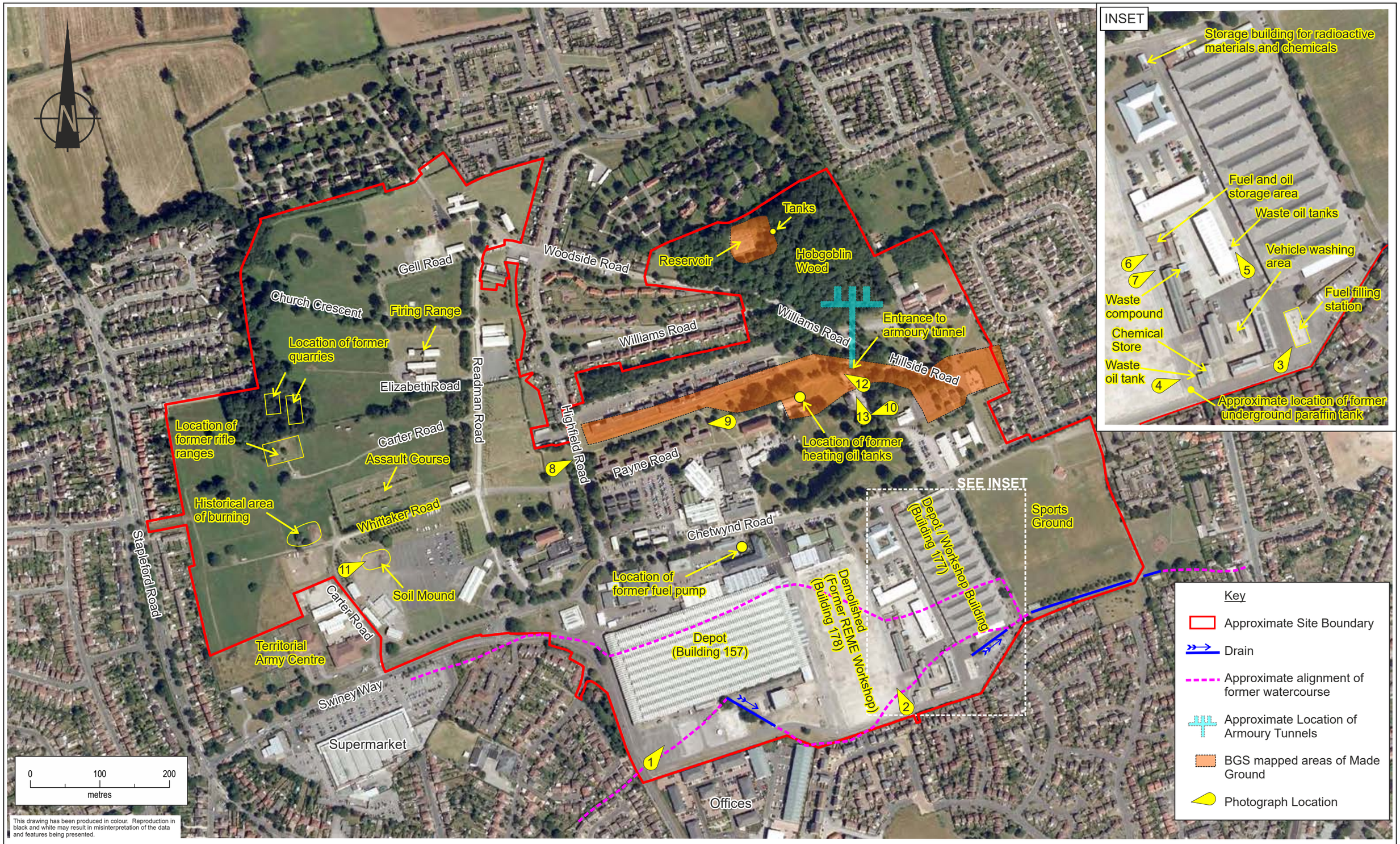
6 The interpretation carried out in this report is based on scientific and engineering appraisal carried out by suitably experienced and qualified technical consultants based on the scope of our engagement. We have not taken into account the perceptions of, for example, banks, insurers, other funders, lay people, etc., unless the report has been prepared specifically for that purpose. Advice from other specialists may be required such as the legal, planning and architecture professions, whether specifically recommended in our report or not.

7 Public or legal consultations or enquiries, or consultation with any Regulatory Bodies (such as the Environment Agency, Natural England or Local Authority) have taken place only as part of this work where specifically stated.



pba peterbrett	Client **Defence Infrastructure Organisation**	**Chetwynd Barracks Site Location Plan**	Date February 2017 A4 Scale NTS Drawn LT Checked RT Figure **1**
11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG [redacted]			

j:\37782 chetwynd barracks\word\reports\geo\fig 1 site location plan.doc



This drawing has been produced in colour. Reproduction in black and white may result in misinterpretation of the data and features being presented.

pba peterbrett

Offices throughout the UK and continental Europe.

www.peterbrett.com

Client

Defence Infrastructure Organisation

Google Earth

© 2016 Getmapping plc

Image Date: 2009

CHETWYND BARRACKS, CHILWELL, NOTTINGHAMSHIRE

SITE FEATURES PLAN

Date	14.02.2016
A3 Scale	1:5000
Drawn by	davco
Checked by	LTr
Revision	0

FIGURE 2

J:\37782 Chetwynd Barracks\Geo\03_ Figures & Drawings\Corel

Appendix A PBA Methodology for Assessing Contaminated Land

PBA Methodology for Assessing Land Contamination in England

1 Introduction

This document defines the approach adopted by PBA in relation to the assessment of land contamination in England. The aim is for the approach to (i) be systematic and objective, (ii) provide for the assessment of uncertainty and (iii) provide a rational, consistent, transparent framework.

When preparing our methodology we have made reference to various technical guidance documents and legislation referenced in Section 7 of which the principal documents are (i) Contaminated Land Statutory Guidance (Defra 2012), (ii) the Model Procedures for the Management of Contamination (CLR 11) (EA 2004), (iii) Contaminated land risk assessment: A guide to good practice (C552) (CIRIA 2001) and (iv) National Planning Policy Framework (DCLG 2012).

2 Dealing with Land Contamination

Government policy on land contamination aims to prevent new contaminated land from being created and promotes a risk based approach to addressing historical contamination. With regard to historical contamination, regulatory intervention is held in reserve for land that meets the legal definition and cannot be dealt with through any other means, including through planning. Land is only considered to be "contaminated land" in the legal sense if it poses an unacceptable risk.

UK legislation on contaminated land is principally contained in Part 2A of the Environmental Protection Act, 1990 (which was inserted into the 1990 Act by section 57 of the Environment Act 1995). Part 2A was introduced in England on 1 April 2000 and provides a risk-based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment. In 2004 the Model Procedures for the Management of Contamination (CLR 11) were published providing guidance on how the statutory requirements were to be delivery. The approach, concepts and principles for land contamination management promoted by CLR 11 are applied to the determination of planning applications.

Other legislative regimes may also provide a means of dealing with land contamination issues, such as the regimes for waste, water, environmental permitting, and environmental damage. Further, the law of statutory nuisance may result in contaminants being unacceptable to third parties whilst not attracting action under Part 2A or other environmental legislation.

2.1 Part 2A

The Regulations and Statutory Guidance that accompanied the Act, including the Contaminated Land (England) Regulations 2006, has been revised with the issue of The Contaminated Land (England) (Amendment) Regulations 2012 (SI 2012/263) and the Contaminated Land Statutory Guidance for England 2012.

Part 2A defines contaminated land as "*land which appears to the Local Authority in whose area it is situated to be in such a condition that, by reason of substances in, on or under the land that significant harm is being caused, or there is a significant possibility that such harm could be caused, or pollution of controlled waters is being, or likely to be, caused*".

Harm is defined as "*harm to the health of living organisms or other interference with the ecological systems of which they form part, and in the case of man, includes harm to his property*".

For the purposes of Part 2A, land is contaminated if it poses a significant possibility of significant harm (SPOSH).

Part 2A provides a means of dealing with unacceptable risks posed by land contamination to human health and the environment, and under the guidance enforcing authorities should seek to find and deal with such land. It states that "*under Part 2A the starting point should be that land is not contaminated land unless there is reason to consider otherwise. Only land where unacceptable risks are clearly identified, after a risk assessment has been undertaken in accordance with the Guidance, should be considered as meeting the Part 2A definition of contaminated land*". Further the guidance makes it clear that *"regulatory decisions should be based on what is reasonably likely, not what is hypothetically possible".*

The overarching objectives of the Government's policy on contaminated land and the Part 2A regime are:

"(a) To identify and remove unacceptable risks to human health and the environment.
(a) To seek to ensure that contaminated land is made suitable for its current use.
(b) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development".

The enforcing authority may need to decide whether and how to act in situations where decisions are not straight forward, and where there is uncertainty. "*In so doing, the authority should use its judgement to strike a reasonable balance between: (a) dealing with risks raised by contaminants in land and the benefits of remediating land to remove or reduce those risks; and (b) the potential impacts of regulatory intervention including financial costs to whoever will pay for remediation, health and environmental impacts of taking action, property blight, and burdens on affected people".* The authority is required to "*take a precautionary approach to the risks raised by contamination, whilst avoiding a disproportionate approach given the circumstances of each case".* The aim is "*that the regime produces net benefits, taking account of local circumstances*".

The guidance recognises that *"normal levels of contaminants in soils should not be considered to cause land to qualify as contaminated land, unless there is a particular reason to consider otherwise".*

Normal levels are quoted as:
"a) natural presence of contaminants' such as from underlying geology *'that have not been shown to pose an unacceptable risk to health and the environment*
b) …low level diffuse pollution, and common human activity…"

Similarly the guidance states that significant pollution of controlled waters is required for land to be considered contaminated and the "*fact that substances are merely entering water"* or "*where discharge from land is not discernible at a location immediately downstream"* does not constitute contaminated land.

To help achieve a more targeted approach to identifying and managing contaminated land in relation to the risk (or possibility) of harm to human health, the revised Statutory Guidance presented a new four category system for considering land under Part 2A, ranging from Category 4, where there is no risk that land poses a significant possibility of significant harm (SPOSH), or the level of risk is low, to Category 1, where the risk that land poses a significant possibility of significant harm (SPOSH) is unacceptably high.

For land that cannot be readily placed into Categories 1 or 4 further assessment is required. If there is a sufficiently strong case that the risks are of sufficient concern to cause significant harm/pollution or have the significant possibility of significant harm/pollution the land is to be placed into Category 2. If the concern is not met land is considered Category 3.

The technical guidance clearly states that the currently published SGV and GAC's represent *"cautious estimates of level of contaminants in soils"* which should be considered *"no risk to health or, at most, a minimal risk"*. These values do not represent the boundary between categories 3 and 4 and "*should be considered to be comfortably within Category 4".*

At the end of 2013 technical guidance in support of Defra's revised Statutory Guidance (SG) was published (CL:AIRE 2013) which provided:

- A methodology for deriving C4SLs for four generic land-uses comprising residential, commercial, allotments and public open space; and
- A demonstration of the methodology, via the derivation of C4SLs for six substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI) and lead.

2.2 Planning

The Local Planning Authority (LPA) is responsible for the control of development, and in doing so it has a duty to take account of all material considerations, including contamination.

Section 11, Paragraph 109 of the National Planning Policy Framework (NPPF) (DCLG 2012) states the planning system should contribute to and enhance the natural and local environment by *"preventing both new and existing developments from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water pollution"* and *"remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate"*. Paragraphs 120 and 121 describe the policy considerations the Government expects LPA to have in regard to land affected by contamination when preparing policies for development plans and in taking decisions on applications.

For planning purposes, the NPPF requires that the assessment of risks arising from contamination and remediation requirements should be considered on the basis of the current environmental setting, the current land use, and the circumstances of its proposed new use The NPPF stipulates that planning policies and decisions should ensure that "the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation"; and that "after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and adequate site investigation information, prepared by a competent person, is presented."

The level at which contamination is deemed to be unacceptable, or, gives rise to adverse effects under a planning context has not been identified but is envisaged to be more precautionary than the level required to detrmine land as contaminated under Part 2A.

In paragraph 121 the developer is required to ensure that land, after development, is not capable of being determined as contaminated land under Part 2A of the EPA 1990.

The principal planning objective is to ensure that any unacceptable risks to human health, buildings and other property and the natural and historical environment from the contaminated condition of the land are identified so that appropriate action can be considered and taken to address those risks. In order to grant a planning permission the Local Planning Authority (LPA) has to be satisfied that there is sufficient information about the condition of the land, its impacts and the availability of viable remedial options. NPPF Paragraph 21 states that *"planning policies and decisions should also ensure that adequate site investigation information, prepared by a competent person, is presented".* Site investigation information is further defined in the NPPF Glossary page 56 and that also states that investigations should be carried out in accordance with established procedures, including BS10175 (BSI 2011) that in turn links procedure to the requirements of CLR11.

A key distinction between the Soil Guideline Values (SGVs) and the C4SLs is the level of risk that they describe. As described by the Environment Agency (2009a):

"SGVs are guidelines on the level of long-term human exposure to individual chemicals in soil that, unless stated otherwise, are tolerable or pose a minimal risk to human health."

A letter from Lord de Mauley dated 3rd September 2014 provides more explicit direction to local authorities on the use of the C4SL in a planning context. The letter identifies four key points:

1) that the screening values were developed expressly with the planning regime in mind
2) their use is recommended in DCLG's planning guidance
3) soil concentrations below a C4SL limit are considered to be 'definitely not contaminated' under Part llA of the 1990 Environmental Protection Act and pose at most a 'low level of toxicological concern' and
4) exceedance of a C4SL screening value does not mean that land is definitely contaminated, just that further investigation may be warranted.

2.3 Building Control

The building control department of the local authority or private sector approved inspectors are responsible for the operation and enforcement of the Building Regulations (DCLG 2010) to protect the health, safety and welfare of people in and around buildings. Approved Document C requires the protection of buildings and associated land from the effects of contamination, to be applied (non-exclusively) in all changes of use from commercial or industrial premises, to residential property.

3 Approach

CLR 11 recommends a phased or tiered approach to risk assessment with the three tiers being:-

- Tier 1 - preliminary – a qualitative assessment forming part of a Phase 1 report,
- Tier 2 - generic - a quantitative assessment using published criteria to screen site specific ground condition data forming part of a Phase 2 report
- Tier 3 - detailed – a quantitative assessment involving the generation of site specific assessment criteria

Each tier of risk assessment comprises the following four stages:-

1. Hazard Identification – identifying potential contaminant sources on and off site;
2. Hazard Assessment – assessing the potential for unacceptable risks by identifying what pathways and receptors could be present, and what pollutant linkages could result (forming the Conceptual Site Model (CSM));
3. Risk Estimation – estimating the magnitude and probability of the possible consequences (what degree of harm might result to a defined receptor and how likely); and
4. Risk Evaluation – evaluating whether the risk needs to be, and can be, managed.

A PBA Phase 1 report normally comprises a desk study, walkover and Tier 1 risk assessment (the project specific offer defines the actual scope of work). This is the minimum requirement as defined by the NPPF, pp56. At Tier 1 the PBA approach to risk estimation involves identifying the magnitude of the potential consequence (taking into account both the potential severity of the hazard and the sensitivity of the receptor) and the magnitude of the likelihood i.e. the probability (taking into account the presence of the hazard and the receptor and the integrity of the pathway). This approach is promoted in current guidance such as R&D 66 (NHBC 2008).

The PBA approach is that if a pollution linkage is identified then it represents a potential risk which requires further consideration and either (1) remediation / direct risk management or (2) further tiers of assessment.

A PBA preliminary Phase 2 report comprises an intrusive investigation to collect site specific information, a Tier 2 quantitative generic risk assessment and a refinement of the CSM using the site specific data. Depending on the findings further investigation and/or progression to Tier 3 risk assessment and the generation of site specific assessment criteria may be required.

The PBA methodology provides an estimate of the level of risk, it does not identify a risk level at which the risk is considered “significant” and/or “unacceptable” as this is dependant on the view of the individual / stakeholder. For example; to a risk adverse stakeholder even a risk level of “very low” may be considered unacceptable and as such this stakeholder may require risk management options to be implemented.

4 Identification of Pollutant Linkages and Conceptual Site Model (CSM)

For all Tiers the underlying principle to ground condition assessment is the identification of *pollutant linkages* in order to evaluate whether the presence of a source of contamination could potentially lead to harmful consequences. A pollutant linkage consists of the following three elements:-

- A source/hazard – a substance or situation which has the potential to cause harm or pollution;
- A pathway – a means by which the hazard moves along / generates exposure; and
- A receptor/target – an entity which is vulnerable to the potential adverse effects of the hazard.

The *Conceptual Site Model* identifies the types and locations of potential contaminant sources/hazards and potential receptors and potential migration/transportation pathway(s). The CSM is refined as the assessment progresses through the Tiers.

4.1 Hazard Identification

A hazard is a substance or situation that has the potential to cause harm. Hazards may be chemical, biological or physical (e.g. explosive gases).

At Tier 1 the potential for hazards to be present is determined from consideration of the previous or ongoing activities on or near to the site in accordance with the criteria presented in the **Table 1**.

Based on the land use information Potential Contaminants of Concern (PCOC) are identified. The PCOC direct the scope of the collection of site specific data and the analytical testing selected for subsequent Tiers.

At Tier 2 the site specific data is screened using published assessment criteria (refer to PBA document entitled Rationale for the Selection of Tier 2 Assessment Criteria). In general, published criteria have been developed using highly conservative assumptions and therefore if the screening criterion is not exceeded then the PCOC is eliminated as a potential Hazard. It should be noted that exceedance does not necessarily indicate that a site is contaminated and/or unsuitable for use only that the PCOC is retained as a potential Hazard. Published criteria are generated using models based on numerous and complex assumptions. Whether or not these assumptions are appropriate in a site-specific context requires confirmation on a project by project basis and would form part of a Tier 3 assessment.

When reviewing or assessing site specific data PBA utilise published guidance on comparing contamination

data with a critical concentration (CL:AIRE/CIEH 2008) which presents a structured process for employing statistical techniques for data assessment purposes. The benefit of the statistical tool is uncertainty is quantified and decisions are made knowing the strength of the evidence. Correct decision probability is a function of sample size, difference in the mean and the critical concentration, variation in measured values and the significance level.

4.2 Receptor and Pathway Identification

For all Tiers the potential receptors (for both on site and adjoining land) that will be considered are:

- Human Health – including current and future occupiers, construction and future maintenance workers, and neighbouring properties/third parties;
- Ecological systems; *[1]
- Controlled waters *[2] – including surface water and groundwater;
- Property, Animal or Crop (existing or proposed) - including buildings, service lines and pipes, crops, livestock, pets, woodland; and
- Archaeological sites and ancient monuments.

*[1] International or nationally designated sites (as defined in the statutory guidance (Defra Circular 04/12)) "in the local area" will be identified as potential ecological receptors. A search radius of 1, 2 or 5km will be utilised depending on the site specific circumstances (see also pathway identification). The Environment Agency has published an ecological risk assessment framework (EA 2008) which promotes (as opposed to statutorily enforces) consideration of additional receptors to include locally protected sites and protected or notable species. These additional potential receptors will only be considered if a Phase 1 habitat survey, undertaken in accordance with guidance (JNCC 1993), is commissioned and the data provided to PBA. It should be noted that without such a survey the Tier 1 risk assessment may conclude that the identification of potential ecological receptors is inconclusive (refer to PBA Specification for Phase 1).

*[2] the definition of "pollution of controlled water" was amended by the introduction of Section 86 of the Water Act 2003. For the purposes of Part 2A groundwater does not include waters above the saturated zone and our assessment does not therefore address perched water other than where development causes a pathway to develop.

If a receptor is taken forward for further assessment it will be classified in terms of its sensitivity, the criteria for which are presented in **Table 2**. Table 2 has been generated using descriptions of environmental receptor importance/value given in various guidance documents including R&D 66 (NHBC 2008) and Transport Analysis Guidance (based on DETR 2000). Human health and buildings classifications have been generated by PBA using the attribute description for each class.

The exposure pathway and modes of transport that will be considered are presented in **Table 3**.

4.3 Note regarding Ecological Systems

The Environment Agency (EA) has developed an ecological risk assessment framework which aims to provide a structured approach for assessing the risks to ecology from chemical contaminants in soils (EA 2008). In circumstances where contaminants in water represent a potential risk to aquatic ecosystems then risk assessors will need to consider this separately.

The framework consists of a three tiered process:-

- Tier 1 is a screening step where the site soils chemical data is compared to a soil screening value (SSV)
- Tier 2 uses various tools (including surveys and biological testing) to gather evidence for any harm to the ecological receptors
- Tier 3 seeks to attribute the harm to the chemical contamination

Tier 1 is preceded by a desk study to collate information about the site and the nature of the contamination to assess whether pollutant linkages are feasible. The framework presents ten steps for ecological desk studies and development of a conceptual site model as follows.

1 Establish Regulatory Context
2 Collate and Assess Documentary Information
3 Summarise Documentary Information
4 Identify Potential Contaminants of Concern
5 Identify Likely Fate Transport of Contaminants
6 Identify Potential Receptors of Concern
7 Identify Potential Pathways of Concern
8 Create a Conceptual Site Model
9 Identify Assessment and Measurement Endpoints
10 Identify Gaps and Uncertainties

The information in a standard PBA Phase 1 report covers Steps 1 to 4 inclusive. Step 5 considers fate and transport of contaminants and it should be noted that our standard report adopts a simplified approach considering only transport mechanisms. A simplified approach has also been adopted in respect of Steps 6 and 7 receptors (a detailed review of the ecological attributes has not been undertaken) and pathways (a food chain assessment has not been undertaken). Step 9 is outside the scope of our standard Phase 1 report.

It should be noted that the Tier 1 assessment for ecological systems (i.e. where designated sites are identified) as part of a Phase 1 report will assess the viability of the mode of transport given the site specific circumstances not specific pathways.

The Tier 1 risk assessment may conclude that the risk to potential ecological receptors is inconclusive (see PBA Specification for Phase 1).

4.4 Note regarding Controlled Waters

Controlled Waters are rivers, estuaries, coastal waters, lakes and groundwaters, but not perched waters.

The EU Water Framework Directive (WFD) 2000/60/EC provides for the protection of sub-surface, surface, coastal and territorial waters through a framework of river basin management. The EU Updated Water Framework Standards Directive 2014/101/EU amended the EU WFD to update the international standards therein; it enters into force on 20 November 2014 and its provisions must be transposed in Member State law by 20 May 2016. Other EU Directives in the European water management framework include:

- the EU Priority Substances Directive 2013/39/EU;

- EU Groundwater Pollutants Threshold Values Directive 2014/80/EU amending the EU Groundwater Directive 2006/118/EC; and

- EU Biological Monitoring Directive 2014/101/EU.

The Ground Water Daughter Directive (GWDD) was enacted by the Groundwater Regulations (2009), which were subsumed by the Environmental Permitting Regulations (2010) which provide essential clarification including on the four objectives specifically for groundwater quality in the WFD:-

- Achieve 'Good' groundwater chemical status by 2015, commonly referred to as 'status objective';
- Achieve Drinking Water Protected Area Objectives;
- Implement measures to reverse any significant and sustained upward trend in groundwater quality, referred to as 'trend objective'; and
- Prevent or limit the inputs of pollutants into groundwater, commonly referred to as 'prevent or limit' objectives

The Water Act 2003 (Commencement No.11) Order 2012 amends the test for 'contaminated land' which relates to water pollution so that pollution of controlled waters must now be "significant" to meet the definition of contaminated land.

River Basin Management Plans (RBMP) have been developed for the 11 River Basin Districts in England and Wales. These were released by Defra in 2009 (Defra 2009).

These RBMP's establish the current status of waters within the catchments of the respective Districts and the current status of adjoining waters identified. As part of a Tier 2 risk assessment water quality data is screened against the WFD assessment criteria. Compare to the RBMP's current status of waters for the catchment under consideration would form part of a Tier 3 assessment.

5 Risk Estimation

Risk estimation classifies what degree of harm might result to a receptor (defined as consequence) and how likely it is that such harm might arise (probability).

At Tier 1 the consequence classification is generated by multiplying the hazard classification score and the receptor sensitivity score. This approach follows that presented in the republished R&D 66 (NHBC 2008).

The criteria for classifying probability are set out in **Table 4** and have been taken directly from Table 6.4 CIRIA C552 (CIRIA 2001). Probability considers the integrity of the exposure pathway.

The consequence classifications detailed in **Table 5** have been adapted from Table 6.3 presented in C552 and R&D 66 (Annex 4 Table A4.3).

The Tier 1 risk classification is estimated for each pollutant linkage using the matrix given in **Table 6** which is taken directly from C552 (Table 6.5). Subsequent Tiers refine the CSM through retention or elimination of potential hazards and pollutant linkages.

6 Risk Evaluation

In order to put the Tier 1 risk classification into context the likely actions are described in **Table 7** which is taken directly from C552 (Table 6.6). Subsequent Tiers identify potential risk management options through remediation and/or mitigation measures.

7 References

BSI 2007 BS 8485 Code of Practice for characterisation and remediation from ground gas in affected developments.
BSI 2011 BS 10175 (2011) Code of practice - Investigation of potentially contaminated sites

CIRIA 2001: Contaminated land risk assessment – a guide to good practice C552.

CIRIA 2008: Assessing risks posed by hazardous ground gases to buildings C655

CL:AIRE/EIH 2008 Guidance on Company Soil Contamination Data with a Critical Concentration. Published by Contaminated Land: Applications in Real Environments (CL:AIRE)

CL:AIRE 2013 SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report published by Contaminated Land: Applications in Real Environments (CL:AIRE) 20th December 2013

DCLG 2010 Building Regulations 2010 Approved Document C Site preparation and resistance to contaminants and moisture.

DCLG 2012 National Planning Policy Framework.

DETR 2000 Methodology for Multi Modal Studies. Volume 2 Section 4. The Environmental Objective.

Defra Circular 01/2006

Defra Circular 04/2012 Environmental Protection Act 1990: Part 2A. Contaminated Land Statutory Guidance.

DEFRA, 2006 The Contaminated Land (England) Regulations 2006.

DEFRA, 2012 The Contaminated Land (England) (Amendment) Regulations 2012 (SI2012/263).

DEFRA, 2012 Environmental Protection Act 1990: Part 2A. Contaminated Land Statuary Guidance. April 2012.

DEFRA, 2013 Environmental Damage (Prevention and Remediation) Regulations 2009: Guidance for England and Wales

Defra '2009 Water for Life and Livelihoods. River Basin Management Plan. (11 Districts: Anglia, Dee, Humber, Northumbria, Northwest, Severn, Solway and Tweed, Southeast, Thames, Western Wales) December 2009

EA 2004: The Model Procedures for the Management of Land Contamination CRL 11 published by the Environment Agency (EA).

EA 2008 Ecological Risk Assessment Science Report Series SC070009 published by the Environment Agency (EA).

JNCC 1993 Handbook for Phase 1 Habitat Survey – A Technical for Environmental Audit prepared by the Joint Nature Conservancy Council (JNCC)

NHBC/EA/CIEH 2008: R&D Publication 66 Guidance for the safe development of housing on land affected by contamination.

Table 1: Criteria for Classifying Hazards / Potential for Generating Contamination

Classification/Score	Potential for generating contamination/gas based on land use
Very Low 1	Land Use: greenfield Contamination: None. Gas generation potential : Inert Made Ground
Low 2	Land Use: residential, retail or office use, recent small scale industrial. Contamination: None or locally slightly elevated concentrations. Gas generation potential : Shallow thickness of Alluvium
Moderate 3	Land Use: railway yards, collieries, scrap yards, light industry, engineering works. Contamination: Locally elevated concentrations. Gas generation potential : Dock silt and substantial thickness of organic alluvium/peat
High 4	Land Use: gas works, chemical works, heavy industry, non-hazardous landfills. Contamination: Possible widespread elevated concentrations. Gas generation potential : Shallow mine workings Pre 1960's landfill
Very High 5	Land Use: hazardous waste landfills. Contamination: Likely widespread elevated concentrations. Gas generation potential : Domestic landfill post 1960

"Greenfield" is land which has not been developed including not used for crop production or animal husbandry and no contamination source therefore no pollutant linkages.

Table 2: Criteria for Classifying Receptor Sensitivity/Value

Classification/Score	Definition
Very Low 1	Receptor of limited importance Groundwater: Non aquifer Surface water: GQA Grade F Ecology: No local designation Buildings: Replaceable Human health: Unoccupied/limited access
Low 2	Receptor of local or county importance with potential for replacement Groundwater: Secondary aquifer Surface water: GQA Grade D/E Ecology: local habitat resources Buildings: Local value Human health: Minimum score 4 where human health identified as potential receptor
Moderate 3	Receptor of local or county importance with potential for replacement Groundwater: Principal aquifer Surface water: GQA Grade B/C Ecology: County wildlife sites, Areas of Outstanding Natural Beauty (AONB) Buildings: Area of Historic Character Human health: Minimum score 4 where human health identified as potential receptor
High 4	Receptor of county or regional importance with limited potential for replacement Groundwater: Source Protection Zone 2 Surface water: GQA Grade A Ecology: SSSI, National or Marine Nature Reserve (NNR or MNR) Buildings: Conservation Area Human health: Minimum score 4 where human health identified as potential receptor
Very High 5	Receptor of national or international importance Groundwater: Source Protection Zone 1 Surface water: GQA Grade A Ecology: Special Areas of Conservation (SAC and candidates), Special Protection Areas (SPA and potentials) or wetlands of international importance (RAMSAR) Buildings: World Heritage site Human health: Residential, open spaces and uses where children are present

Table 3: Exposure Pathway and Modes of Transport

Receptor	Pathway	Mode of transport
Human health	Ingestion	Fruit or vegetable leaf or roots
		Contaminated water
		Soil/dust indoors
		Soil/dust outdoors
	Inhalation	Particles (dust / soil) – outdoor
		Particles (dust / soil) - indoor
		Vapours – outdoor - migration via natural or anthropogenic pathways
		Vapours - indoor - migration via natural or anthropogenic pathways
	Dermal absorption	Direct contact with soil
		Direct contact with waters (swimming / showering)
		Irradiation
Groundwater	Leaching	Gravity / permeation
	Migration	Natural – groundwater as pathway Anthropogenic (e.g. boreholes, culverts, pipelines etc.)
Surface Water	Direct	Runoff or discharges from pipes
	Indirect	Recharge from groundwater
	Indirect	Deposition of wind blown dust
Buildings	Direct contact	Sulphate attack on concrete, hydrocarbon corrosion of plastics
	Gas ingress	Migration via natural or anthropogenic paths
Ecological systems	See Notes	Runoff/discharge to surface water body
	See Notes	Windblown dust
	See Notes	Groundwater migration
	See Notes	At point of contaminant source
Animal and crop	Direct	Wind blown or flood deposited particles / dust / sediments
	Indirect	Plants via root up take or irrigation. Animals through watering
	Inhalation	By livestock / fish - gas / vapour / particulates / dust
	Ingestion	Consumption of vegetation / water / soil by animals

Table 4: Classification of Probability

Classification	Definition
High likelihood	There is a pollution linkage and an event either appears very likely in the short-term and almost inevitable over the long-term, or there is already evidence at the receptor of harm / pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter-term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

Table 5: Classification of Consequence (score = magnitude of hazard Table 1 and sensitivity of receptor Table 2)

Classification / Score	Examples
Severe **20-25**	Human health effect - exposure likely to result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Equivalent to EA Category 1 incident (persistent and/or extensive effects on water quality leading to closure of potable abstraction point or loss of amenity, agriculture or commercial value. Major fish kill. Ecological effect - short-term exposure likely to result in a substantial adverse effect. Catastrophic damage to crops, buildings or property
Medium **13-19**	Human health effect - exposure could result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - equivalent to EA Category 2 incident requiring notification of abstractor Ecological effect - short-term exposure may result in a substantial adverse effect. Damage to crops, buildings or property
Mild **6-12**	Human health effect - exposure may result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - equivalent to EA Category 3 incident (short lived and/or minimal effects on water quality). Ecological effect - unlikely to result in a substantial adverse effect. Minor damage to crops, buildings or property. Damage to building rendering it unsafe to occupy (for example foundation damage resulting in instability).
Minor **1-5**	No measurable effect on humans. Protective equipment is not required during site works. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects to crops, buildings or property. The loss of plants in a landscaping scheme. Discolouration of concrete.

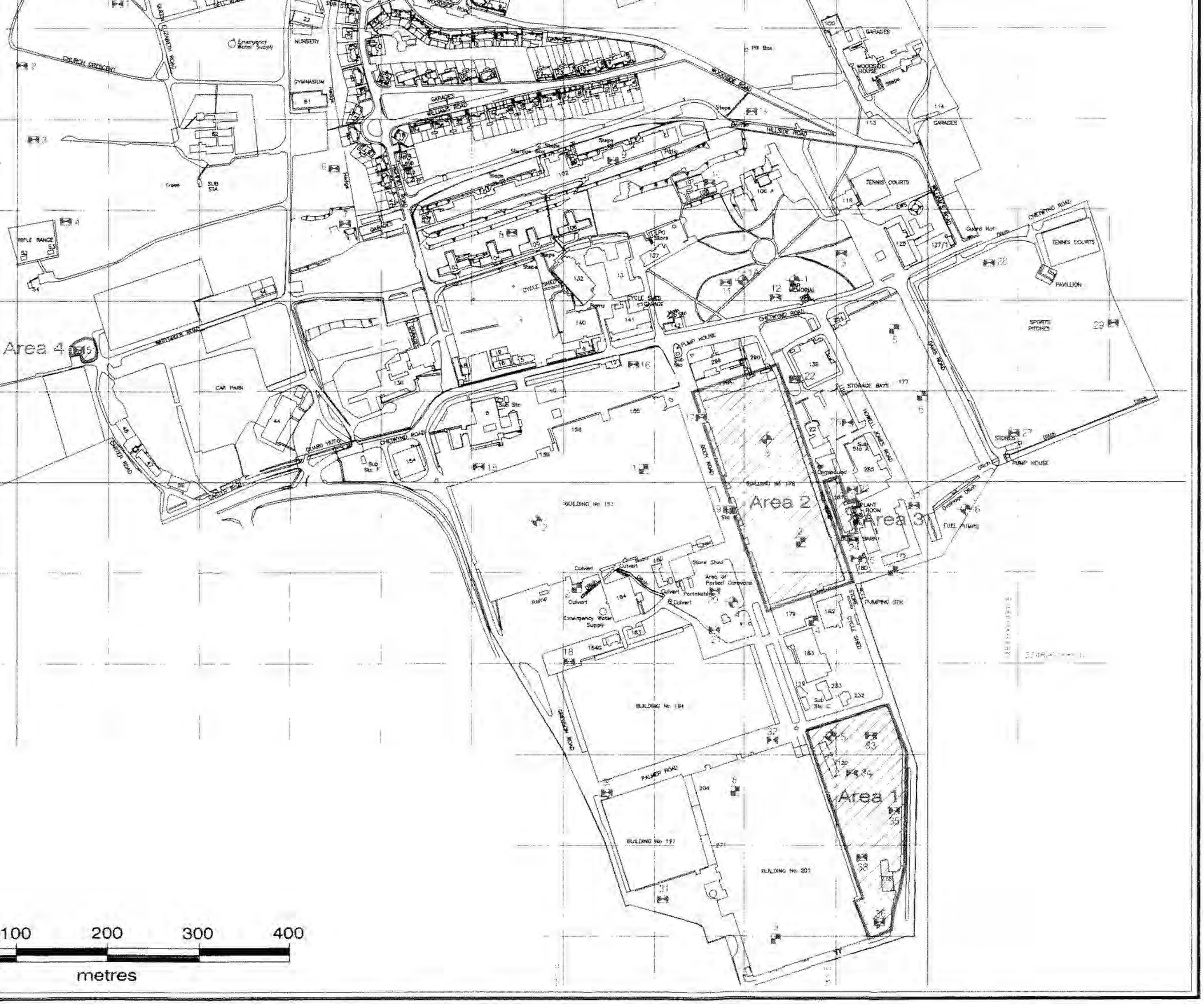
Table 6: Classification of Risk (Combination of Consequence Table 5 and Probability Table 4)

	Consequence			
Probability	***Severe***	***Medium***	***Mild***	***Minor***
High likelihood	Very high	High	Moderate	Low
Likely	High	Moderate	Moderate/low	Low
Low likelihood	Moderate	Moderate/low	Low	Very low
Unlikely	Moderate/low	Low	Very low	Very low

Table 7: Description of Risks and Likely Action Required

Risk Classification	Description
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation is likely to be required in the short term.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer-term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Appendix B Data from Previous Reports



REV. DESCRIPTION

DEFENCE ESTATE ORGANISATION

PHASE 2 LAND QUA ASSESSMENT CHIL

FIGURE 2

SITE LAYOUT WITH EXPL HOLE LOCATIONS AND F SURVEY AREAS

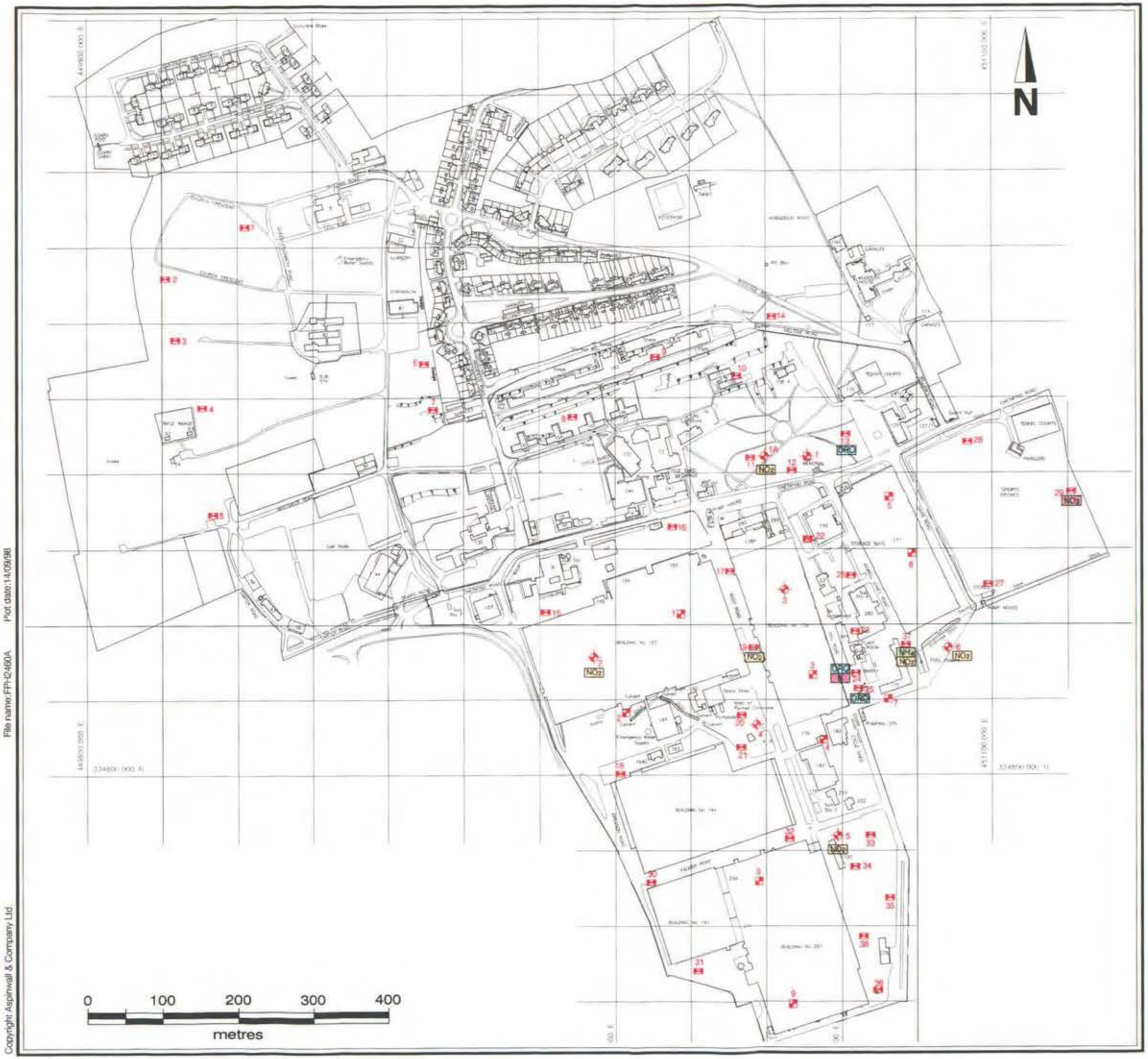
SCALE	1:5000
CONTENT	HHU
CHECKED	MWW

CA

DR

DA

Aspinwal
CONSULTANTS IN ENVI



KEY:

- Borehole location
- Trial pit location
- Window sampling location

Locations where parameter exceeds UK drinking water standard or equivalent Dutch intervention value.

- DRO — Diesel Range organics
- NH4 — Ammoniacal nitrogen
- NO2 — Nitrite
- NO3 — Nitrate
- B — Benzene

REV.	DESCRIPTION	DATE

DEFENCE ESTATE ORGANISATION

PHASE 2 LAND QUALITY ASSESSMENT CHILWELL STATION

FIGURE 5

LOCATION OF IDENTIFIED CONTAMINANTS IN GROUNDWATER

SCALE	1:5000	CAN	GR2713B
CONTENT	HHU	DRAWN	FPH
CHECKED	JMW	DATE	SEPT 1998

Aspinwall & company
CONSULTANTS IN ENVIRONMENTAL MANAGEMENT

File name:FPH2460A Plot date:14/09/98

KEY:

- Borehole location
- Trial pit location
- Window sampling location

Location where parameter exceeds ICRCL threshold values for domestic gardens and housing, exept for PAH value where the Dutch Intervention value (not corrected for soil type) is exceeded

- As — Arsenic
- A — Asbestos
- B — Benzene
- Bo — Boron
- Cd — Cadmium
- Cu — Copper
- DRO — Diesel Range Organics
- Ni — Nickel
- PAH — Polyaromatic hydrocarbons
- Pb — Lead
- SO_4 — Sulphate
- S2 — Sulphide
- Zn — Zinc

REV.	DESCRIPTION	DATE

DEFENCE ESTATE ORGANISATION

PHASE 2 LAND QUALITY ASSESSMENT CHILWELL STATION

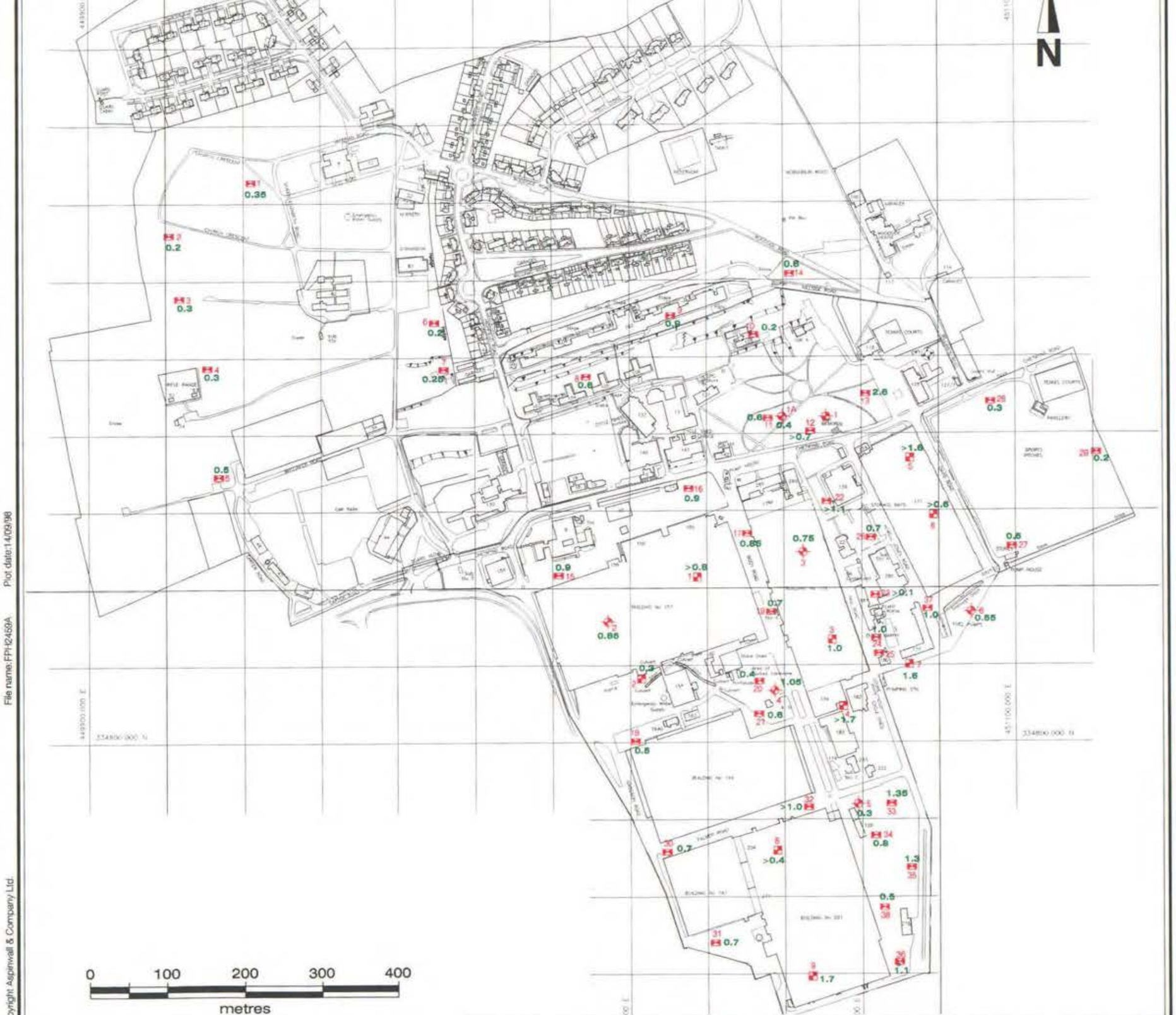
FIGURE 4

LOCATION OF IDENTIFIED CONTAMINANTS IN SOILS

SCALE	1:5000	CAN	GR2713B
CONTENT	HHU	DRAWN	FPH
CHECKED		DATE	DEC 1998

Aspinwall&company
CONSULTANTS IN ENVIRONMENTAL MANAGEMENT

File name:FPH2462A Plot date:15/12/98



Borehole location

Trial pit location

Window sampling location

0.3 Depth to base of Made Ground (m)

REV.	DESCRIPTION	DATE

DEFENCE ESTATE ORGANISATION

PHASE 2 LAND QUALITY ASSESSMENT CHILWELL STATION

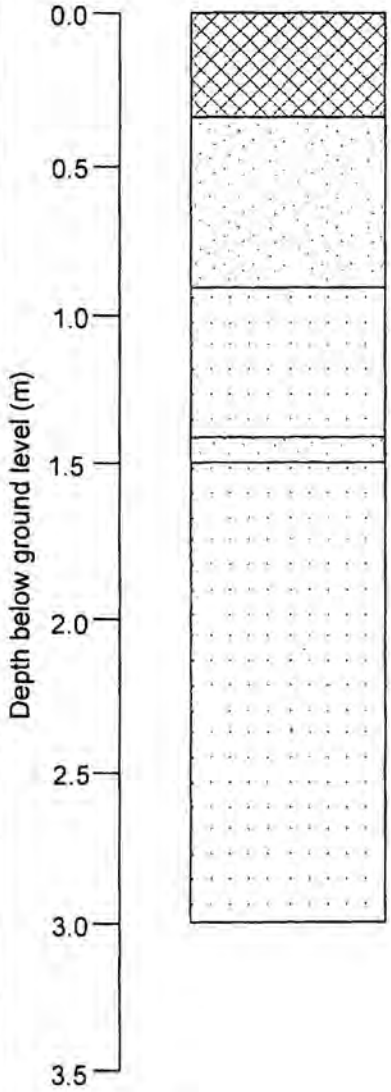
FIGURE 3

DEPTH TO BASE OF MADE GROUND

SCALE	1:5000	CAD	GR2713B
CONTENT	JCM	DRAWN	FPH
CHECKED	JMW	DATE	SEPT 1998

Aspinwall&company
CONSULTANTS IN ENVIRONMENTAL MANAGEMENT

Aspinwall&company	TRIAL PIT LOG	TP1
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Depth (m)	DESCRIPTION
0.35 m	MADE GROUND - Loose dark brown sandy topsoil with some gravel of glass, brick, pot and a little boulders of metal bar and wire.
0.9 m	Dry, firm ochre brown and grey mottled clayey SAND with some black mottling.
1.4 m	Damp, soft to firm grey clayey SANDSTONE.
1.5 m	Soft damp red SAND with red/grey SANDSTONE ground.
3.0 m	Very stiff fissured silty SANDSTONE with red coloration on fissured surfaces and pale brown/grey SANDSTONE.
	END OF TRIAL PIT 3.0 m

Scale: 1:25

Remarks: Concrete base in north of pit at 0.2 m.

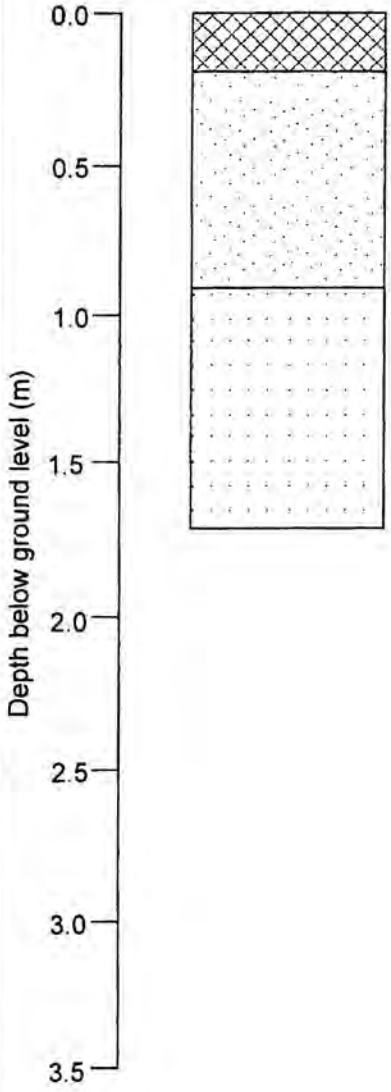
Water: None Encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Soil	Soil		**Logged by:** MAP
Depth	0.2-0.3 m	0.5-0.6 m	0.9-1.0 m	0.9-1.0 m	1.4-1.5 m	1.4-1.5 m		
Type	P. Pot	P. Pot	P. Pot	Amber	P. Pot	Amber		**Date:** 22.07.98
Test		✓			✓			

Aspinwall&company	TRIAL PIT LOG	TP2
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



DESCRIPTION

MADE GROUND - Loose dark brown sandy topsoil with a little pot, brick and plastic cobble fill.

Firm, dark brown SAND with some fine to medium gravel and roots.

Stiff to very stiff pale brown/grey mottled SAND with many coarse cobbles of SANDSTONE.

Very stiff pale brown/ochre brown mottled SANDSTONE.

END OF TRIAL PIT 1.7 m

Scale: 1:25

Remarks:

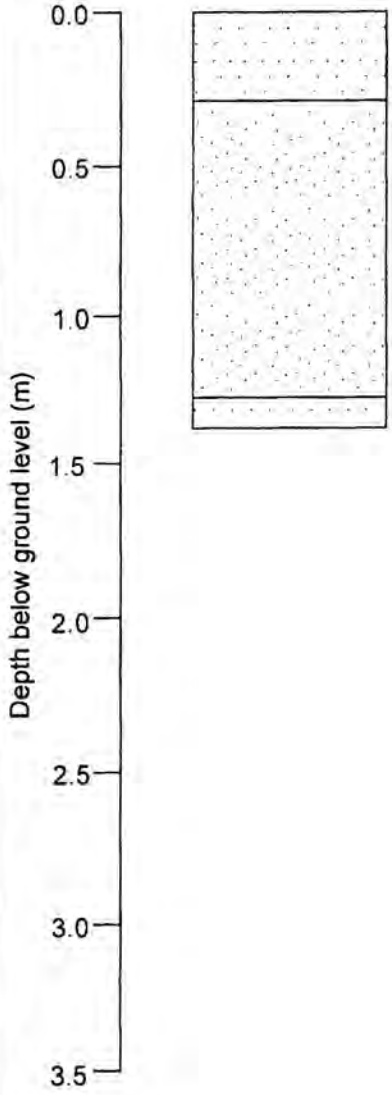
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.1-0.2 m	0.4-0.5 m	0.4-0.5 m	0.6-1.7 m				
Type	P. Pot	P. Pot	Amber	P. Pot				**Date:** 20.07.98
Test	✓			✓				

Aspinwall&company	TRIAL PIT LOG	TP3
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



DESCRIPTION

MADE GROUND - Loose, dark brown sandy topsoil with fine roots and a little clinker.

Firm pale brown/grey mottled SAND with some organic staining and fissures and plant debris with some very stiff SANDSTONE cobbles.

Very stiff pale brown SANDSTONE.

END OF TRIAL PIT 1.4 m

Scale: 1:25

Remarks:

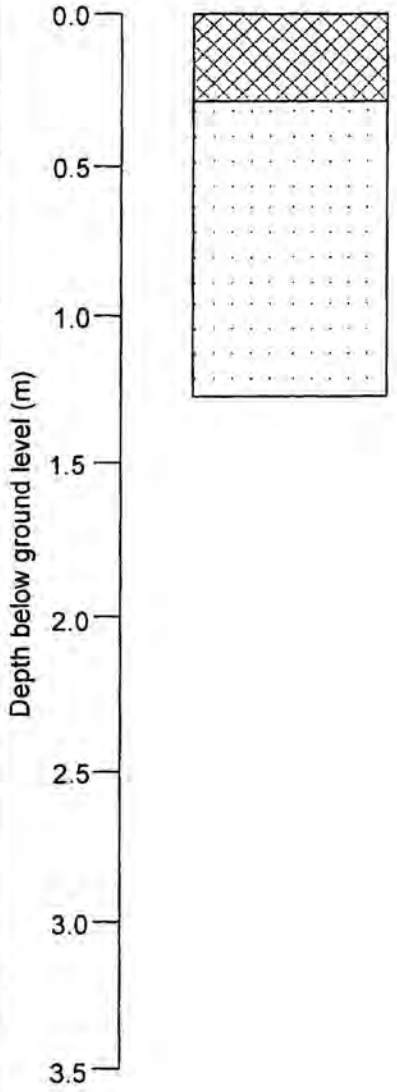
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.1-0.15 m	0.6-0.7 m	0.6-0.7 m	1.3-1.4 m				
Type	P. Pot	P. Pot	Amber	P. Pot				**Date:** 20.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP4
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Loose, dark brown sandy topsoil with many fine roots and occasional cobbles of brick.

Firm pale brown/grey mottled clayey SAND with black organic fissures and roots, with some fine to coarse gravel of silty SANDSTONE.

Very stiff pale brown and ochre brown mottled SANDSTONE.

END OF TRIAL PIT 1.3 m

Scale: 1:25

Remarks: Original position of TP4a abandoned due to severage of a plastic water hose pipe at 0.3 m. TP4b moved adjacent to locality.

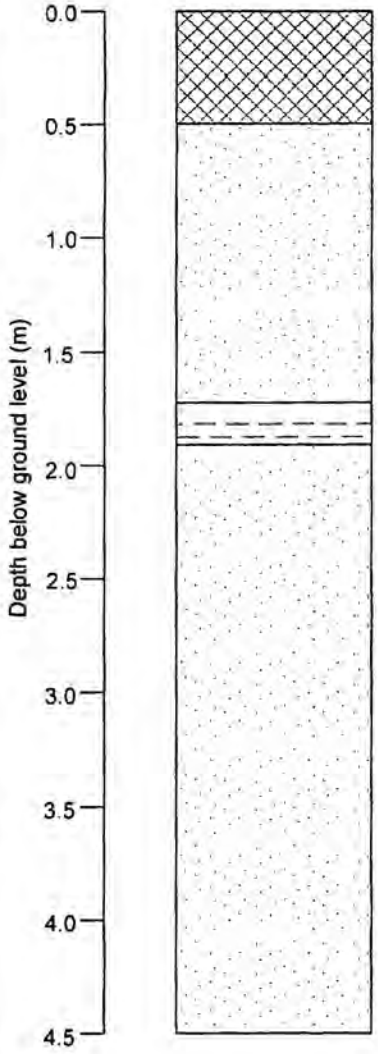
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0-0.05 m	0.5-0.6 m	1.2-1.3 m	1.2-1.3 m				
Type	P. Pot	P. Pot	P. Pot	Amber				**Date:** 20.07.98
Test	✓	✓	✓					

Aspinwall&company	TRIAL PIT LOG	TP5
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Light showers	



DESCRIPTION

MADE GROUND - Black/dark brown sandy gravel fill with much brick and some wood, plastic, metal, ash and a little clinker.

0.5 m

Soft, ochre brown fine SAND with some fine gravel and a little black/grey organic plant debris mottling.

1.7 m

1.9 m

Stiff to very stiff pale yellow and grey mottled CLAY with occasional fine gravel. Some black organic plant debris.

Firm ochre brown silty very clayey SAND with much fine to coarse gravel.

4.5 m

END OF TRIAL PIT 4.5 m

Scale: 1:30

Remarks:

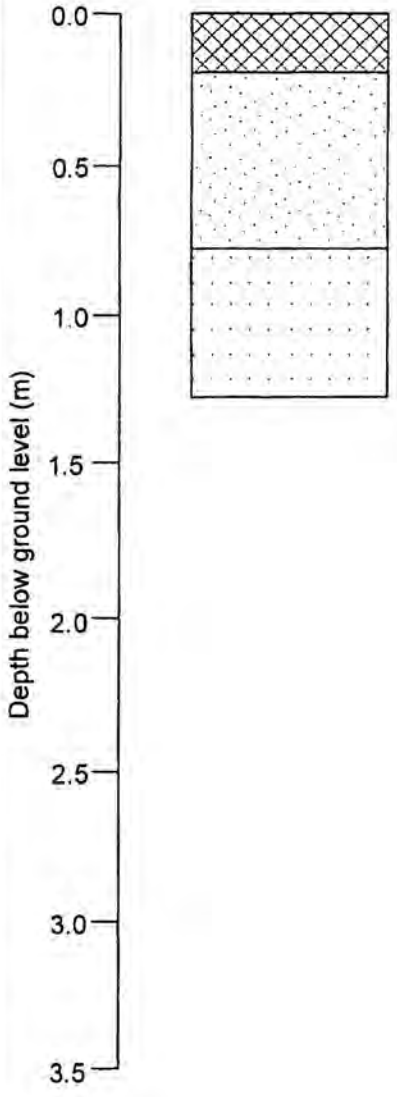
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Soil	Soil		**Logged by:** MAP
Depth	0.2-0.3 m	0.6-0.7 m	1.8-1.9 m	1.8-1.9 m	2.0-2.1 m	4.4-4.5 m		
Type	P. Pot	P. Pot	P. Pot	Amber	P. Pot	P. Pot		**Date:** 17.07.98
Test	✓		✓			✓		

Aspinwall&company	TRIAL PIT LOG	TP6
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.2 m	MADE GROUND - Loose dark brown sandy topsoil with some fine rootage and a little brick gravel.
	0.8 m	Dry, firm rusty brown clayey SAND with orange mottling.
	1.3 m	Firm ochre brown clayey sand with much very stiff pale brown/grey SANDSTONE.
		END OF TRIAL PIT 1.3 m

Scale: 1:25

Remarks:

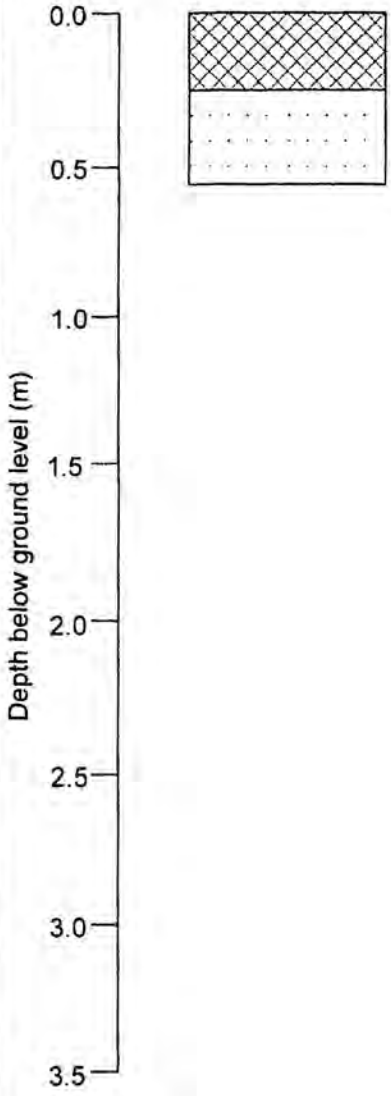
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.1-0.2 m	0.7-0.8 m	0.7-0.8 m	1.2-1.3 m				
Type	P. Pot	P. Pot	Amber	P. Pot				**Date:** 22.07.98
Test		✓	✓	✓				

Aspinwall&company	TRIAL PIT LOG	TP7
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Soft dark brown sandy topsoil with some fine rootage and a little brick cobbles.

Dry, firm ochre brown and grey mottled clayey SAND with many SANDSTONE cobbles.
Very stiff SANDSTONE at 0.55 m.

END OF TRIAL PIT 0.55 m

Scale: 1:25

Remarks:

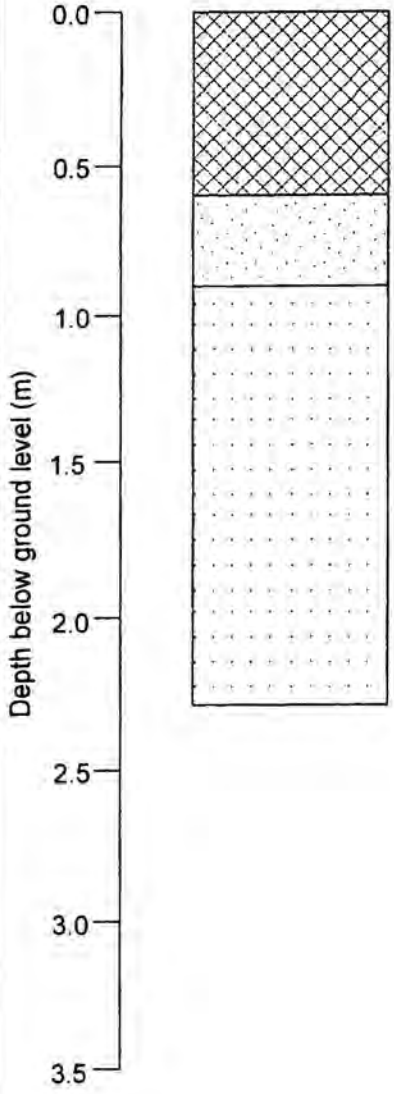
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil					**Logged by:** MAP
Depth	0.05-0.15 m	0.45-0.55 m	0.45-0.55 m					
Type	P. Pot	P. Pot	Amber					**Date:** 22.07.98
Test	✓							

Aspinwall&company	TRIAL PIT LOG	TP8
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



DESCRIPTION

MADE GROUND - Dark brown topsoil sandy gravel with a little cobble sized brick and concrete.

0.6 m

Soft ochre brown very clayey brown SAND with occasional cobbles and a little black silty mottling.

0.9 m

Stiff weathered SANDSTONE with much soft clayey sand and a little quartz crystalline rock.

2.3 m

END OF TRIAL PIT 2.3 m

Scale: 1:25

Remarks:

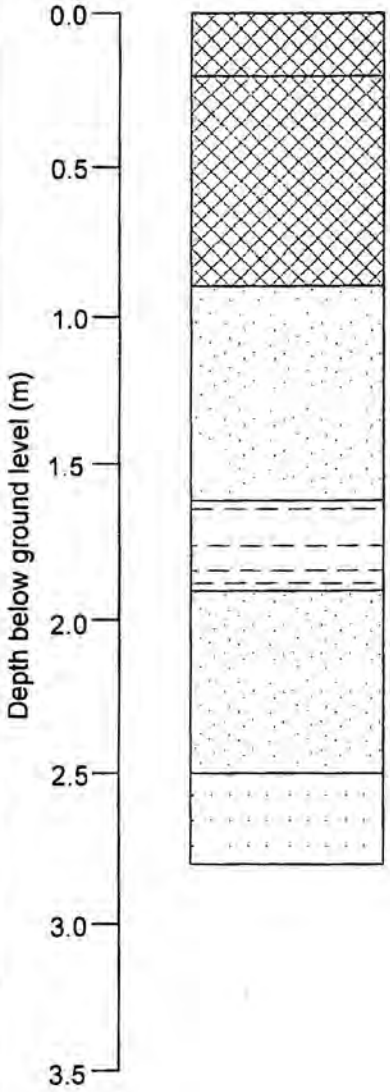
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Soil			**Logged by:** MAP
Depth	0-0.2 m	0.6-0.7 m	0.8-0.9 m	0.8-0.9 m	2.2-2.3 m			
Type	P. Pot	P. Pot	P. Pot	Amber	P. Pot			**Date:** 21.07.98
Test	✓		✓					

Aspinwall&company	TRIAL PIT LOG	TP9
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



Depth (m)	DESCRIPTION
0.2 m	MADE GROUND - Dark brown topsoil with shallow grass roots.
0.9 m	MADE GROUND - Loose dark brown sand with much gravel, brick, wire fill.
1.6 m	Soft ochre brown SAND with some gravel.
1.9 m	Firm to soft dark brown/black very sandy CLAY with organic debris.
2.5 m	Soft to firm ochre brown clayey SAND with coarse cobbles of sandstone.
2.8 m	Stiff to very stiff yellow brown SANDSTONE with red oxide surface coaling on laminations.
	END OF TRIAL PIT 2.8 m

Scale: 1:25

Remarks:

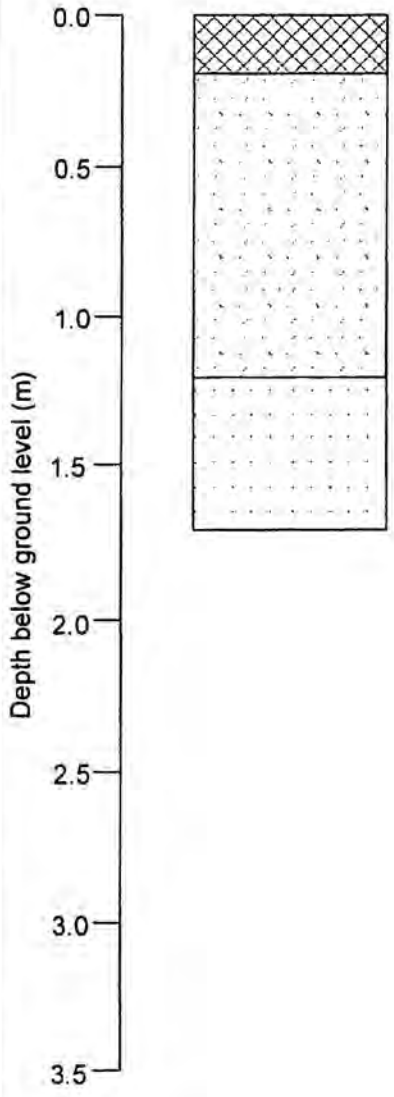
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Soil			
Depth	0.6-0.7 m	1.7-1.8 m	1.7-1.8 m	2.5-2.6 m	0.95-1.15 m			**Logged by:** MAP
Type	P. Pot	P. Pot	Amber	P. Pot	P. Pot			**Date:** 16.07.98
Test	✓	✓		✓				

Aspinwall&company	TRIAL PIT LOG	TP10
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



DESCRIPTION

MADE GROUND - Loose black/brown sandy gravel with ash/clinker and occasional coarse gravel of glass and possible asbestos sheet cement.

Soft ochre brown very clayey SILT with occasional fine gravel of brick and coarse gravel.

Stiff yellow brown silty SANDSTONE.

END OF TRIAL PIT 1.7 m

Scale: 1:25

Remarks:

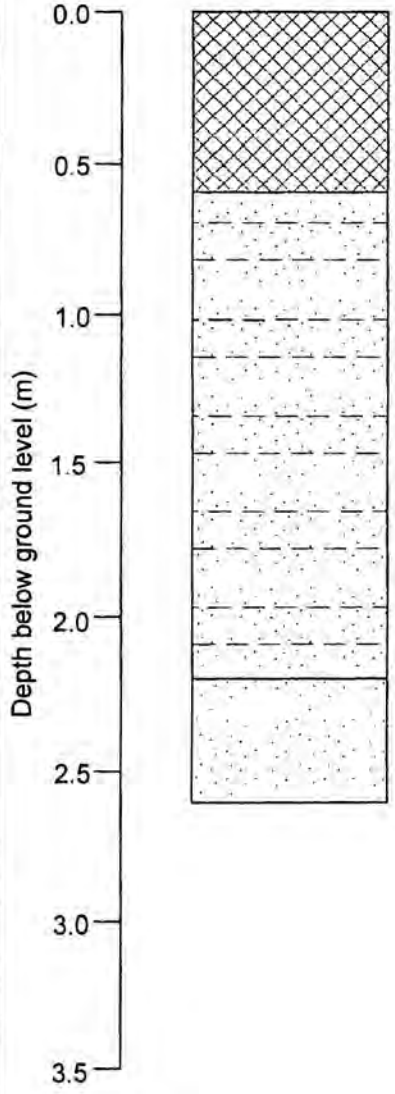
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Asbestos?	.Soil	Soil				**Logged by:** MAP
Depth	0.1-0.2 m	0.1 m	0.5-0.6 m	1.4-1.5 m				
Type	P. Pot	P. Pot	P. Pot	P. Pot				**Date:** 16.08.98
Test		✓	✓					

Aspinwall&company	TRIAL PIT LOG	TP11
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunshine	



Legend	Depth (m)	DESCRIPTION
	0.6 m	MADE GROUND - Loose dark brown sandy topsoil with occasional fine gravel of brick.
	2.2 m	Reworked soft ochre brown very clayey SAND with some roots and occasional soft pale brown/grey silty CLAY cobbles.
	2.6 m	Soft to firm ochre brown/grey mottled clayey SAND with occasional fine gravel.
		END OF TRIAL PIT 2.6 m

Scale: 1:25

Remarks: Concrete pad in west side of pit at 0.45 m.

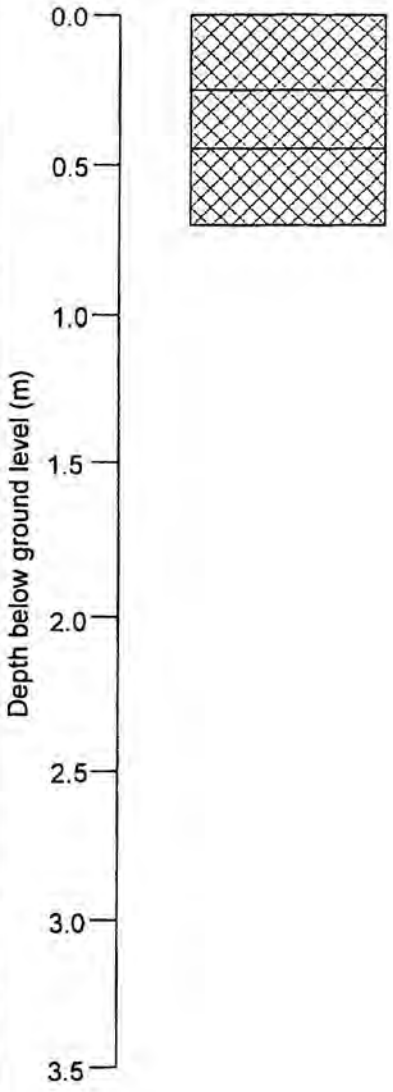
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Soil			**Logged by:** MAP
Depth	0.1-0.2 m	0.7-0.8 m	0.7-0.8 m	2.3-2.4 m	1.6-1.7 m			
Type	P. Pot	P. Pot	Amber	P. Pot	P. Pot			**Date:** 21.07.98
Test	✓	✓		✓				

Aspinwall&company	TRIAL PIT LOG	TP12
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunshine	



Legend	Depth (m)	DESCRIPTION
	0.25 m	MADE GROUND - Soft dark brown sandy topsoil with roots.
	0.45 m	MADE GROUND - Black ashy sandy fill.
	0.7 m	MADE GROUND - Reworked soft dark brown sand with some brick gravel to cobbles. Tarmac and concrete base.

END OF TRIAL PIT 0.7 m

Scale: 1:25

Remarks: At 0.1 m cable destroyed.

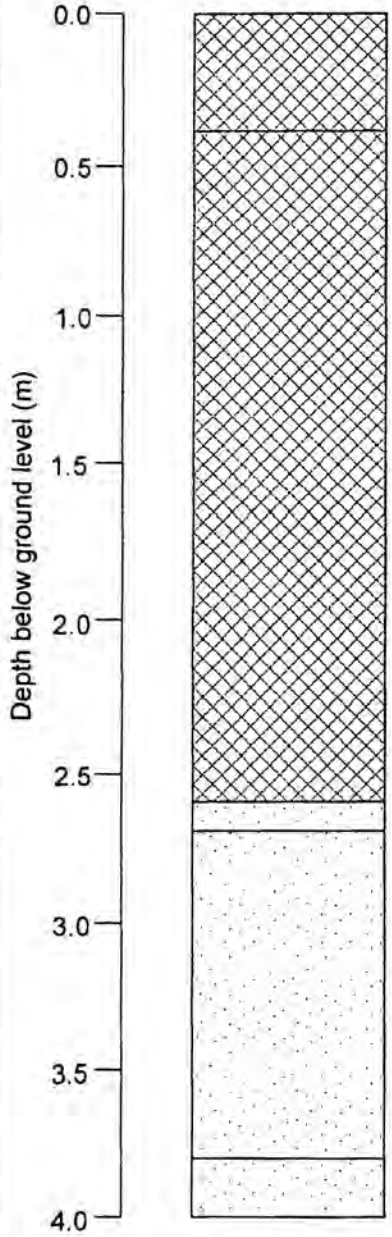
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.1-0.2 m	0.3-0.4 m	0.6-0.7 m	0.3-0.4 m				
Type	P. Pot	P. Pot	P. Pot	Tin				**Date:** 21.07.98
Test		✓	✓	✓				

Aspinwall&company	TRIAL PIT LOG	TP13
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



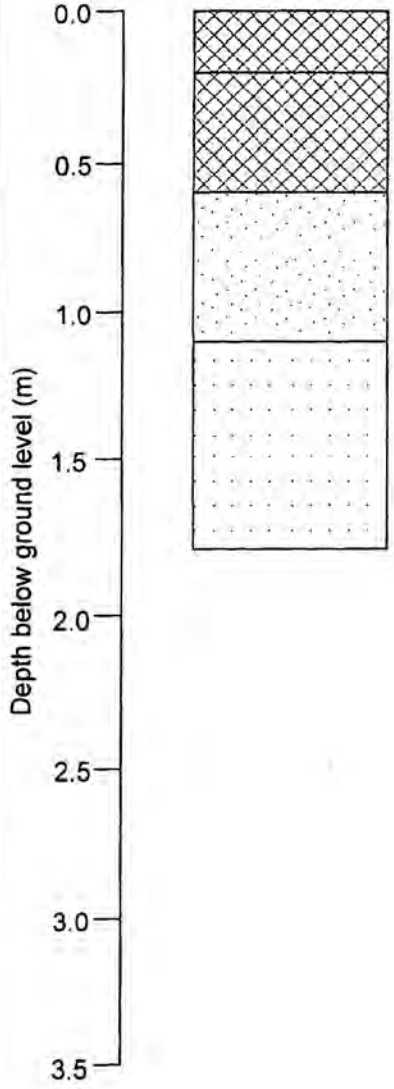
Depth (m)	DESCRIPTION
	MADE GROUND - Soft dark brown sandy topsoil with plant roots and occasional brick and gravel.
0.4 m	
	MADE GROUND - Reworked soft brown very clayey SAND with a little fine gravel.
2.6 m	Soft ochre brown, very clayey SAND with localised black/ grey organic plant debris.
2.7 m	
	Soft to damp ochre brown/grey mottled clayey SAND with pot drain.
3.8 m	Loose, ochre brown/grey SAND with much fine to coarse gravel.
4.0 m	**END OF TRIAL PIT 4.0 m** **Scale: 1:25**

Remarks: 0.6-1.8 m MADE GROUND - Brick wall and foundations in south end of pit.
0.8-0.9 m MADE GROUND - Tarmac layer.
1.8-1.7 m MADE GROUND - Concrete base.

Water: At 4.0 m
Stability: Fair
Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Soil	Soil	Water x 3	**Logged by:** MAP
Depth	0.05-0.15 m	0.4-0.6 m	0.8-0.9 m	2.6-2.7 m	2.9-3.0 m	3.9-4.0 m	4.0 m	
Type	P. Pot	P. Pot/Amber	P. Pot	P. Pot/Amber	Amber	P. Pot		**Date:** 21.07.98
Test			✓	✓			✓	

Aspinwall&company	TRIAL PIT LOG	TP14
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



Depth (m)	DESCRIPTION
0.2 m	MADE GROUND - Dark brown sandy topsoil with shallow grass rootage.
0.6 m	MADE GROUND - Loose brown sandy gravel with occasional brick cobbles and with many thick roots.
1.1 m	Soft ochre brown SAND.
1.8 m	Stiff SANDSTONE with occasional cobbles of quartz. Very stiff SANDSTONE at 1.8 m.
	END OF TRIAL PIT 1.8 m

Scale: 1:25

Remarks:

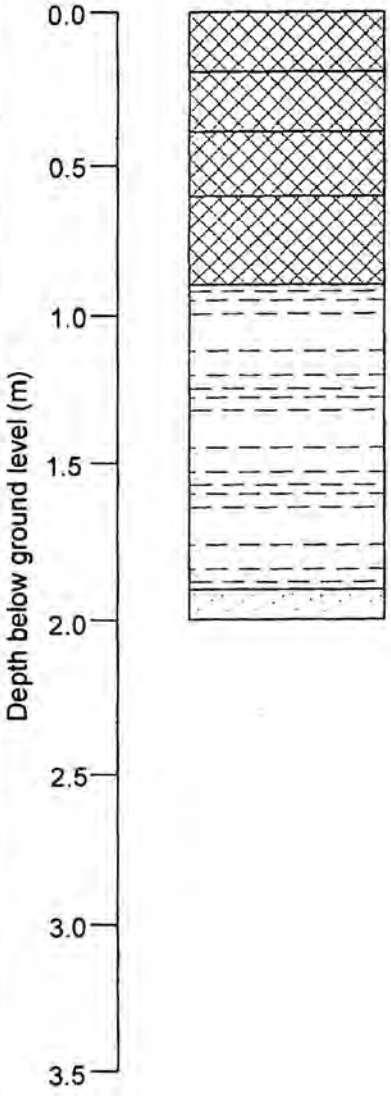
Water: None encountered

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.1-0.2 m	0.9-1.6 m	1.5-1.6 m	1.5-1.6 m				
Type	P. Pot	P. Pot	P. Pot	Amber				**Date:** 16.07.98
Test		✓	✓					

Aspinwall&company	TRIAL PIT LOG	TP15
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.2 m	MADE GROUND - Dark black asphalt hardstanding.
	0.4 m	MADE GROUND - Soft, light brown sandy gravel fill with some brick foundations, concrete pad and a little metal sheeting.
	0.6 m	MADE GROUND - Firm, ochre brown reworked sandy CLAY with some gravel and ash clasts.
	0.9 m	MADE GROUND - Firm dark brown reworked very clayey sand with black ashy mottling.
		Soft to firm, ochre brown silty sandy CLAY with pale brown streaking and occasional fine gravel.
	1.9 m	
	2.0 m	Loose, ochre brown sand with much fine to medium gravel.

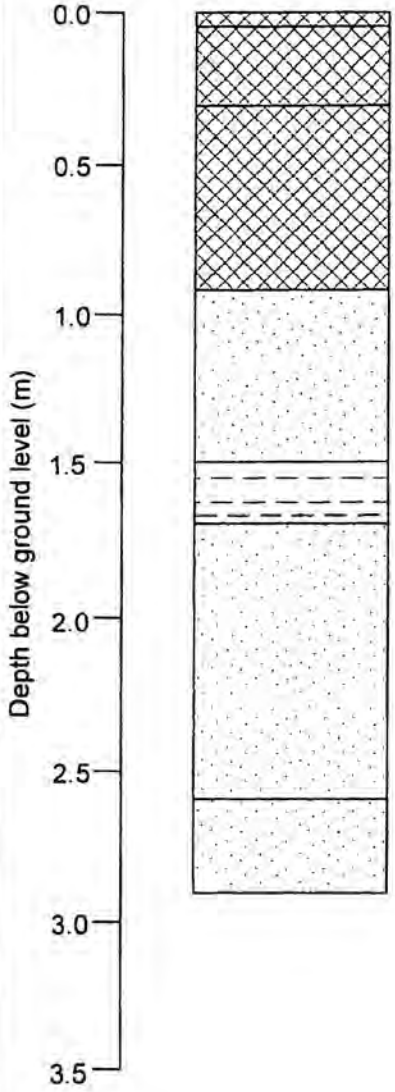
END OF TRIAL PIT 2.0 m

Scale: 1:25

Remarks:	Water: At 1.9 m
	Stability: Collapse at 1.9 m
	Time trench open: 30 mins

Sample	Soil	Soil						Logged by: MAP
Depth	0.8-0.85 m	1.25-1.3 m						
Type	P. Pot	P. Pot						Date: 13.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP16
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Asphalt hardstanding.

MADE GROUND - Concrete with reinforced wire and gravel base.

MADE GROUND - Dark brown sand with much gravel to cobble ash, clinker fill.

Firm, damp, ochre brown very clayey SAND.

Firm to stiff dark grey and orange mottled very sandy CLAY.

Firm ochre brown and grey mottled clayey SAND.

Firm coarse SAND with much fine gravel.

END OF TRIAL PIT 2.9 m

Scale: 1:25

Remarks: (1-10 ppm at 1.5-1.6 m).
20 cps in clinker/ash fill at 0.3-0.4 m.

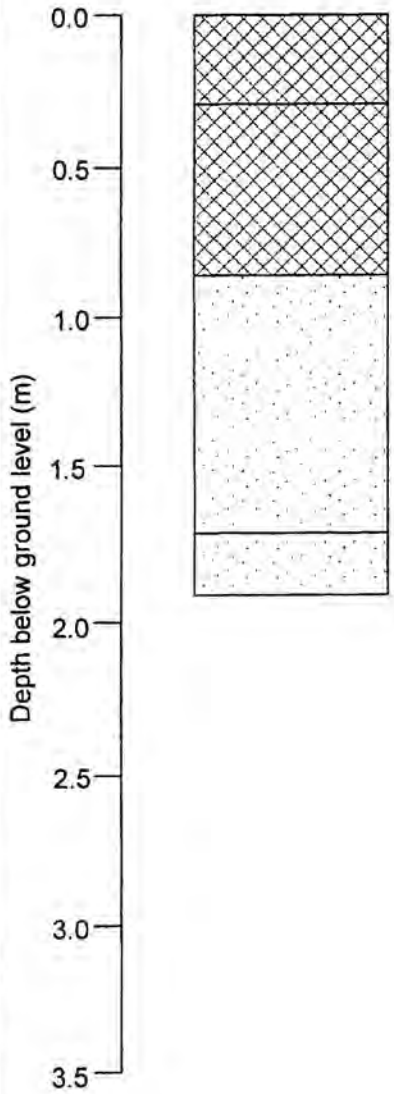
Water: At 2.9 m

Stability: Collapse at 2.9 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.5-0.6 m	0.9-1.0 m	1.5-1.6 m	1.5-1.6 m				
Type	P. Pot	P. Pot	P. Pot	Amber				**Date:** 15.07.98
Test	✓	✓	✓					

Aspinwall&company	TRIAL PIT LOG	TP17
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



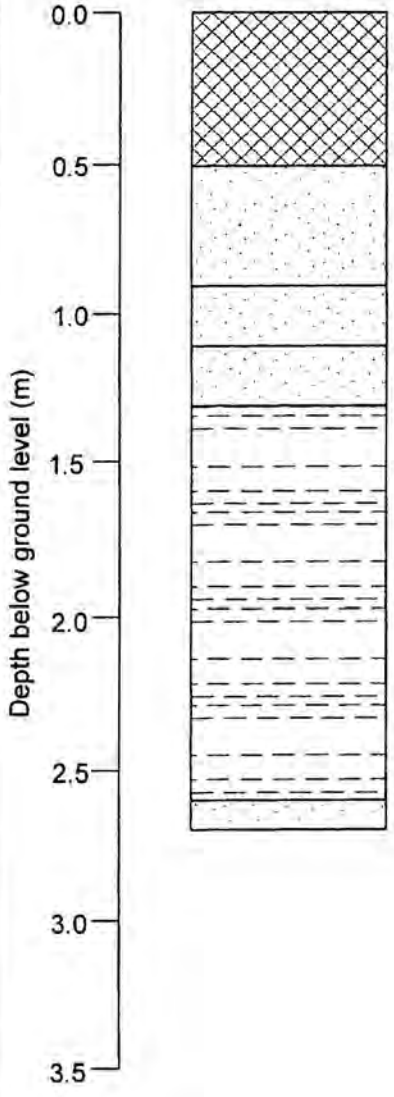
Depth (m)	DESCRIPTION
0.3 m	MADE GROUND - Asphalt/concrete pad.
0.85 m	MADE GROUND - Brick, ash and gravel fill with some coarse cobbles and boulders.
1.7 m	Soft ochre brown silty SAND with much gravel.
1.9 m	Damp ochre brown SAND with much fine to coarse gravel.
	END OF TRIAL PIT 1.9 m

Scale: 1:25

Remarks:	Water: At 1.9 m
	Stability: Collapse at 1.9 m
	Time trench open: 30 mins

Sample	Soil	Soil						Logged by: MAP
Depth	0.9-1.0 m	1.8-1.85 m						
Type	P. Pot	P. Pot						Date: 14.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP18
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Black ashy clinker brick and sand fill.

0.5 m

Firm ochre brown very clayey SAND with green/grey mottling and some fine gravel.

0.9 m

Firm dark grey/black organic rich very clayey SAND with occasional gravel.

1.1 m

Soft to firm ochre brown SAND with much gravel.

1.3 m

Firm grey/green silty CLAY with much organic debris and black staining along roots and fissures.

2.6 m

Firm grey/green SAND with much gravel.

2.7 m

END OF TRIAL PIT 2.7 m

Scale: 1:25

Remarks:

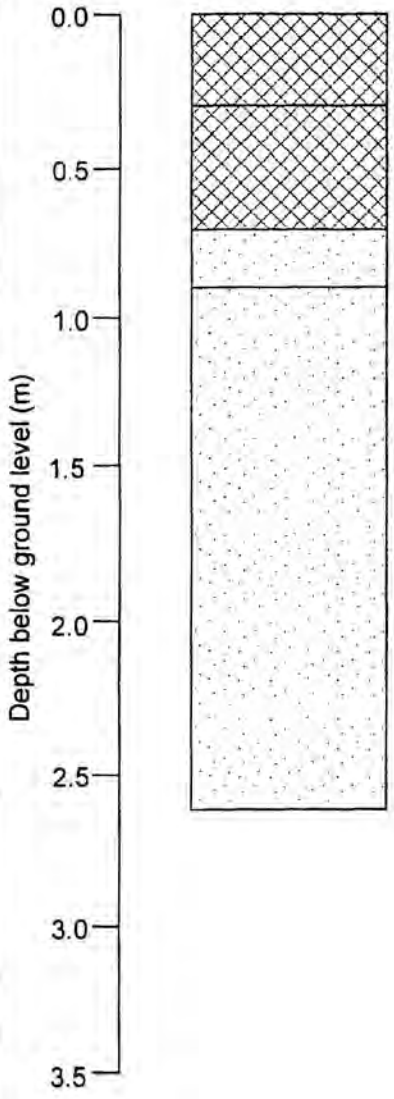
Water: At 2.7 m

Stability: Collapse at 2.7 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.3-0.4 m	0.9-1.0 m	0.9-1.0 m	1.9-2.0 m				
Type	P. Pot	P. Pot	Amber	P. Pot				**Date:** 15.07.98
Test	✓		✓					

Aspinwall&company	TRIAL PIT LOG	TP19
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Depth (m)	DESCRIPTION
0.3 m	MADE GROUND - Asphalt and reinforced concrete.
0.7 m	MADE GROUND - Black ashy fill with many cobbles and organic peat.
0.9 m	Dark black organic sandy peat.
2.6 m	Damp ochre clayey SAND with much gravel. Black decaying organic roots with odour.

END OF TRIAL PIT 2.6 m

Scale: 1:25

Remarks: FID 100-300 ppm at 0.3-0.7 m.

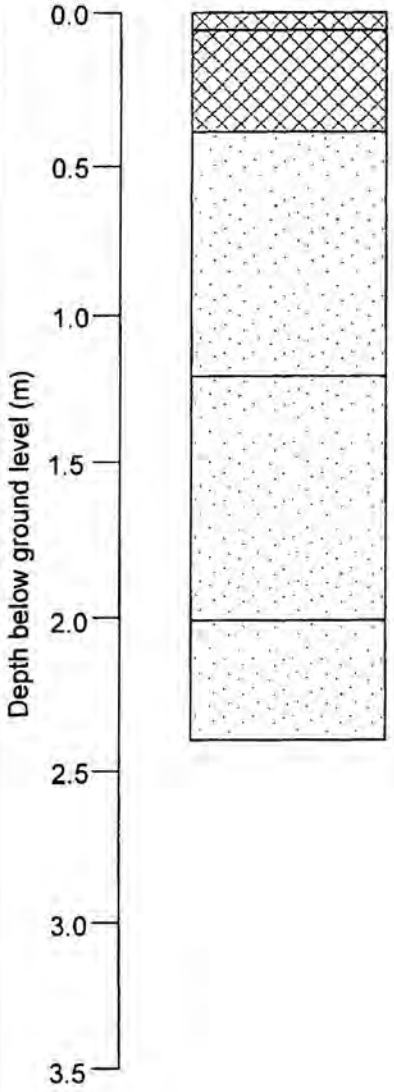
Water: At 2.6 m

Stability: Collapse at 2.6 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Water			**Logged by:** MAP
Depth	0.7-0.8 m	0.7-0.8 m	0.7-0.8 m	1.2-1.3 m	2.6 m			
Type	P. Pot	Amber	Vial	P. Pot	Plastic, Amber & Phenol			**Date:** 14.07.98
Test	✓			✓	✓			

Aspinwall&company	TRIAL PIT LOG	TP20
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.05 m	MADE GROUND - Gravel surface.
	0.4 m	MADE GROUND - Brick, ash, gravel to cobble sandy fill.
	1.2 m	Soft dark brown very clayey SAND.
	2.0 m	Firm ochre brown clayey SAND with much gravel.
	2.4 m	Damp pale brown coarse SAND with some fine gravel.
		END OF TRIAL PIT 2.4 m

Scale: 1:25

Remarks:

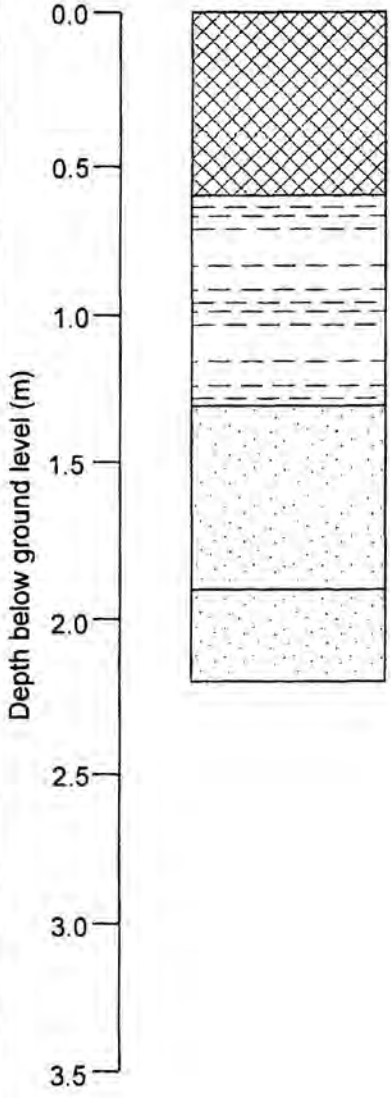
Water: At 2.4 m

Stability: Collapse at 2.4 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil					**Logged by:** MAP
Depth	0.5-0.6 m	1.4-1.5 m	2.3-2.4 m					
Type	P. Pot	P. Pot	P. Pot					**Date:** 14.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP21
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Depth (m)	DESCRIPTION
	MADE GROUND - Brick, ash, gravel to cobble fill in dark brown sand.
0.6 m	
	Firm dark brown with grey mottling very sandy CLAY with occasional roots.
1.3 m	
	Firm, ochre brown SAND with some fine gravel.
1.9 m	
	Damp pale brown/grey SAND with much fine gravel.
2.2 m	
	END OF TRIAL PIT 2.2 m

Scale: 1:25

Remarks:

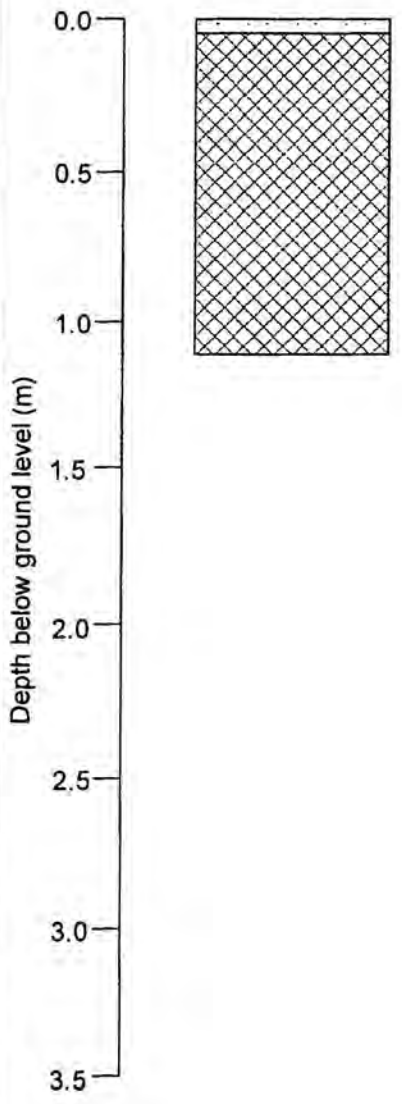
Water: At 2.2 m

Stability: Collapse at 2.2 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil					**Logged by:** MAP
Depth	0.7-0.8 m	1.4-1.5 m	2.1-2.2 m					
Type	P. Pot	P. Pot	P. Pot					**Date:** 14.07.98
Test	✓		✓					

Aspinwall&company	TRIAL PIT LOG	TP22
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



Legend	Depth (m)	DESCRIPTION
	0.05 m	Topsoil with grass vegetation cover.
		MADE GROUND - Dark brown/grey sandy gravel fill with plastic, wood, copper earthing strips, metal bar, brick and tarmac with oily odour and loose concrete boulders.
	1.1 m	
		END OF TRIAL PIT 1.1 m

Scale: 1:25

Remarks: 10 ppm on tarmac.

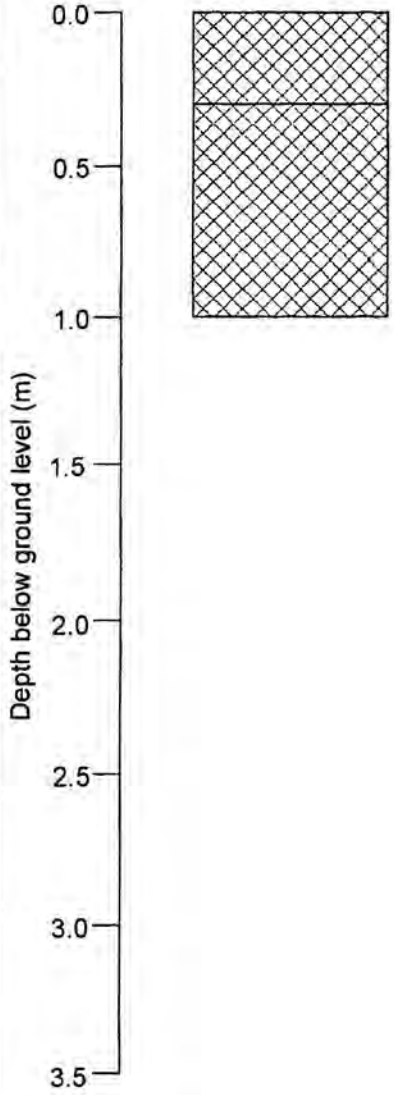
Water: None encountered

Stability: Collpase at 1.1 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil					**Logged by:** MAP
Depth	0.3-0.4 m	0.6-0.7 m	0.6-0.7 m					
Type	P. Pot	P. Pot	Amber					**Date:** 16.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP23
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Concrete pad with reinforced metal wires.

MADE GROUND - Concrete and brick structure with sandy fill.

END OF TRIAL PIT 1.0 m

Scale: 1:25

Remarks: Water/soil = 0 ppm
no oil smell or colour.

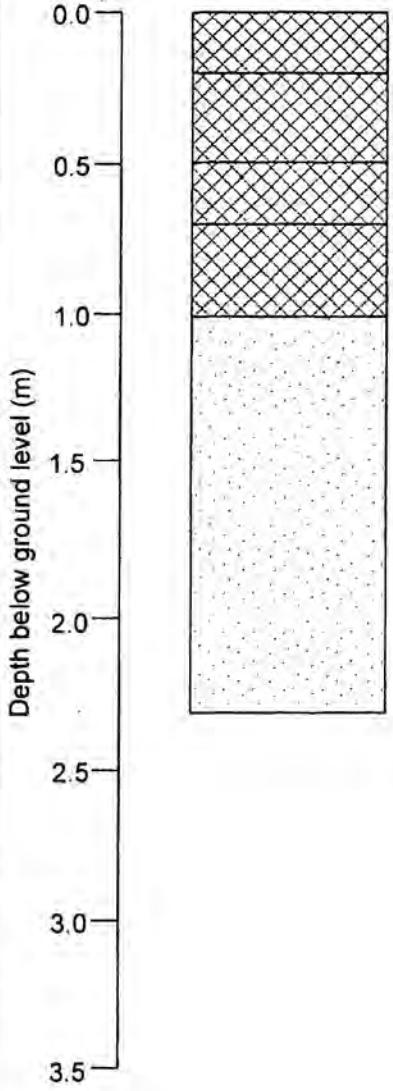
Water: Localised pool at 1.00 m

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil						Logged by: MAP
Depth	0.9-1.0 m	0.9-1.0 m						
Type	Amber	P. Pot						Date: 14.07.98
Test	✓							

Aspinwall&company	TRIAL PIT LOG	TP24
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Asphalt hardstanding.

MADE GROUND - Brick, ash, sand and gravel fill.

MADE GROUND - Green clay with much brick and gravel fill. H/C odour.

MADE GROUND - Dark black gravel. H/C odour.

Dark brown very clayey SAND with some gravel. Strong H/C odour.

END OF TRIAL PIT 2.3 m

Scale: 1:25

Remarks: Possible land drain at 1.8 m
1,000 ppm in side pit at 2.0 m

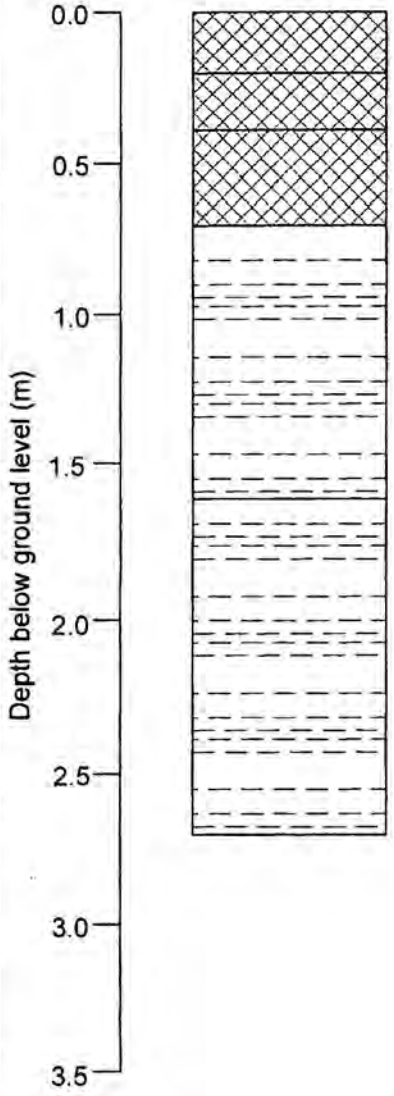
Water: 2.3 m

Stability: Collapse at 2.3 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Water				**Logged by:** MAP
Depth	0.6-0.7 m	0.8-0.9 m	2.2-2.3 m	2.3 m				
Type	Pot, Vial, Amber & Tin	Pot, Vial, Amber	Pot, Vial, Amber	Plastic, Amber & Phenol				**Date:** 14.07.98
Test	✓	✓	✓	✓				

Aspinwall&company	TRIAL PIT LOG	TP26
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Concrete hardstanding with reinforced wire.

MADE GROUND - Pale brown gravel and sand fill.

MADE GROUND - Dark brown/black clayey sand with brick and ash fill.

Dark brown organic rich very sandy CLAY with some fine gravel.

Dark brown very sandy CLAY with much gravel and cobbles.

END OF TRIAL PIT 2.7 m

Scale: 1:25

Remarks:

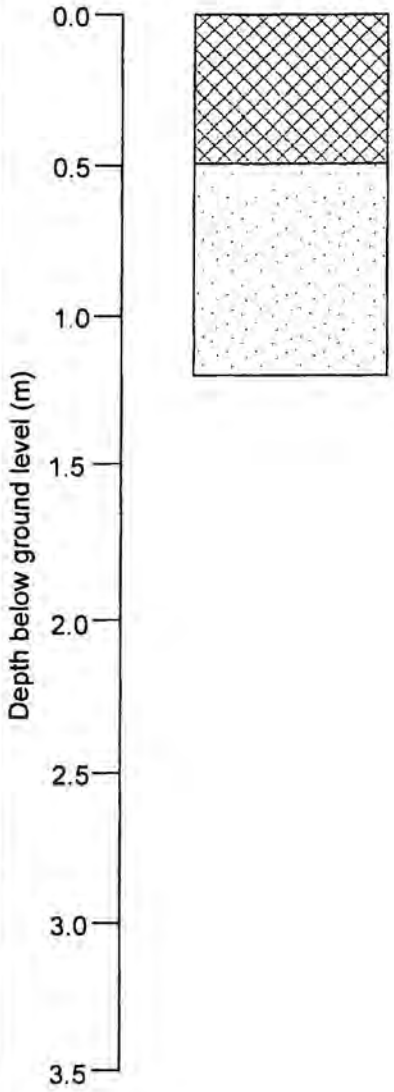
Water: At 2.7 m

Stability: Collapse at 2.7 m

Time trench open: 30 mins

Sample	Soil	Soil						Logged by: MAP
Depth	1.0-1.1 m	2.5-2.6 m						
Type	P. Pot	P. Pot						Date: 14.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP27
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Soft dark brown sandy topsoil with shallow grass roots.

Possibly reworked ochre brown SAND with much fine to coarse gravel and a little fine brick and black silty ash/ organic debris.

END OF TRIAL PIT 1.2 m

Scale: 1:25

Remarks:

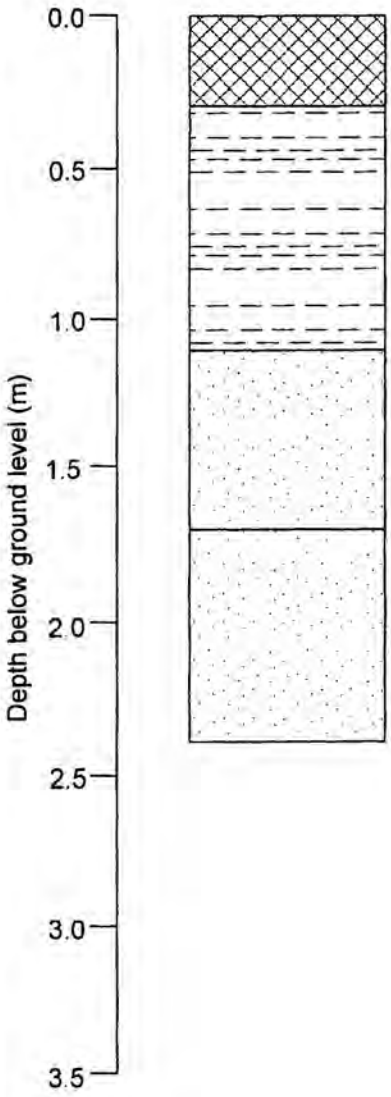
Water: At 1.2 m

Stability: Fair

Time trench open: 30 mins

Sample	Soil	Soil						Logged by: MAP
Depth	0.5-0.6 m	0.9-1.0 m						
Type	P. Pot	P. Pot						Date: 16.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP28
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



DESCRIPTION

MADE GROUND - Soft dark brown sandy topsoil.

0.3 m

Firm to stiff ochre brown very sandy CLAY with a little fine gravel and some roots.

1.1 m

Firm brown/grey mottled SAND with some fine gravel.

1.7 m

Damp, loose, brown grey SAND with much fine to coarse gravel and plant debris.

2.4 m

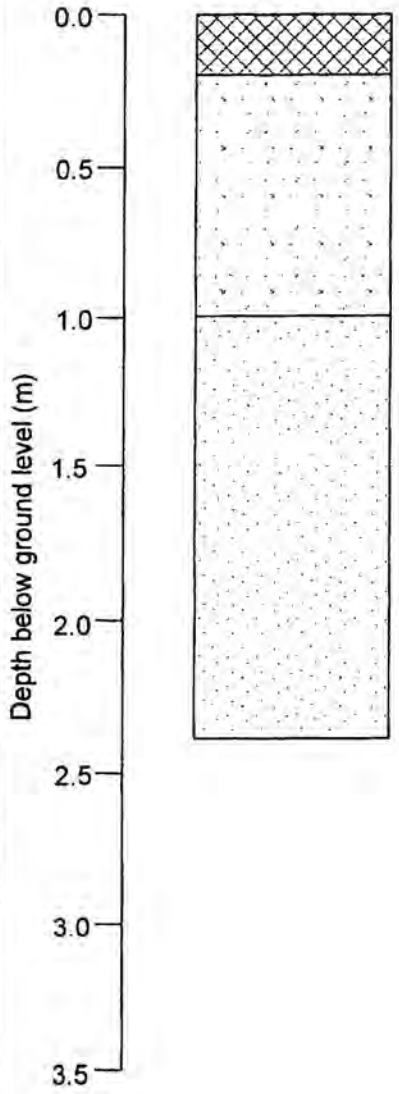
END OF TRIAL PIT 2.4 m

Scale: 1:25

Remarks:	**Water:** At 2.4 m
	Stability: Collapse at 2.4 m
	Time trench open: 30 mins

Sample	Soil	Soil	Soil	Water				**Logged by:** MAP
Depth	0.1-0.2 m	0.5-0.6 m	2.3-2.4 m	1.2-1.3 m				
Type	P. Pot	P. Pot	P. Pot	P. Pot				**Date:** 16.07.98
Test		✓	✓					

Aspinwall&company	TRIAL PIT LOG	TP29
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Sunny	



DESCRIPTION

MADE GROUND - Soft to loose sandy topsoil with grass cover.

Soft ochre brown slightly clayey sandy SILT with a little fine to coarse gravel and cobbles.

Loose light grey/ochre brown mottled coarse SAND with much fine to coarse gravel.

END OF TRIAL PIT 2.4 m

Scale: 1:25

Remarks:

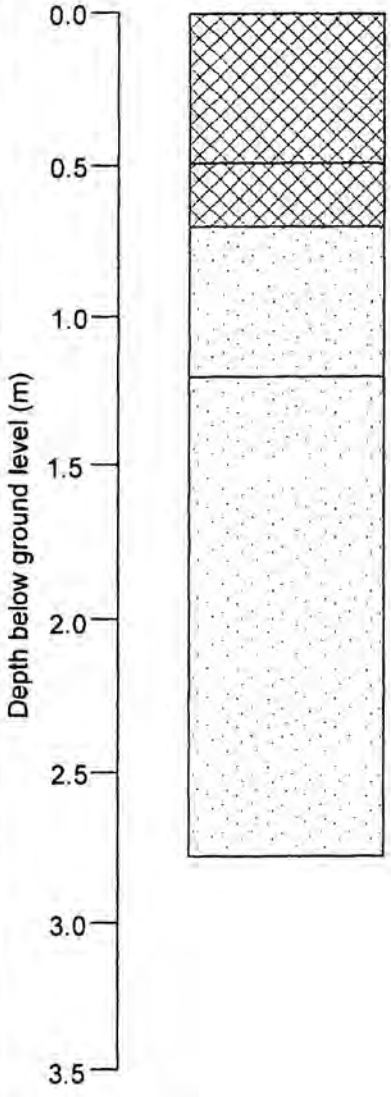
Water: At 2.4 m

Stability: Collapse at 2.4 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Water				**Logged by:** MAP
Depth	0.1-0.2 m	0.6-0.7 m	1.5-1.6 m	2.4 m				
Type	P. Pot	P. Pot	P. Pot	Amber, Plastic & Phenol				**Date:** 16.07.98
Test		✓		✓				

Aspinwall&company	TRIAL PIT LOG	TP30
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Soft dark brown sand with brick and concrete gravel to cobbles.

MADE GROUND - Black ash brick and clinker fill.

Soft green/brown very clayey SAND with decaying roots and plant debris.

Damp, soft, ochre brown coarse SAND with much fine gravel with a grey/green mottling.

END OF TRIAL PIT 2.8 m

Scale: 1:25

Remarks:

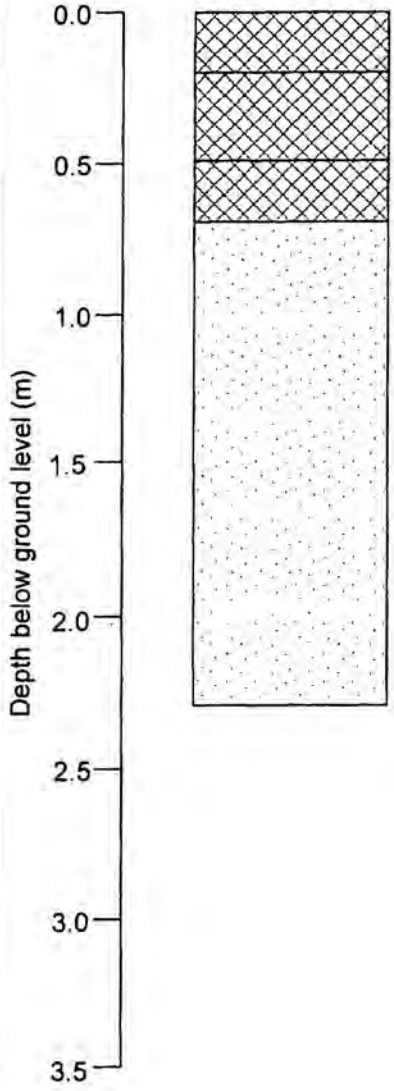
Water: At 2.8 m

Stability: Collapse at 2.8 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Water	Water	Water		**Logged by:** MAP
Depth	0.5-0.6 m	0.9-1.0 m	2.6-2.7 m	2.8 m	2.8 m	2.8 m		
Type	P. Pot	P. Pot	P. Pot	Plastic	Amber	Phenol		**Date:** 15.07.98
Test	✓	✓		✓				

Aspinwall&company	TRIAL PIT LOG	TP31
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Depth (m)	DESCRIPTION
0.2 m	MADE GROUND - Concrete hardstanding with reinforced metal wire.
0.5 m	MADE GROUND - Loose pale grey coarse gravel.
0.7 m	MADE GROUND - Black ash, sand and gravel.
2.3 m	Soft ochre brown coarse SAND with much fine gravel.
	END OF TRIAL PIT 2.3 m

Scale: 1:25

Remarks:

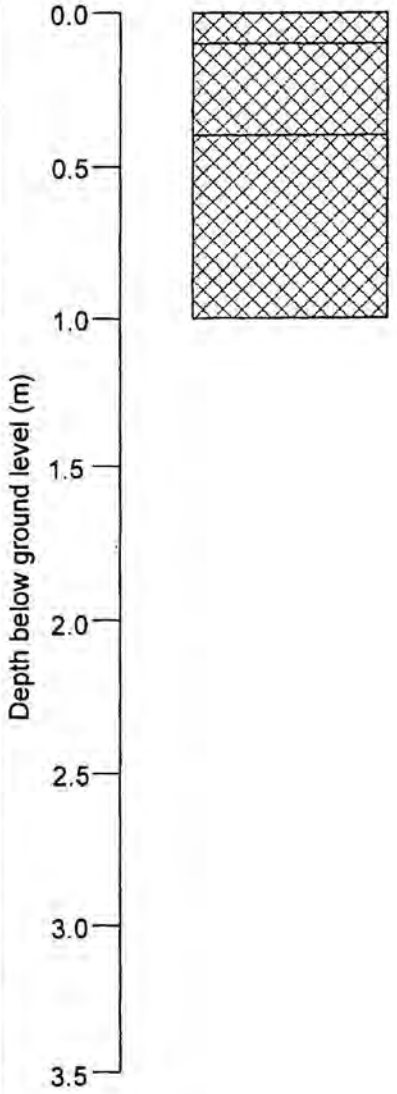
Water: None encountered

Stability: Collapse at 2.3 m

Time trench open: 30 mins

Sample	Soil	Soil						**Logged by:** MAP
Depth	0.3-0.4 m	1.0-1.1 m						
Type	P. Pot	P. Pot						**Date:** 15.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP32
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Asphalt hardstanding.

MADE GROUND - Soft firm orange brown sand with some brick and ash.

MADE GROUND - Dark brown, sandy fill with much fine ash, brick, concrete and gravel to cobbles, a little asbestos lining.
Concrete pad - pit terminated.

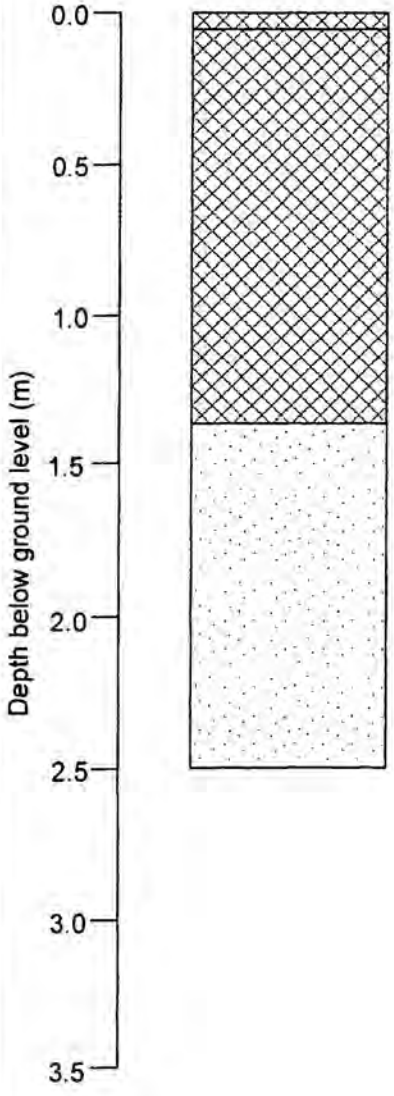
END OF TRIAL PIT 1.0 m

Scale: 1:25

Remarks: Some asbestos cement found. Concrete base terminated pit.	**Water:** None encountered
	Stability: Fair
	Time trench open: 30 mins

Sample	MG							**Logged by:** MAP
Depth	0.8-0.9 m							
Type	P. Pot							**Date:** 14.07.98
Test	✓							

Aspinwall&company	TRIAL PIT LOG	TP33
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



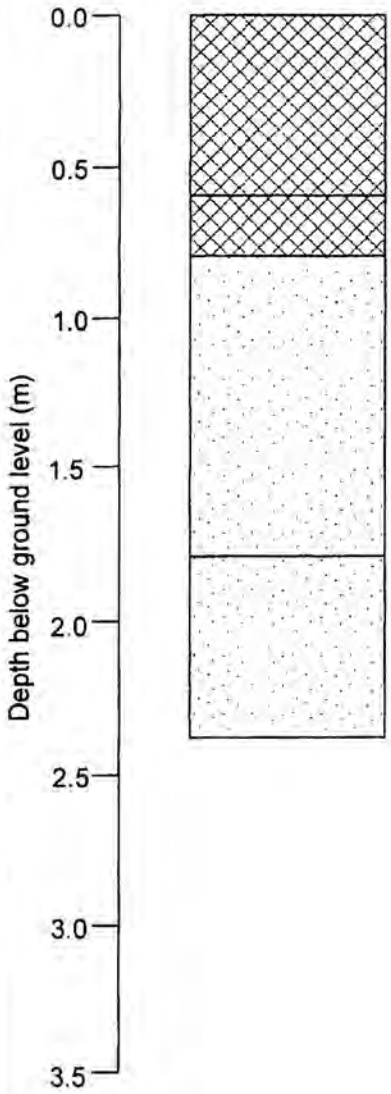
Depth (m)	DESCRIPTION
0.05 m	MADE GROUND - Ash and gravel.
	MADE GROUND - Reworked brown sand and gravel with some brick, ash and a little clinker.
1.35 m	
	Soft, loose, ochre brown coarse SAND with much fine gravel and occasional coarse sand.
2.5 m	
	END OF TRIAL PIT 2.5 m

Scale: 1:25

Remarks:	**Water:** None encountered
	Stability: Collapse at 2.4 m
	Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0-0.05 m	1.2-1.3 m	2.2-2.3 m	1.6-1.7 m				
Type	P. Pot	P. Pot	P. Pot	P. Pot				**Date:** 15.07.98
Test		✓						

Aspinwall&company	TRIAL PIT LOG	TP34
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

MADE GROUND - Loose black ash, clinker, brick, copper wire, plastic fill.

0.6 m

Firm green/grey sandy CLAY.

0.8 m

Loose ochre brown medium to coarse SAND.

1.8 m

Loose, damp coarse SAND with much fine to medium gravel.

2.4 m

END OF TRIAL PIT 2.4 m

Scale: 1:25

Remarks:

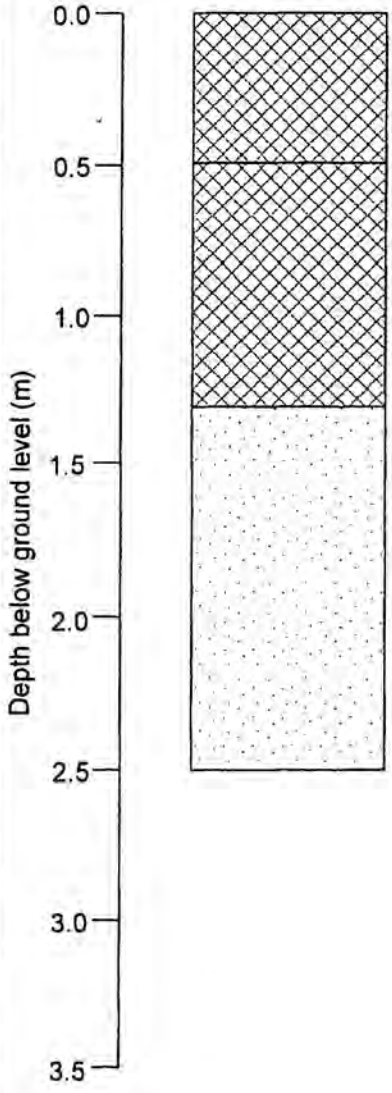
Water: None encountered

Stability: Collapse at 1.8 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil					**Logged by:** MAP
Depth	0.4-0.5 m	0.65-0.75 m	1.2-1.3 m					
Type	P. Pot	P. Pot	P. Pot					**Date:** 15.07.98
Test	✓		✓					

Aspinwall&company	TRIAL PIT LOG	TP35
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
		MADE GROUND - Black ash clinker and gravel.
	0.5 m	
		MADE GROUND - Soft brown sand with a little brick and ash gravel.
	1.3 m	
		Soft ochre brown SAND with much fine to coarse gravel.
		At 2.5 m + Wooden structure - 'shoring planks'.
	2.5 m	
		END OF TRIAL PIT 2.5 m

Scale: 1:25

Remarks:

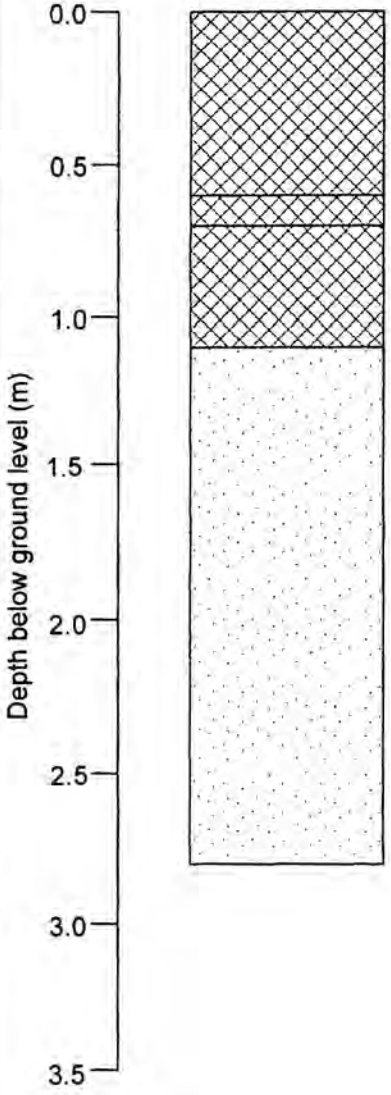
Water: None encountered

Stability: Collapse at 2.0 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil				**Logged by:** MAP
Depth	0.2-0.3 m	0.2-0.3 m	0.8-0.9 m	1.6-1.7 m				
Type	P. Pot	Amber	P. Pot	P. Pot				**Date:** 15.07.98
Test	✓		✓					

Aspinwall&company	TRIAL PIT LOG	TP36
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.6 m	MADE GROUND - Ash, gravel, clinker with a little yellow coke fill.
	0.7 m	MADE GROUND - Fine red brick gravel.
	1.1 m	MADE GROUND - Ash, gravel, clinker.
	2.8 m	Soft loose ochre brown SAND with much fine to coarse gravel.
		END OF TRIAL PIT 2.8 m

Scale: 1:25

Remarks:

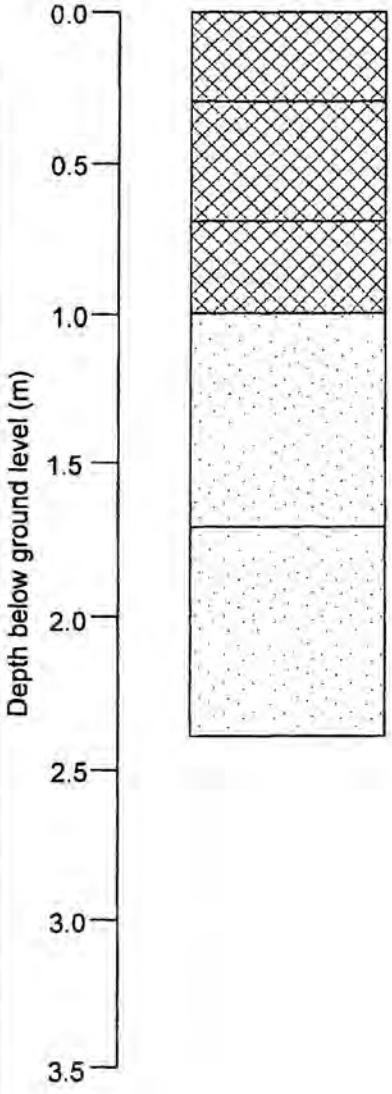
Water: At 2.8 m

Stability: Collapse at 2.8 m

Time trench open: 30 mins

Sample	Soil	Soil						**Logged by:** MAP
Depth	0.5-0.6 m	1.1-1.2 m						
Type	P. Pot	P. Pot						**Date:** 15.07.98
Test	✓	✓						

Aspinwall&company	TRIAL PIT LOG	TP37
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Depth (m)	DESCRIPTION
0.3 m	MADE GROUND - Concrete reinforced metal wire.
0.7 m	MADE GROUND - Black ash, brick and pale brown sandy gravel fill.
1.0 m	MADE GROUND - Coarse cobbles to boulders of weathered crystalline rock (quartz?) with some green discolouration and sulphurous odour.
1.7 m	Soft dark brown clayey SAND with black organic mottling and some fine gravel.
2.4 m	Soft, damp, pale brown and grey mottled clayey SAND with much fine to medium gravel and organic plant debris.

END OF TRIAL PIT 2.4 m

Scale: 1:25

Remarks:

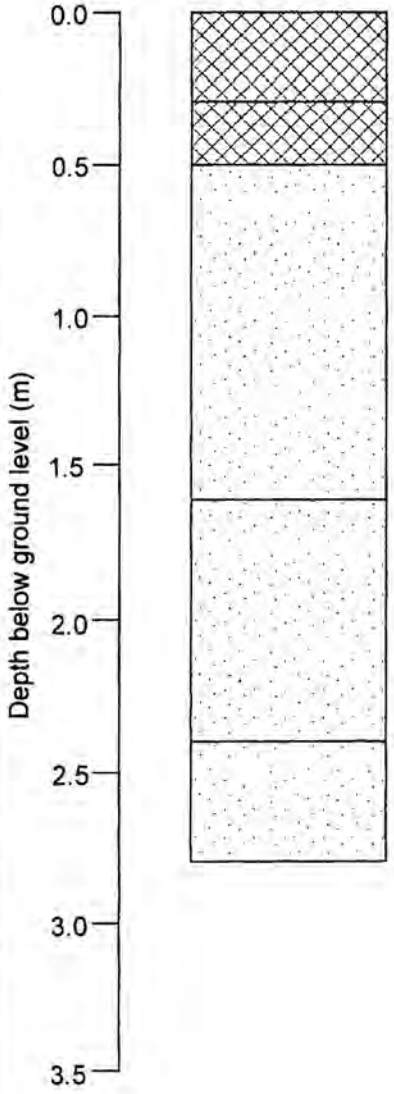
Water: At 2.4 m

Stability: Collapse at 2.4 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil	Soil	Water	Water		**Logged by:** MAP
Depth	0.4-0.5 m	1.2-1.3 m	1.2-1.3 m	1.9-2.0 m	2.4 m	2.4 m		
Type	P. Pot	P. Pot	Amber	P. Pot	Plastic, Phenol	Amber		**Date:** 16.07.98
Test	✓	✓			✓			

Aspinwall&company	TRIAL PIT LOG	TP38
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** JCB 3CX	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.3 m	MADE GROUND - Ash, clinker, gravel fill with some coarse cobble to boulder crystalline rock.
	0.5 m	MADE GROUND - Pale green crystalline cobbles of heavily weathered quartz with pitted structure and sulphurous acid odour.
		Soft ochre brown SAND.
	1.6 m	
		Loose ochre brown SAND with much fine to coarse gravel.
	2.6 m	
		Damp, loose, ochre brown coarse sand with fine to coarse gravel.
	2.8 m	

END OF TRIAL PIT 2.8 m

Scale: 1:25

Remarks:

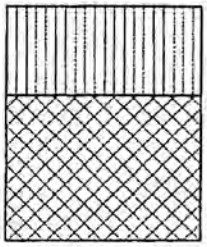
Water: Seepage at 2.8 m

Stability: Collapse at 2.8 m

Time trench open: 30 mins

Sample	Soil	Soil	Soil					Logged by: MAP
Depth	0.1-0.2 m	0.3-0.5 m	2.2-2.3 m					
Type	P. Pot	Tin	P. Pot					Date: 15.07.98
Test		✓	✓					

Aspinwall&company	WINDOW SAMPLING LOG	W 1
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.3 m	Concrete.
	0.5	MADE GROUND - Recovered as fine gravel to cobbles of stone, concrete, clinker.
	0.8 m	
	1.0	**END OF WINDOW SAMPLING LOG 0.8 m**
	1.5	
	2.0	
	2.5	
	3.0	
	3.5	

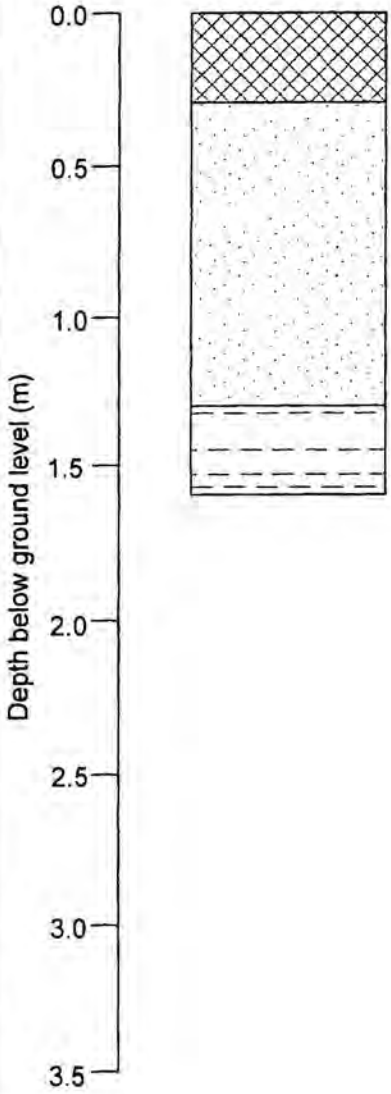
Depth below ground level (m)

Scale: 1:25

Remarks: Concrete obstruction at 0.8 m. 25 ppm.	**Water:** None

Sample	Soil							**Logged by:** HHU
Depth	0.3-0.8 m							
Type	P. Pot							**Date:** 20.07.98
Test	✓							

Aspinwall&company	WINDOW SAMPLING LOG	W 2
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.3 m	MADE GROUND - Firm brown sandy CLAY with some fine gravel of ash and brick.
		Soft grey organic rich very clayey SAND.
	1.3 m	
	1.6 m	Firm brown mottled grey sandy CLAY with much fine to coarse gravel.

END OF WINDOW SAMPLING LOG 1.6 m

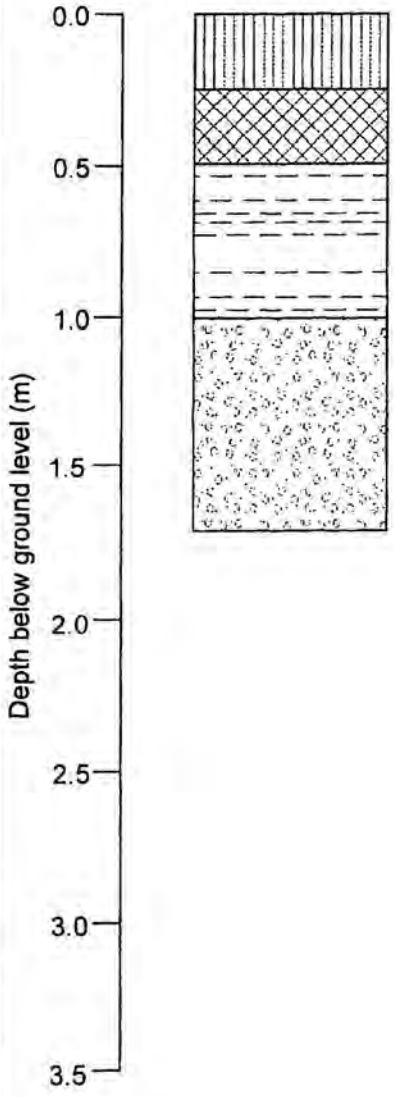
Scale: 1:25

Remarks: 1,000 ppm.

Water: None

Sample	Soil	Soil	Soil	Soil				**Logged by:** HHU
Depth	0-0.3 m	0.3-1.0 m	0.3-1.0 m	1.3-1.6 m				
Type	P. Pot	P. Pot	Amber	P. Pot				**Date:** 20.07.98
Test	✓	✓		✓				

Aspinwall&company	WINDOW SAMPLING LOG	W 3
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.25 m	Concrete.
	0.5 m	MADE GROUND - Loose black clayey sands and gravels of brick, stone, clinker (slight sulphur odour).
	1.0 m	Firm ochre brown mottled grey sandy and silty CLAY with much fine to coarse gravel and a little fine gravel of ash?
	1.7 m	Loose ochre brown coarse SAND with fine to coarse GRAVEL.

END OF WINDOW SAMPLING LOG 1.7 m

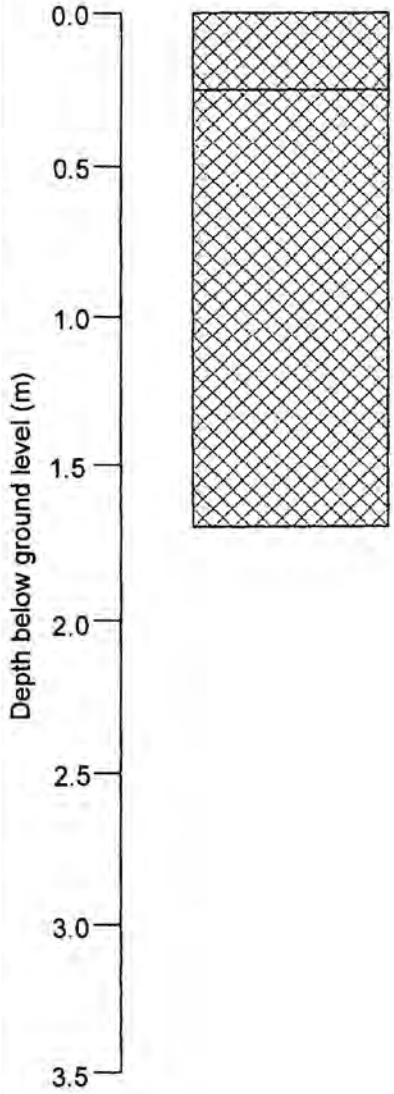
Scale: 1:25

Remarks: 2 ppm.

Water: At 1.4 m

Sample	Soil	Soil	Soil	Soil				**Logged by:** HHU
Depth	0.25-0.5 m	0.25-0.5 m	0.5-0.8 m	1.5-1.7 m				
Type	P. Pot	Tin	P. Pot	P. Pot				**Date:** 20.07.98
Test	✓		✓					

Aspinwall&company	WINDOW SAMPLING LOG	W 4
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

0.25 m — Tarmac.

MADE GROUND - Recovered as firm ochre brown mottled yellow/green silty CLAY with much fine to coarse gravel, occasional fine gravel of ash and cobble of clinker.

1.7 m

END OF WINDOW SAMPLING LOG 1.7 m

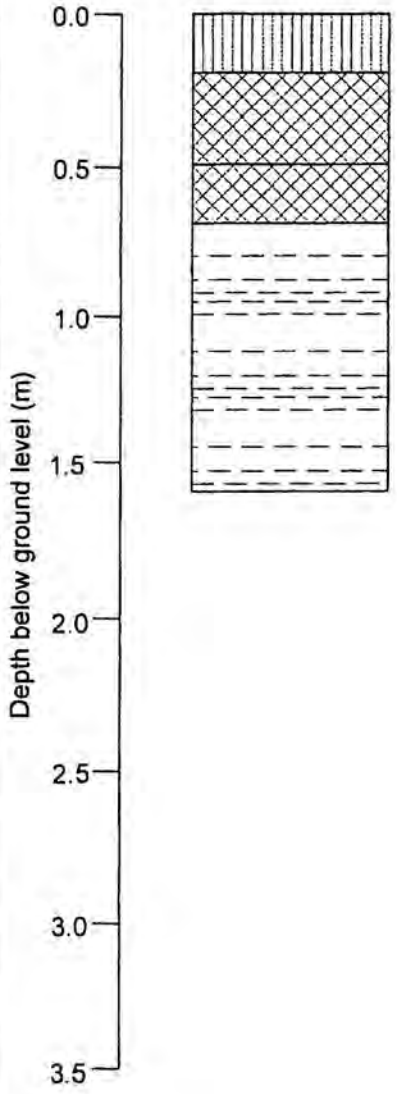
Scale: 1:25

Remarks: 3 ppm.
Little sample recovery 0.25-1.7 m.

Water: None

Sample	Soil							**Logged by:** HHU
Depth	0.5-1.7 m							
Type								**Date:** 20.07.98
Test	✓							

Aspinwall&company	WINDOW SAMPLING LOG	W 5
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



DESCRIPTION

0.2 m — Concrete.

Brick, stone, rubble fill.

0.5 m — MADE GROUND - Soft brown sandy CLAY with much fine to coarse gravel, clinker, ash, brick.

0.7 m — Firm ochre brown sandy and silty CLAY with much fine to coarse gravel and a little fine gravel of ash?

1.6 m

END OF WINDOW SAMPLING LOG 1.6 m

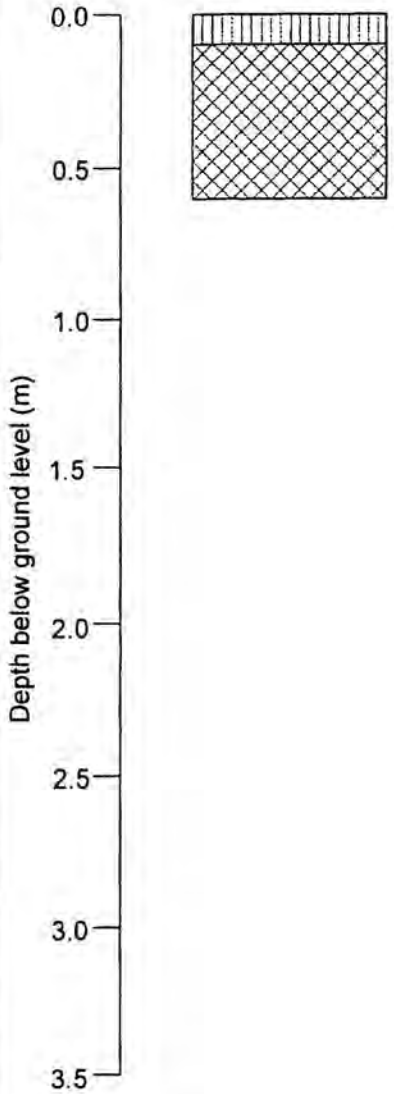
Scale: 1:25

Remarks: 2 ppm.

Water: None

Sample	Soil	Soil						Logged by: HHU
Depth	0.5-0.7 m	1.4-1.6 m						
Type	P. Pot	P. Pot						Date: 20.07.98
Test	✓	✓						

Aspinwall&company	WINDOW SAMPLING LOG	W 6
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.1 m	Concrete.
	0.6 m	MADE GROUND - Loose black sands and gravels of ash, clinker, brick, stone.

END OF WINDOW SAMPLING LOG 0.6 m

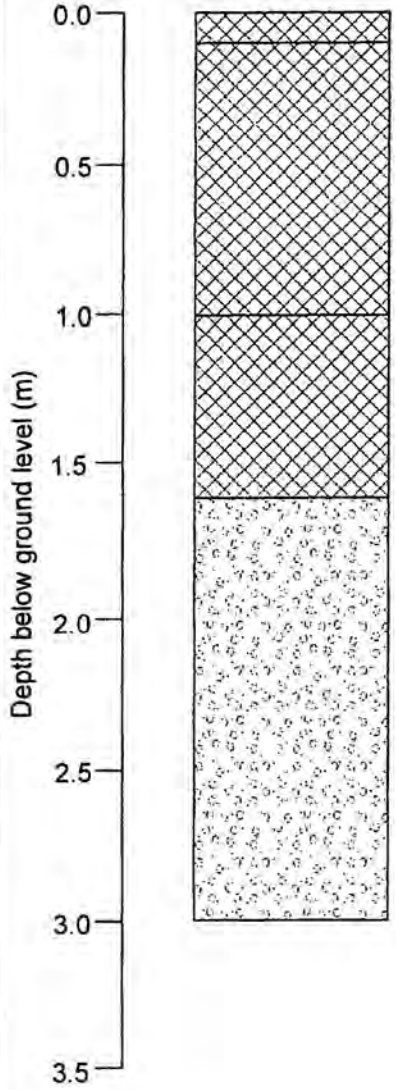
Scale: 1:25

Remarks: 2 ppm.
Obstruction at 0.6 m.

Water: None

Sample	Soil							**Logged by:** HHU
Depth	0.1-0.6 m							
Type	P. Pot							**Date:** 21.07.98
Test	✓							

Aspinwall&company	WINDOW SAMPLING LOG	W 7
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.1 m	Tarmac.
		MADE GROUND - Loose black clayey sands and gravels of brick, concrete, stone.
	1.0 m	
		MADE GROUND - Firm brown mottled black sandy and silty CLAY with some fine to coarse gravel, stone, brick.
	1.6 m	
		Loose ochre brown coarse SAND and fine to coarse GRAVEL.
	3.0 m	
		END OF WINDOW SAMPLING LOG 3.0 m

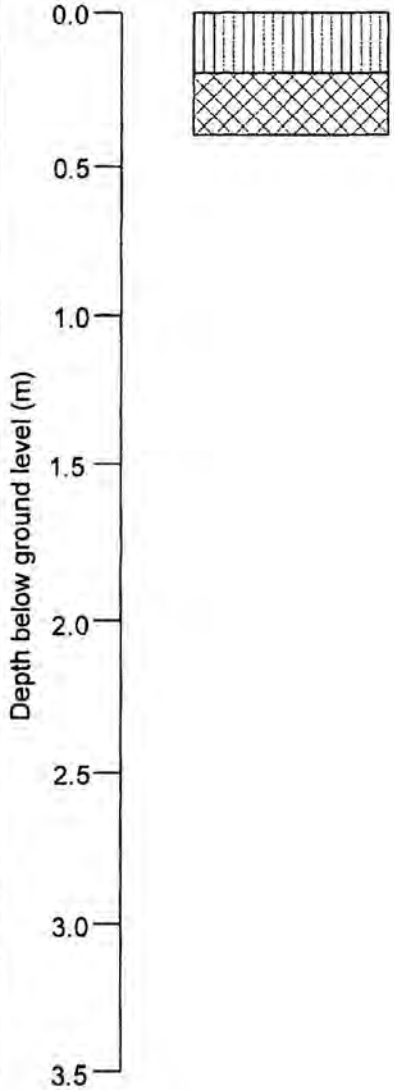
Scale: 1:25

Remarks: 50 ppm.

Water: At 2.13 m

Sample	Soil	Soil	Soil	Soil				**Logged by:** HHU
Depth	0.1-1.0 m	1.0-1.6 m	1.0-1.6 m	1.6-2.0 m				
Type	P. Pot	P. Pot	Jar	P. Pot				**Date:** 20.07.98
Test	✓	✓	✓	✓				

Aspinwall&company	WINDOW SAMPLING LOG	W 8
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



Legend	Depth (m)	DESCRIPTION
	0.2 m	Concrete.
	0.4 m	MADE GROUND - Recovered as loose black fine to coarse gravel of stone, brick, clinker.

END OF WINDOW SAMPLING LOG 0.4 m

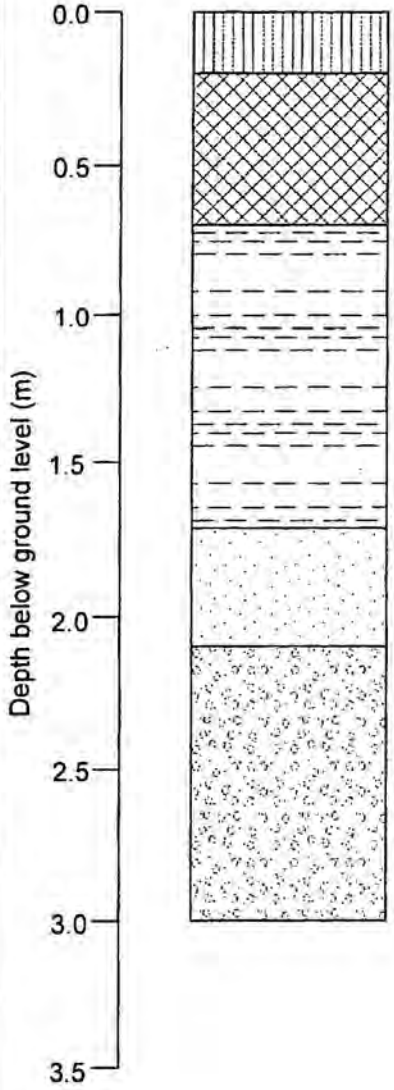
Scale: 1:25

Remarks: 8 ppm.
Obstruction at 0.4 m.

Water: None

Sample	Soil							Logged by: HHU
Depth	0.2-0.4 m							
Type	P. Pot							Date: 21.07.98
Test	✓							

Aspinwall&company	WINDOW SAMPLING LOG	W 9
Client: Grimley/Defence Estate Organisation	**CA No:** GR2713C	**Sheet 1 of 1**
	Ground Level - m A.O.D approx.	**Grid Ref.:**
Project: Establishment Development Plan LQA, Phase II Investigation	**Excavation Method:** Window Sampler	
Location: Chilwell Station	**Weather:** Overcast	



Depth (m)	DESCRIPTION
0.2 m	Concrete.
0.7 m	MADE GROUND - Soft to firm grey/brown CLAY with much fine to coarse gravels of clinker, brick, stone.
1.7 m	Soft brown sandy and silty CLAY with occasional fine gravel of ash? and some fine to coarse gravel.
2.1 m	Soft brown fine SAND with some fine to coarse gravel.
3.0 m	Loose ochre brown fine to coarse SAND and fine to coarse GRAVEL.
	END OF WINDOW SAMPLING LOG 3.0 m

Scale: 1:25

Remarks: 30 ppm.

Water: None

Sample	Soil	Soil	Soil	Soil				**Logged by:** HHU
Depth	0.2-0.7 m	0.8-1.0 m	1.7-2.1 m	2.8-3.0 m				
Type	P. Pot	P. Pot	P. Pot	P. Pot				**Date:** 21.07.98
Test								

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project: **MoD: Chilwell, Nottingham**			BOREHOLE No **BH-01A**
Client: **Aspinwall and Company**	Location: **Nottingham E N**		
Method & Equipment: **Cable Percussion using a Pilcon Wayfarer 1500**	Ground Level(m(AOD)):	Date: **21-07-98**	Sheet: **1 of 2**

SAMPLES & TESTS			Water	STRATA				Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
						(0.40) 0.40	(1) TOPSOIL with brick fragments.	
0.60-0.90 0.70	B1 J2					(2.05) 2.45	Soft to firm orange brown friable very sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded and consists of sandstone, coal and quartzite.	
1.65-1.95 1.70	B3 J4							
2.65-2.95 2.70	B5 J6					(1.10) 3.55	Soft to firm orange brown mottled grey, speckled black, very sandy slightly gravelly CLAY. Gravel ie fine subangular to subrounded and consists of sandstone, quartzite and coal.	
3.15	W19							
3.65-3.95 3.70	B7 J8		▼1			(3.70) 7.25	Medium dense brown gravelly SAND. Sand is medium to coarse. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite, siltstone and coal. Becoming very gravelly with depth.	
4.65-4.95 4.70	B9 J10							
5.65-5.95 5.70	B11 J12							
6.65-6.95 6.70	B13 J14							
7.40-7.70 7.50	B15 J16					(1.10)	Orange brown slightly gravelly SAND. Sand is fine to medium. Gravel is fine to medium subrounded and consists of quartzite and sandstone.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date		Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To	
21/07/98		0.00	0.00			8.40	8.60	0.50			1) Description derived from driller's daily report. 2) Inspection pit dug prior to drilling. 3) Water strike at 4.00m BGL.
21/07/98		9.00	8.65	150mm	3.15	8.80	9.00	0.75			

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- PRELIM1
Date:- 14/08/98

Project:		BOREHOLE No
MoD: Chilwell, Nottingham		BH-01A
Client: Aspinwall and Company	Location: Nottingham E N	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 21-07-98 / Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA				
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Instru-ment / Backfill
						8.35	(As sheet 1 of 2)	
8.40-8.60	J17					(0.65)	Dense grey gravelly SAND. Sand is coarse. Gravel is fine to coarse angular to subrounded and consists predominantly of quartzite and flint.	
8.80-9.00	B18					9.00		
							Borehole complete at 9.00m BGL	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date		Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To	
21/07/98		0.00	0.00			8.40	8.60	0.50			1) Description derived from driller's daily report. 2) Inspection pit dug prior to drilling. 3) Water strike at 4.00m BGL.
21/07/98		9.00	8.65	150mm	3.15	8.80	9.00	0.75			

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project: MoD: Chilwell, Nottingham	BOREHOLE No BH-02
Client: Aspinwall and Company	Location: Nottingham E N
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):
Date: 15-07-98	Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA				Instrument Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
						(0.25) 0.25	(1) Reinforced concrete.	
			1			(0.60) 0.85	(1) Whole house bricks and cobbles of slag and cinder.	
0.90-1.20 1.00	B1 J2					(0.55) 1.40	Soft to firm orange brown friable very sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded and consists of sandstone, coal and quartzite.	
1.50-1.80 1.60	B3 J4					(1.30) 2.70	Soft to firm orange brown mottled grey, locally speckled black, very sandy slightly gravelly CLAY. Gravel is fine subangular to subrounded and consists of sandstone, quartzite and coal.	
2.50-2.70 2.60 2.70-3.00 2.80	B5 J6 B7 J8		2				Medium dense orange brown to brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite, siltstone and flint.	
3.70-4.00 3.80	B9 J10					(2.95)		
4.70-5.00 4.80	B11 J12					5.65		
5.70-6.00 5.80	B13 J14					(1.25)	Medium dense orange brown gravelly SAND. Sand is medium to coarse. Gravel is fine to coarse subangular to subrounded and consists of sandstone, siltstone and quartzite.	
6.65-6.90 6.80 7.00-7.30 7.10	B15 J16 B17 J18					6.90	Thickly interlaminated to very thickly interbedded highly weathered red brown CLAYSTONE very weak and blue grey SILTSTONE weak. Recovered as a firm clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
15/07/98		0.00	0.00		
15/07/98		10.00	8.58	150mm	4.70

Chiselling			Water Added	
From	To	Hours	From	To

GENERAL REMARKS

1) Description derived from driller's daily report. 2) Inspection pit not required. 3) Water strikes at 0.75m and 2.65m BGL.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- 14/08/98

Project: **MoD: Chilwell, Nottingham**			BOREHOLE No BH-02
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 15-07-98	Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA				Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
8.00-8.30 8.10 9.00-9.30 9.10	B19 J20 B21 J22					(3.10) 10.00	(As sheet 1 of 2) Thickly laminated to very thinly interbedded highly weathered red brown CLAYSTONE very weak and blue grey SILTSTONE weak. Recovered as firm clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	
							Borehole complete at 10.00m BGL.	

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date		Depth	Casing	Casing Dia	Water Depth	From	To	Hours	From	To	
15/07/98		0.00	0.00								1) Description derived from driller's daily report. 2) Inspection pit not required. 3) Water strikes at 0.75m and 2.65m BGL.
15/07/98		10.00	8.58	150mm	4.70						

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project: **MoD: Chilwell, Nottingham**			BOREHOLE No **BH-03**
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 13-07-98	Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA				
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Instru-ment/ Backfill
						(0.15) 0.15	(1) Reinforced concrete.	
0.20-0.50	B1					(0.60)	MADE GROUND (Firm brown slightly gravelly sandy clay. Gravel fine angular and consists of brick, coal, sandstone and quartzite).	
0.40	J2					0.75		
0.80-1.10	B3						Medium dense orange brown to brown slightly sandy to sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite, siltstone and flint.	
1.00	J4							
1.80-2.10	B5					(2.50)		
2.00	J6							
2.30	J16							
2.80-3.10	B7							
3.00	J8					3.25		
3.30-3.60	B9					(0.60)	Medium dense orange brown gravelly SAND. Sand is medium to coarse. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite and siltstone.	
3.50	J10					3.85		
4.30-4.60	B11						Medium dense orange brown to brown slightly sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite, siltstone and flint.	
4.50	J12					(2.05)		
5.30-5.60	B13							
5.50	J14					5.90		
5.90-6.15	B15						Thickly interlaminated to very thinly interbedded highly weathered red brown CLAYSTONE very weak and blue grey SILTSTONE weak. Recovered as firm clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	
6.20	J17							
6.80-7.00	B18							
6.90	J19							
7.80-8.00	B20					(4.10)		

Boring Progress and Water Observations

Date		Depth	Casing	Casing Dia	Water Depth
13/07/98		0.00	0.00		
13/07/98		6.15	6.02	150mm	2.30
14/07/98		6.15	6.02	150mm	1.40

Chiselling

From	To	Hours
6.30	6.70	1.00
8.00	8.45	1.00

Water Added

From	To
0.00	10.00

GENERAL REMARKS

1) Description derived from driller's daily report.
2) No inspection pit required.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project:		BOREHOLE No
MoD: Chilwell, Nottingham		BH-03
Client: Aspinwall and Company	Location: Nottingham E N	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 13-07-98 / Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA				Instru-ment / Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
7.90	J21						(As sheet 1 of 2	
8.60-8.90	B22						Dense grey gravelly SAND. Sand is coarse. Gravel is fine to coarse angular to subrounded and consists predominantly of quartzite and flint.	
8.70	J23							
9.70-10.00	B24							
9.80	J25					10.00		
							Borehole complete at 10.00m BGL.	

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
13/07/98		0.00	0.00		
13/07/98		6.15	6.02	150mm	2.30
14/07/98		6.15	6.02	150mm	1.40

Chiselling			Water Added	
From	To	Hours	From	To
6.30	6.70	1.00	0.00	10.00
8.00	8.45	1.00		

GENERAL REMARKS

1) Description derived from driller's daily report.
2) No inspection pit required.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- PRELIM1
Date:- 14/08/98

Project:		BOREHOLE No
MoD: Chilwell, Nottingham		BH-04
Client: Aspinwall and Company	Location: Nottingham E N	
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 16-07-98 / Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA				
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Instru-ment/ Backfill
						(1.05) 1.05	(1) MADE GROUND (Angular cobbles consisting of brick and concrete).	
1.10-1.40 1.20 1.60 1.75-2.00 1.80	B1 J2 WJ7 B3 J4		▼			(0.70) 1.75	Soft to firm orange brown mottled grey locally speckled black sandy gravellY CLAY. Gravel is fine to medium subangular to subrounded and consists of sandstone, quartzite, flint and siltstone.	
2.80-3.10 2.90 3.80-4.10 3.90	B5 J6 B8 J9					(2.90) 4.65	Medium dense brown SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded and consists of sandstone, quartzite, flint and siltstone.	
4.80-5.10 4.90	B10 J11					(0.90) 5.55	Medium dense orange brown gravelly SAND. Sand is medium to coarse. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite and siltstone.	
5.60-5.90 5.70	B12 J13					(1.05) 6.60	Medium dense orange brown to brown slightly sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite, siltstone and flint.	
6.60-6.90 6.70 7.60-7.90 7.70	B14 J15 B16 J17						Thickly interlaminated to very thinly interbedded highly weathered red brown CLAYSTONE very weak and blue grey SILTSTONE weak to very weak. Recovered as firm red brown clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
16/07/98		0.00	0.00		
16/07/98		10.00	8.58	150mm	4.05

Chiselling			Water Added	
From	To	Hours	From	To
			2.00	10.00

GENERAL REMARKS

1) Description derived from driller's daily report. 2) Inspection pit dug prior to drilling. 3) Borehole probed to 1.50m BGL. 4) Water strike at 1.90m BGL.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project: **MoD: Chilwell, Nottingham**			BOREHOLE No **BH-04**
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 16-07-98	Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA				Instru-ment/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	
8.60-8.90 8.70	B18 J19					(3.40)	(As sheet 1 of 2) Thickly interlaminated to very thinly interbedded highly weathered red brown CLAYSTONE very weak and blue grey SILTSTONE weak to very weak. Recovered as firm red brown clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	
9.60-9.90 9.70	B20 J21					10.00		
							Borehole complete at 10.00m BGL.	

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
16/07/98		0.00	0.00		
16/07/98		10.00	8.58	150mm	4.05

Chiselling			Water Added	
From	To	Hours	From	To
			2.00	10.00

GENERAL REMARKS

1) Description derived from driller's daily report. 2) Inspection pit dug prior to drilling. 3) Borehole probed to 1.50m BGL. 4) Water strike at 1.90m BGL.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project: **MoD: Chilwell, Nottingham**			BOREHOLE No **BH-05**
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 17-07-98	Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA				
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Instry-ment Backfill
						(0.15) 0.15	(1) TOPSOIL.	
0.15-0.30	B1					(0.15) 0.30	MADE GROUND (Black sandy gravel. Sand consists of ash. Gravel is fine to coarse angular and consist of clinker and slag).	
0.20	J2							
0.30-0.50	B3						Soft to firm orange brown friable sandy gravelly CLAY. Gravel is fine to medium subangular to subrounded and consists of sandstone, coal and quartzite.	
0.40	J4							
0.60-0.90	B5					(1.40)		
0.70	J6							
						1.70		
1.70-2.00	B7						Medium dense orange brown to brown slightly sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, siltstone, quartzite and flint.	
1.80	J8							
2.70-3.00	B9							
2.80	J10							
3.70-4.00	B11							
3.80	J12							
4.70-5.00	B13							
4.80	J14							
4.95	WJ25					(7.55)		
5.70-6.00	B15							
5.80	J16							
6.70-7.00	B17							
6.80	J18							
7.70-8.00	B19							

Boring Progress and Water Observations

Date		Depth	Casing	Casing Dia	Water Depth
17/07/98		0.00	0.00		
17/07/98		10.00	9.50	150mm	4.95

Chiselling

From	To	Hours
4.90	5.20	0.75

Water Added

From	To
2.40	10.00

GENERAL REMARKS

1) Description derived from driller's daily report.
2) Inspection pit dug prior to drilling.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- **14/08/98**

Project: MoD: Chilwell, Nottingham			BOREHOLE No BH-05
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 17-07-98	Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA				
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Instru-ment/ Backfill
7.80	J20						(As sheet 1 of 2) Medium dense orange brown to brown slightly sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, siltstone, quartzite and flint.	
8.70-9.00	B21							
8.80	J22					9.25		
9.30-9.60	B23						Thickly interlaminated to very thinly interbedded highly weathered red brown CLAYSTONE very weak and blue grey SILTSTONE weak to very weak. Recovered as firm red brown and blue grey clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	
9.40	J24					(0.75)		
						10.00		
							Borehole complete at 10.00m BGL.	

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
17/07/98		0.00	0.00		
17/07/98		10.00	9.50	150mm	4.95

Chiselling			Water Added	
From	To	Hours	From	To
4.90	5.20	0.75	2.40	10.00

GENERAL REMARKS

1) Description derived from driller's daily report.
2) Inspection pit dug prior to drilling.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- 14/05/98

Project: MoD: Chilwell, Nottingham			BOREHOLE No BH-06
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 20-07-98	Sheet: 1 of 2

SAMPLES & TESTS			Water	STRATA				Instrument/Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
						(0.07)	(1) MADE GROUND (Tarmacadam).	
0.20-0.50	B1					(0.48)	MADE GROUND (Black sandy gravel. Sand consists of ash. Gravel is fine to coarse angular and consists of clinker and slag).	
0.30	J2					0.55		
0.55-0.70	B3					(0.15)	Soft to firm orange brown friable very sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded and consists of sandstone, quartzite, siltstone and flint.	
0.60	J4					0.70		
0.80-1.00	B5						Medium dense orange brown to brown slightly sandy GRAVEL. Gravel is fine to coarse subangular to subrounded and consists of sandstone, quartzite, siltstone and flint. between c.0.70m and 2.10m BGL ... clayey.	
0.90	J6							
1.80-2.10	B7							
1.90	J8							
2.36	WJ19		▼					
2.80-3.10	B9							
2.90	J10							
3.80-4.10	B11					(6.45)		
3.90	J12							
4.80-5.10	B13							
4.90	J14							
5.80-6.10	B15							
5.90	J16							
6.80-7.10	B17							
6.90	J18					7.15		
7.30-7.50	J20						(1) Light grey/blue grey SILTSTONE moderately strong.	
7.40	J21					(1.40)		

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
20/07/98		0.00	0.00		
20/07/98		9.00	7.45	150mm	3.20

Chiselling			Water Added	
From	To	Hours	From	To
7.65	8.45	1.75	2.50	9.00

GENERAL REMARKS

1) Description derived from driller's daily report. 2) Inspection pit dug prior to drilling. 3) Water strike at 2.50m BGL

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2

ALLIED EXPLORATION & GEOTECHNICS LTD

BOREHOLE RECORD

Status:- **PRELIM1**
Date:- 14/05/98

Project: MoD: Chilwell, Nottingham			BOREHOLE No BH-06
Client: Aspinwall and Company	Location: Nottingham E N		
Method & Equipment: Cable Percussion using a Pilcon Wayfarer 1500	Ground Level(m(AOD)):	Date: 20-07-98	Sheet: 2 of 2

SAMPLES & TESTS			Water	STRATA				
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION	Instru-ment/ Backfill
						8.55	(As sheet 1 of 2) (1) Light grey/blue grey SILTSTONE moderately strong.	
8.70-9.00	B22					(0.45) 9.00	Thickly laminated to very thinly bedded highly weathered red brown CLAYSTONE very weak. Recovered as firm red brown locally blue grey clay with many lithorelicts. Occasional thin bands of grey siltstone moderately weak.	
							Borehole complete at 9.00m BGL	

Boring Progress and Water Observations					
Date		Depth	Casing	Casing Dia	Water Depth
20/07/98		0.00	0.00		
20/07/98		9.00	7.45	150mm	3.20

Chiselling			Water Added	
From	To	Hours	From	To
7.65	8.45	1.75	2.50	9.00

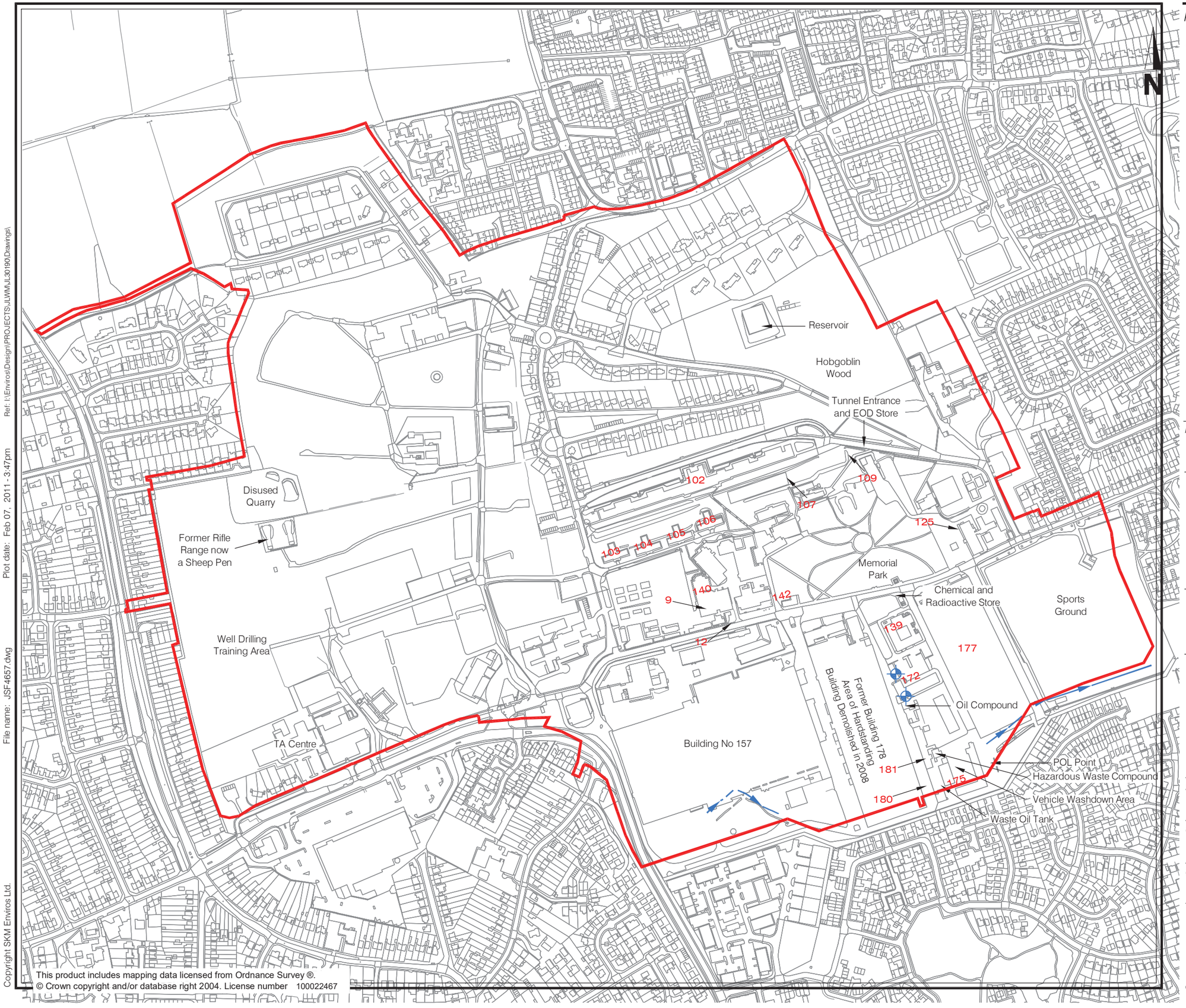
GENERAL REMARKS

1) Description derived from driller's daily report. 2) Inspection pit dug prior to drilling. 3) Water strike at 2.50m BGL.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By: G. Lloyd-Payne	Contract No. 1898

Date Printed:- 14/08/98

Form AEG21/2



KEY:

- Site Ownership Boundary
- Surface Water Culvert
- Water Abstraction Boreholes
- 102 Building Numbers

REV.	DESCRIPTION	DATE

DEFENCE ESTATES

CHETWYND BARRACKS LAND QUALITY ASSESSMENT

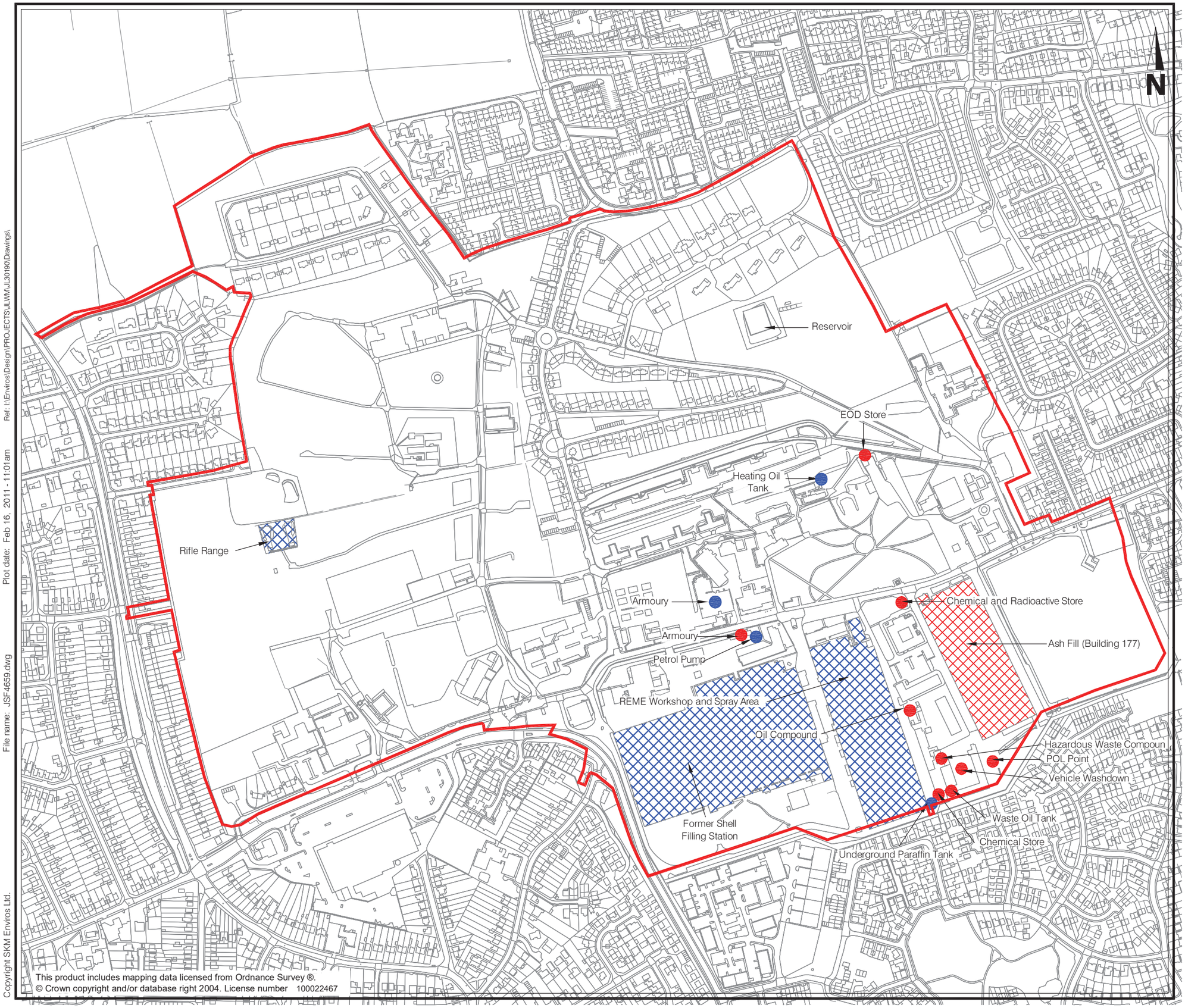
FIGURE 2

SITE LAYOUT PLAN

SCALE	1:5,000 @ A3
PROJECT	JL30190
CONTENT	
DRAWN	JSF
CHECKED	JW
DATE	FEB 2011

SINCLAIR KNIGHT MERZ SKM ENVIROS

File name: JSF4657.dwg
Plot date: Feb 07, 2011 - 3:47pm
Ref: I:\Enviros\Design\PROJECTS\JLWM\JL30190\Drawings\



File name: JSF4659.dwg Ref: I:\Enviros\Design\PROJECTS\JLWM\JL30190\Drawings\

Plot date: Feb 16, 2011 - 11:01am

KEY:

- Site Ownership Boundary
- Current Sources
- Historic Sources

REV.	DESCRIPTION	DATE

DEFENCE ESTATES
Delivering Estate Solutions to Defence Needs

CHETWYND BARRACKS LAND QUALITY ASSESSMENT

FIGURE 3

POTENTIAL SOURCES OF CONTAMINATION

SCALE	PROJECT
1:5,000 @ A3	JL30190
CONTENT	DRAWN
JW	JSF
CHECKED	DATE
	FEB 2011

SINCLAIR KNIGHT MERZ
SKM ENVIROS

Appendix C Site Photographs

Photograph 1 - Depot building (Building 157).

Photograph 2 - Site of demolished REME workshop (left of shot), Workshop building (right of shot).

peterbrett	Client: **Defence Estates**	**Chetwynd Barracks** **Site Photographs**	Date: Feb 2017 A4 Scale: - Drawn: LT Checked: LT Figure: **App B**

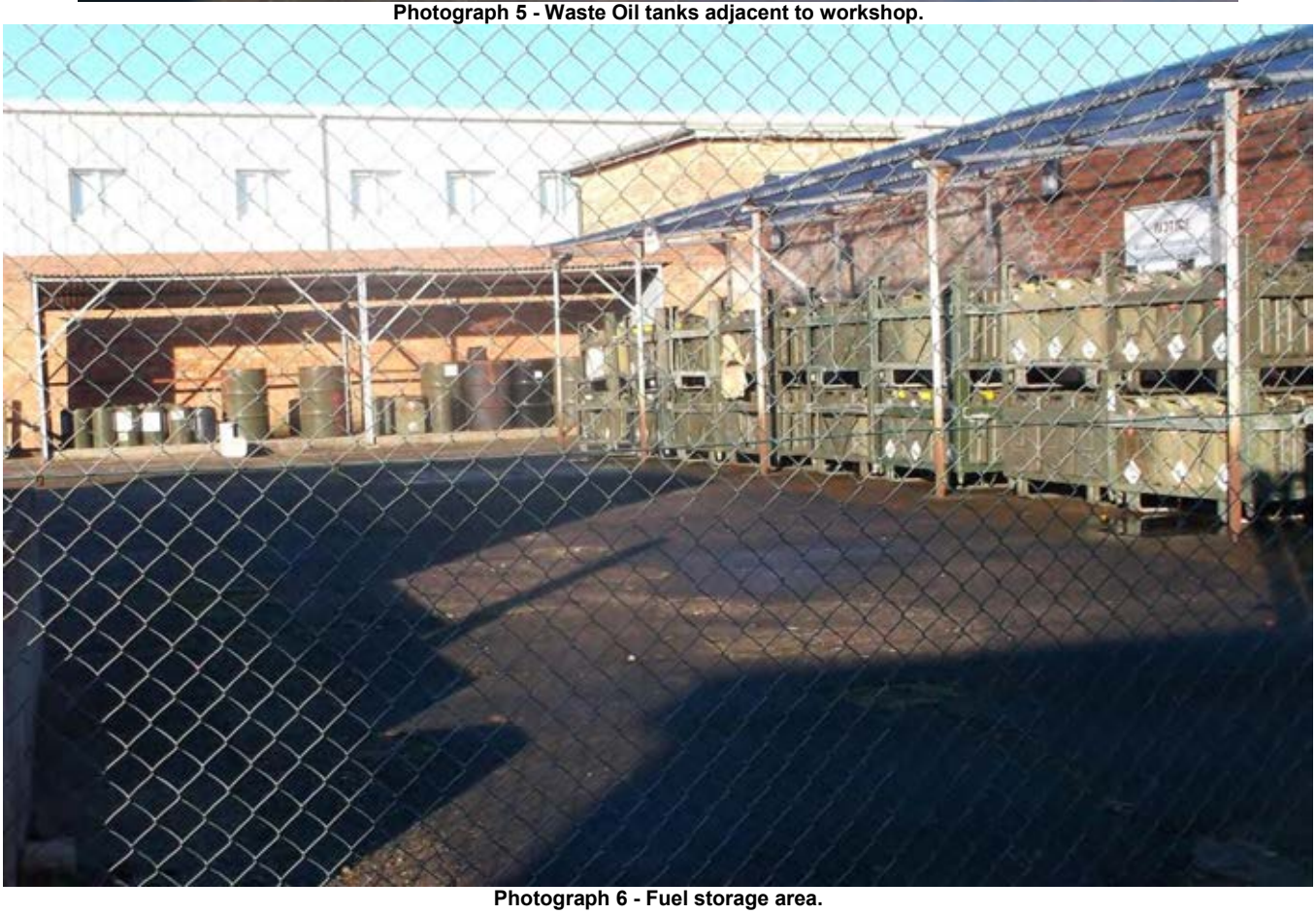
11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG

Photograph 3 - Fuel filling station with Building 171 in background.

Photograph 4 - Waste oil tank adjacent to workshop.

pba peterbrett 11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG	Client **Defence Estates**	**Chetwynd Barracks** **Site Photographs**	Date Feb 2017 A4 Scale - Drawn LT Checked LT Figure **App B**

Photograph 5 - Waste Oil tanks adjacent to workshop.



Photograph 6 - Fuel storage area.

pba peterbrett 11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG	Client **Defence Estates**	**Chetwynd Barracks** **Site Photographs**	Date Feb 2017 A4 Scale - Drawn LT Checked LT Figure **App B**

Photograph 7 - Waste storage area.

Photograph 8 - Terrace ground north of Payne Road coincident with BGS mapped Made Ground.

pba peterbrett 11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG	Client **Defence Estates**	**Chetwynd Barracks** **Site Photographs**	Date February 2017 A4 Scale - Drawn LT Checked LT Figure **App B**

Photograph 9 - Terraced ground north of Payne Road.

Photograph 10 - Terraced ground close to the armoury/ explosive storage tunnels entrance.

pba peterbrett	Client	**Chetwynd Barracks**	Date February 2017
	Defence Estates		A4 Scale -
			Drawn LT
		Site Photographs	Checked LT
			Figure **App B**

11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG

Photograph 11 - Soil Mound.

Photograph 12 - Entrance to the armoury/ explosive storage tunnels.

pba peterbrett 11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG	Client **Defence Estates**	**Chetwynd Barracks** **Site Photographs**	Date February 2017 A4 Scale - Drawn LT Checked LT Figure **App B**

Photograph 13 - Chemical store adjacent to Entrance to the armoury/ explosive storage tunnels.

pba peterbrett

11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG

Client

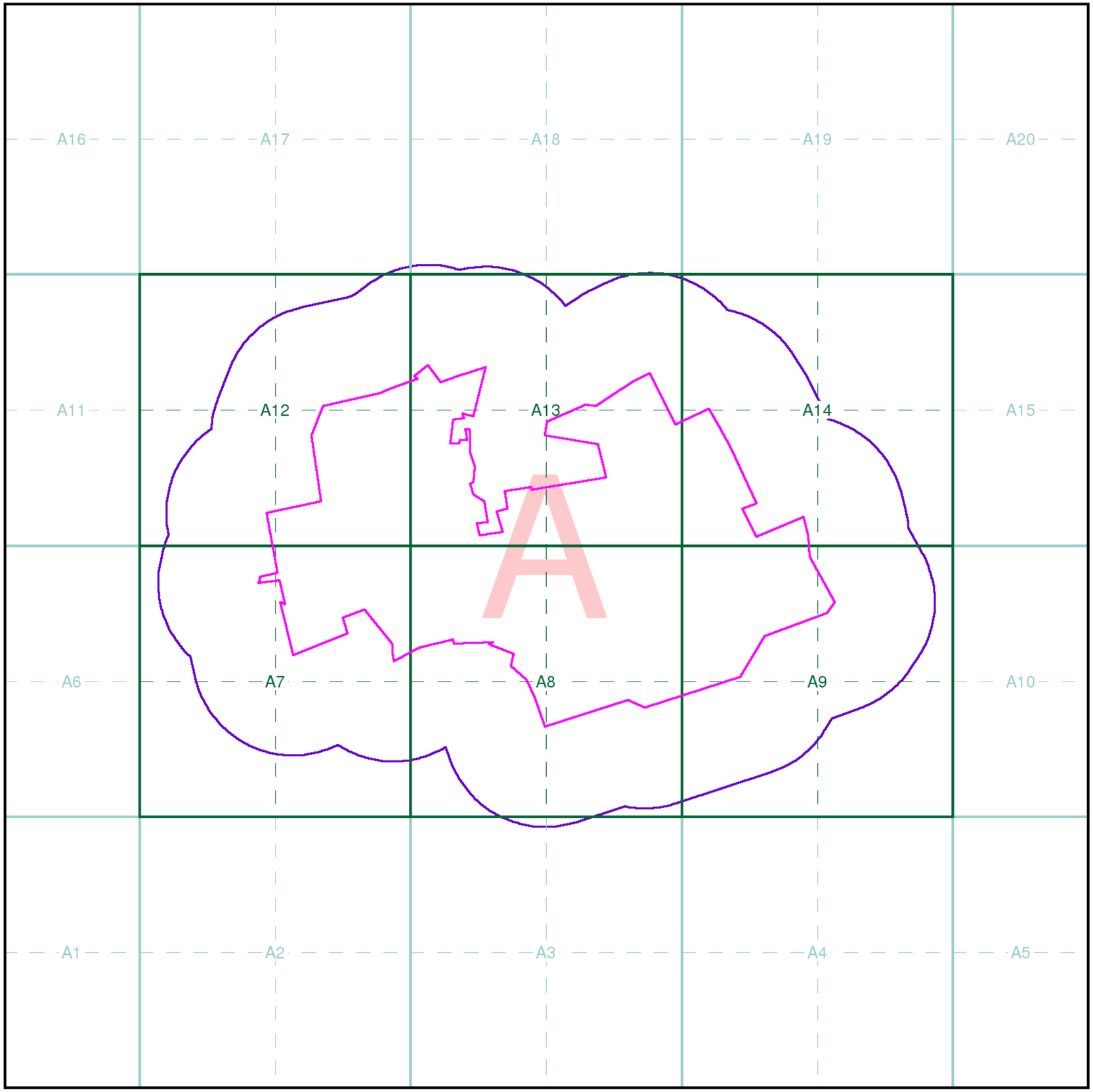
Defence Estates

Chetwynd Barracks

Site Photographs

Date	February 2017
A4 Scale	-
Drawn	LT
Checked	LT
Figure	**App B**

Appendix D Historical Maps



Envirocheck®
LANDMARK INFORMATION GROUP®

Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data
British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL
Environment Agency
NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Prepared For
DIO

Client Details
Mr P Crisp - 486500LON, Jones Lang Lasalle Limited, 30 Warwick Street, London, W1B 5NH

Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450530, 335230
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details
2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Full Terms and Conditions can be found on the following link:
http://www.landmarkinfo.co.uk/Terms/Show/515

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Pylon
Electricity Transmission Line
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

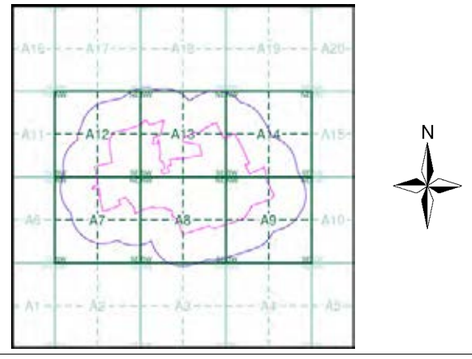
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Nottinghamshire	1:10,560	1884	3
Derbyshire	1:10,560	1901	4
Nottinghamshire	1:10,560	1901	5
Nottinghamshire	1:10,560	1921	6
Derbyshire	1:10,560	1921	7
Nottinghamshire	1:10,560	1938	8
Derbyshire	1:10,560	1939	9
Ordnance Survey Plan	1:10,000	1955 - 1956	10
Ordnance Survey Plan	1:10,000	1967	11
Ordnance Survey Plan	1:10,000	1971 - 1973	12
Nottingham	1:10,000	1975	13
Ordnance Survey Plan	1:10,000	1983 - 1985	14
Ordnance Survey Plan	1:10,000	1995	15

Historical Map - Slice A



Order Details

Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 — Values for prominent elevations

186.0 — Numbers for spot elevations, depth soundings, contour lines, etc.

0,2 — Velocity of the current, width of river bed, depth of river

Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (-)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

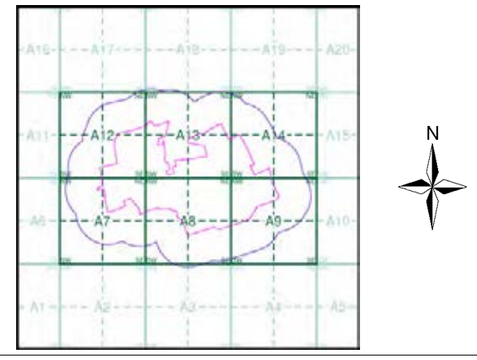
- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway
- Highway under Construction
- Improved Dirt Road (former truck road)
- Double-track Railroad with First Class Station
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment
- Water Gauge
- Direction and velocity of current
- Water Level Mark
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Russian Map - Slice A



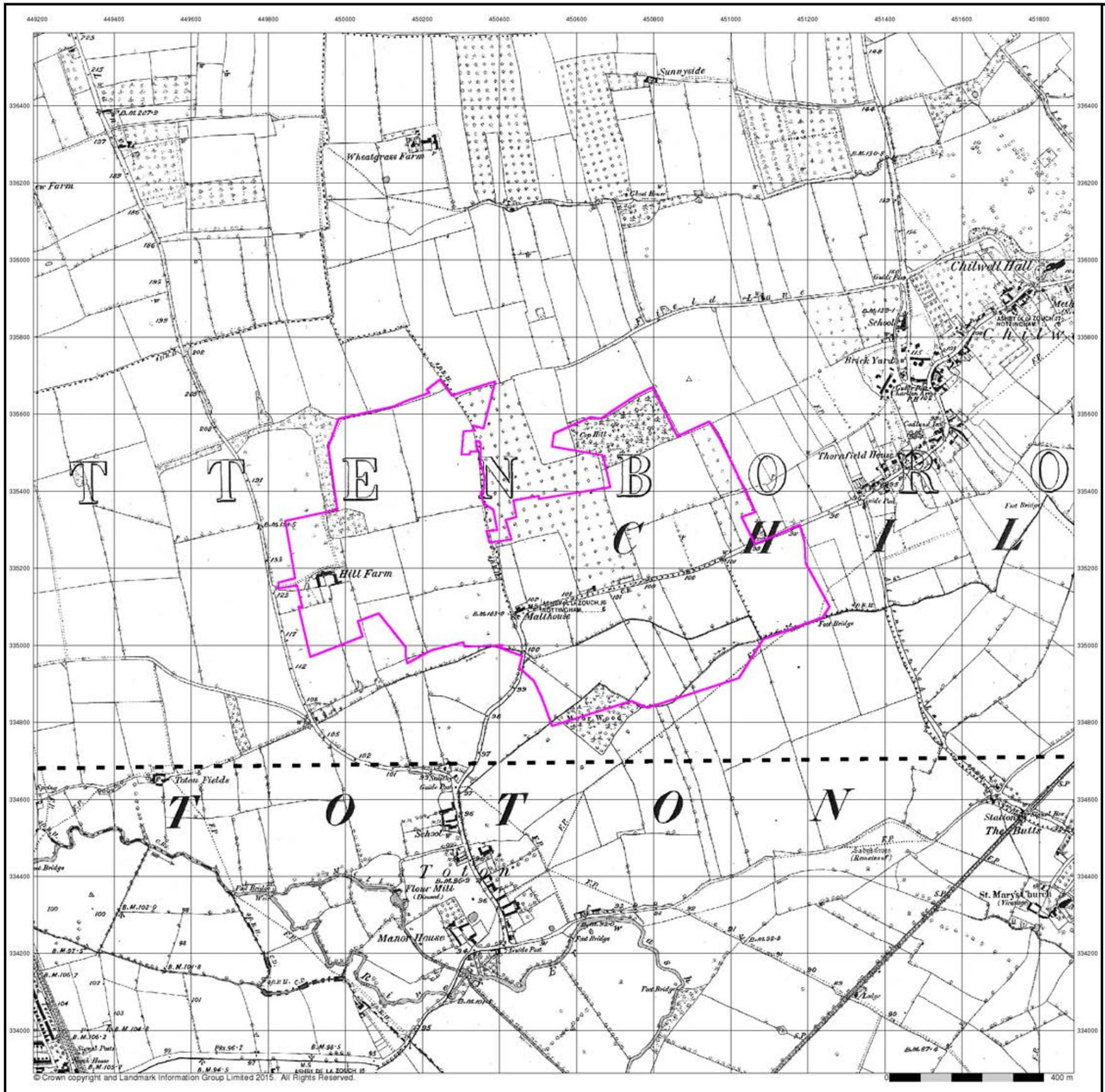
Order Details

Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Nottinghamshire

Published 1884

Source map scale - 1:10,560

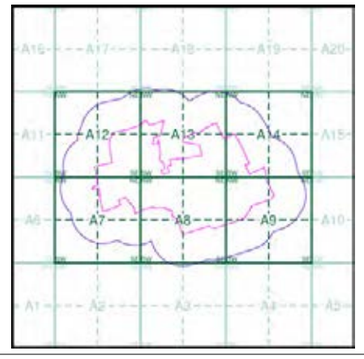
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

041SE
1884
1:10,560

045NE
1884
1:10,560

Historical Map - Slice A



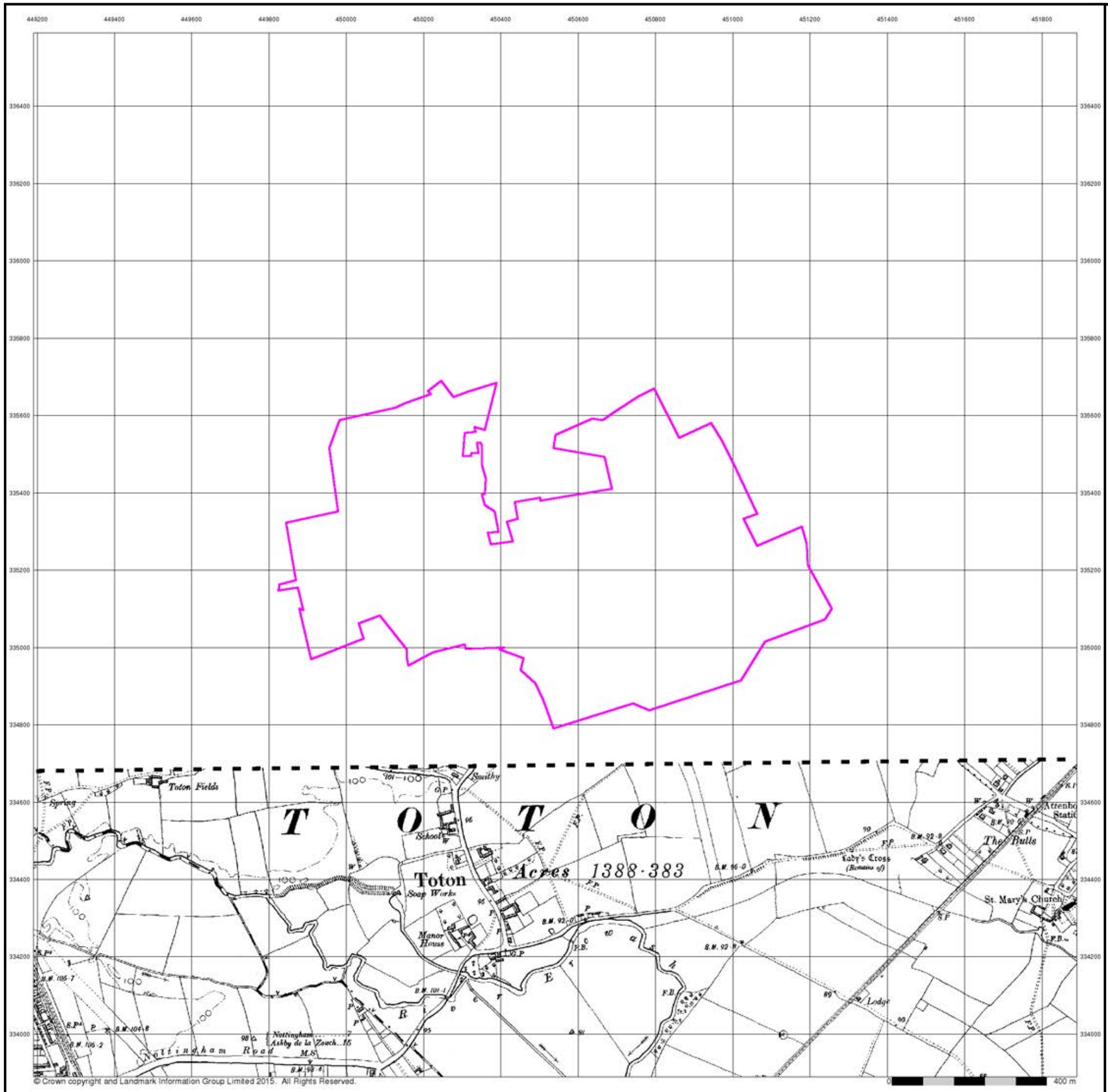
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



Envirocheck®

LANDMARK INFORMATION GROUP®

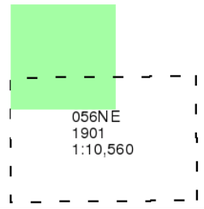
Derbyshire

Published 1901

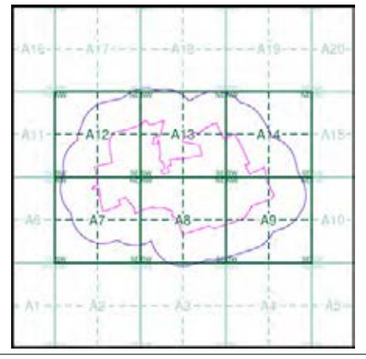
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

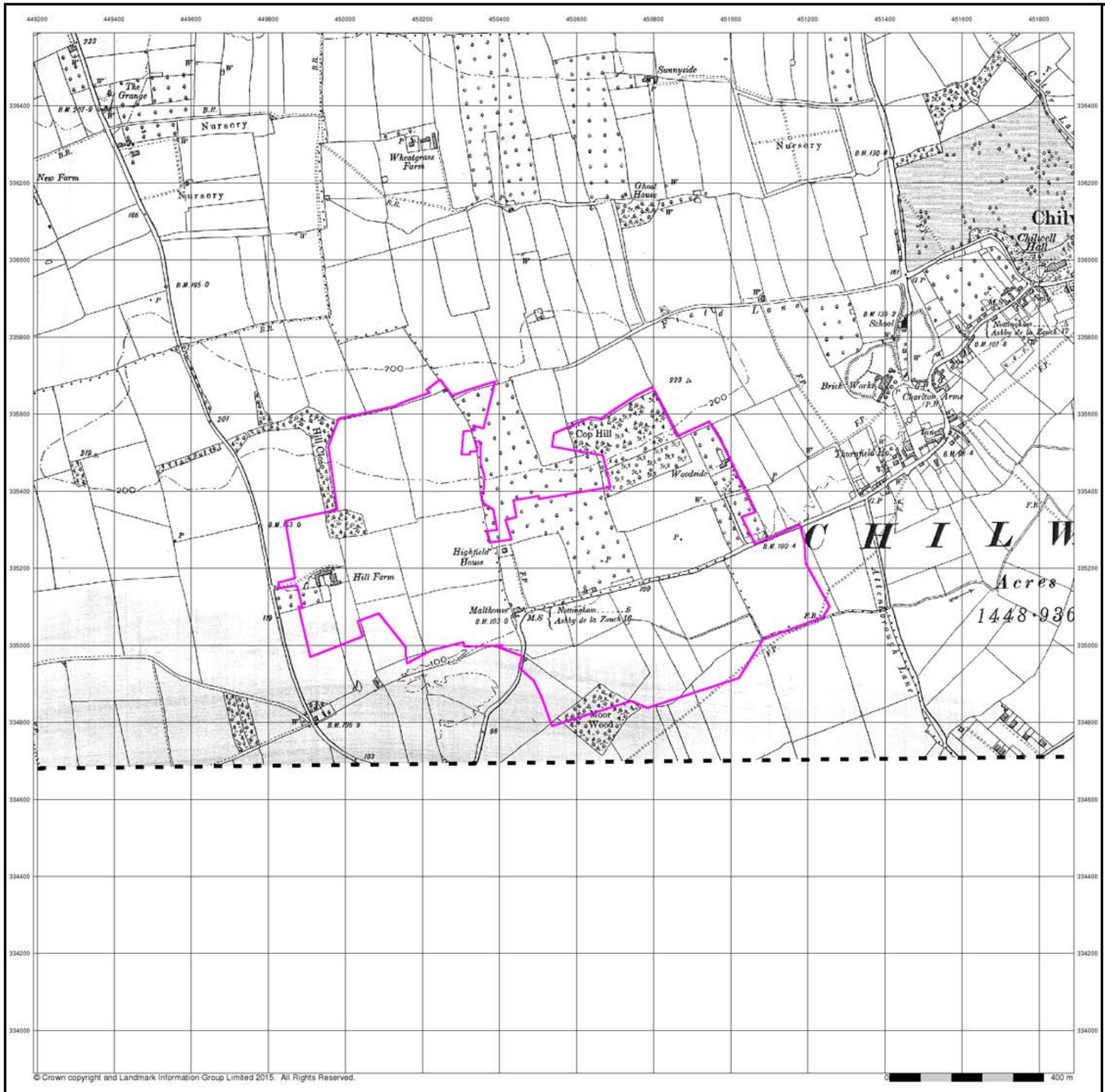
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

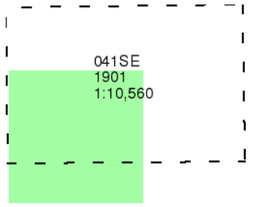
Nottinghamshire

Published 1901

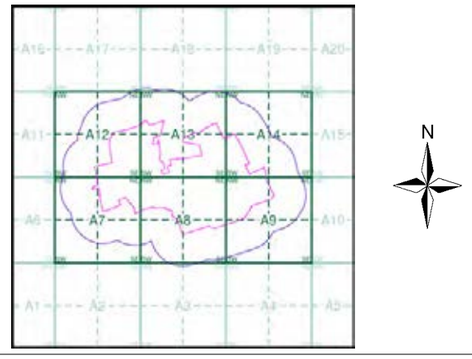
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

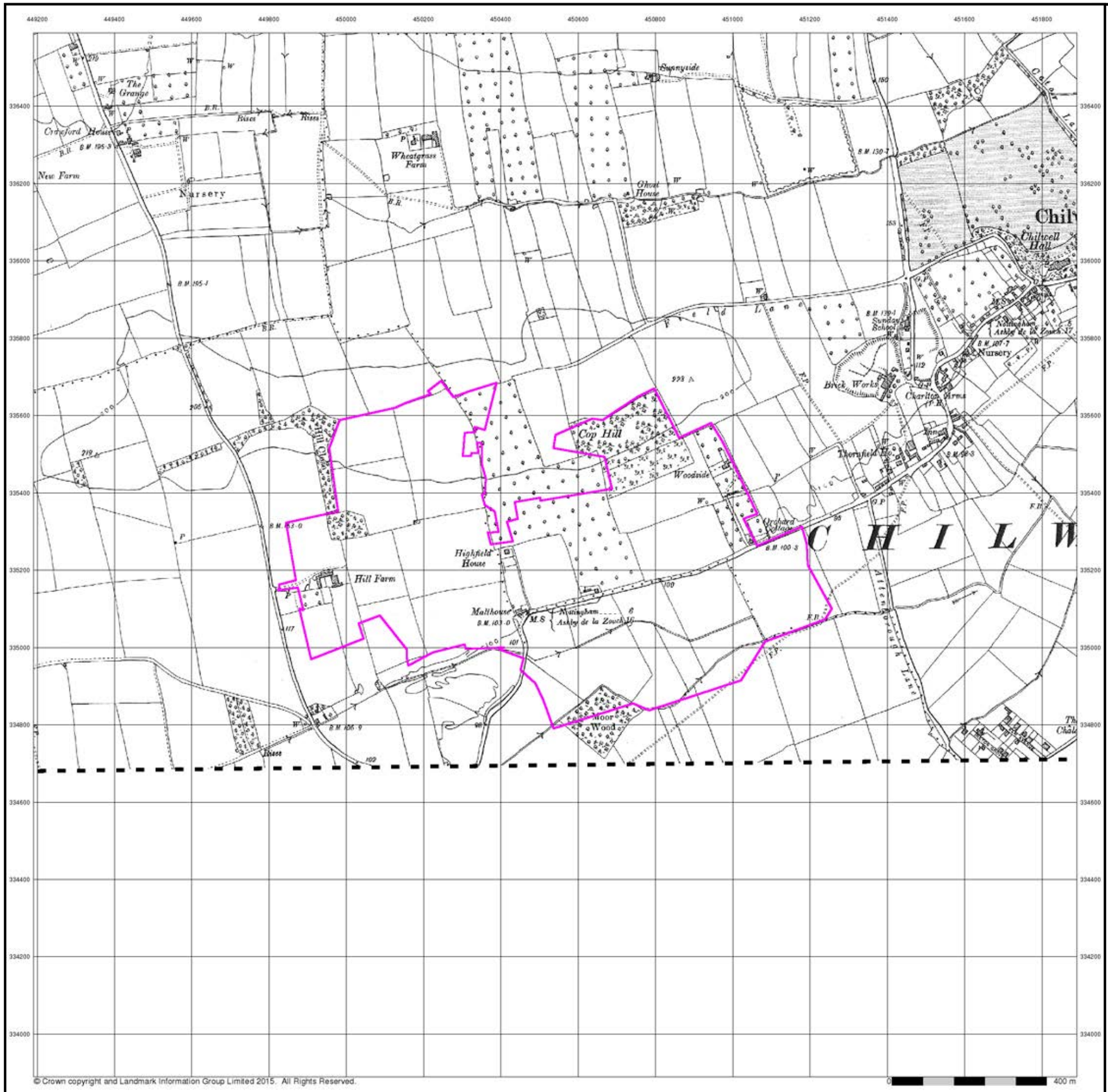
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

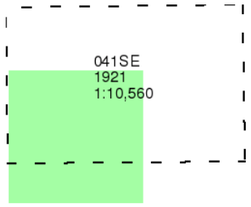
Nottinghamshire

Published 1921

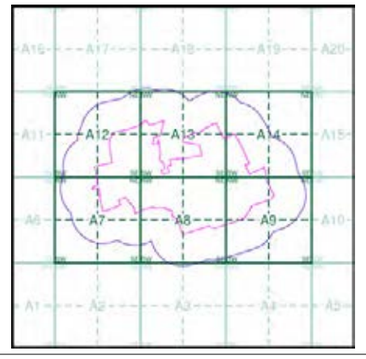
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



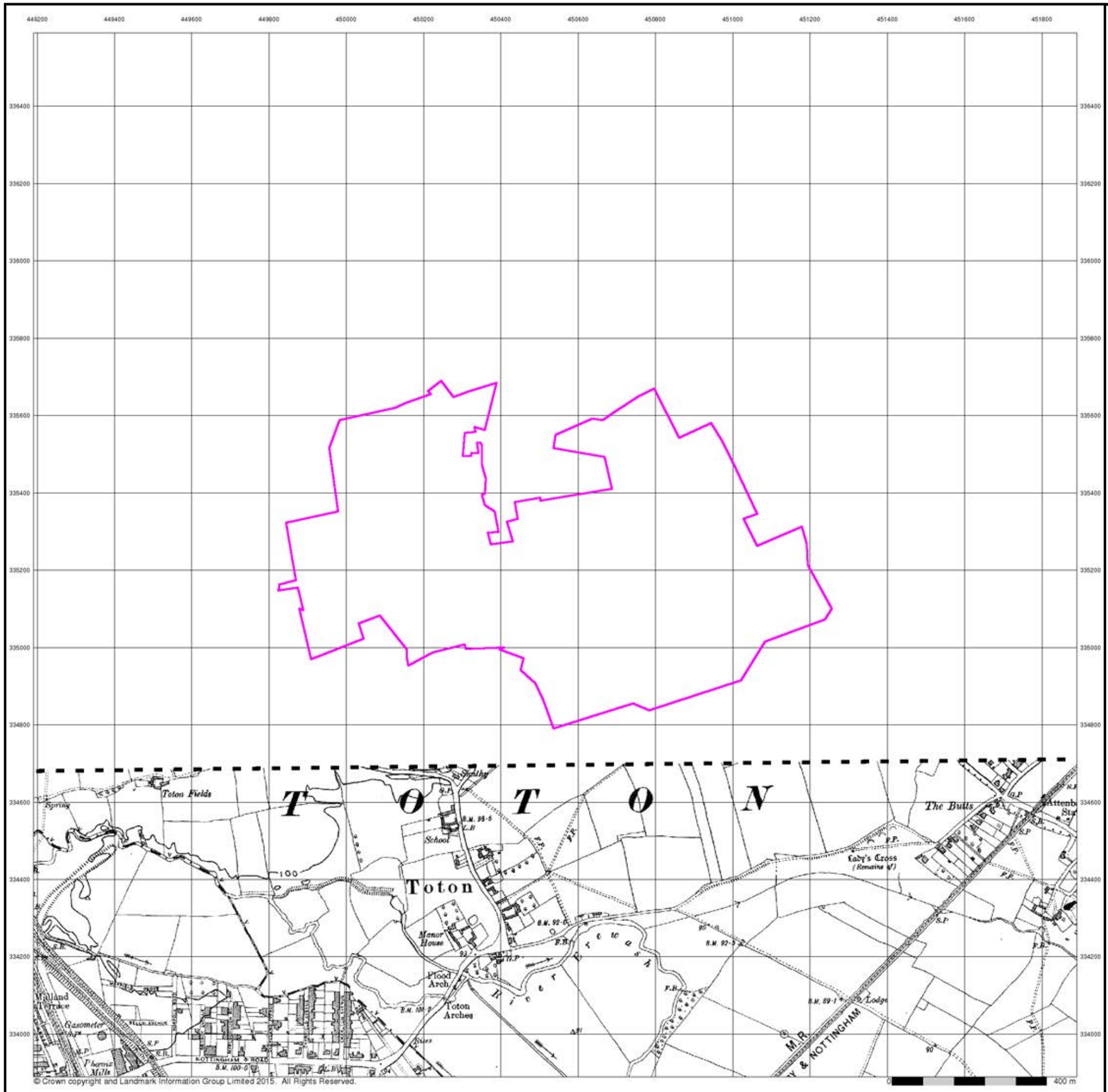
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

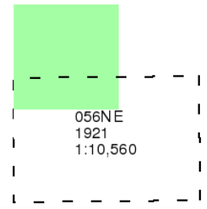
Derbyshire

Published 1921

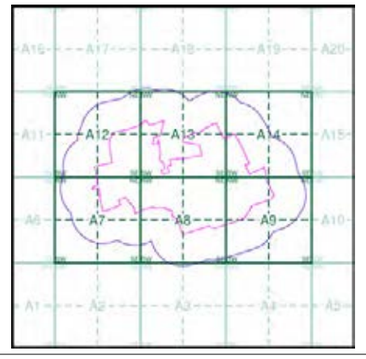
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

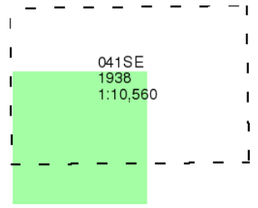
Nottinghamshire

Published 1938

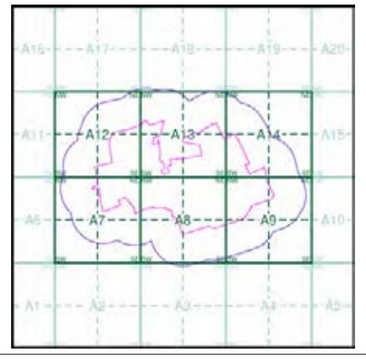
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



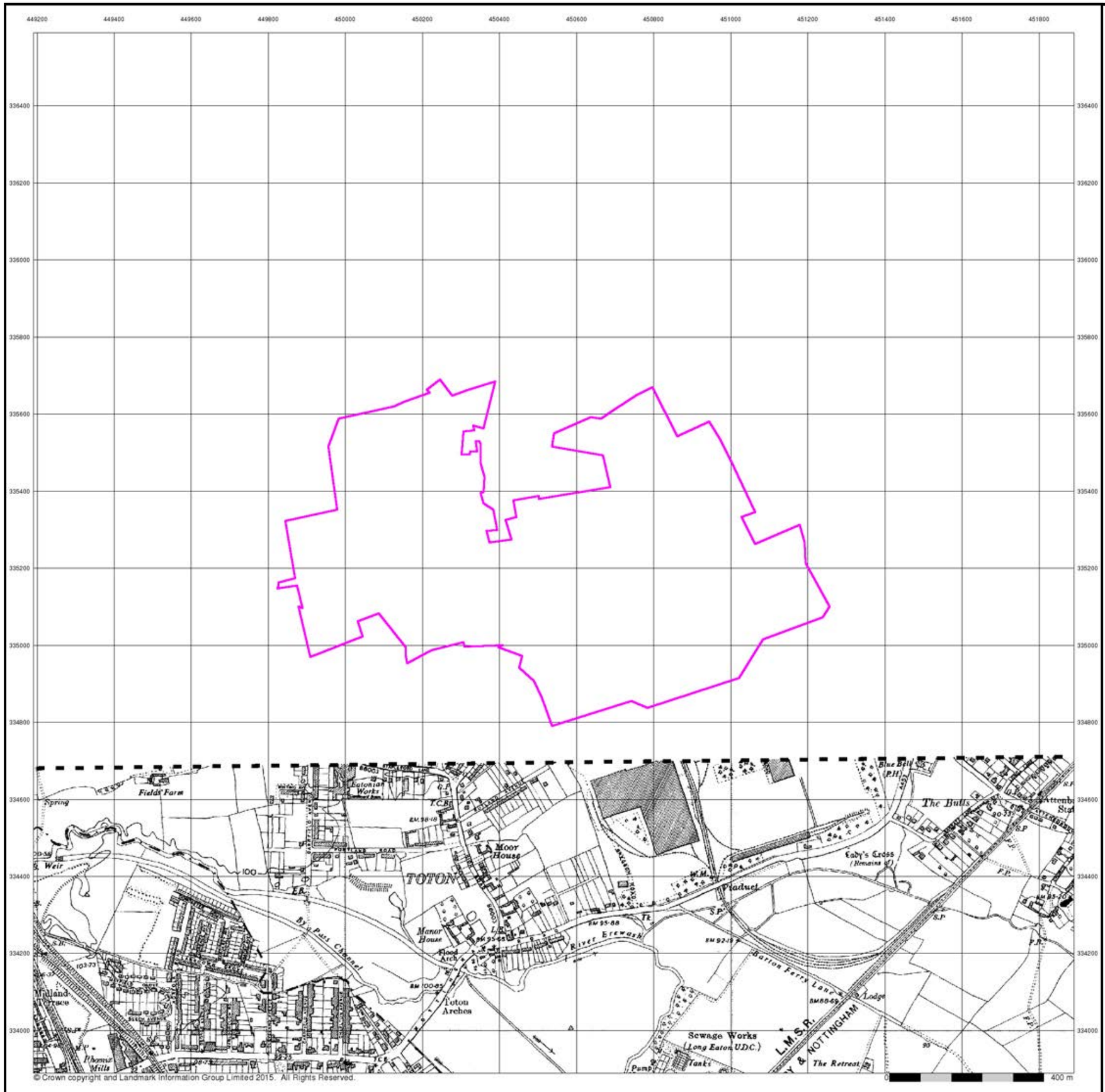
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

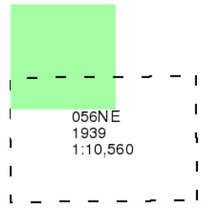
Derbyshire

Published 1939

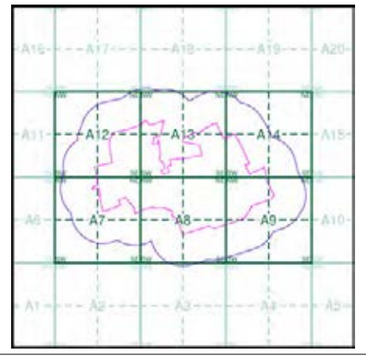
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

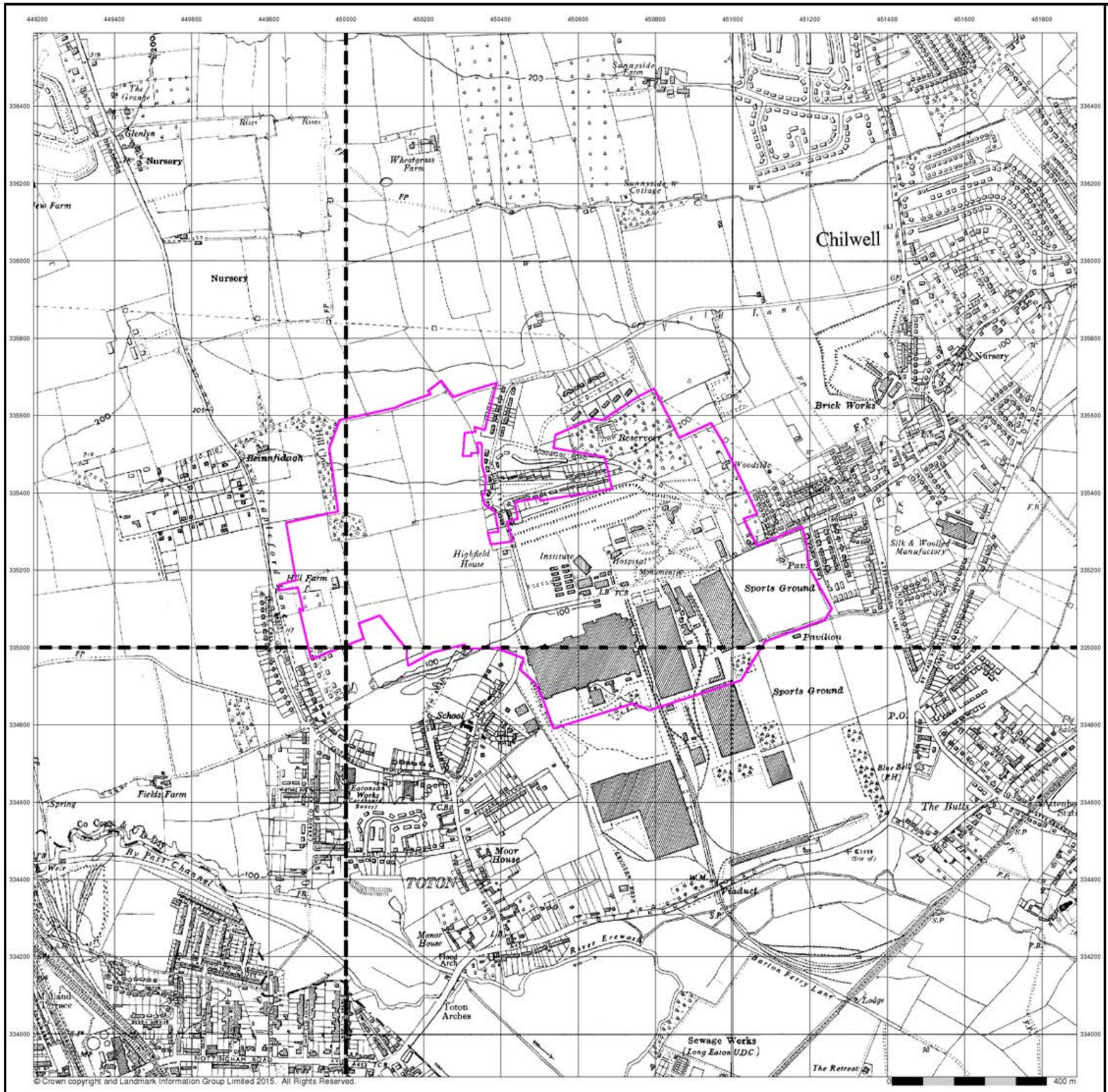
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1955 - 1956

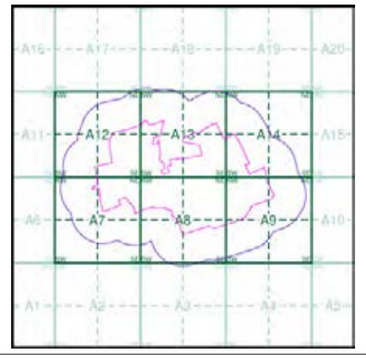
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SK43NE 1956 1:10,560	SK53NW 1955 1:10,560
SK43SE 1955 1:10,560	SK53SW 1955 1:10,560

Historical Map - Slice A



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

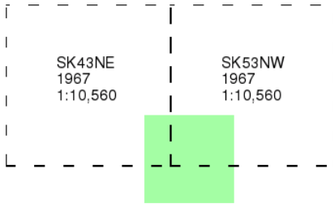
Ordnance Survey Plan

Published 1967

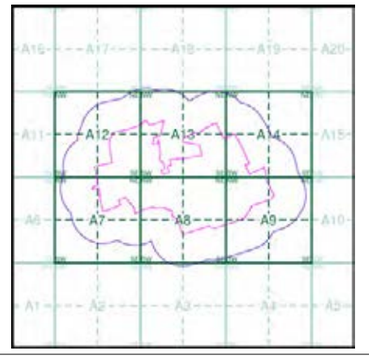
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



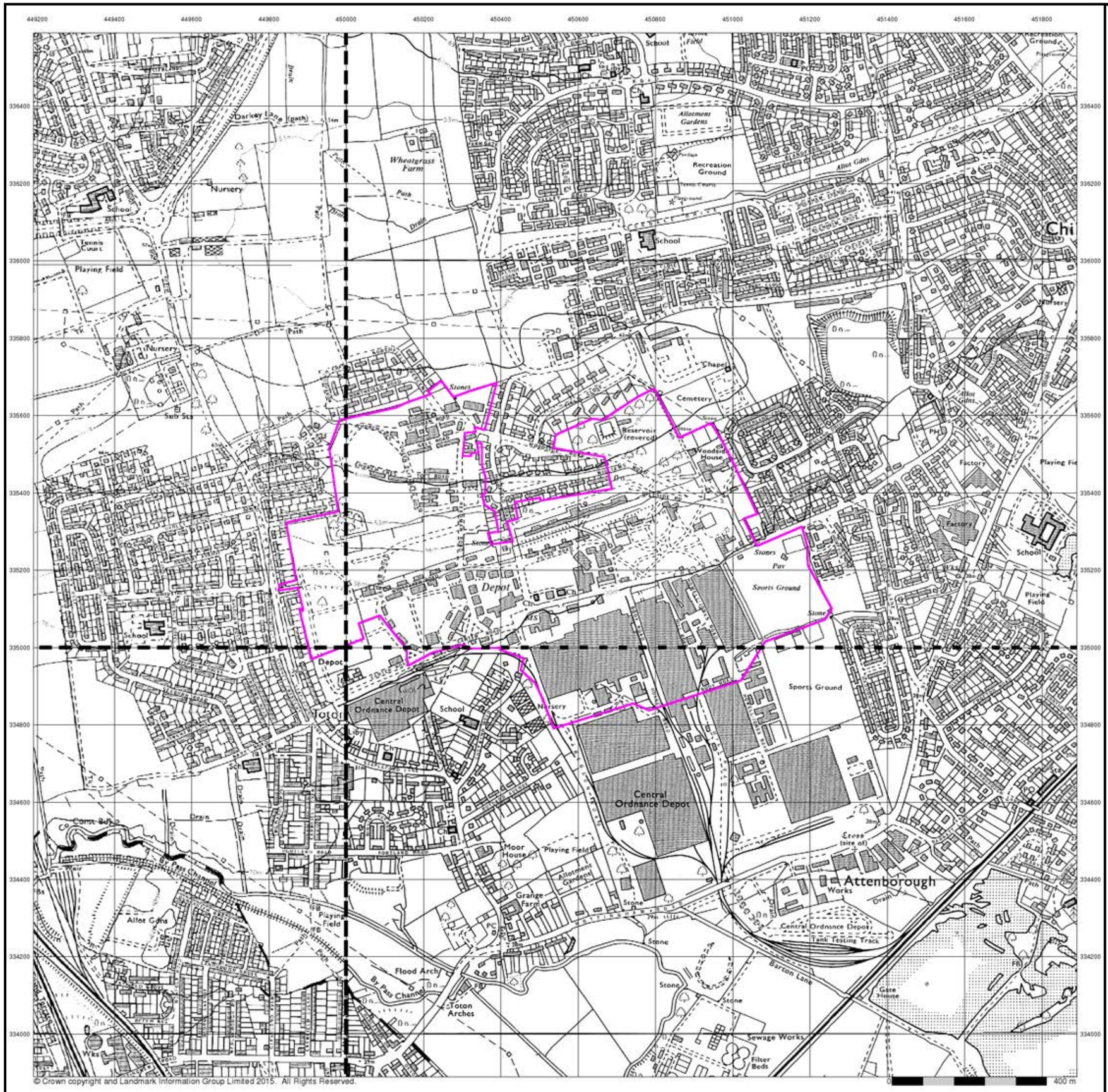
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1971 - 1973

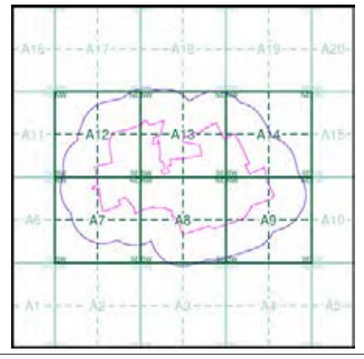
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SK43NE 1973 1:10,000	SK53NW 1973 1:10,000
SK43SE 1971 1:10,000	SK53SW 1971 1:10,000

Historical Map - Slice A



Order Details

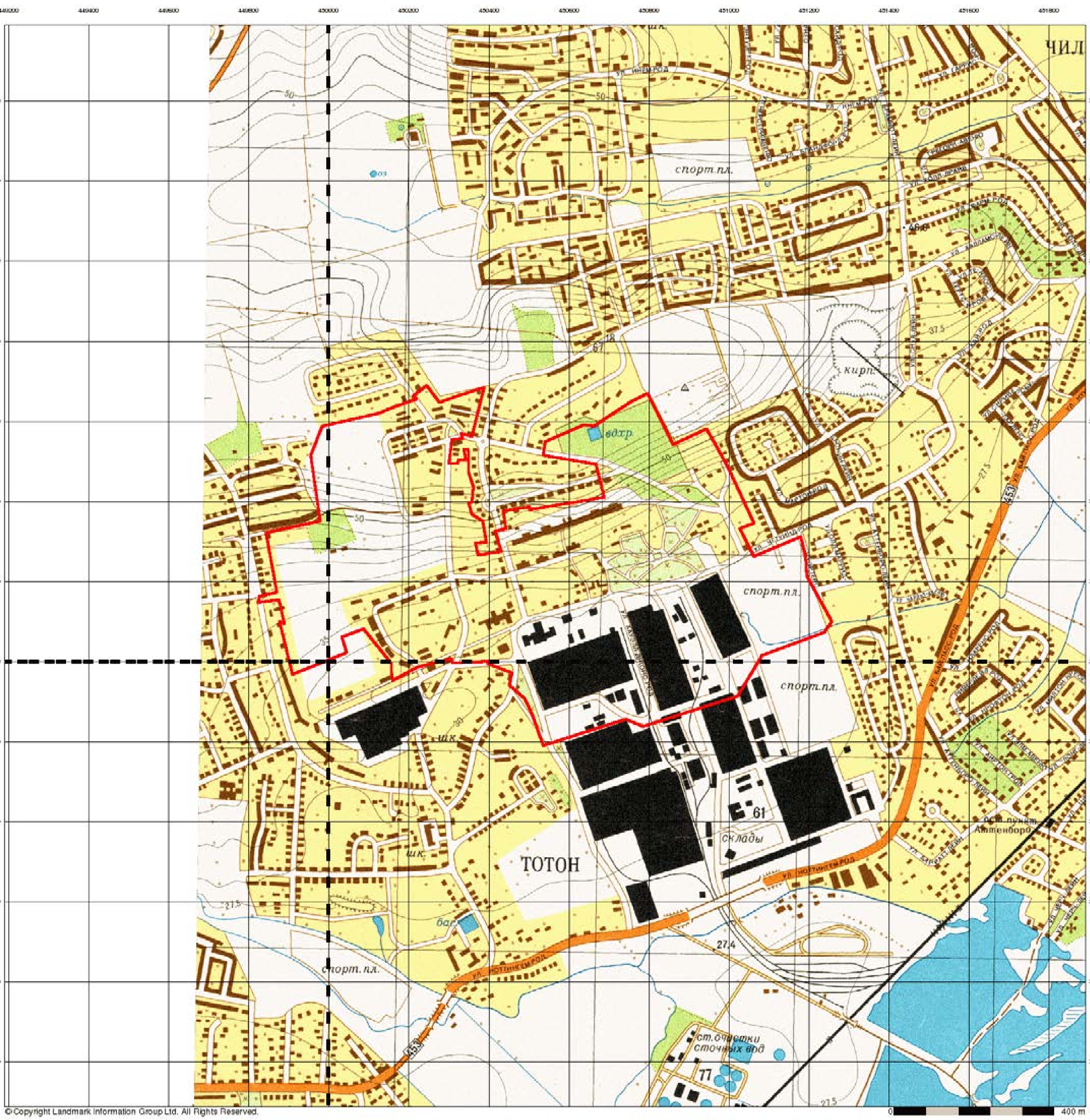
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Nottingham

Published 1975

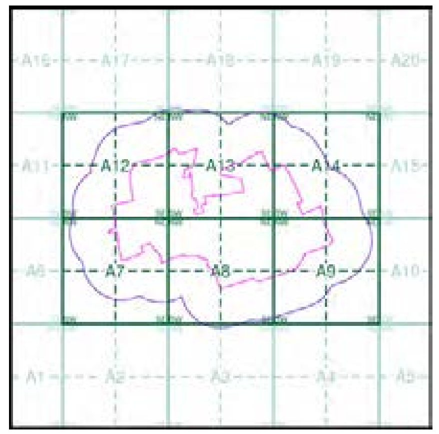
Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

SK43NE 1975 1:10,000	SK53NW 1975 1:10,000
SK43SE 1975 1:10,000	SK53SW 1975 1:10,000

Russian Map - Slice A



N

Order Details

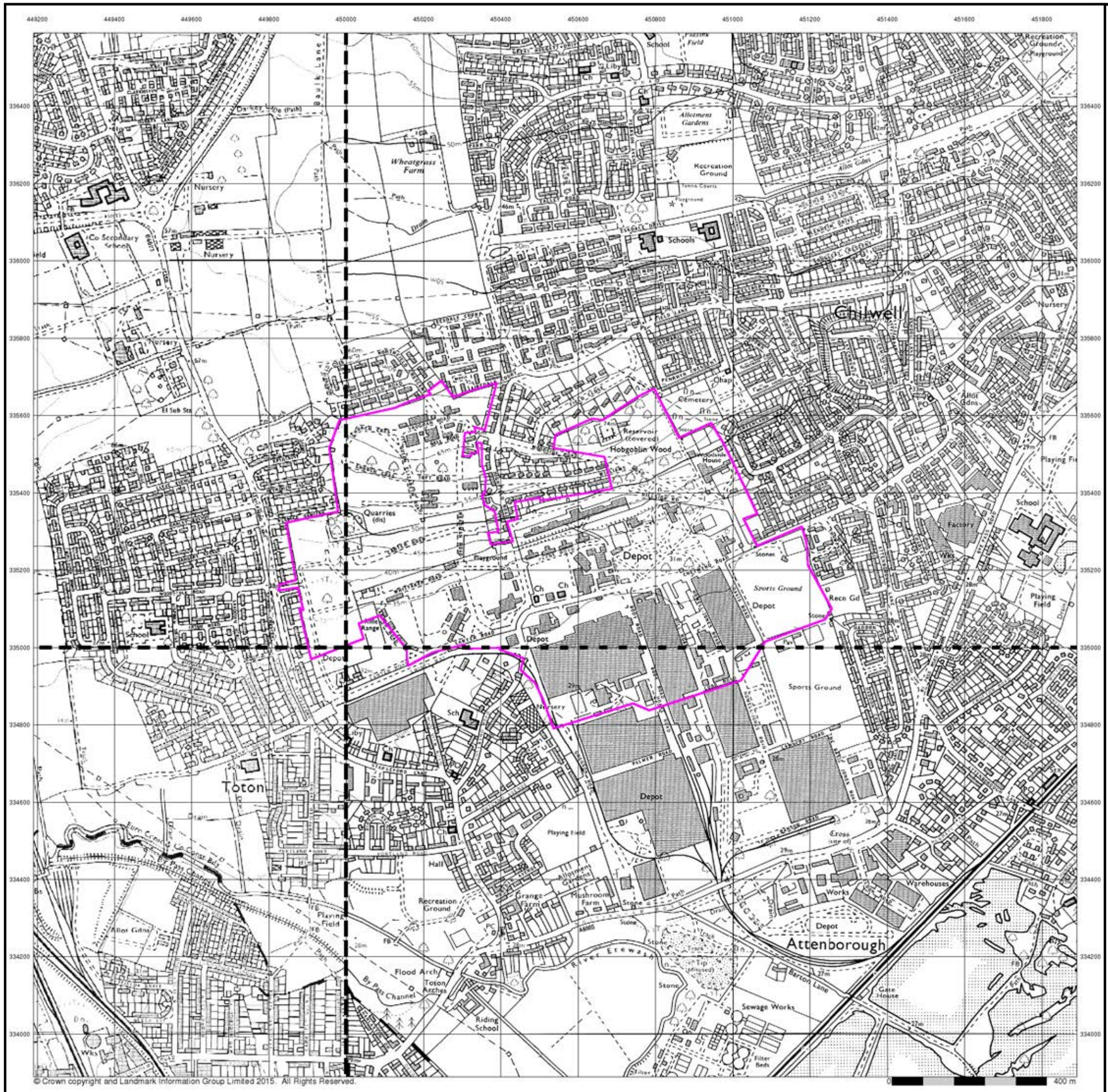
Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark®
INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1983 - 1985

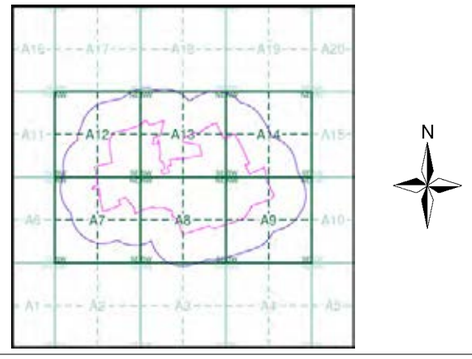
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SK43NE 1985 1:10,000	SK53NW 1984 1:10,000
SK43SE 1983 1:10,000	SK53SW 1983 1:10,000

Historical Map - Slice A



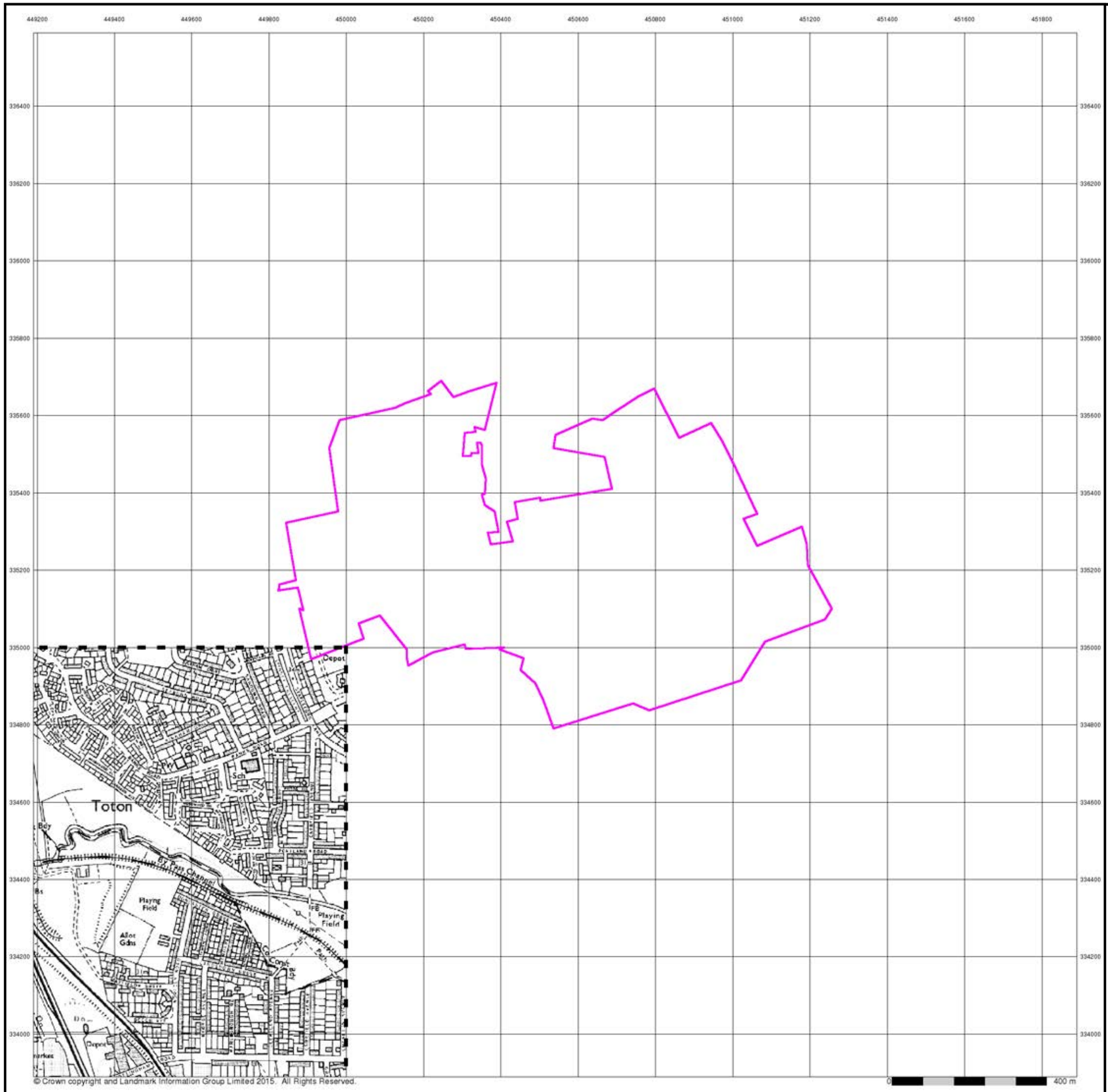
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

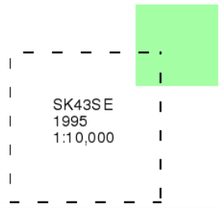
Ordnance Survey Plan

Published 1995

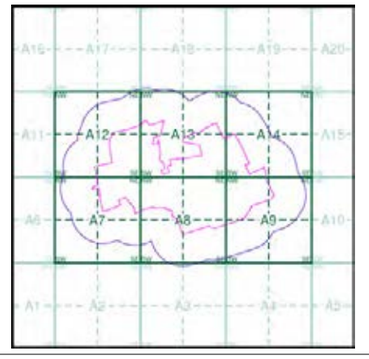
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	250

Site Details

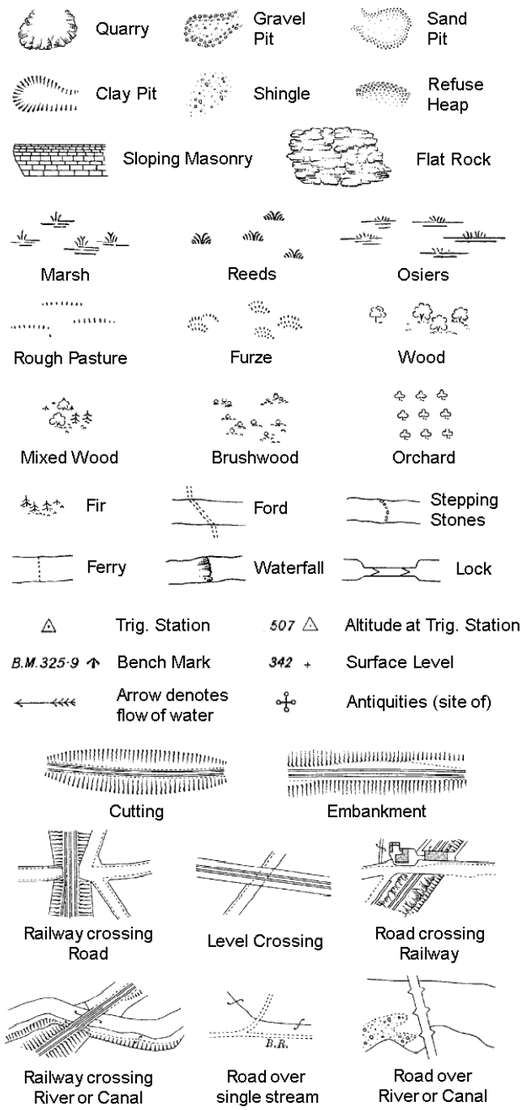
2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

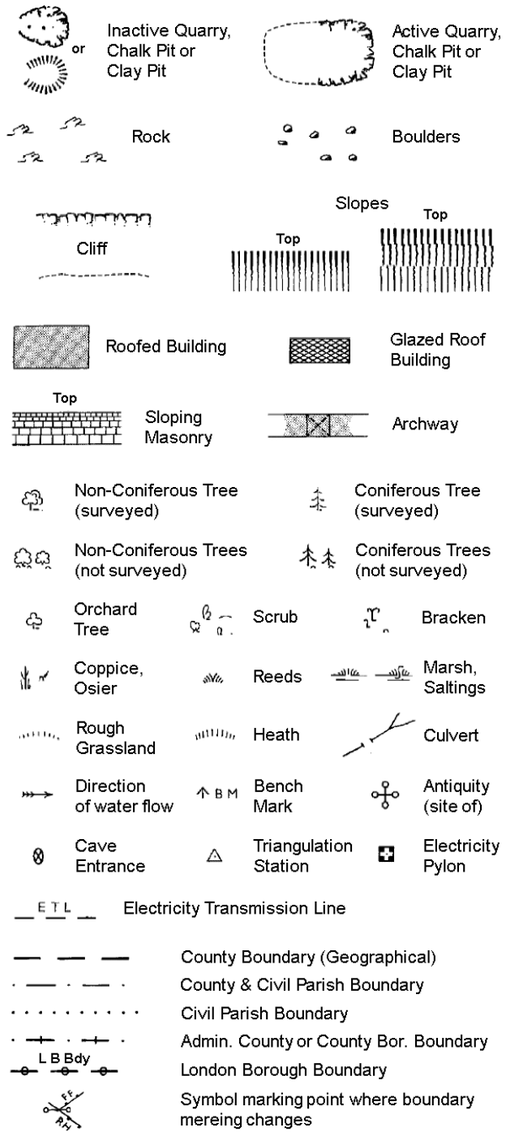
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



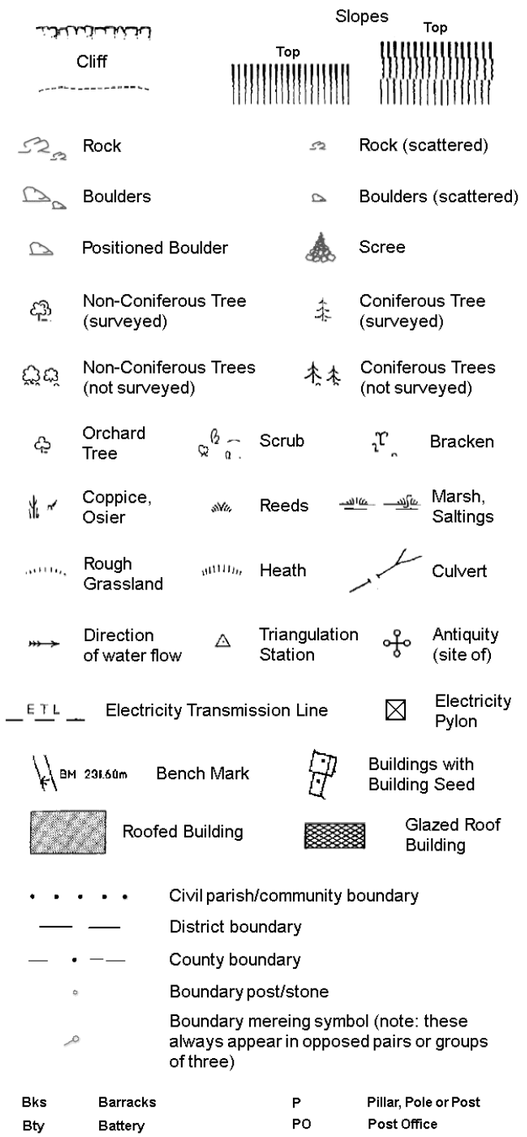
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

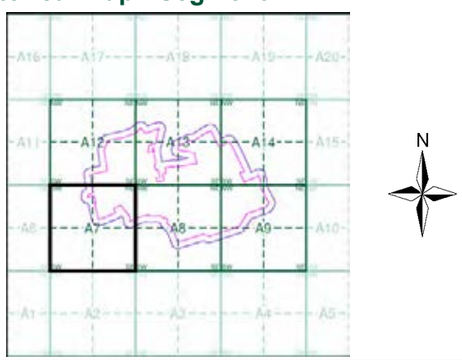


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Historical Map - Segment A7



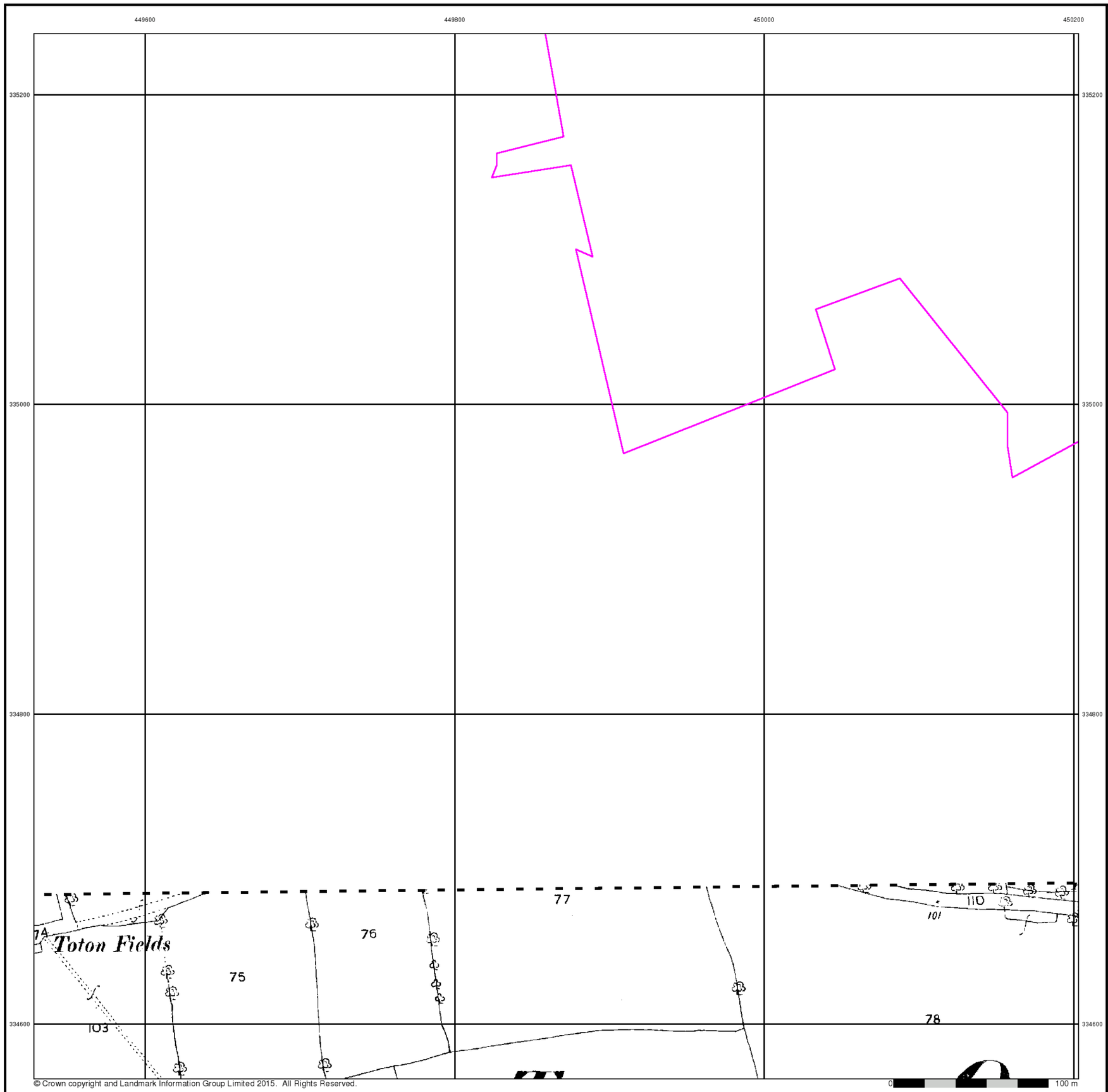
Order Details

Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark® INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

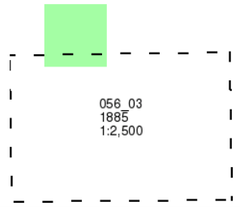
Derbyshire

Published 1885

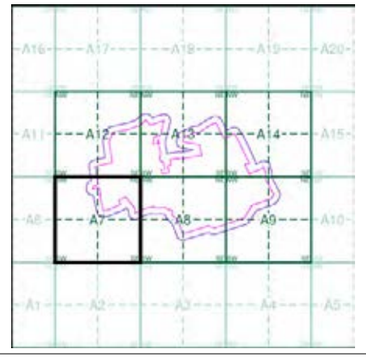
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



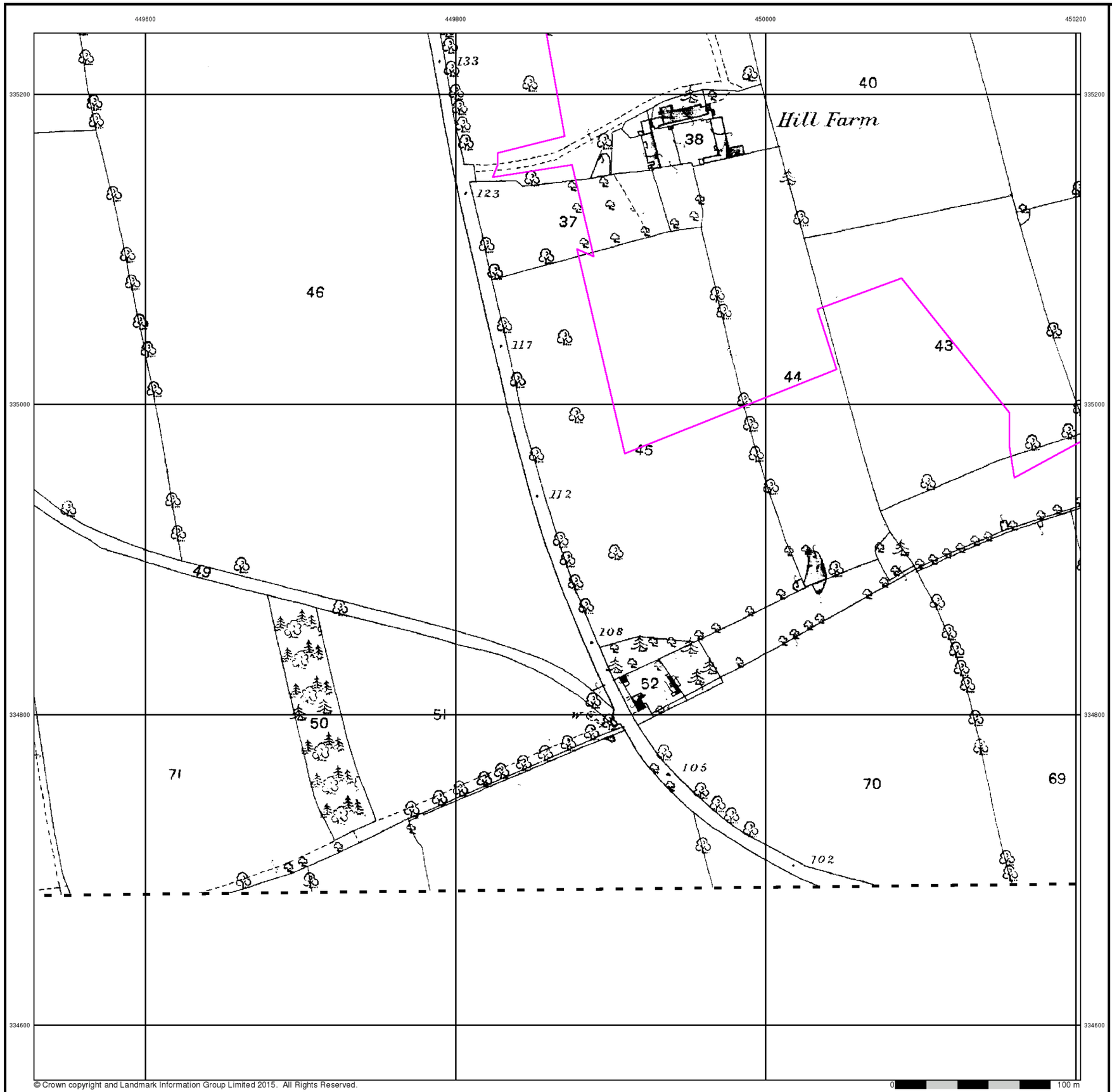
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

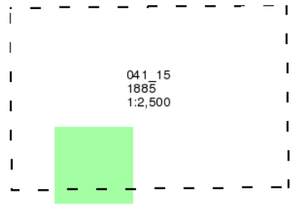
Nottinghamshire

Published 1885

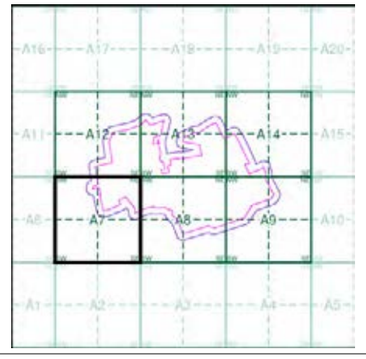
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

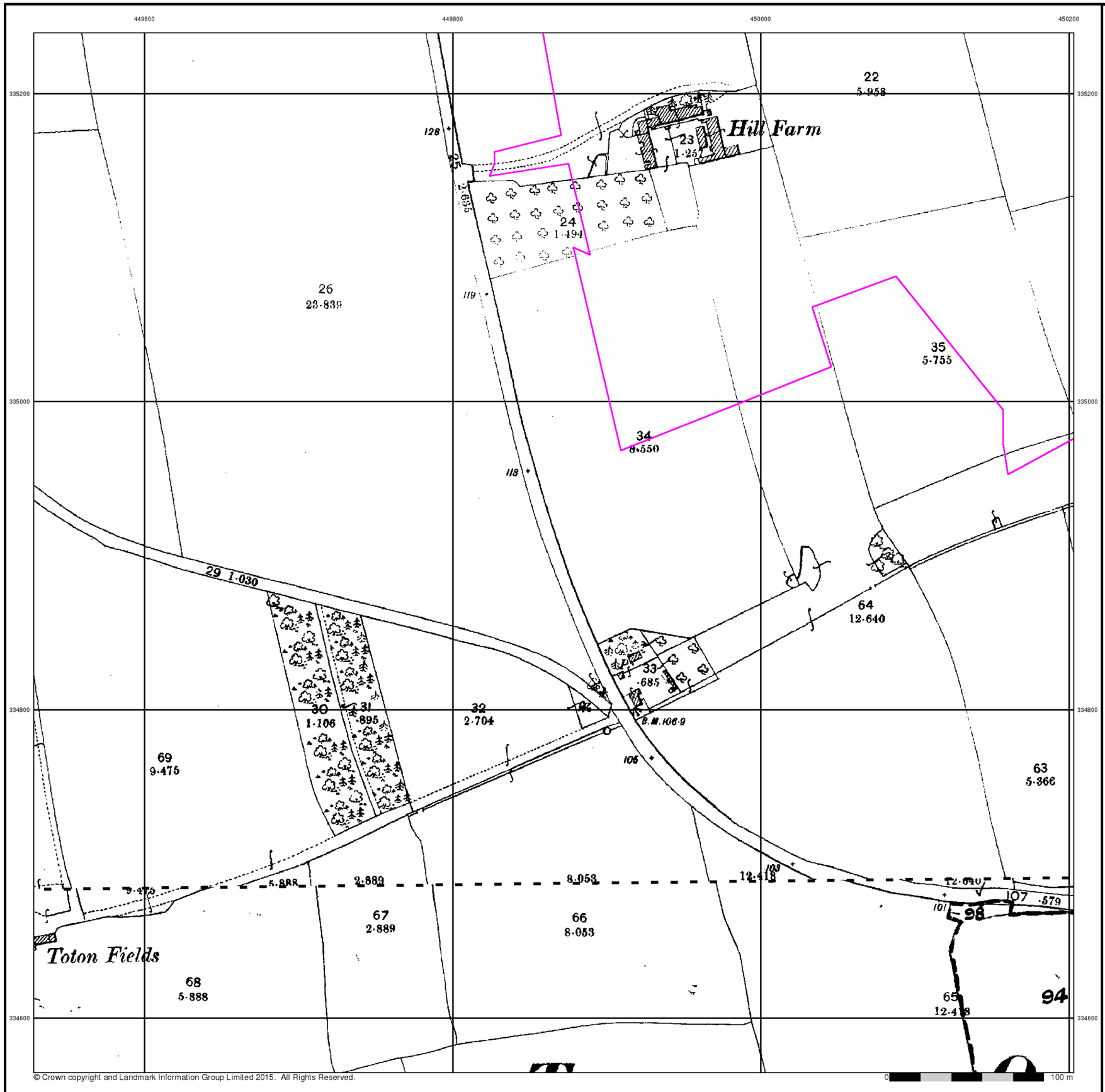
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

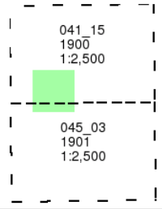
Nottinghamshire

Published 1900 - 1901

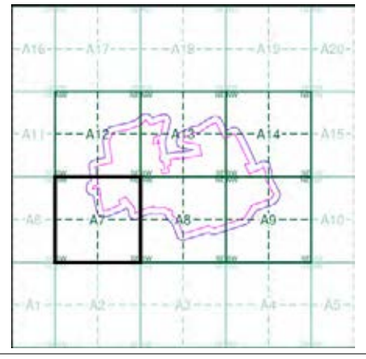
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



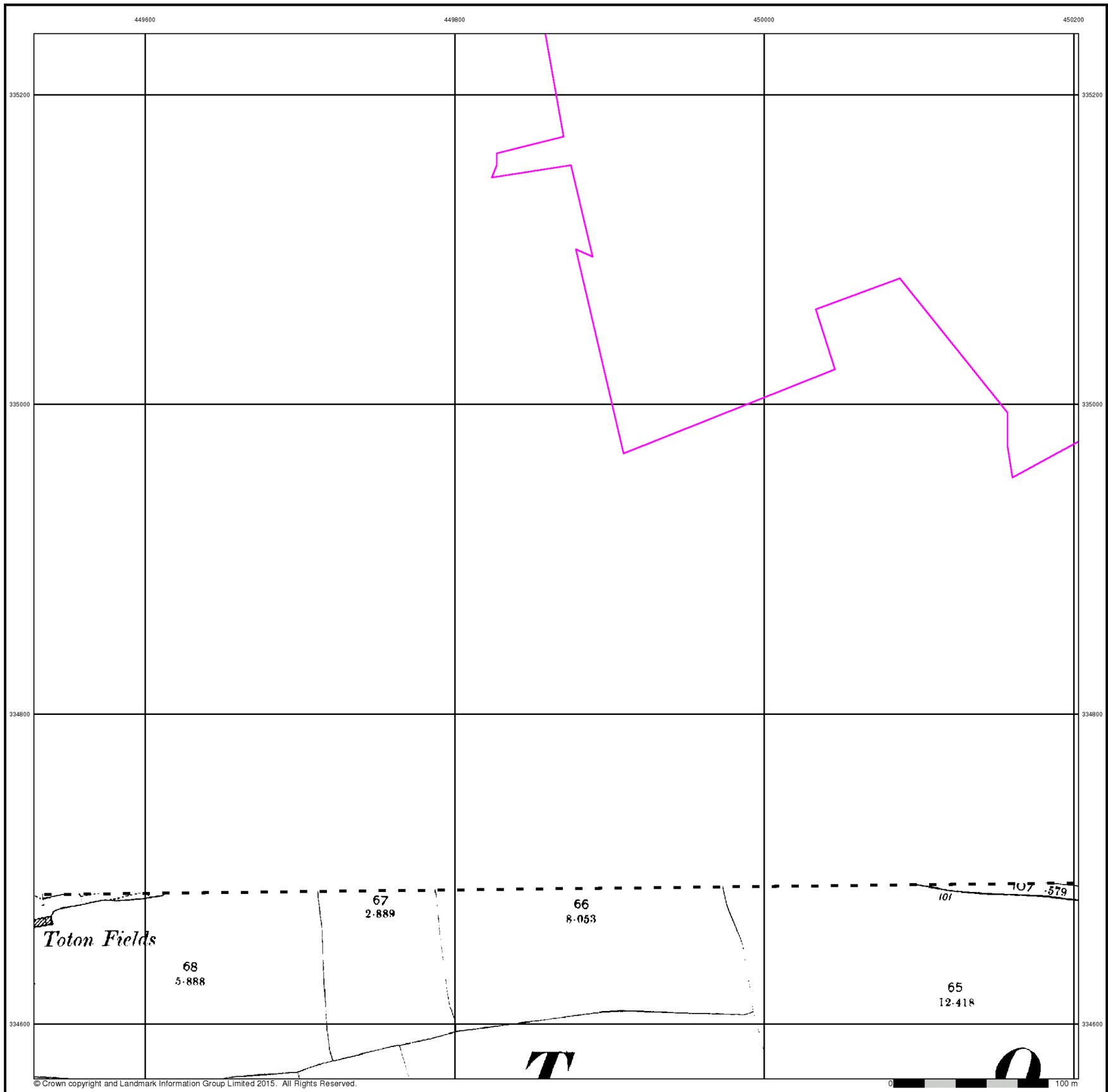
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

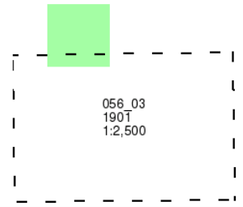
Derbyshire

Published 1901

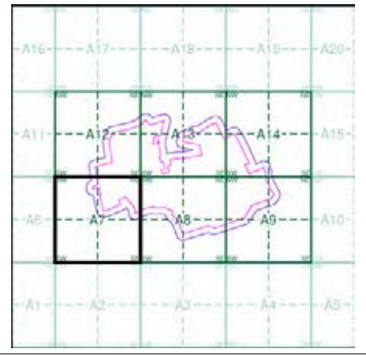
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



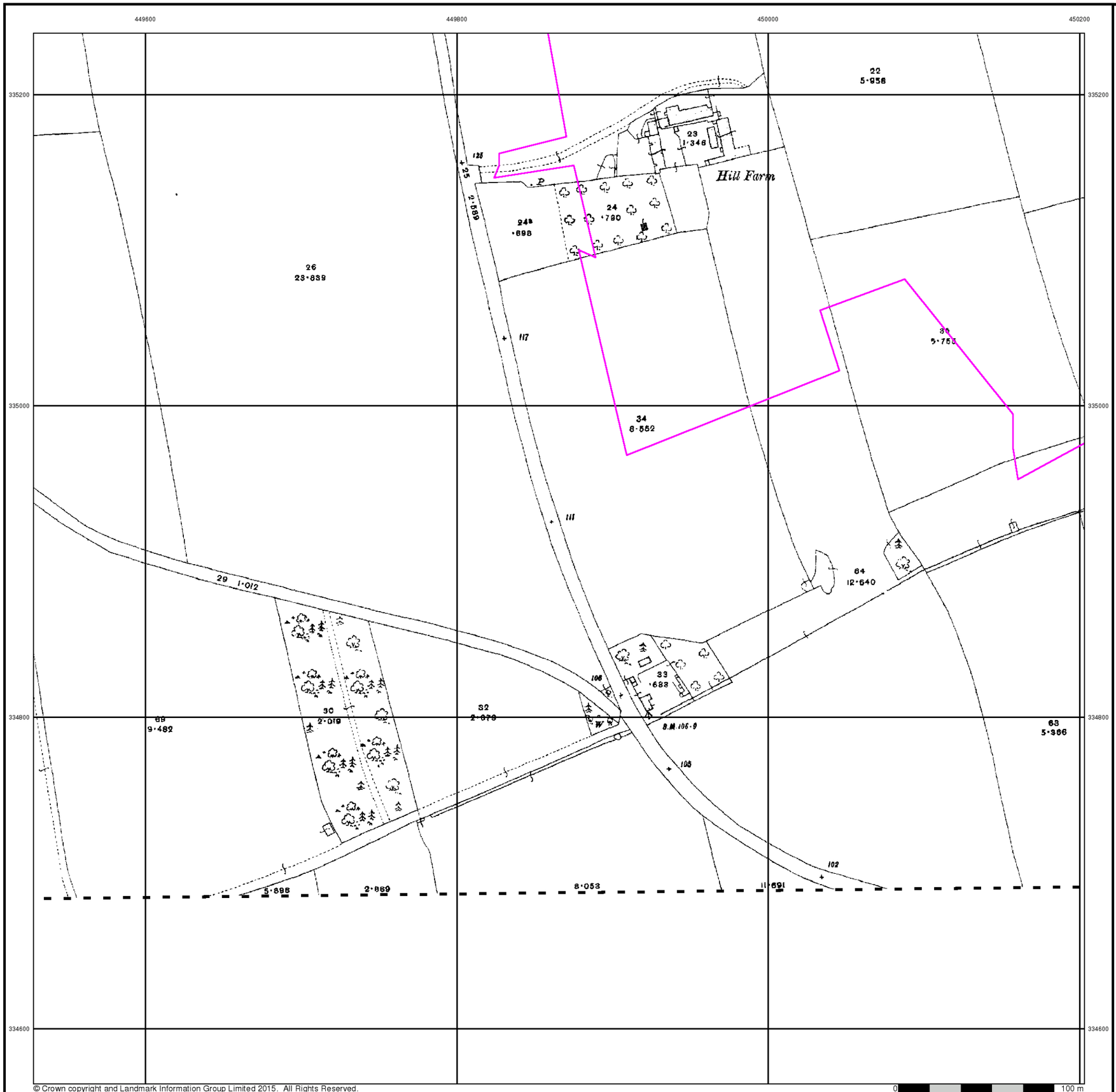
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

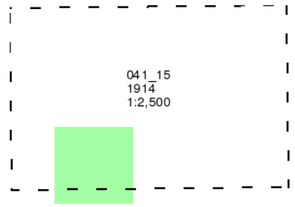
Nottinghamshire

Published 1914

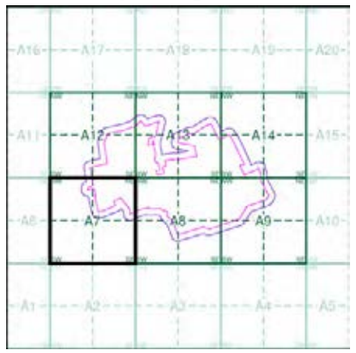
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

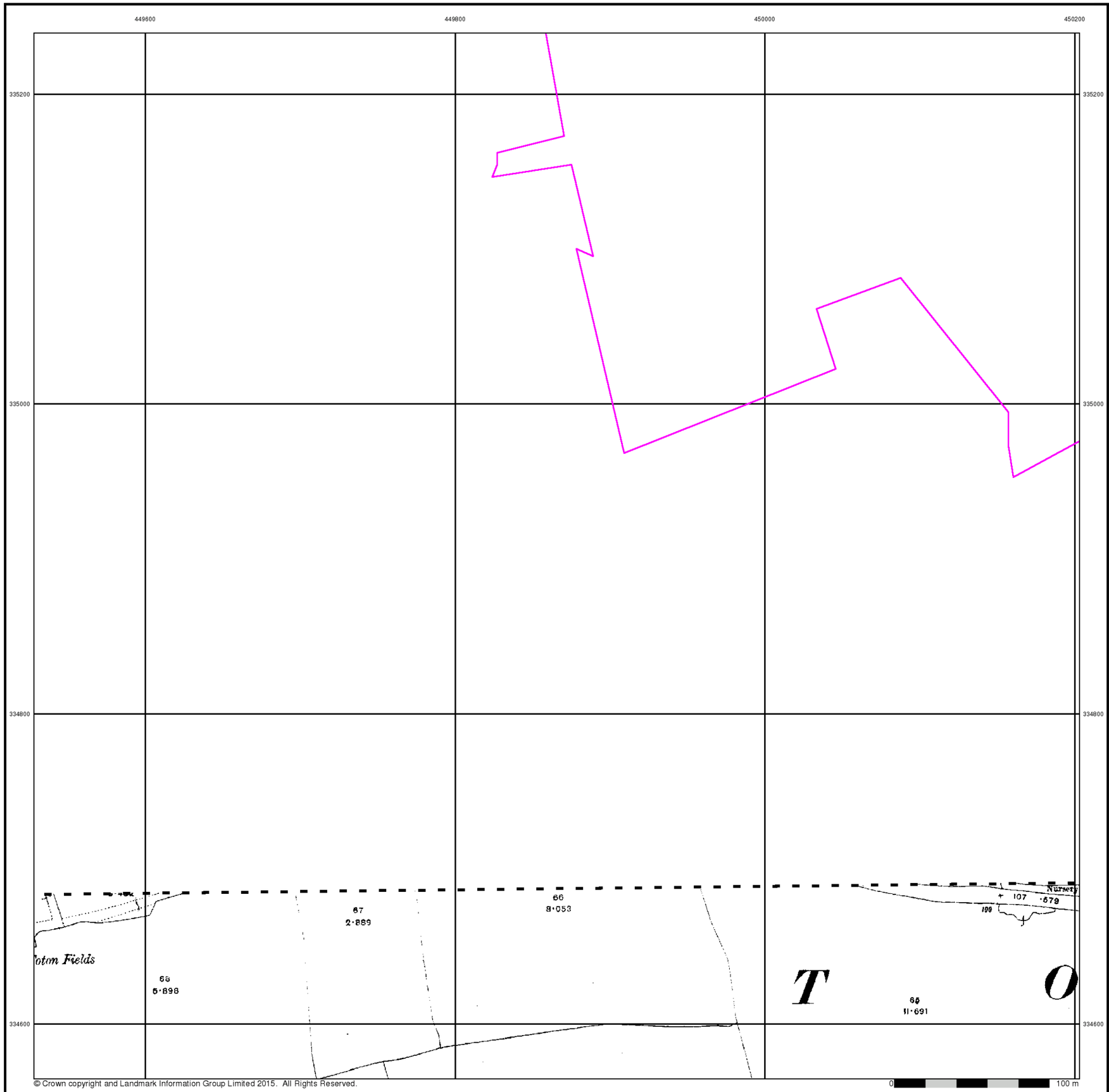
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

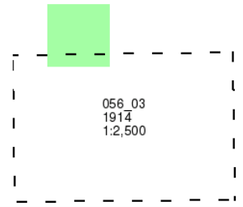
Derbyshire

Published 1914

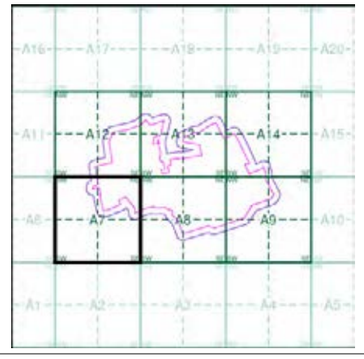
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



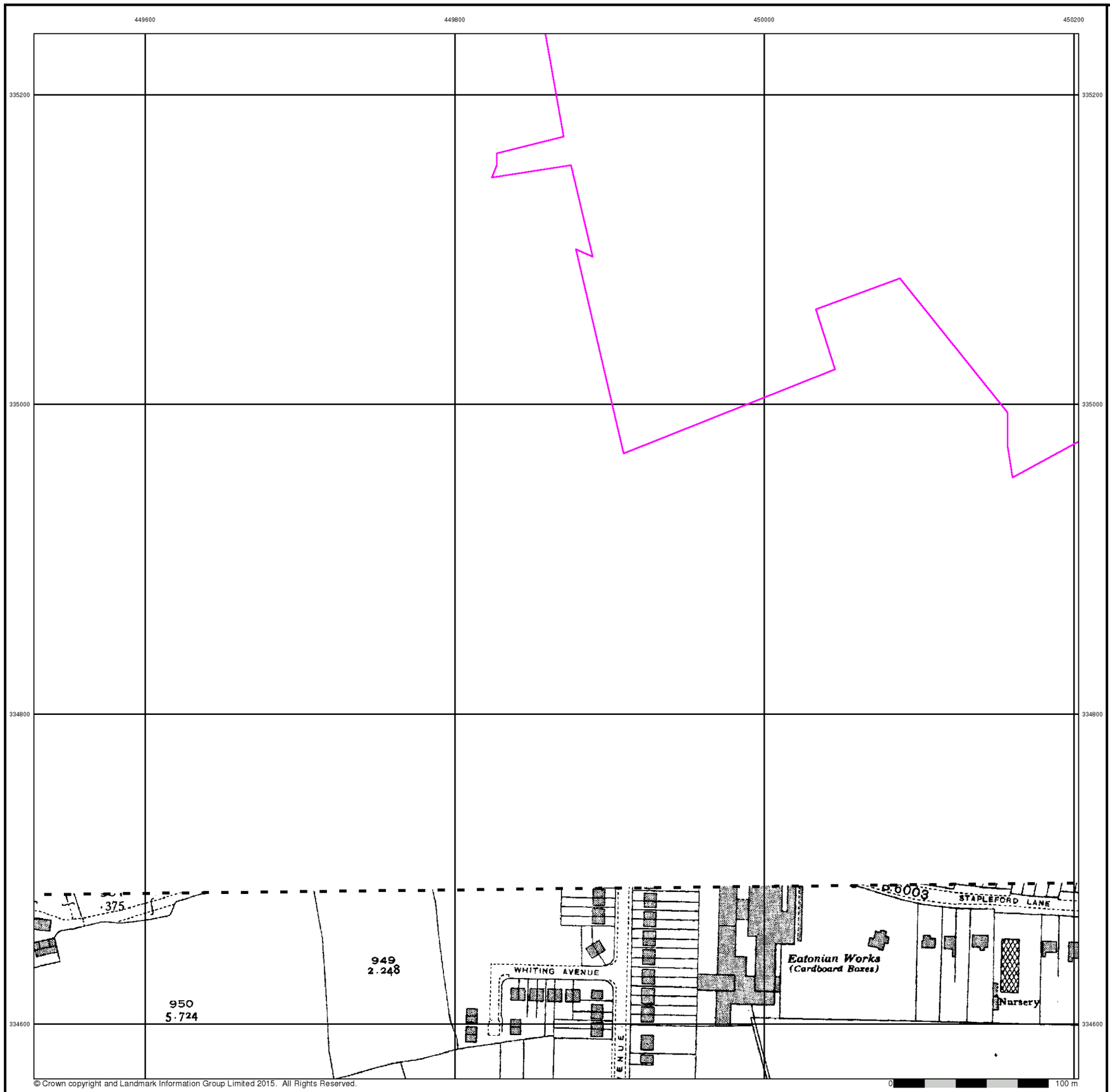
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

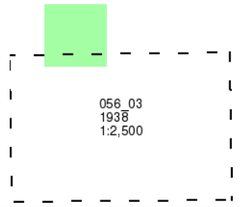
Derbyshire

Published 1938

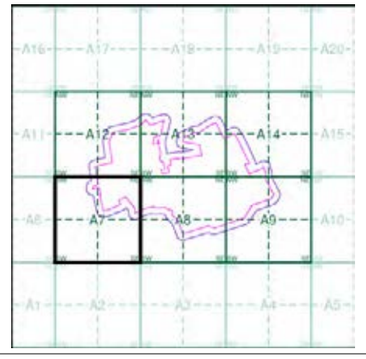
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



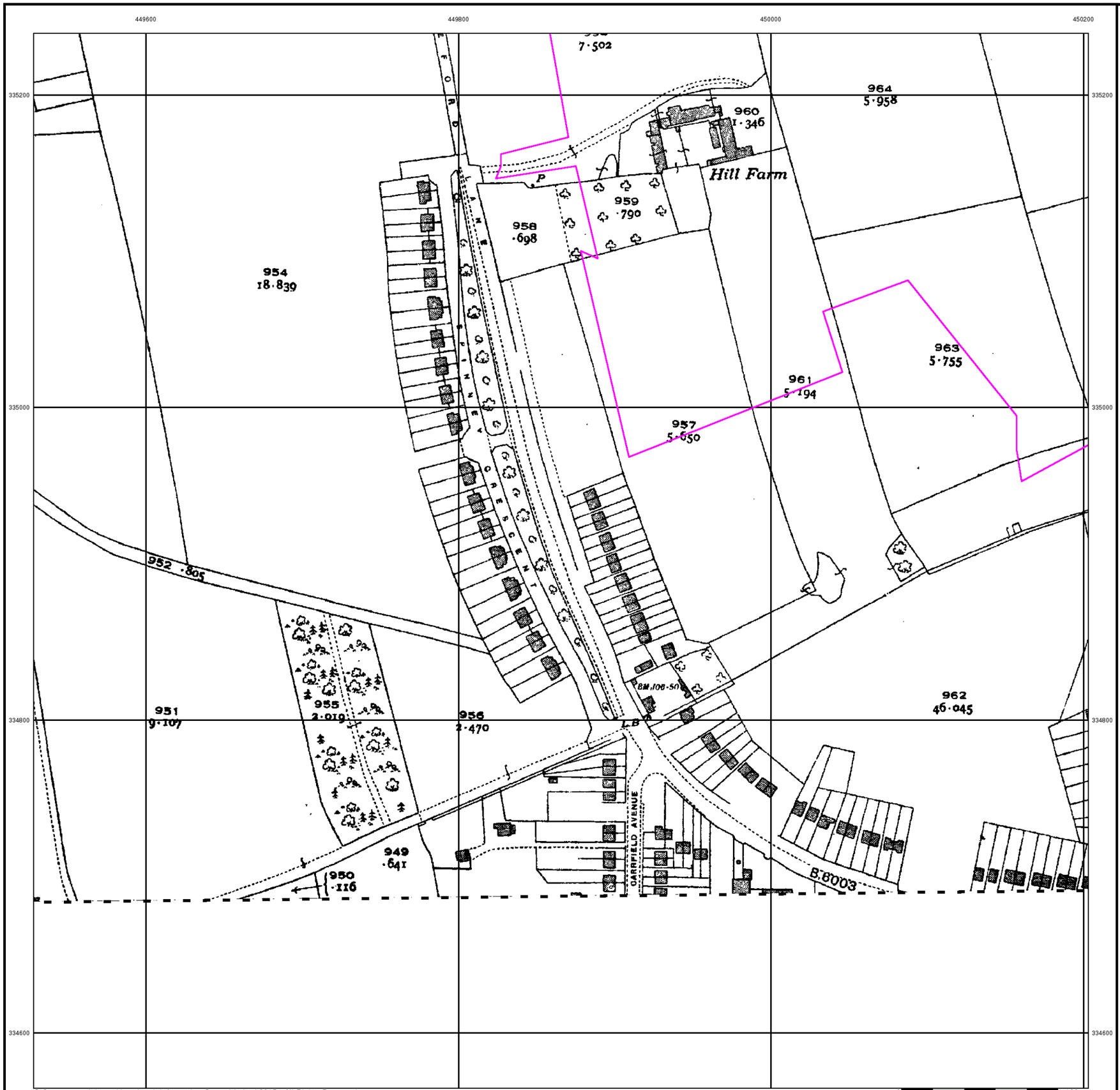
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

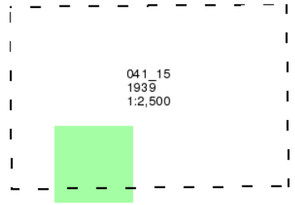
Nottinghamshire

Published 1939

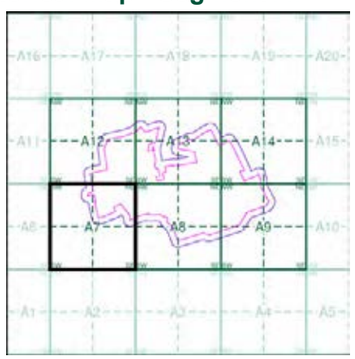
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

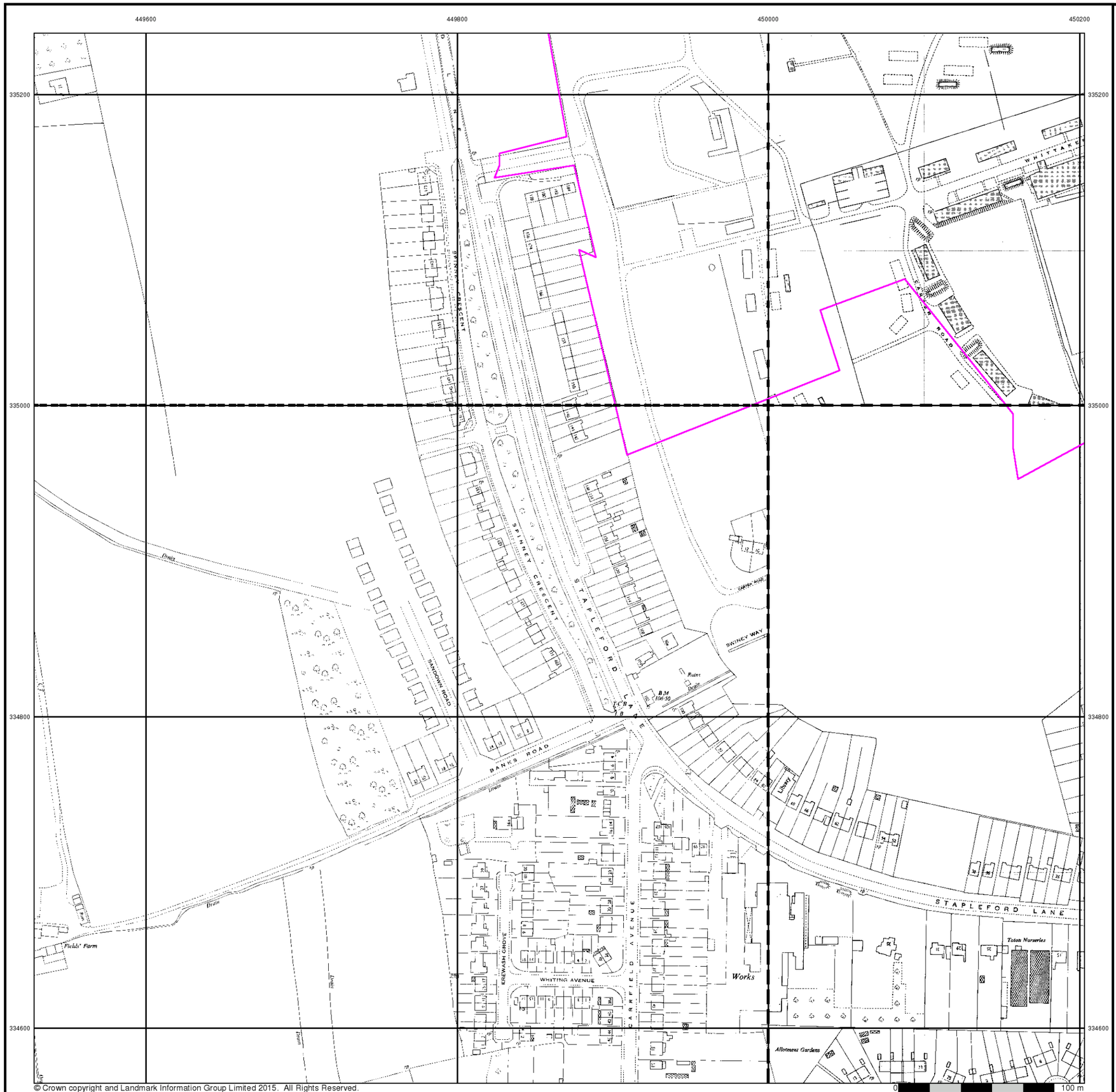
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®
LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1956 - 1962

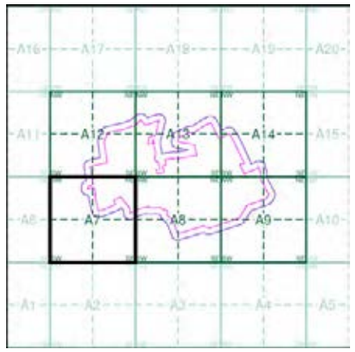
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK4935SE 1957 1:1,250	SK5035SW 1962 1:1,250
SK4934NE 1957 1:1,250	SK5034NW 1956 1:1,250

Historical Map - Segment A7



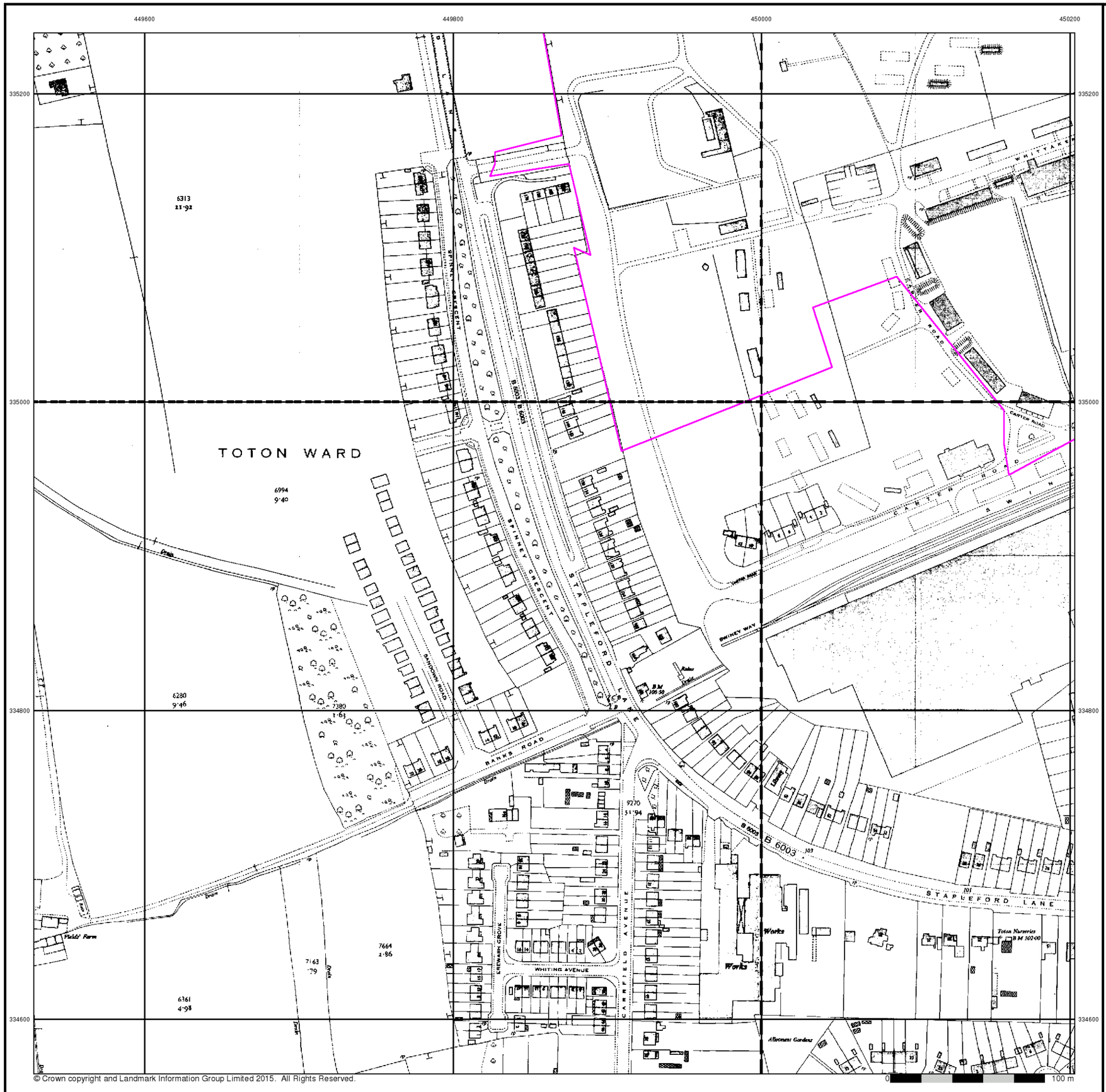
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

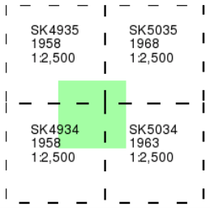
Ordnance Survey Plan

Published 1958 - 1968

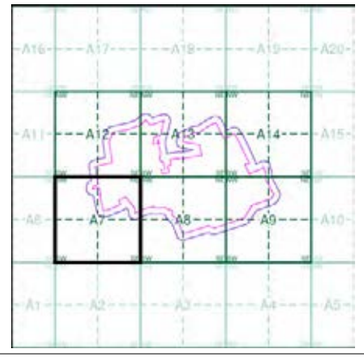
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®
LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1962 - 1977

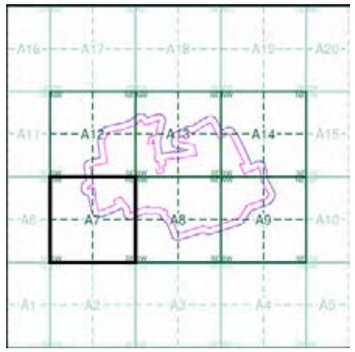
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK4935SE 1962 1:1,250	SK5035SW 1977 1:1,250
SK4934NE 1963 1:1,250	SK5034NW 1962 1:1,250

Historical Map - Segment A7



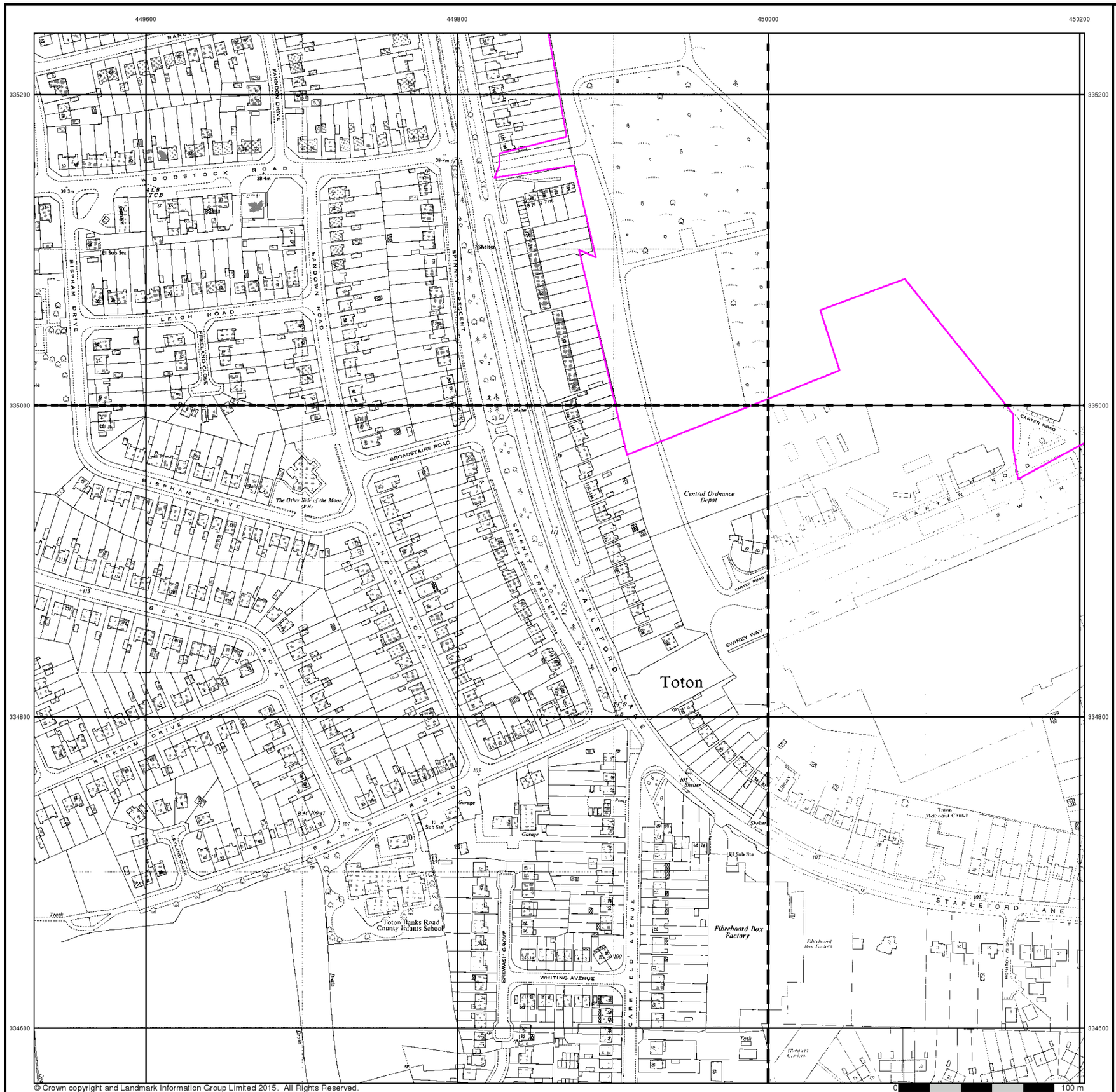
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

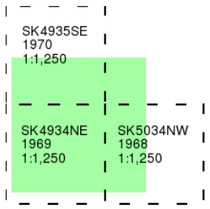
Ordnance Survey Plan

Published 1968 - 1970

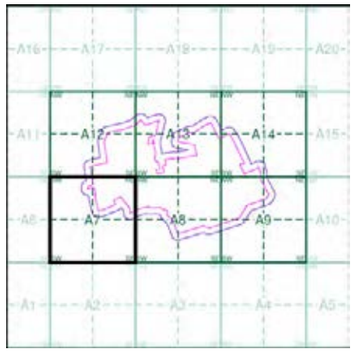
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

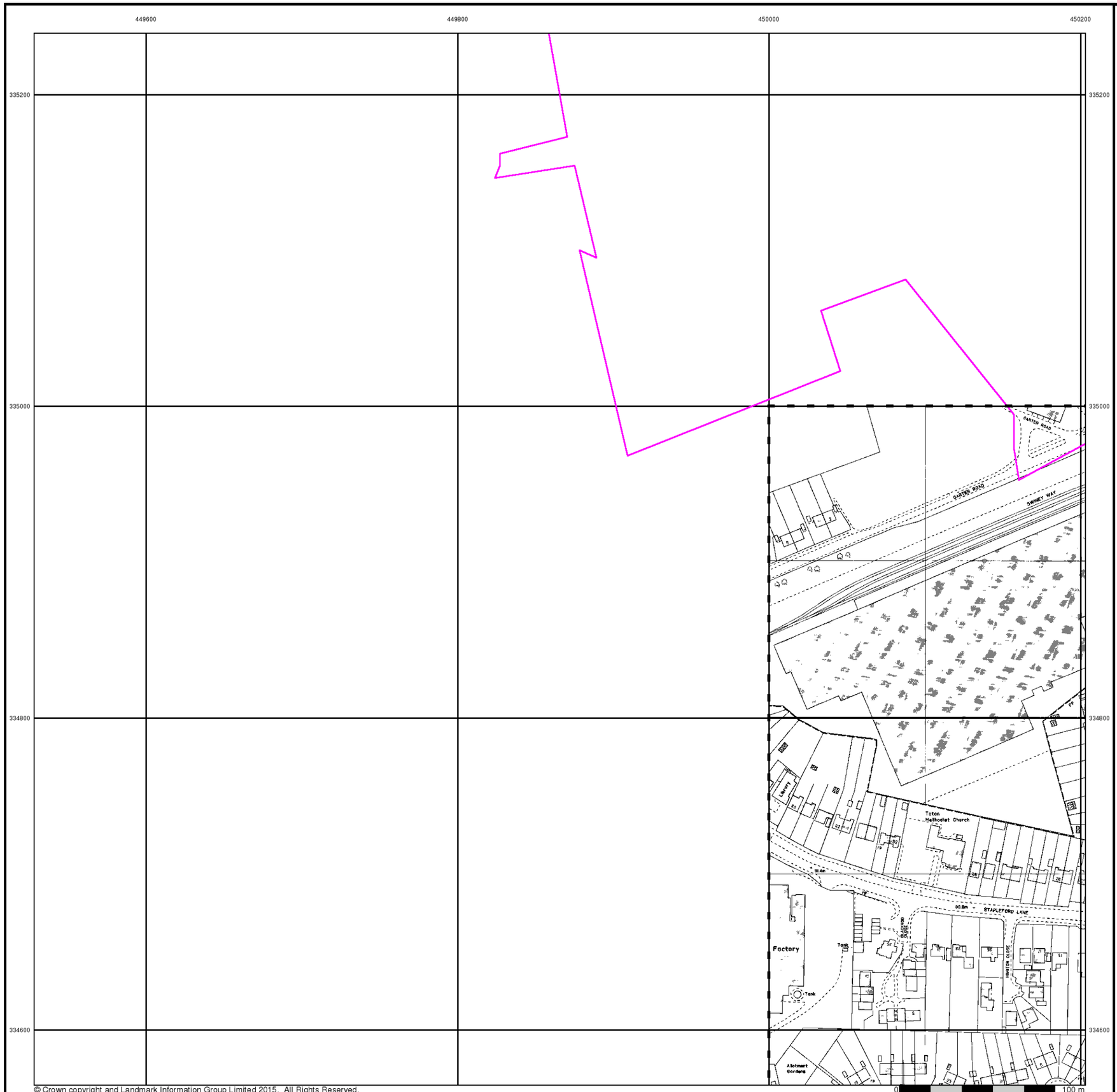
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

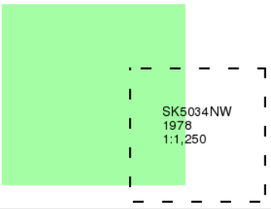
Ordnance Survey Plan

Published 1978

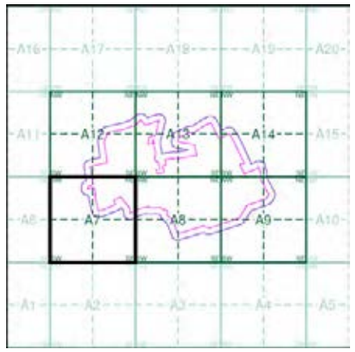
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

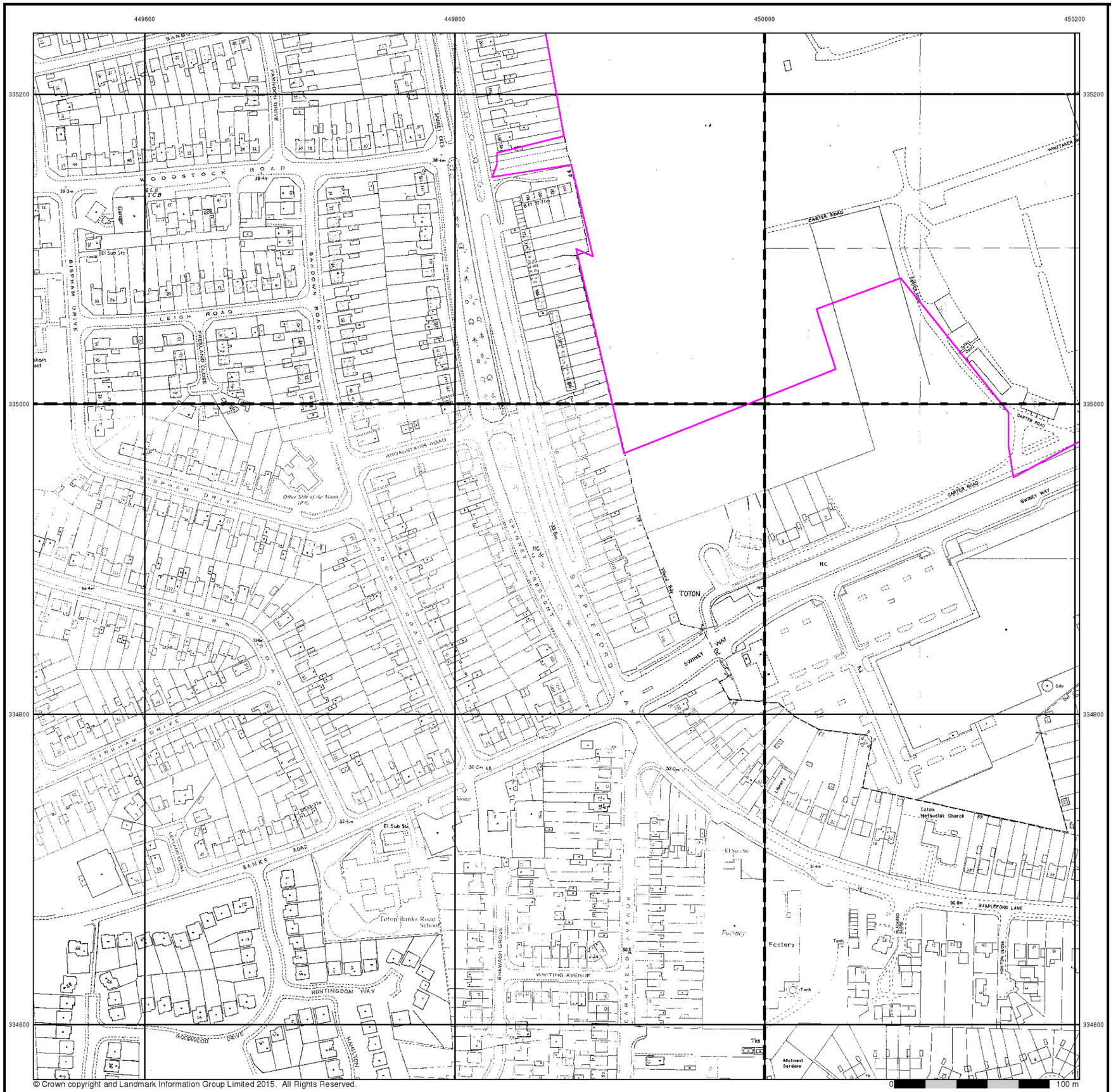
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

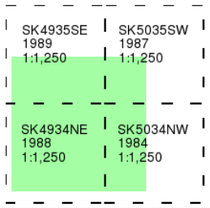
Additional SIMs

Published 1984 - 1989

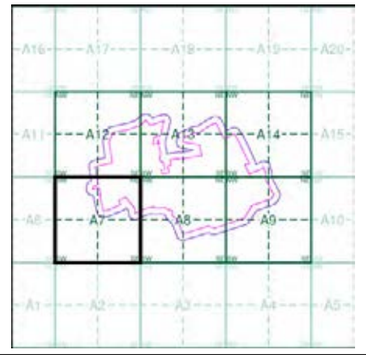
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

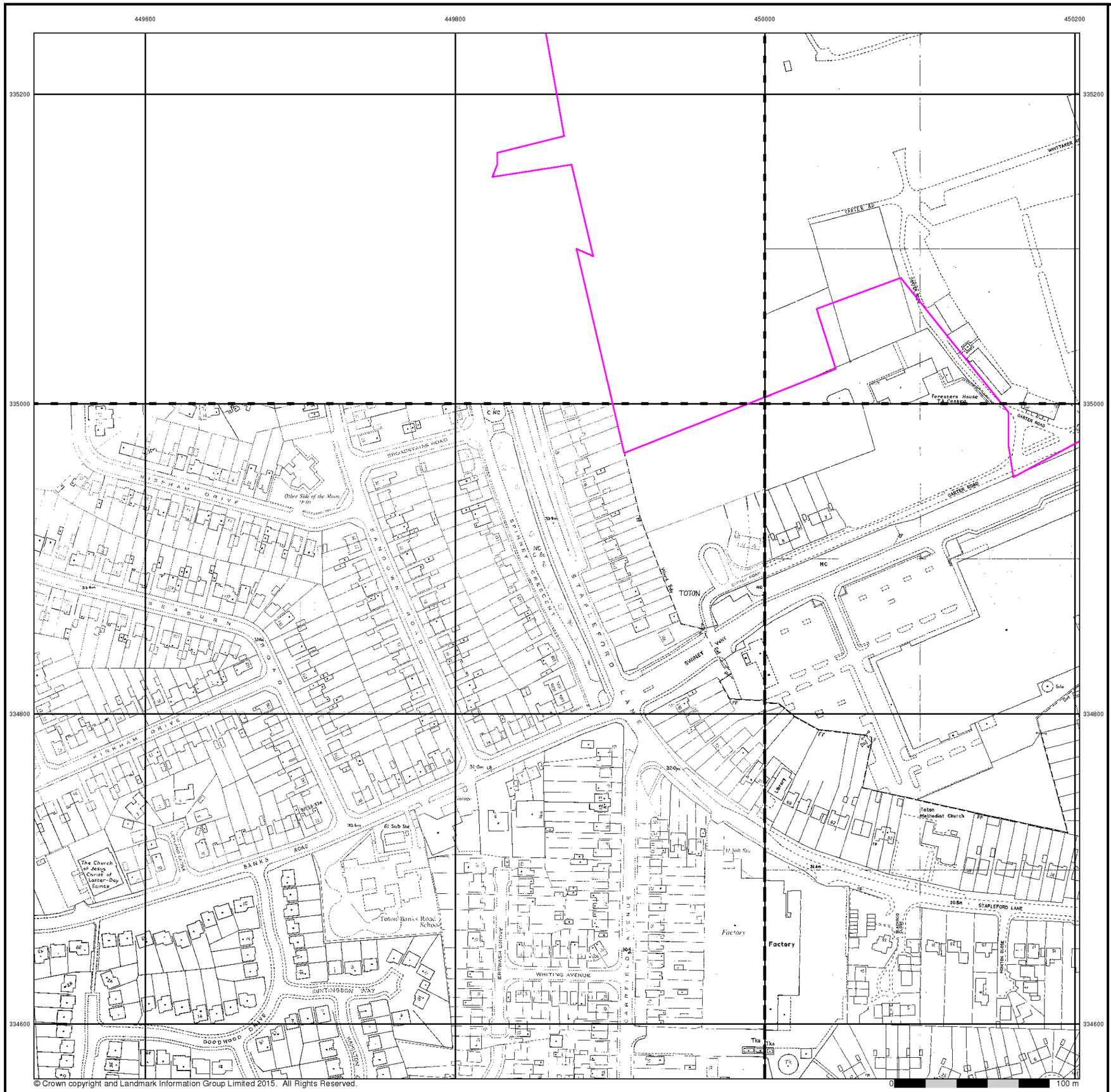
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®
LANDMARK INFORMATION GROUP®

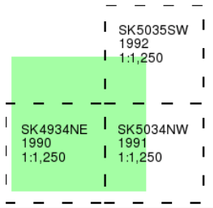
Additional SIMs

Published 1990 - 1992

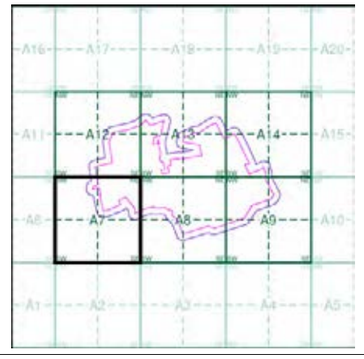
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



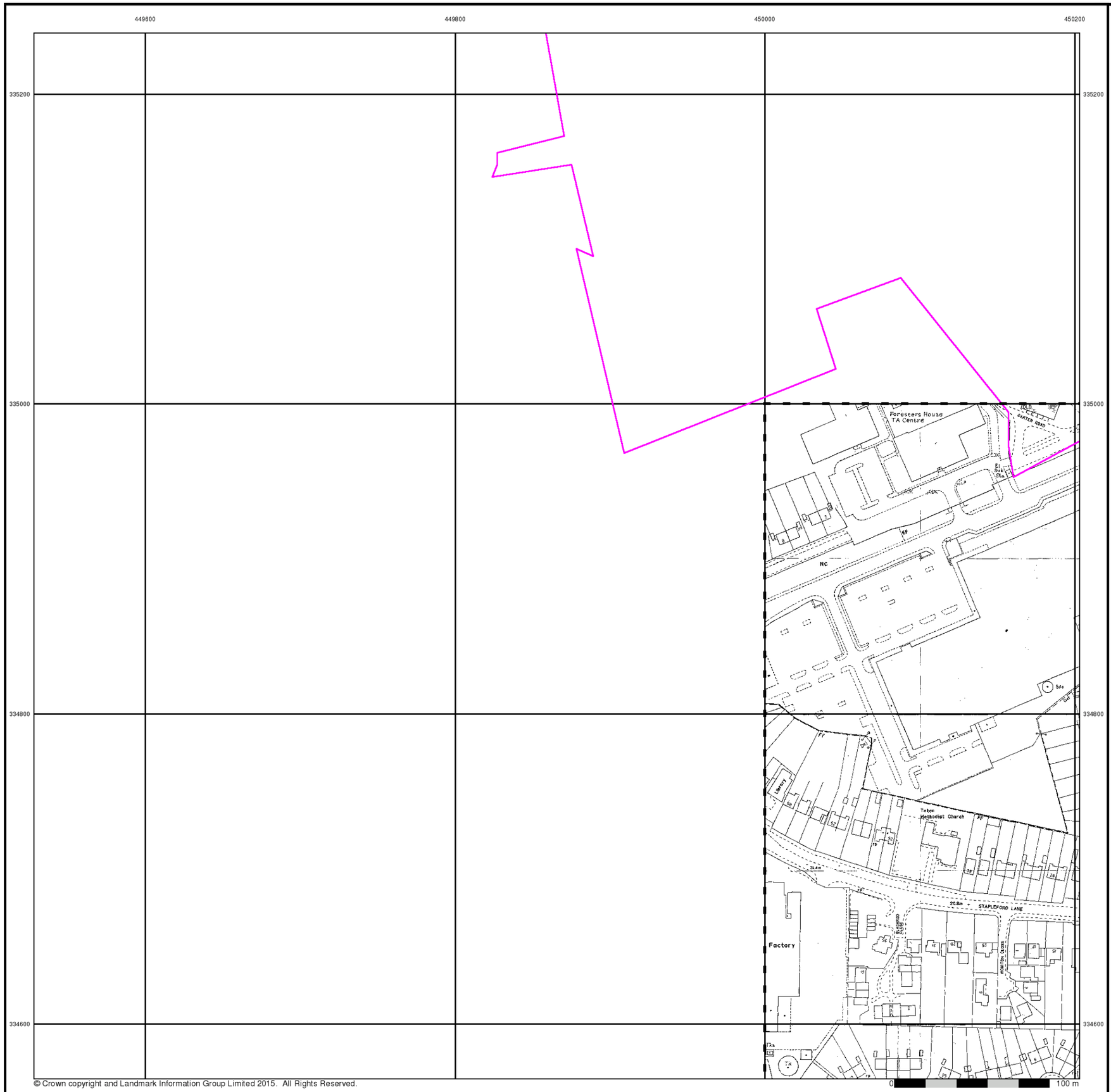
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

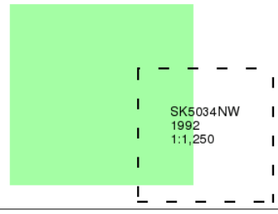
Additional SIMs

Published 1992

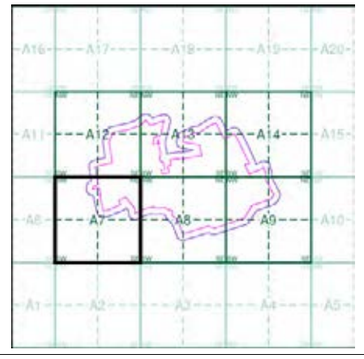
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

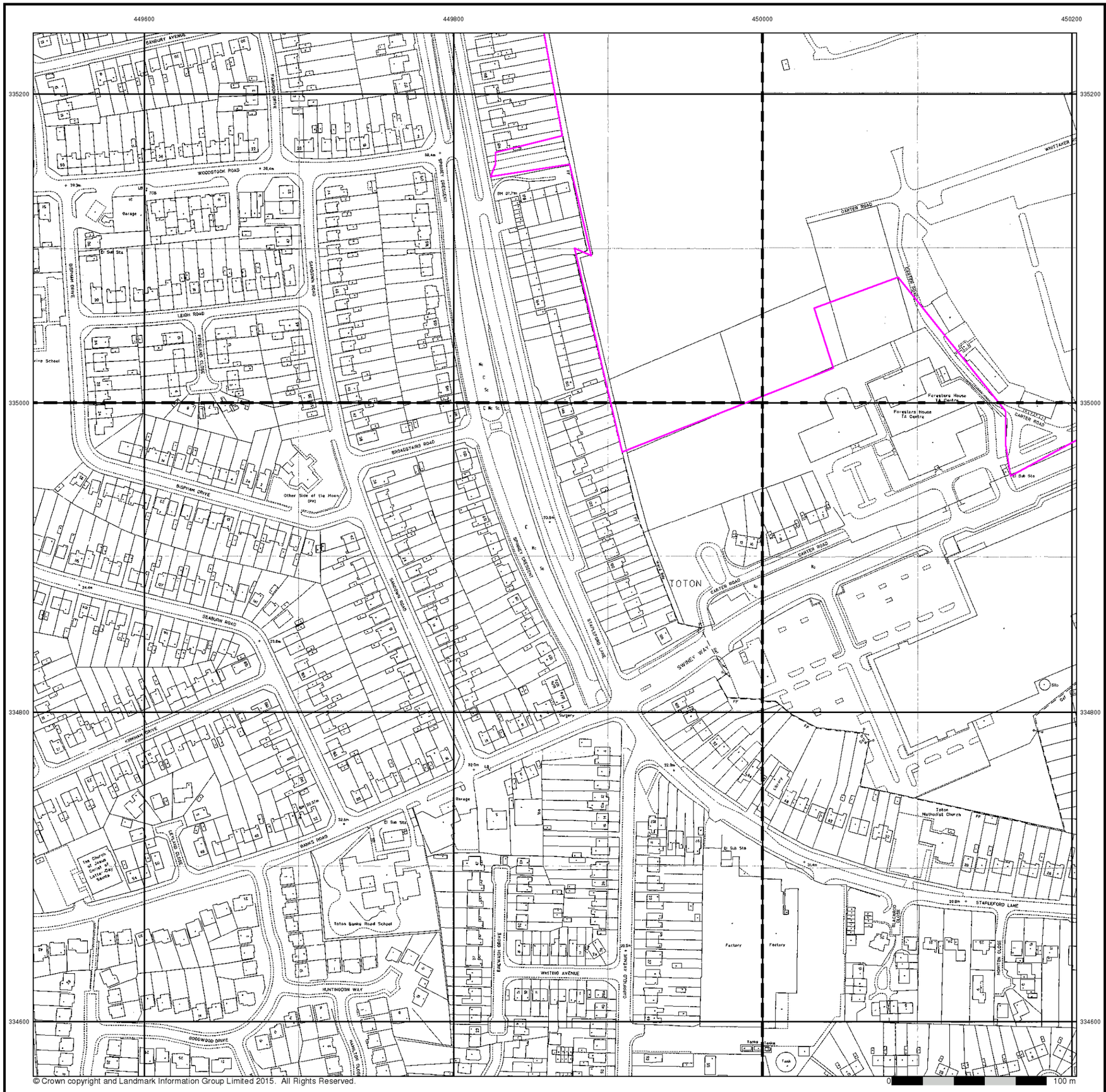
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

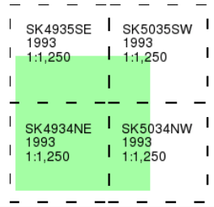
Large-Scale National Grid Data

Published 1993

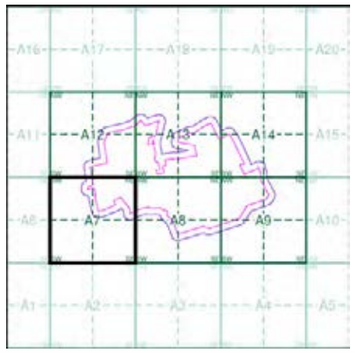
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

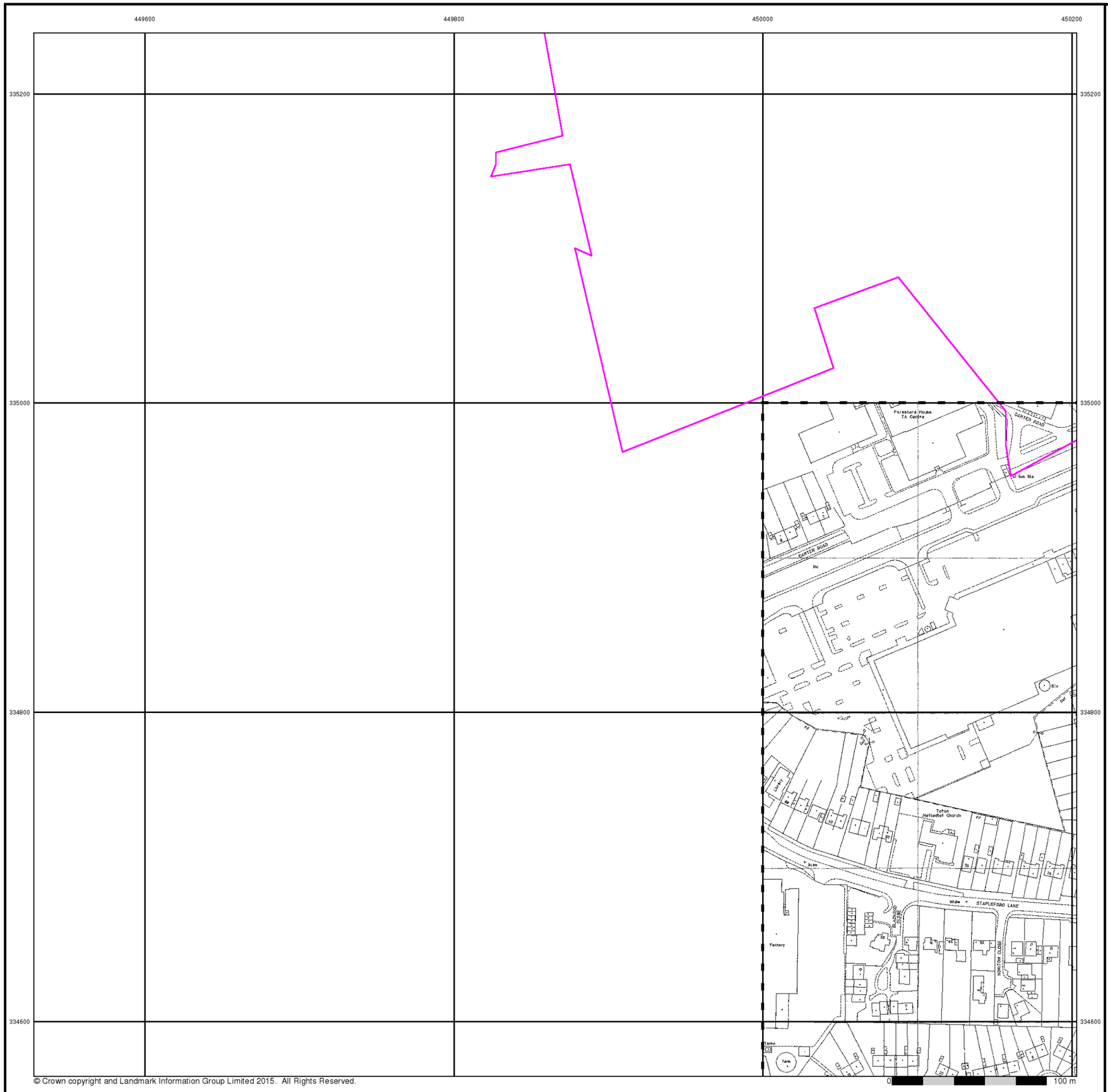
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

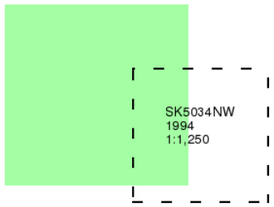
Large-Scale National Grid Data

Published 1994

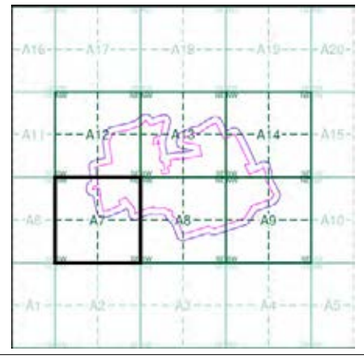
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A7



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

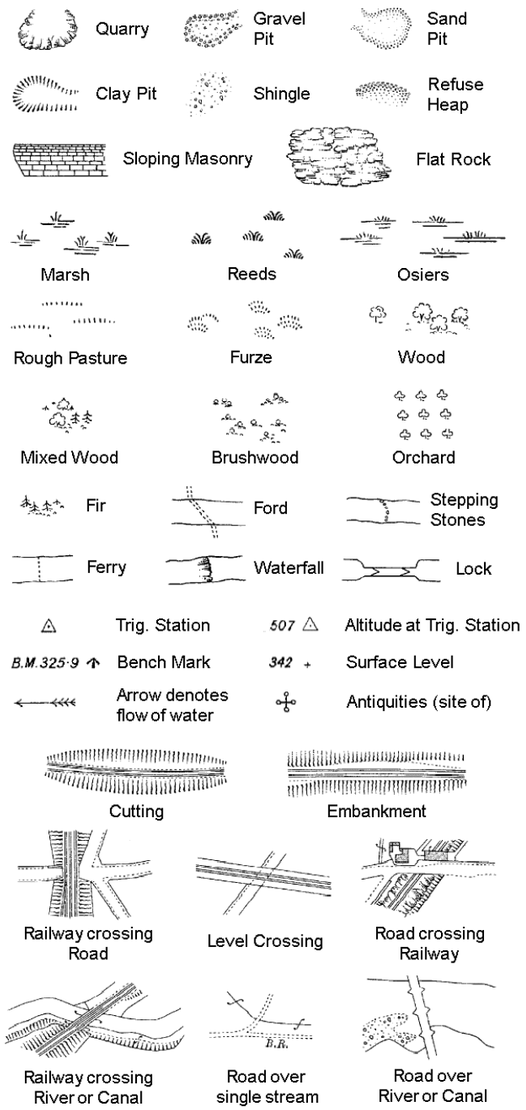
2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Historical Mapping Legends

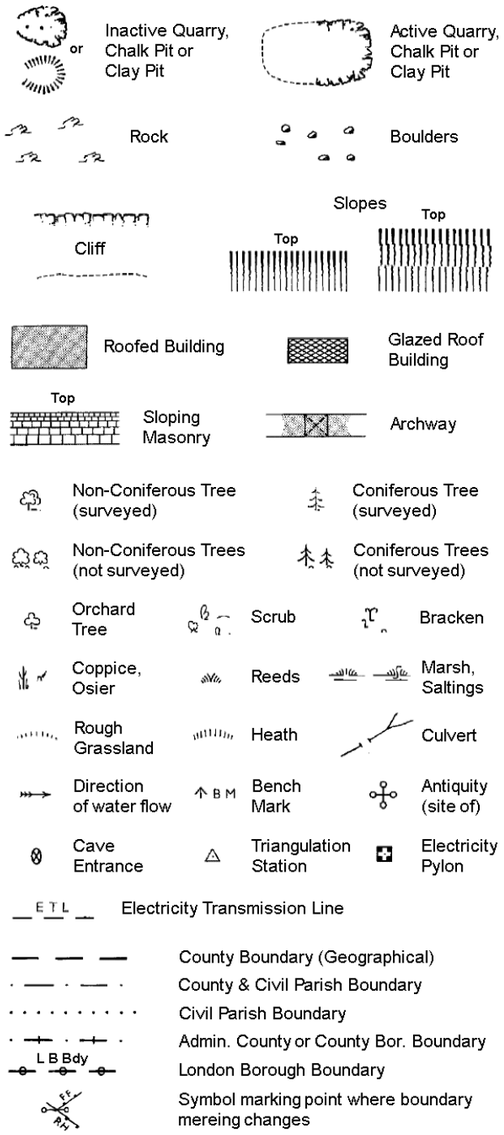
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

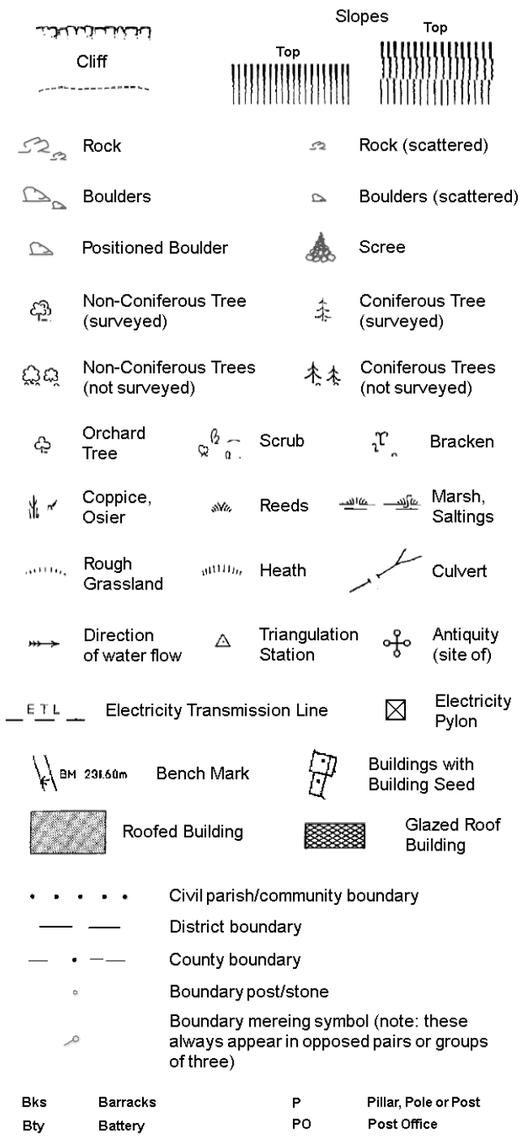
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



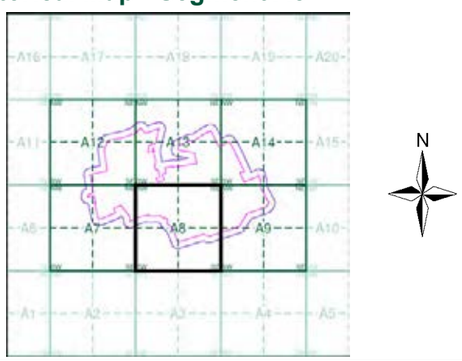
Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Historical Map - Segment A8



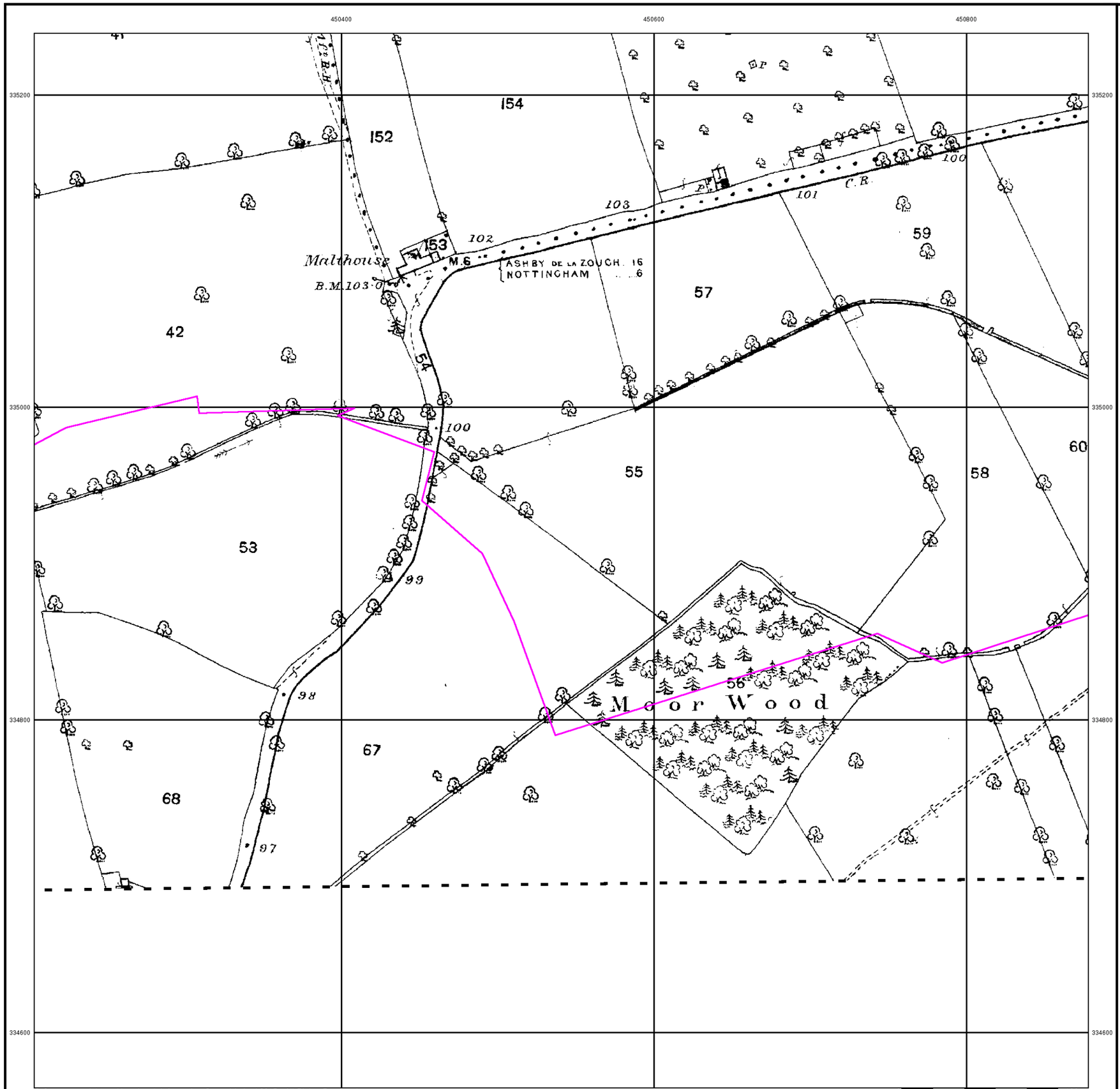
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

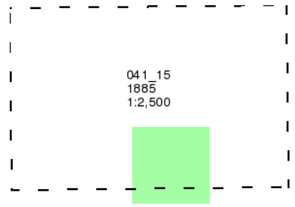
Nottinghamshire

Published 1885

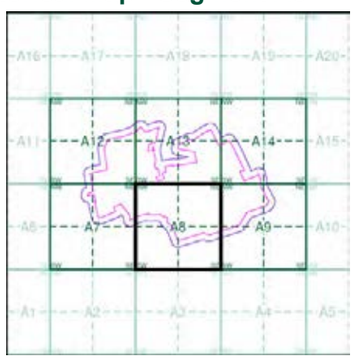
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

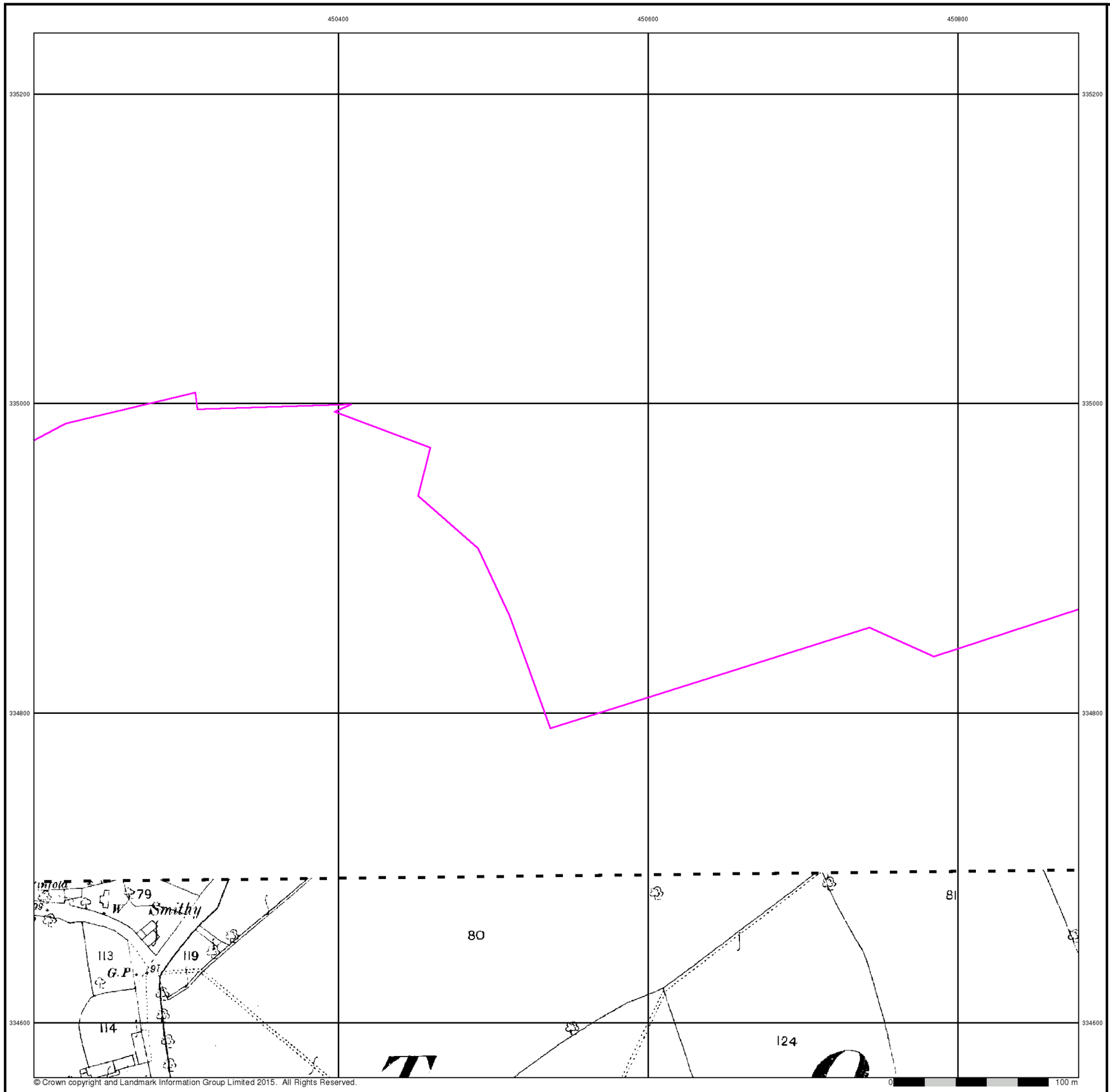
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

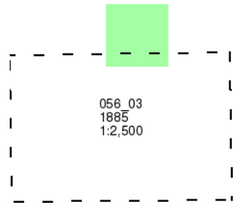
Derbyshire

Published 1885

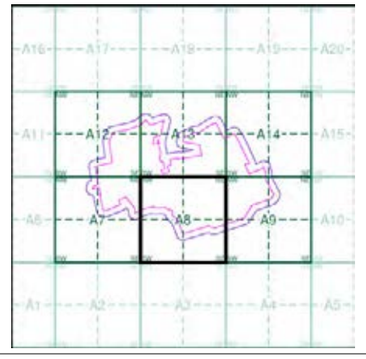
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

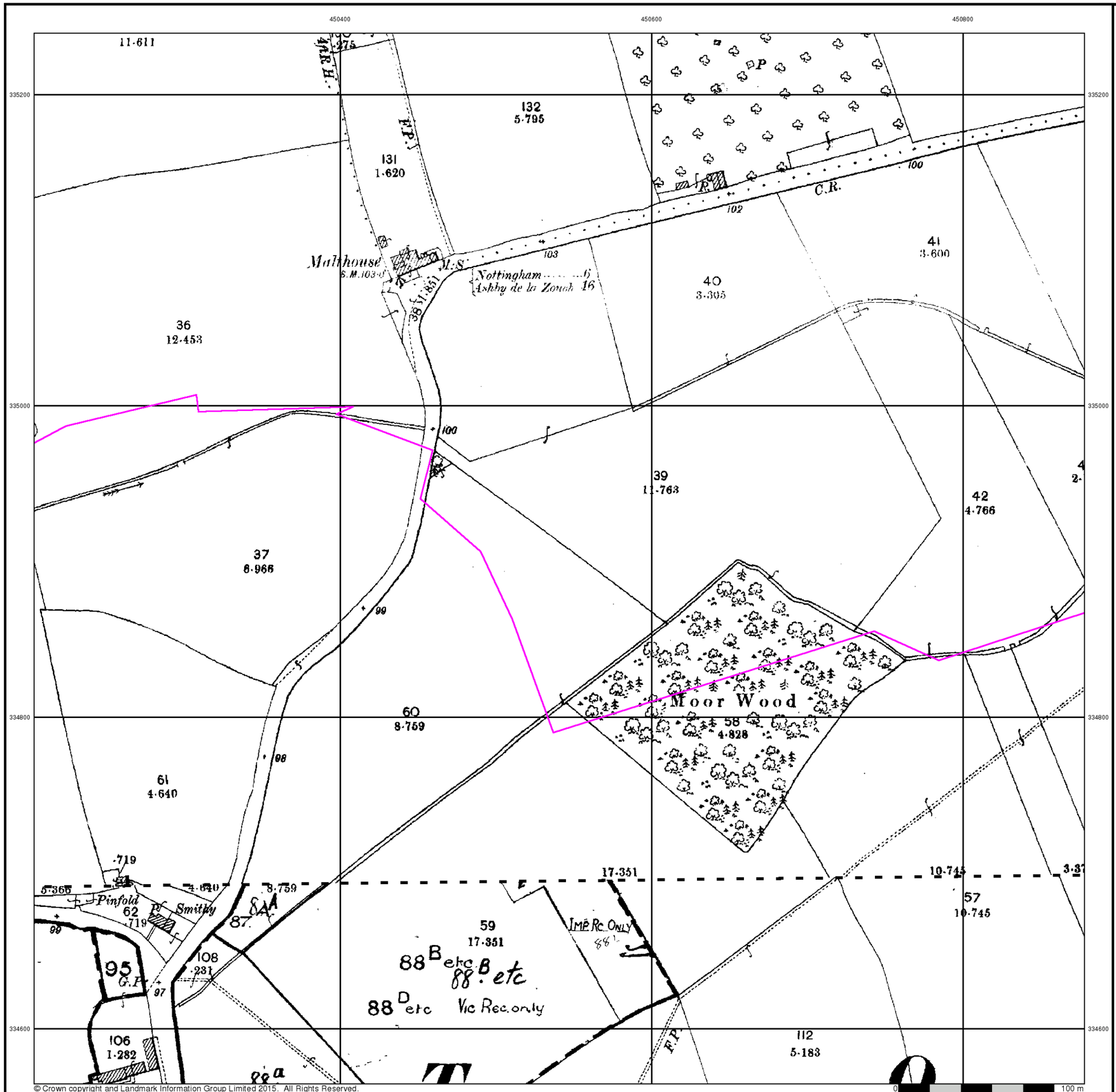
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

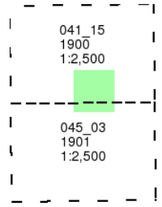
Nottinghamshire

Published 1900 - 1901

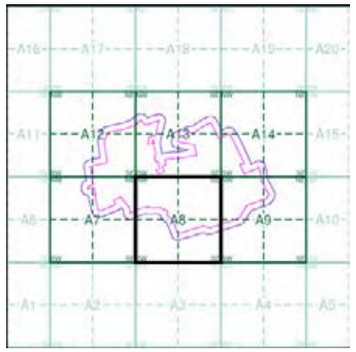
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



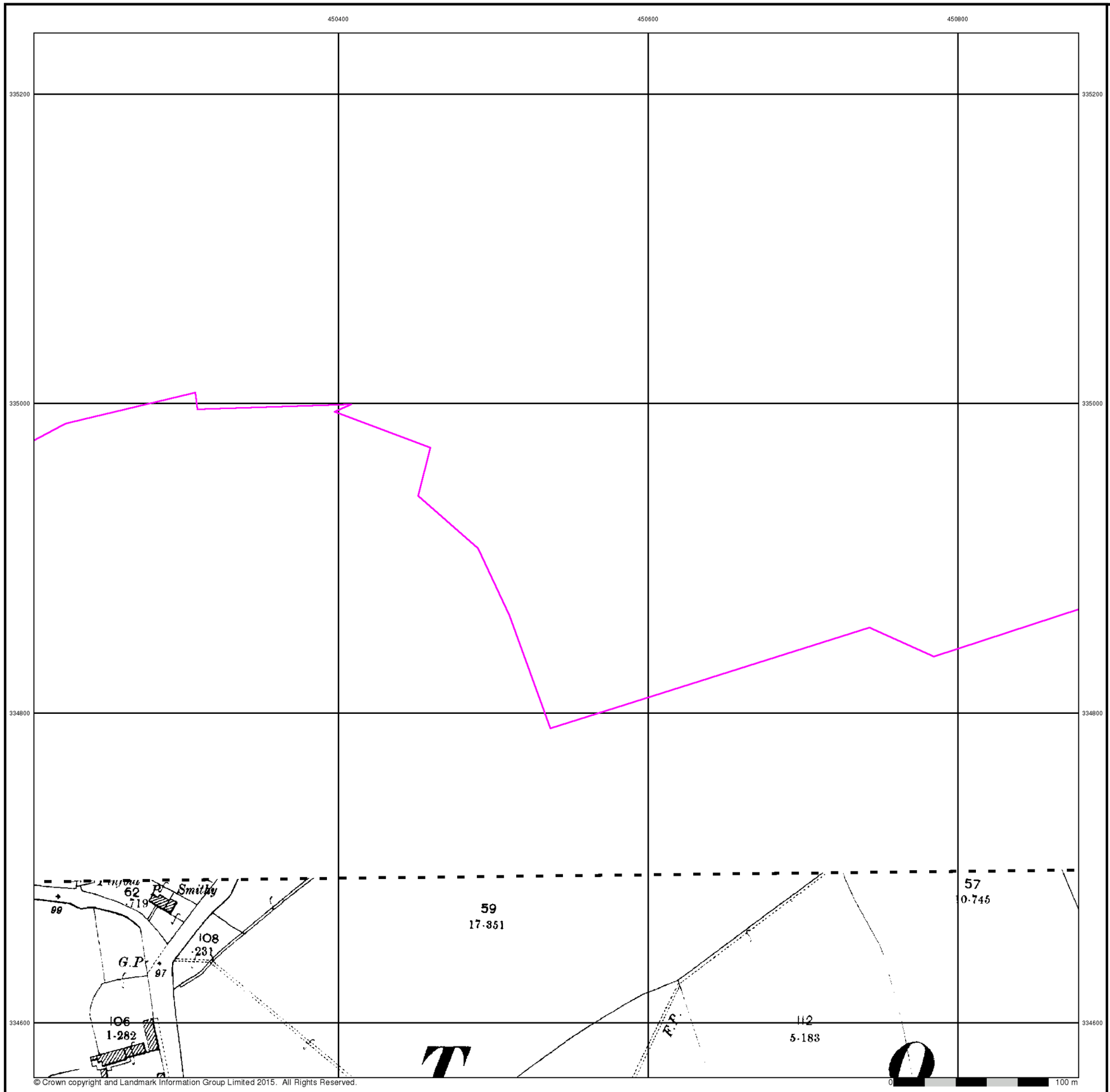
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

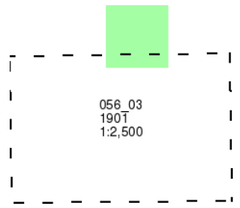
Derbyshire

Published 1901

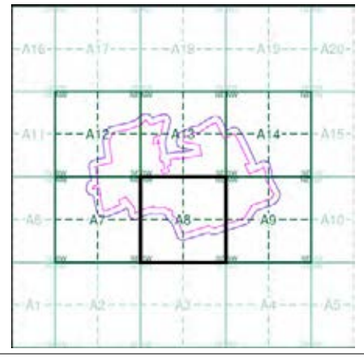
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

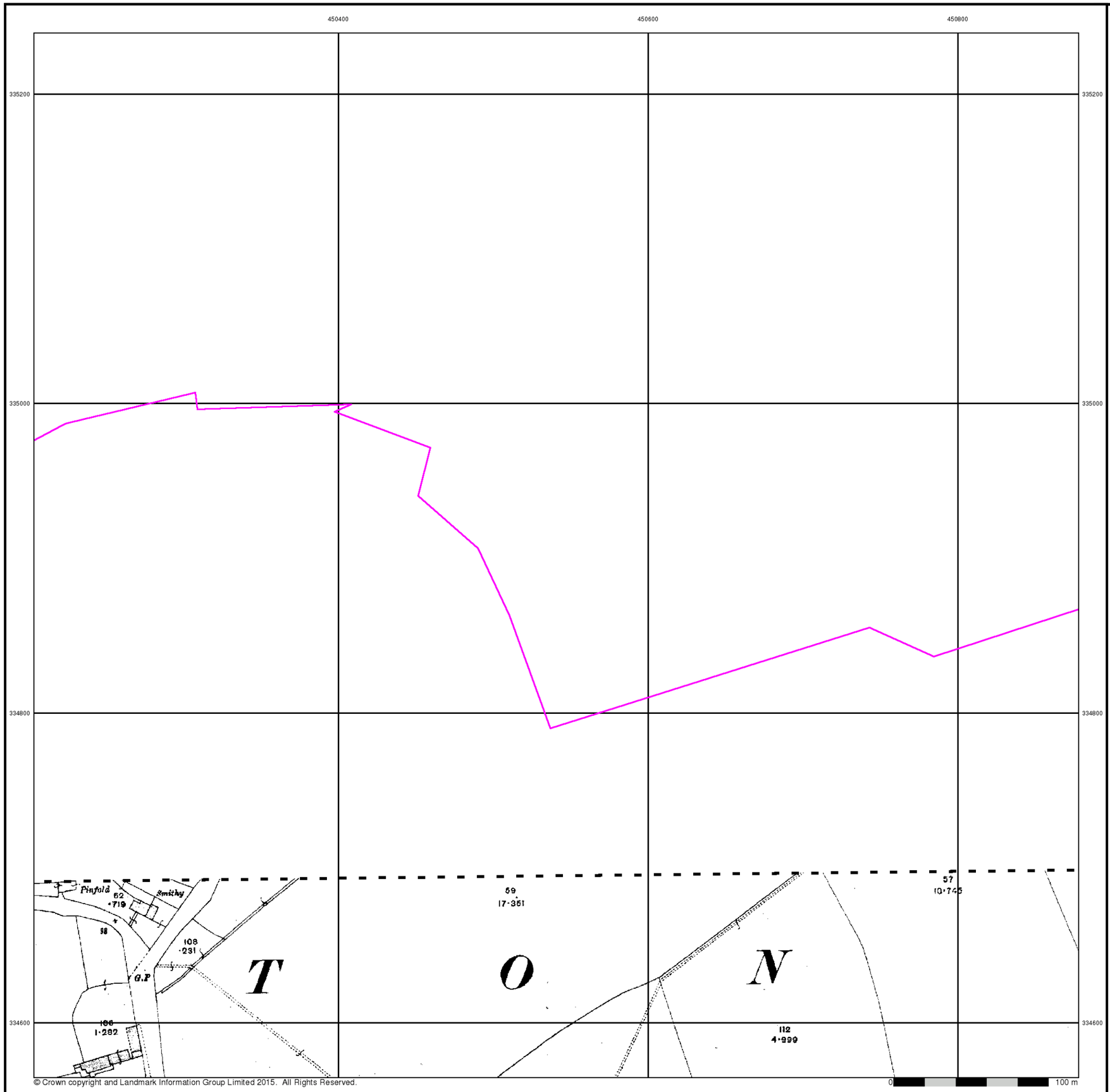
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®
LANDMARK INFORMATION GROUP®

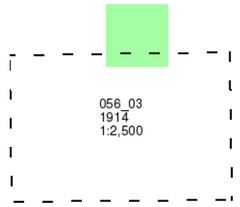
Derbyshire

Published 1914

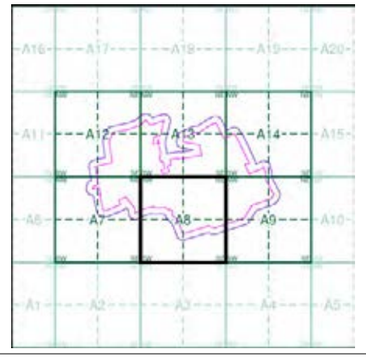
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



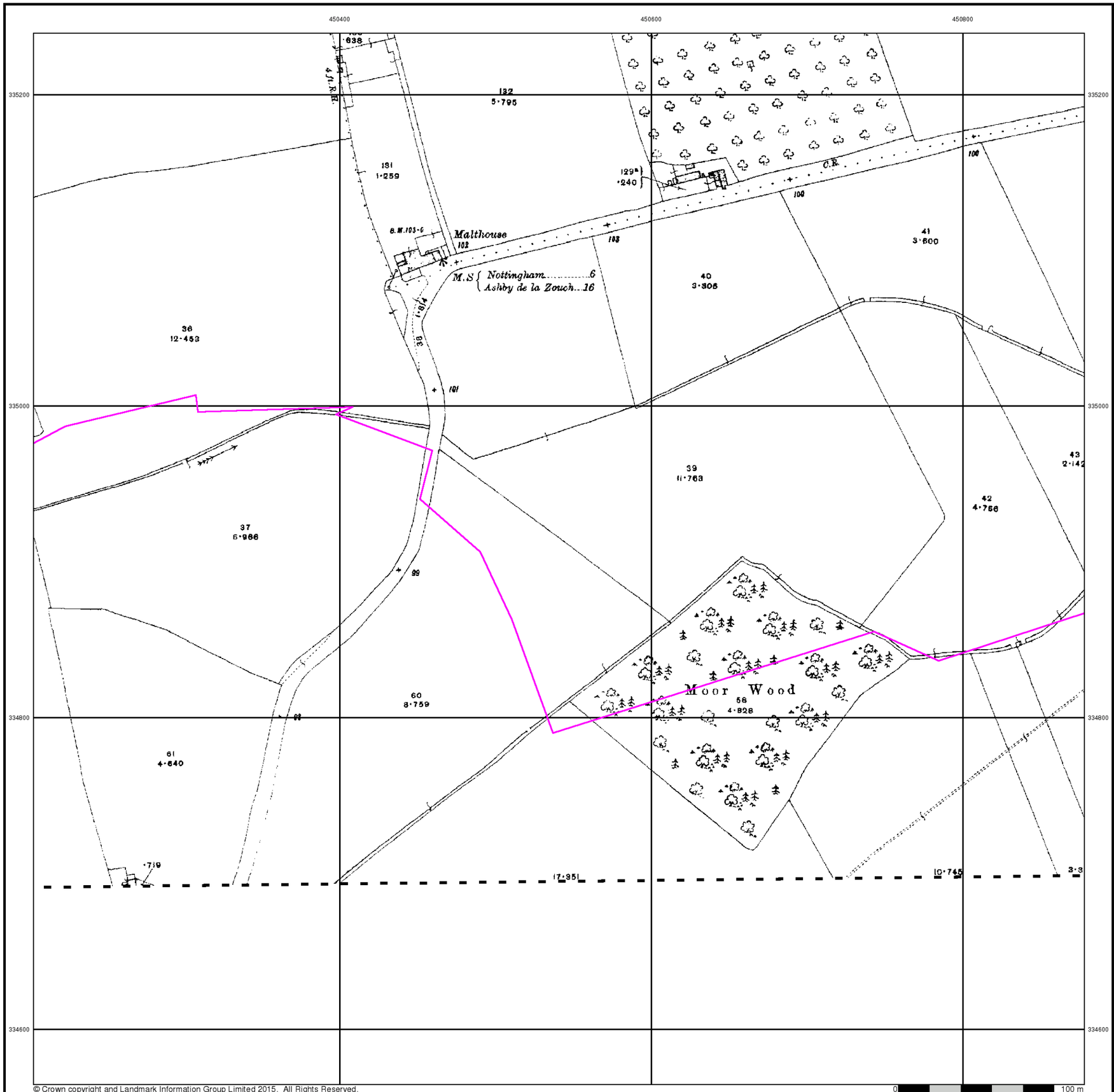
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

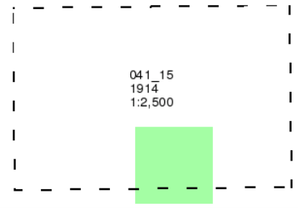
Nottinghamshire

Published 1914

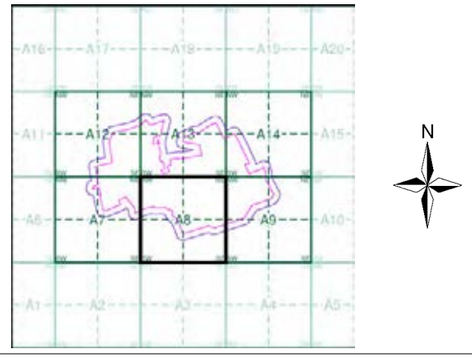
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



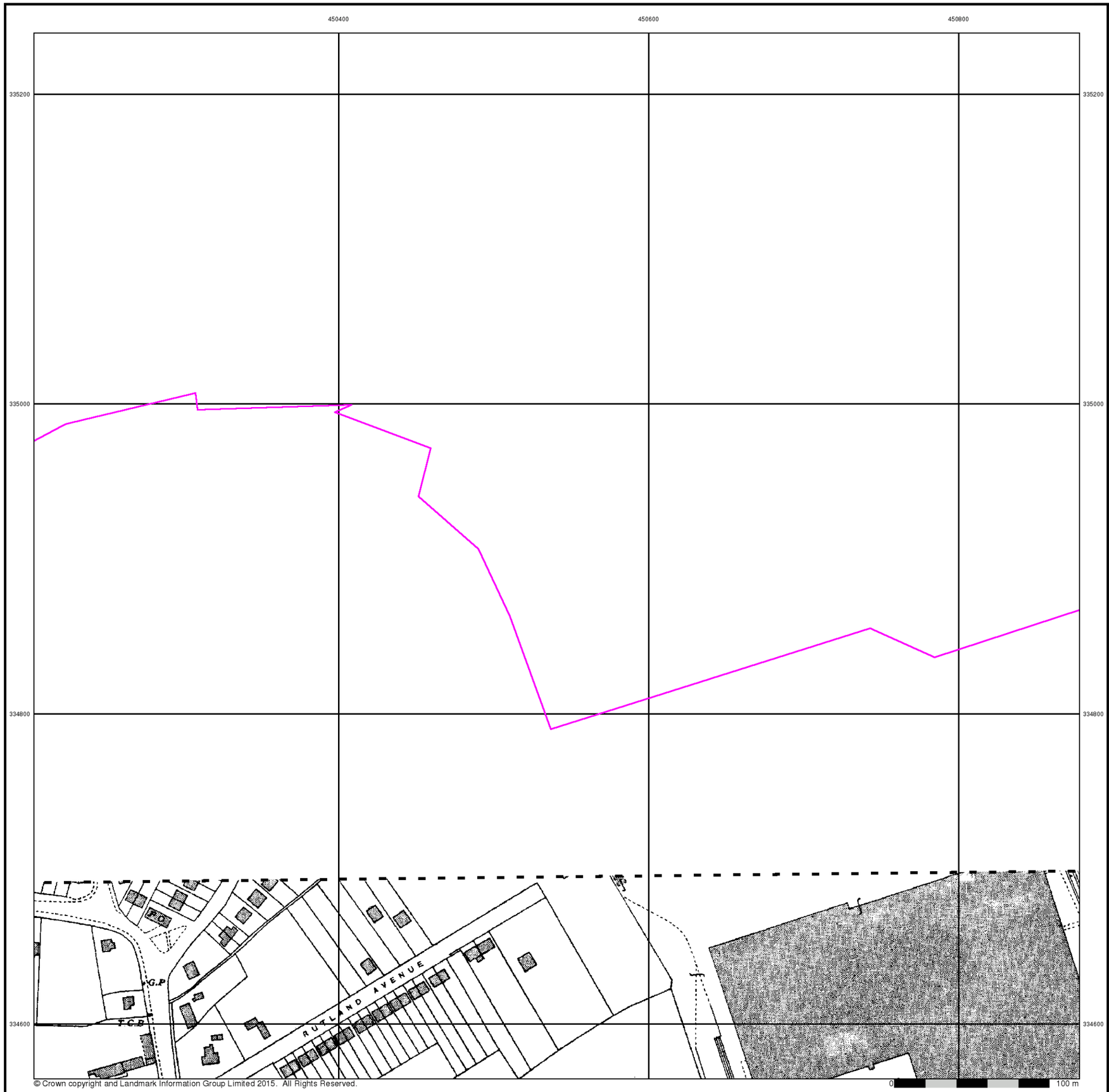
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



0 100 m

Envirocheck®
LANDMARK INFORMATION GROUP®

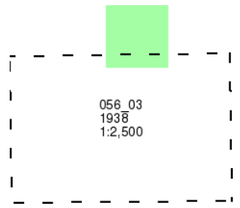
Derbyshire

Published 1938

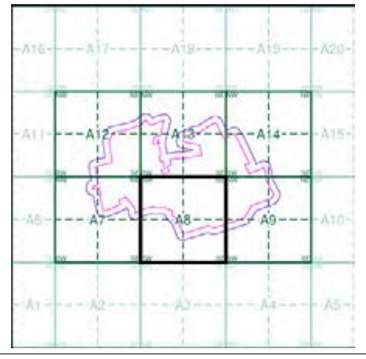
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



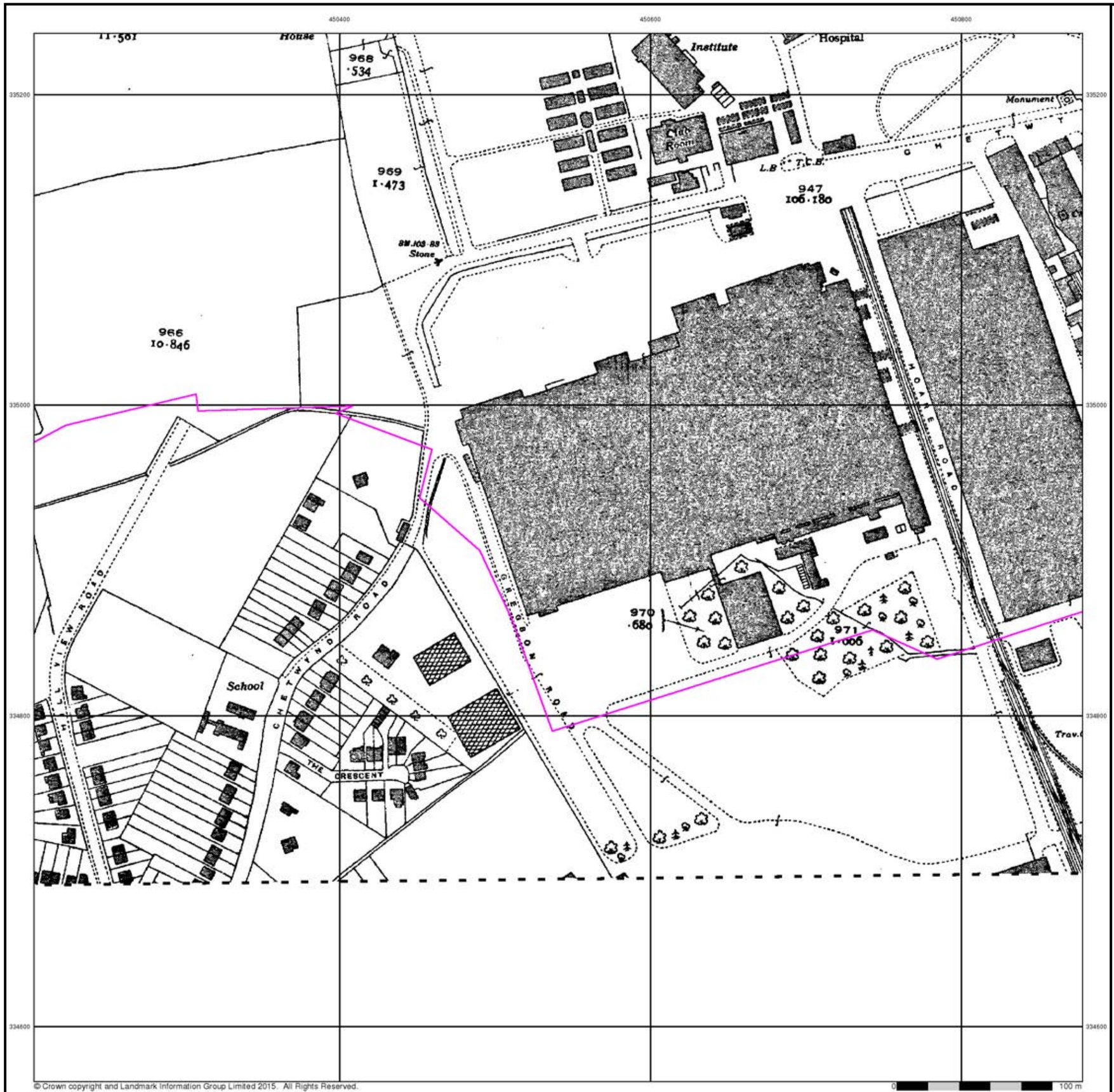
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

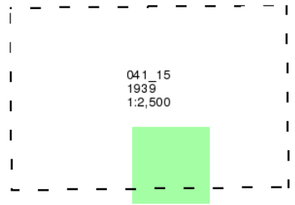
Nottinghamshire

Published 1939

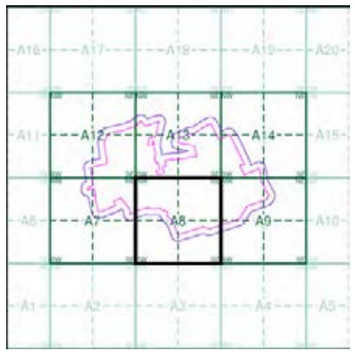
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



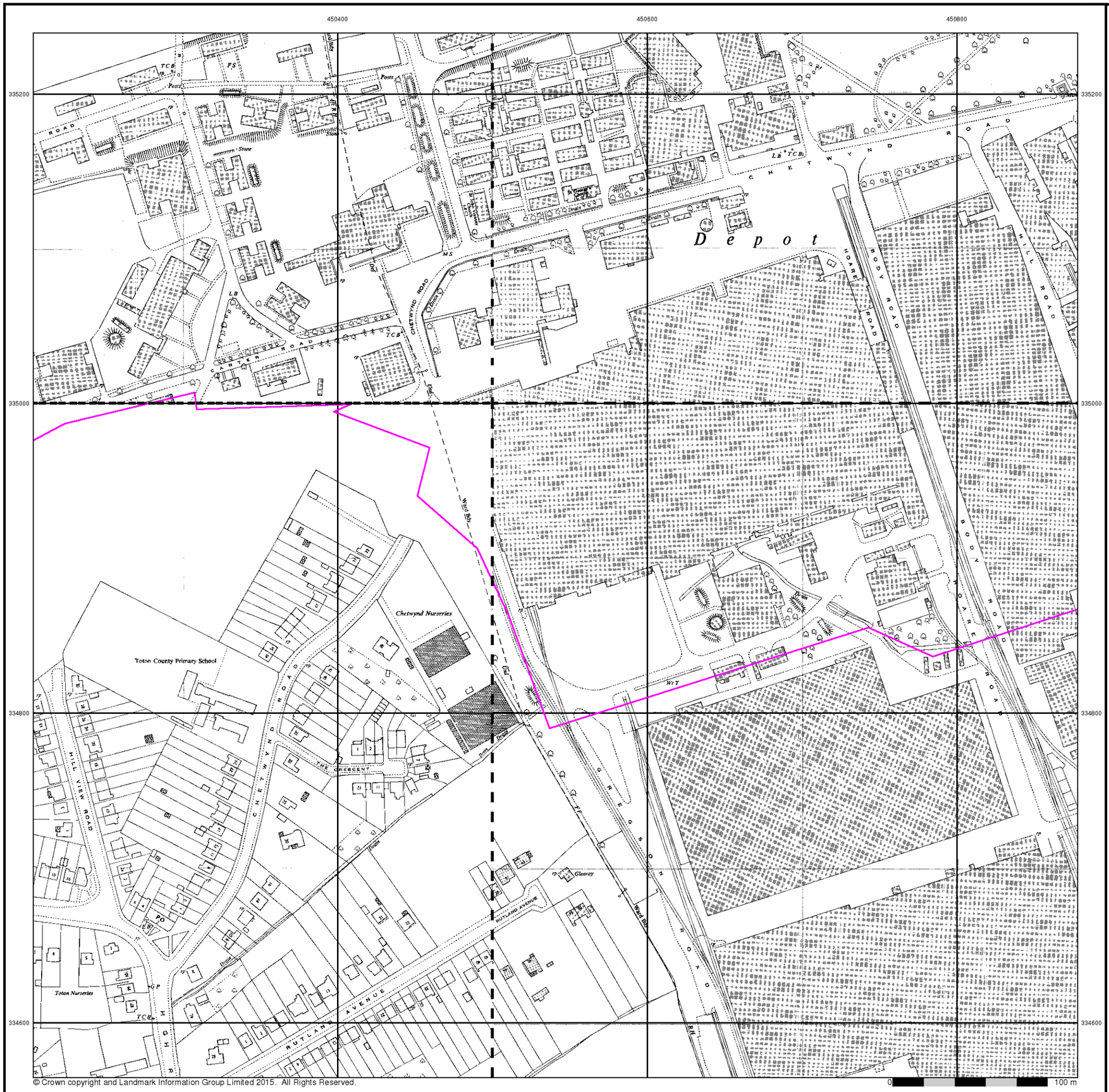
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

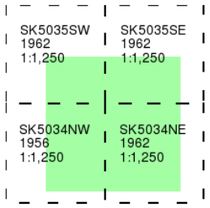
Ordnance Survey Plan

Published 1956 - 1962

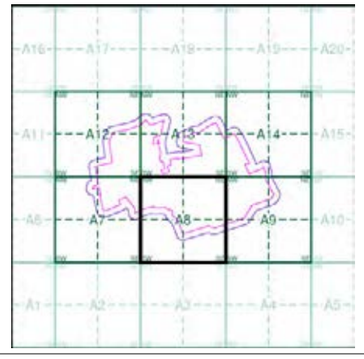
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

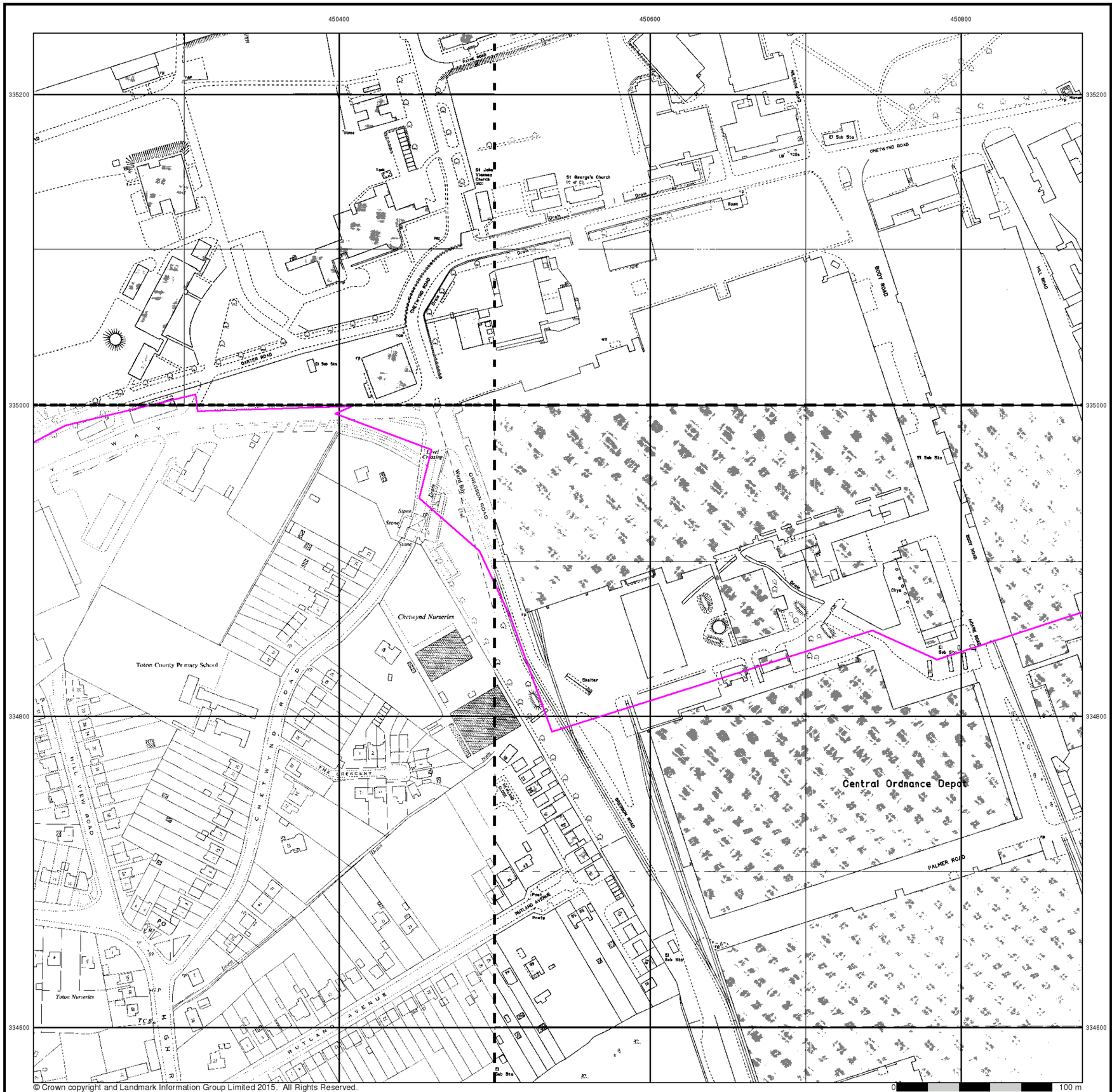
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1962 - 1977

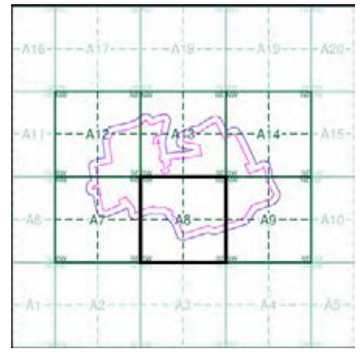
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035SW 1977 1:1,250	SK5035SE 1977 1:1,250
SK5034NW 1962 1:1,250	SK5034NE 1976 1:1,250

Historical Map - Segment A8



Order Details

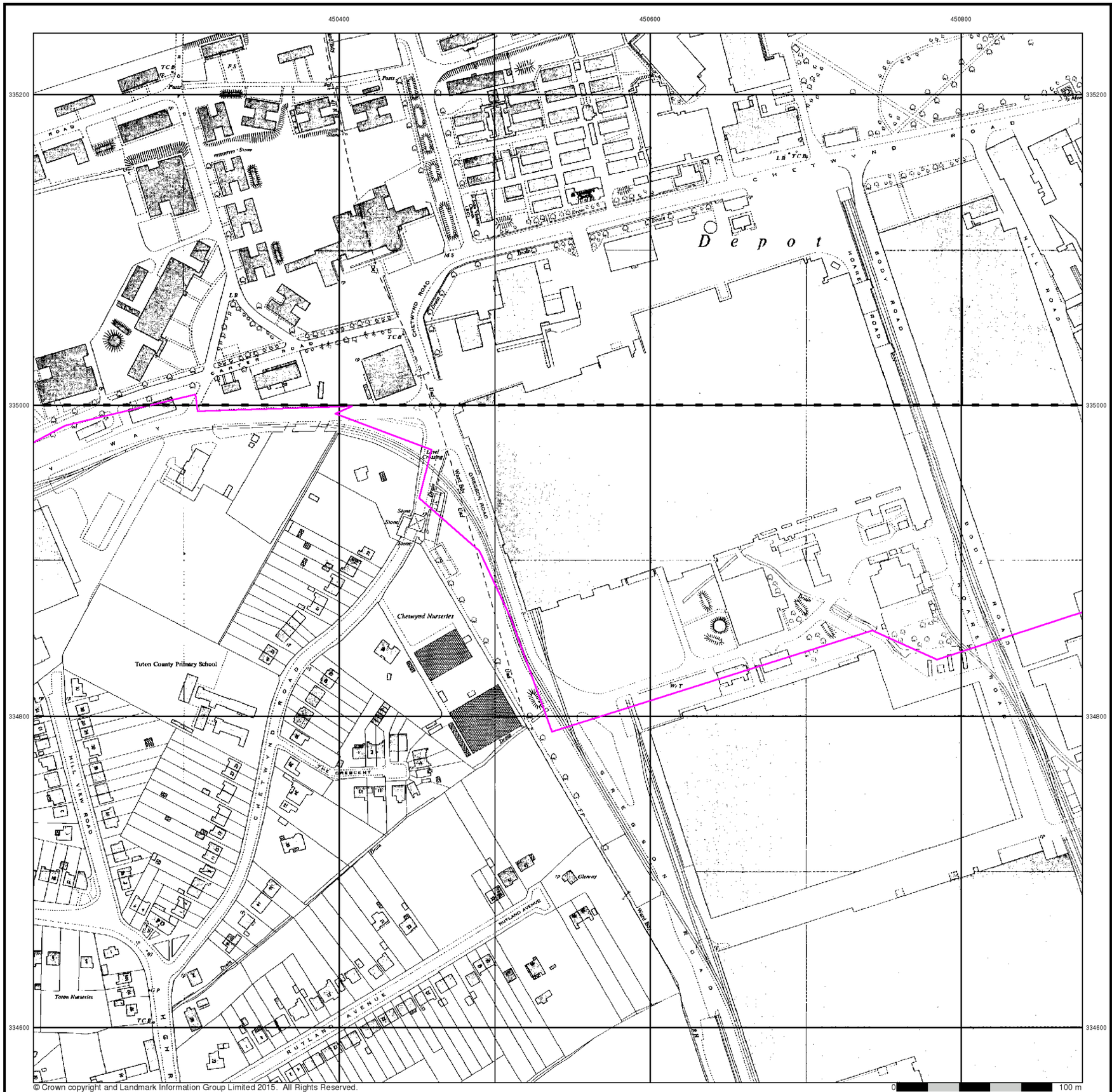
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

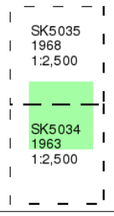
Ordnance Survey Plan

Published 1963 - 1968

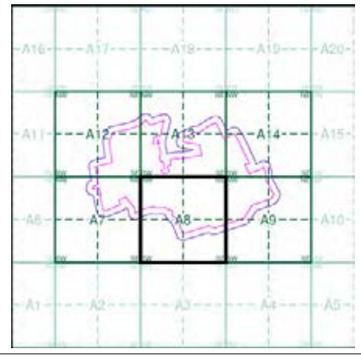
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

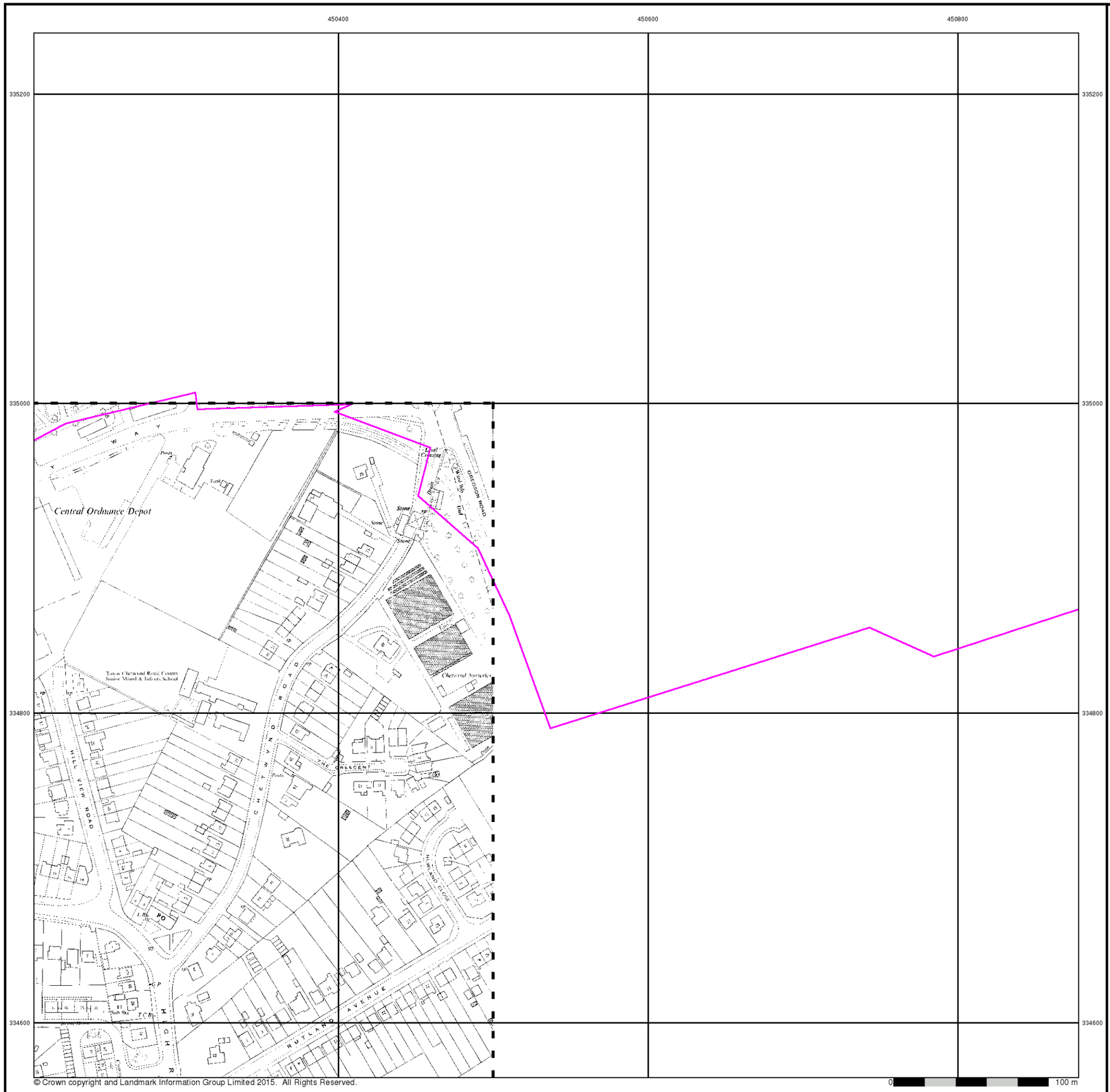
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

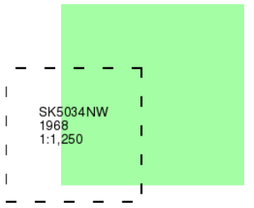
Ordnance Survey Plan

Published 1968

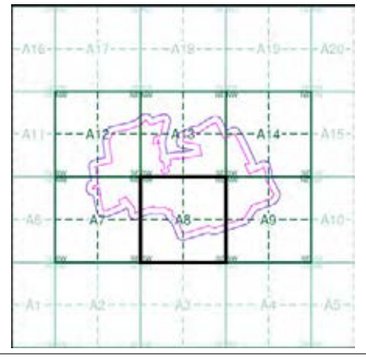
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



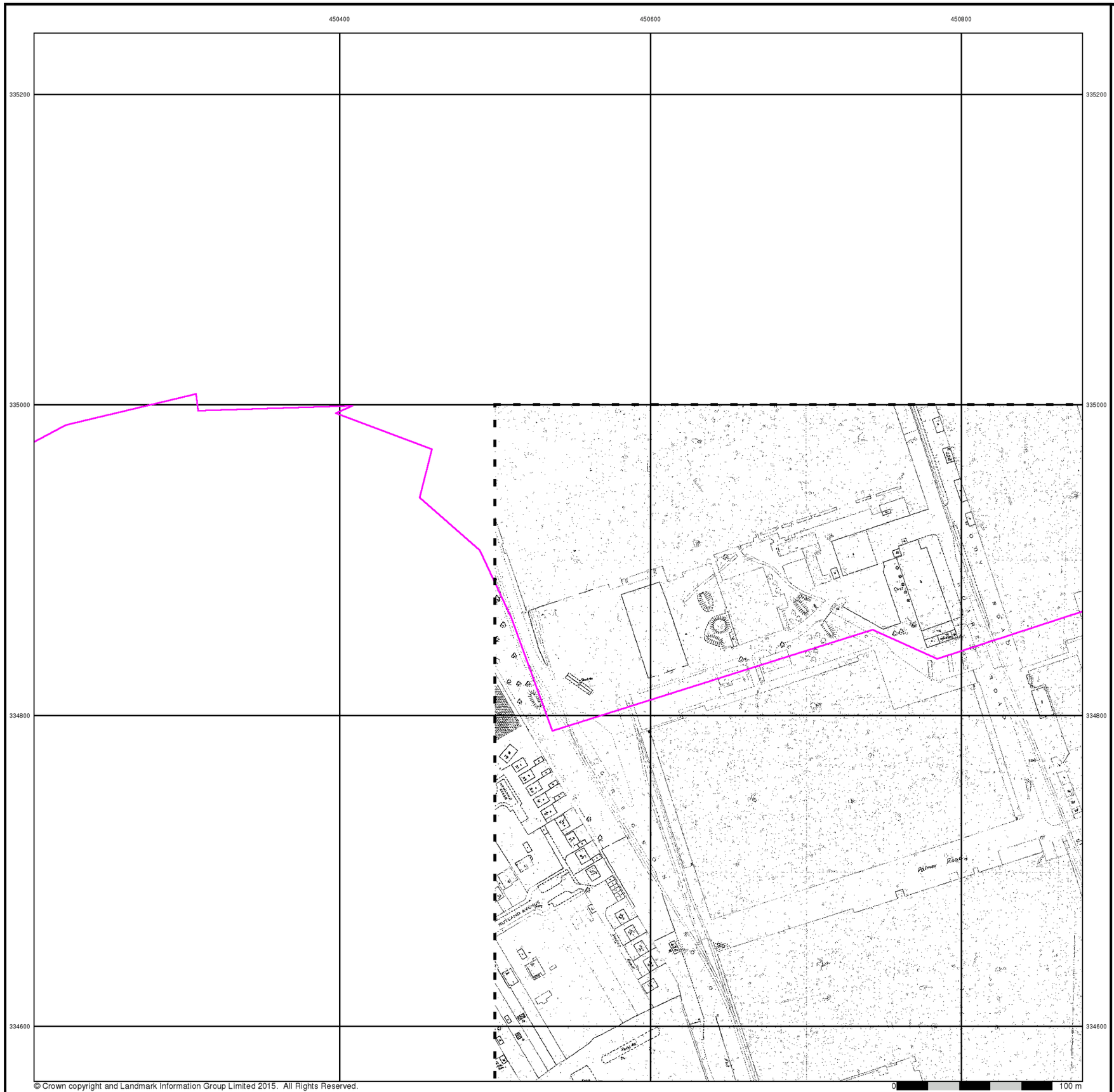
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

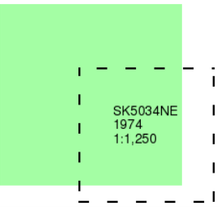
Supply of Unpublished Survey Information

Published 1974

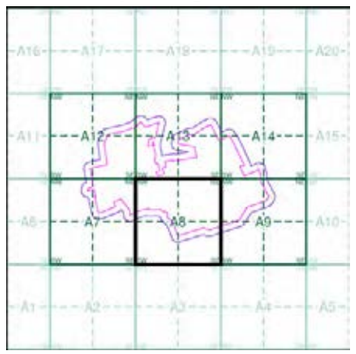
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



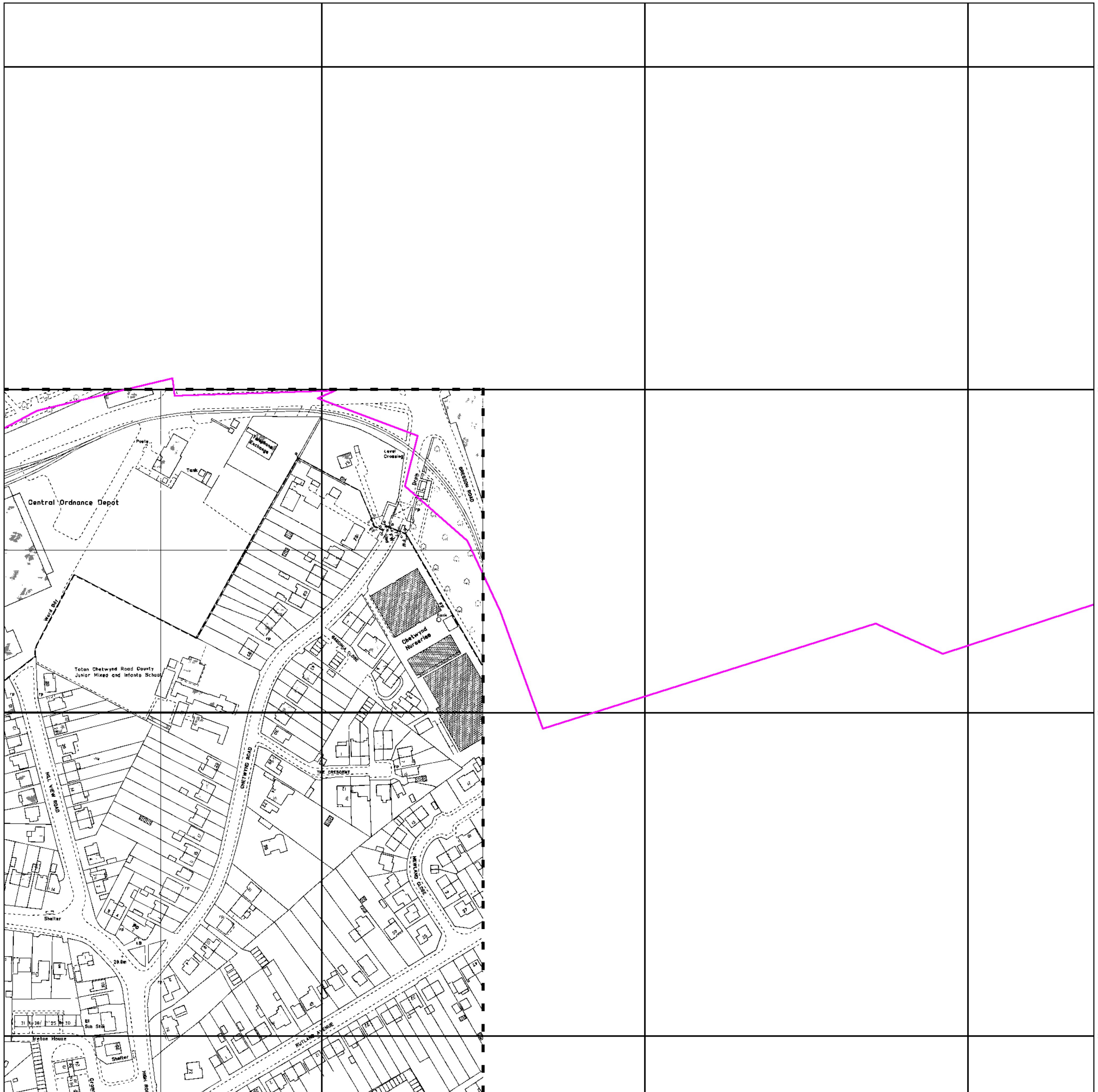
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web: [redacted]uk



0 100 m

Envirocheck®
LANDMARK INFORMATION GROUP®

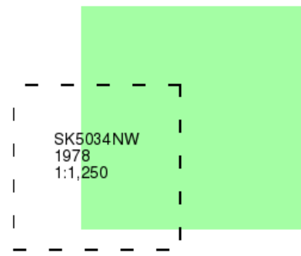
Ordnance Survey Plan

Published 1978

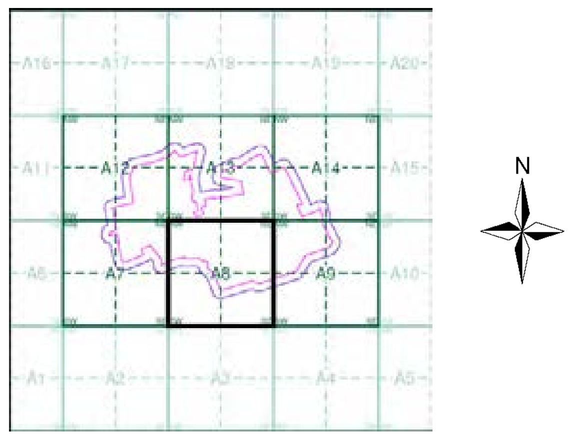
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

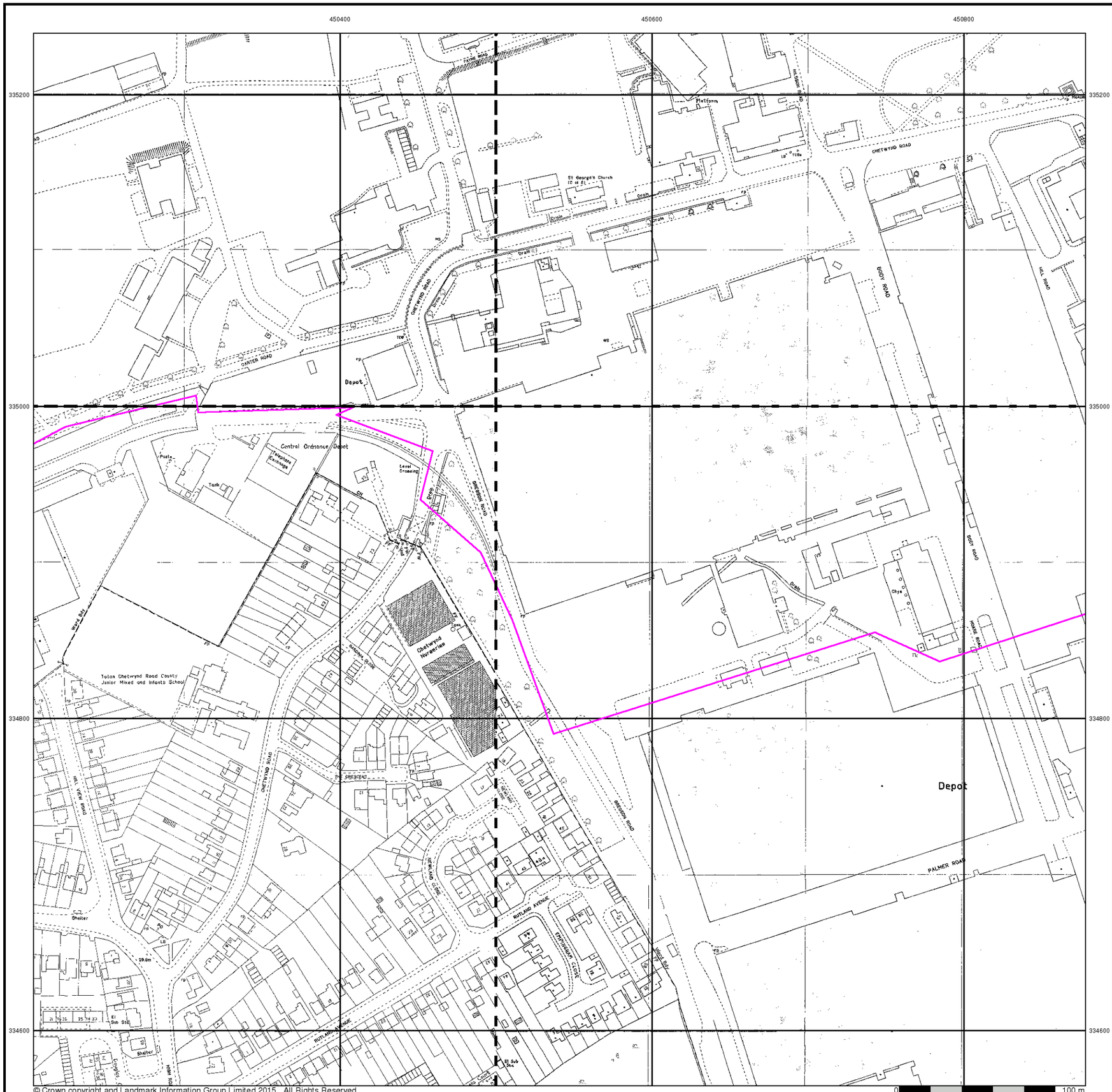
Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web: [redacted]uk



Envirocheck®

LANDMARK INFORMATION GROUP®

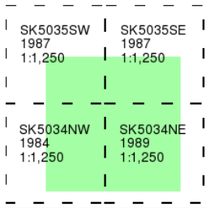
Additional SIMs

Published 1984 - 1989

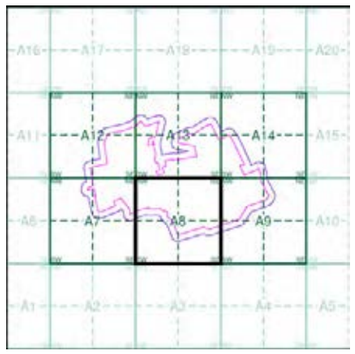
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

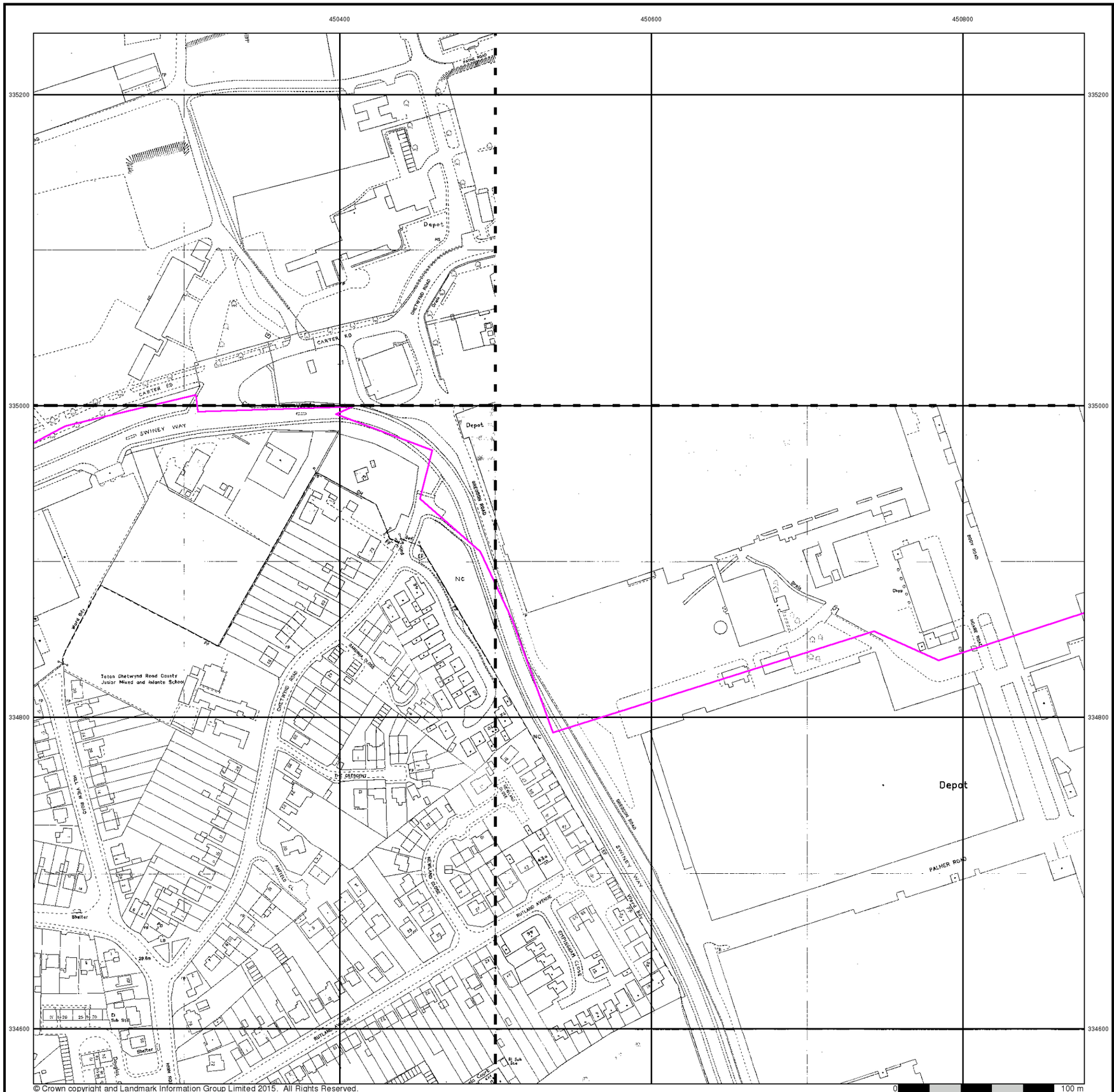
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

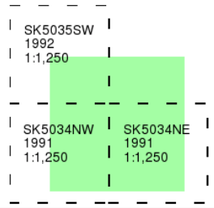
Additional SIMs

Published 1991 - 1992

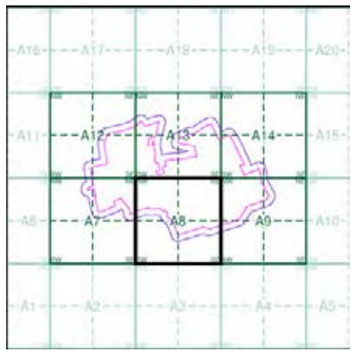
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

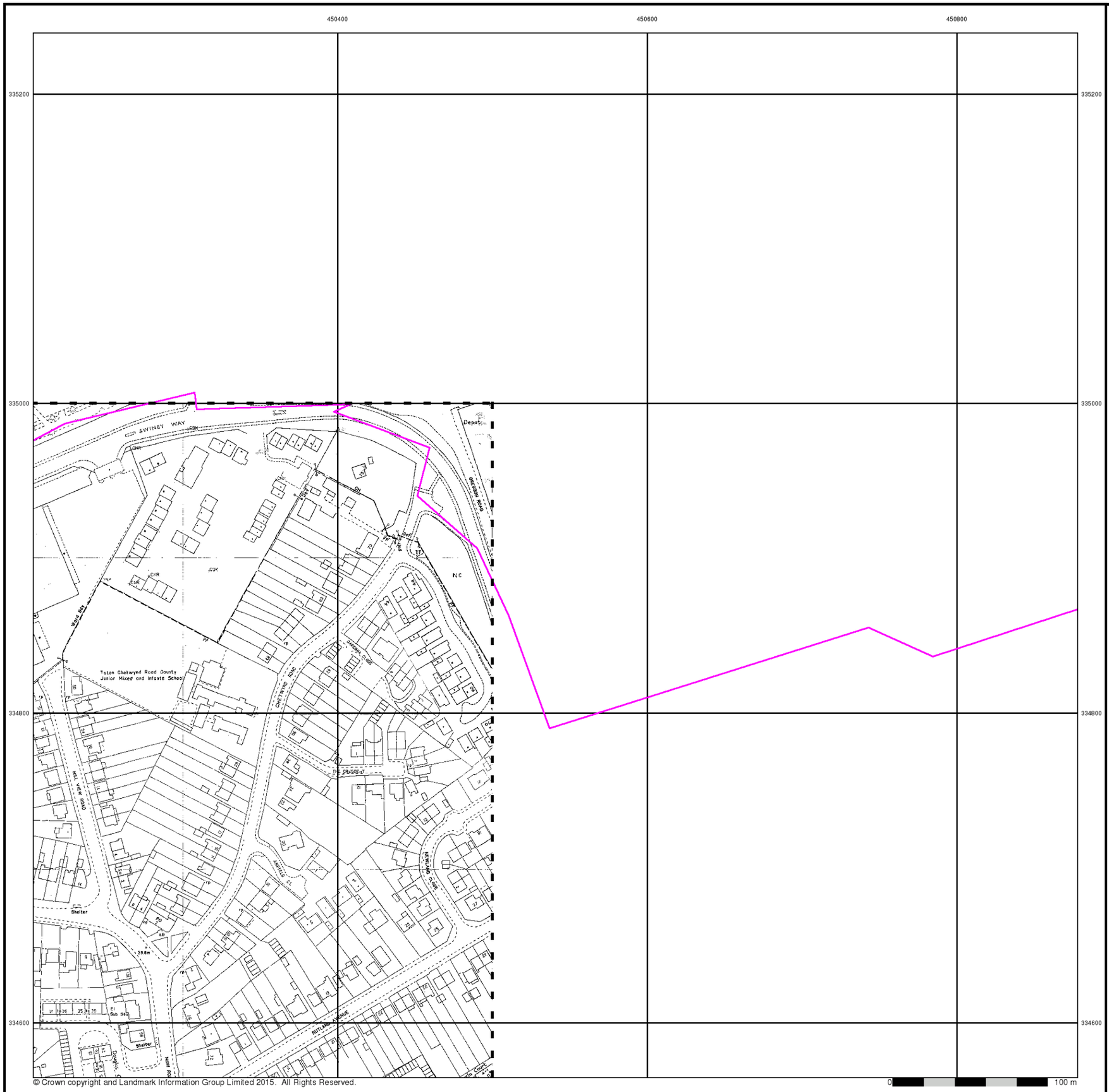
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

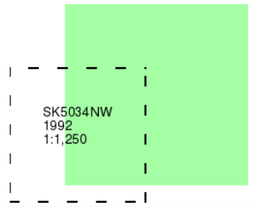
Additional SIMs

Published 1992

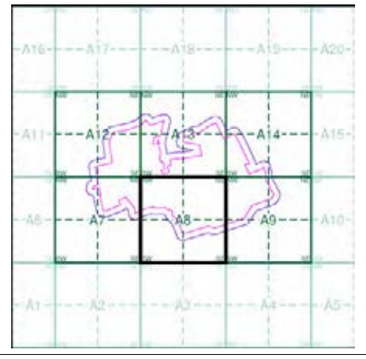
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

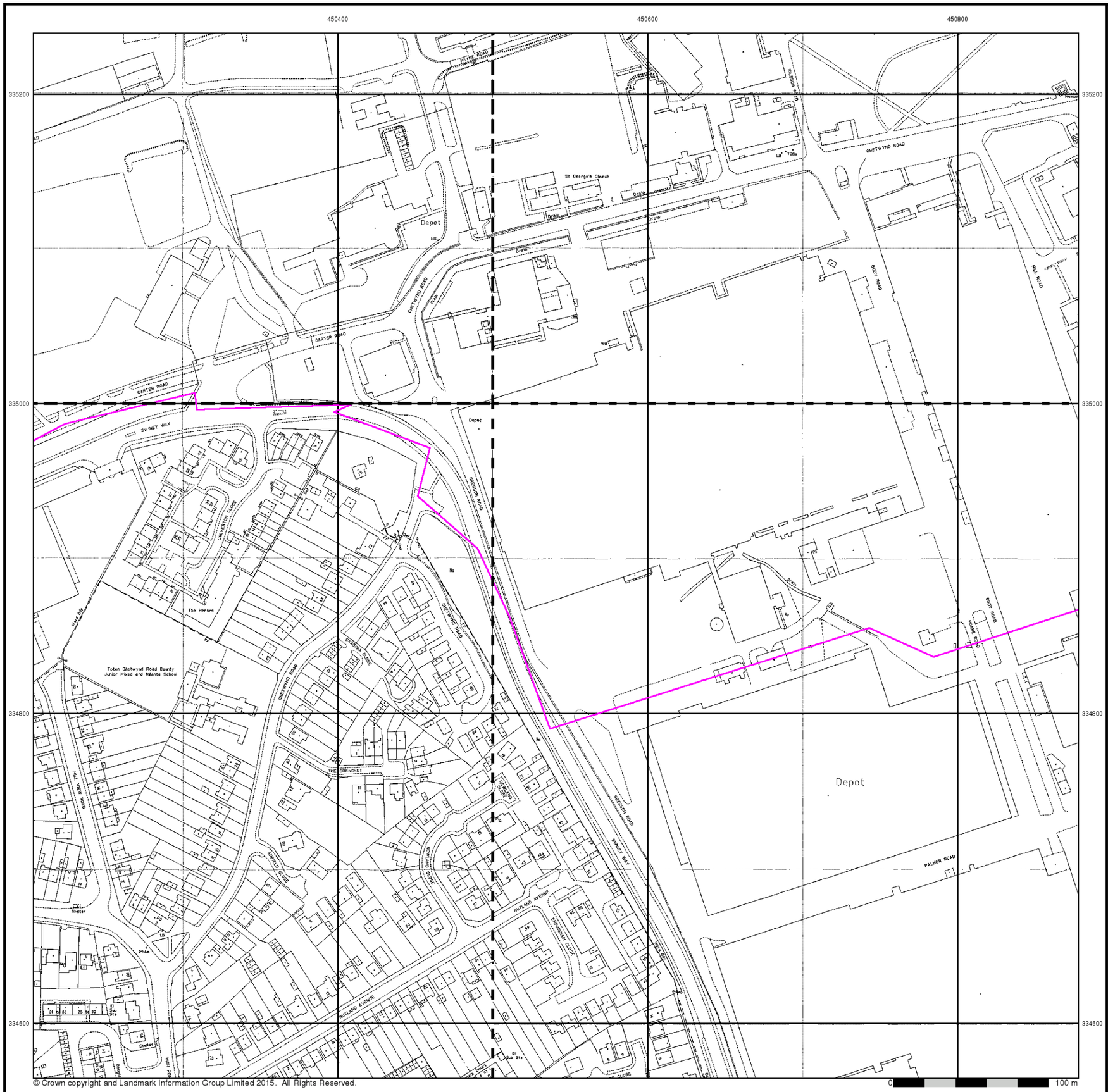
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

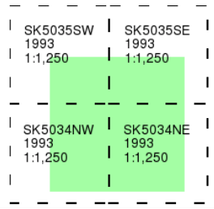
Large-Scale National Grid Data

Published 1993

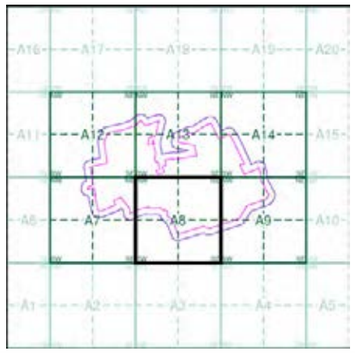
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

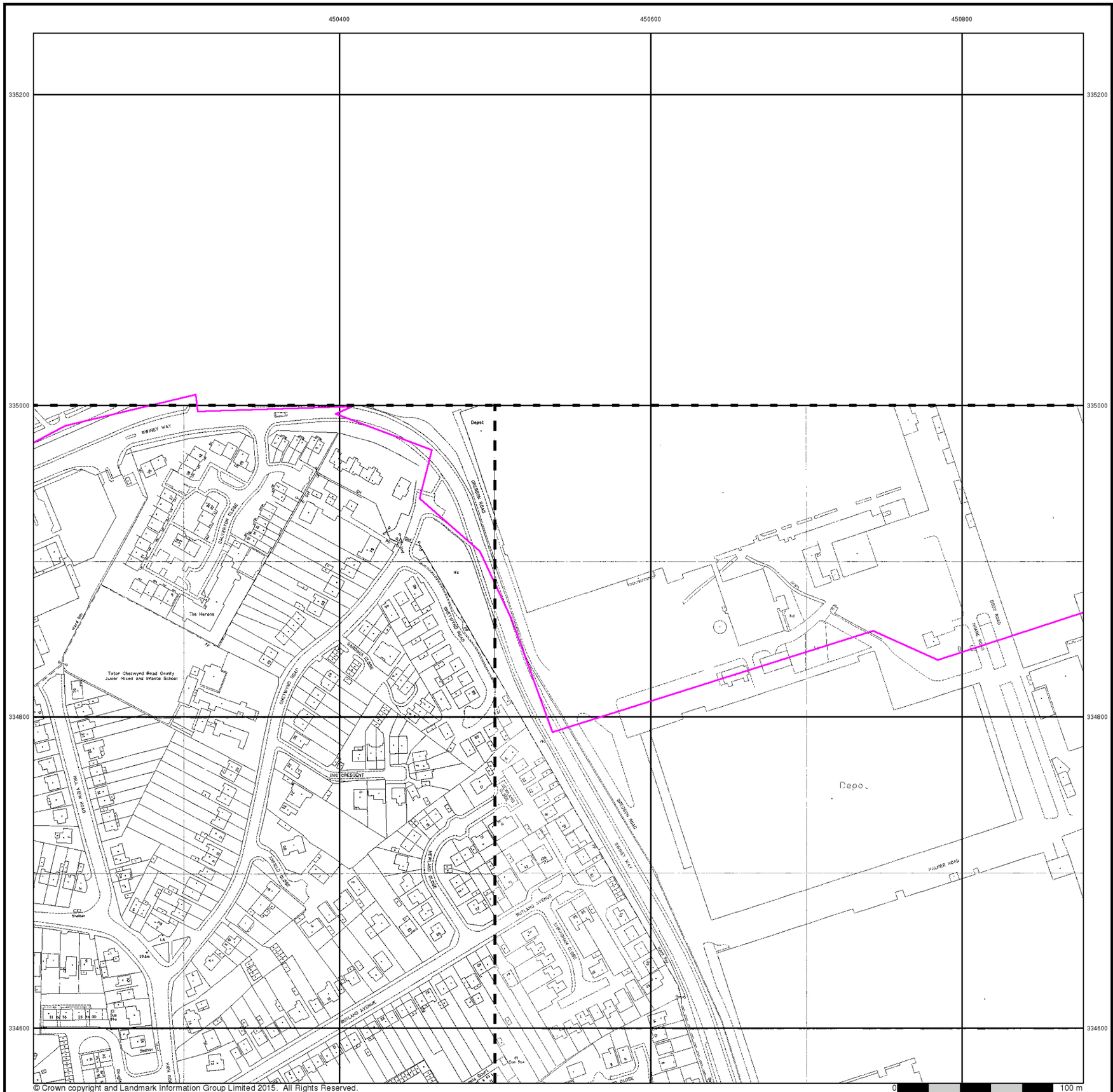
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

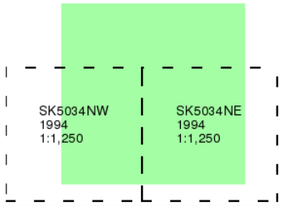
Large-Scale National Grid Data

Published 1994

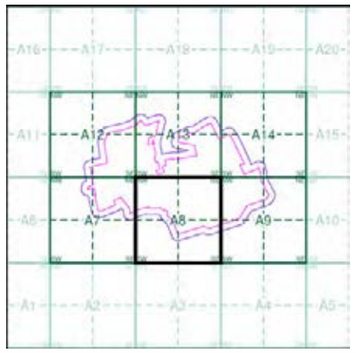
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A8



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

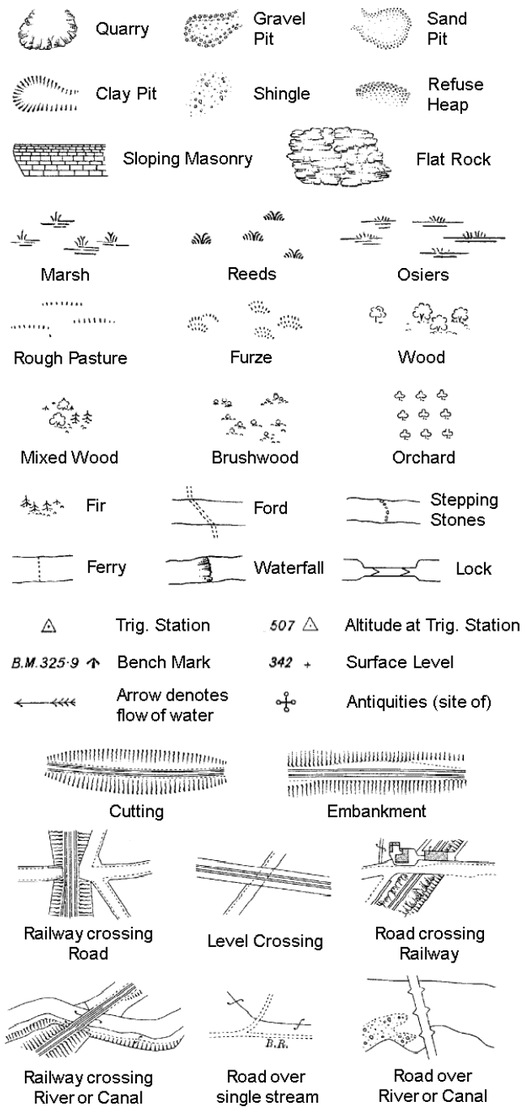
Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

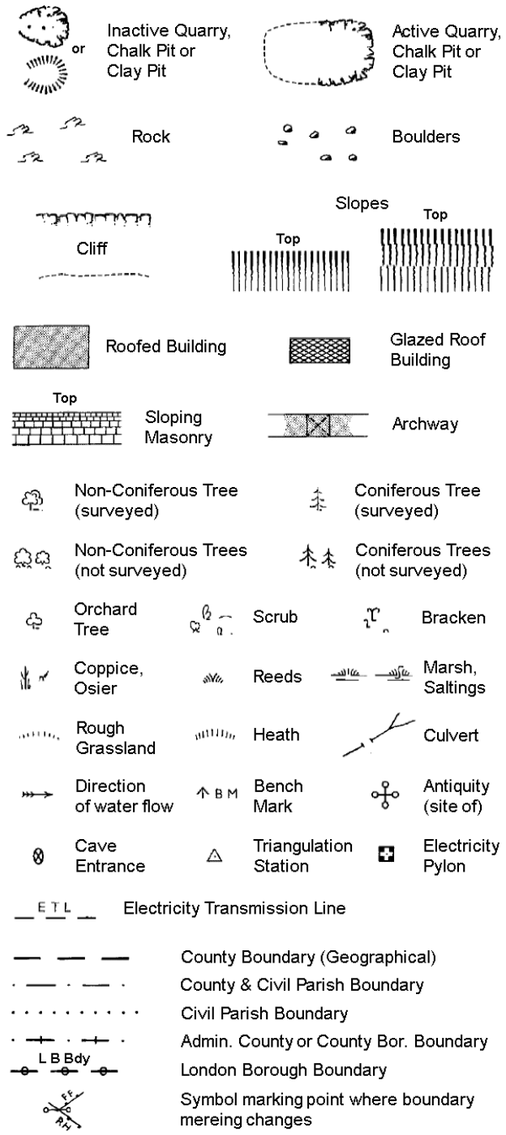
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



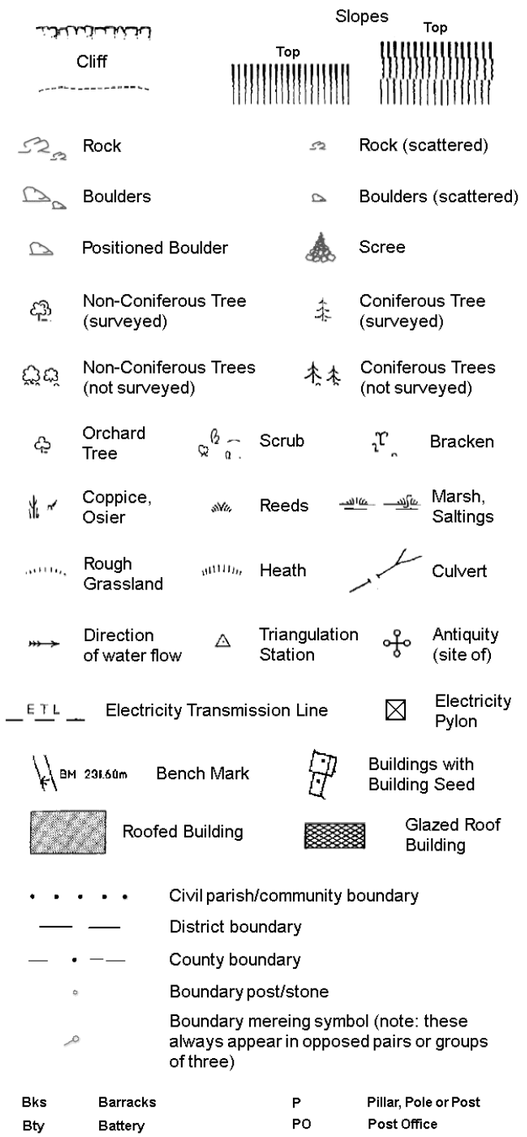
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250

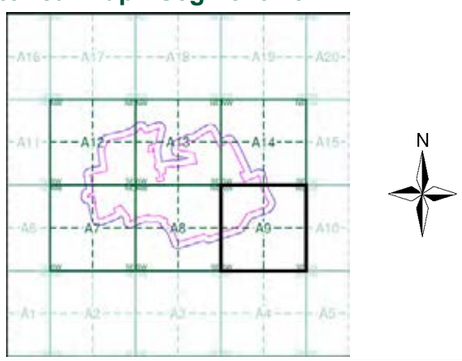


Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Historical Map - Segment A9



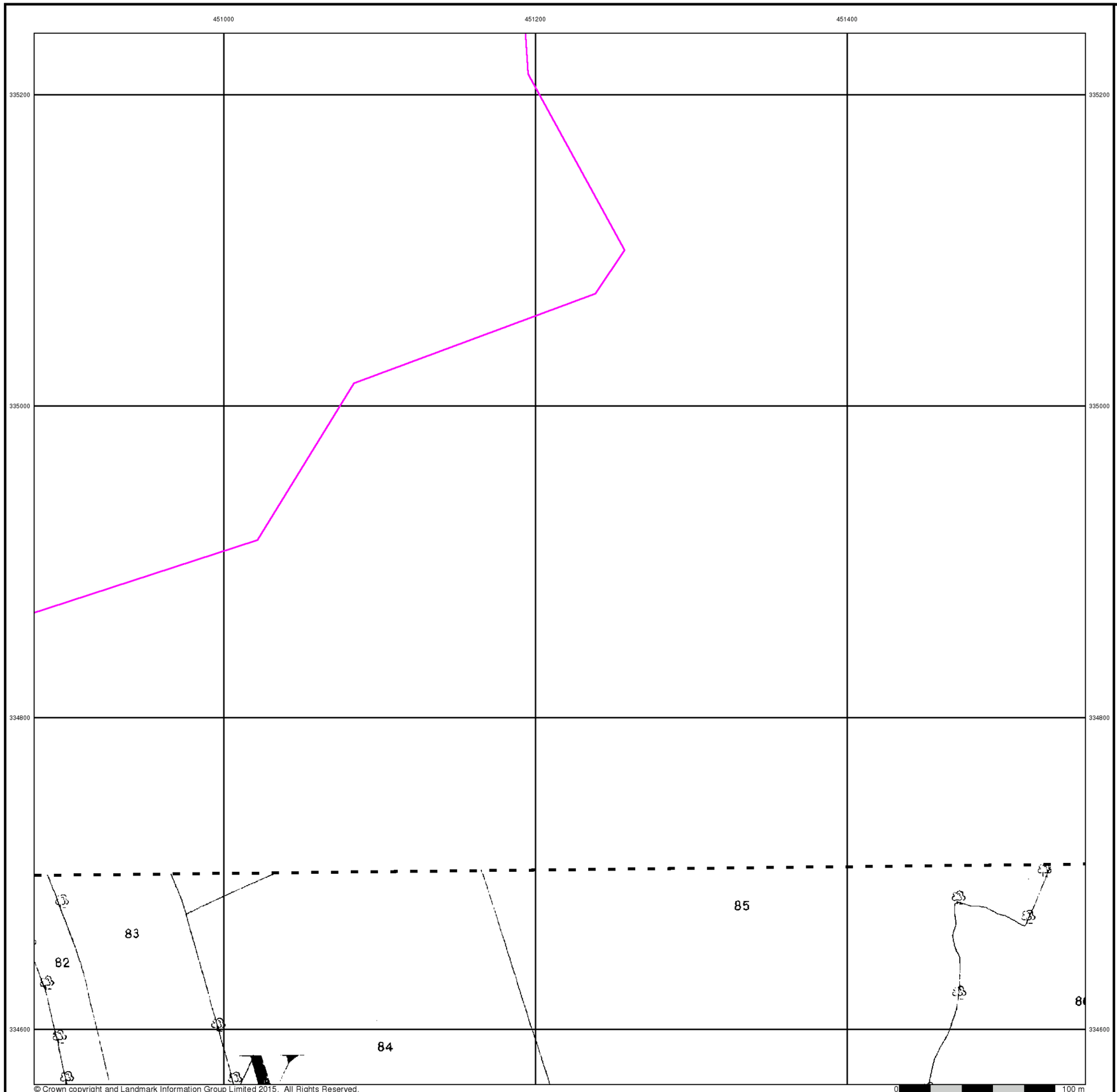
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark® INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

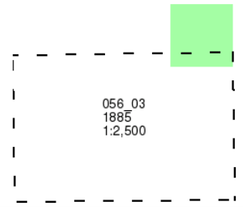
Derbyshire

Published 1885

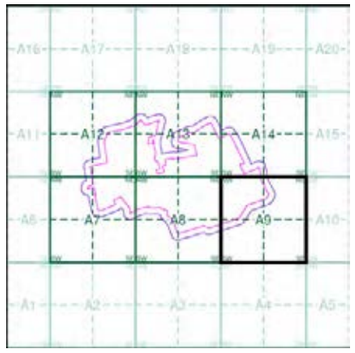
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

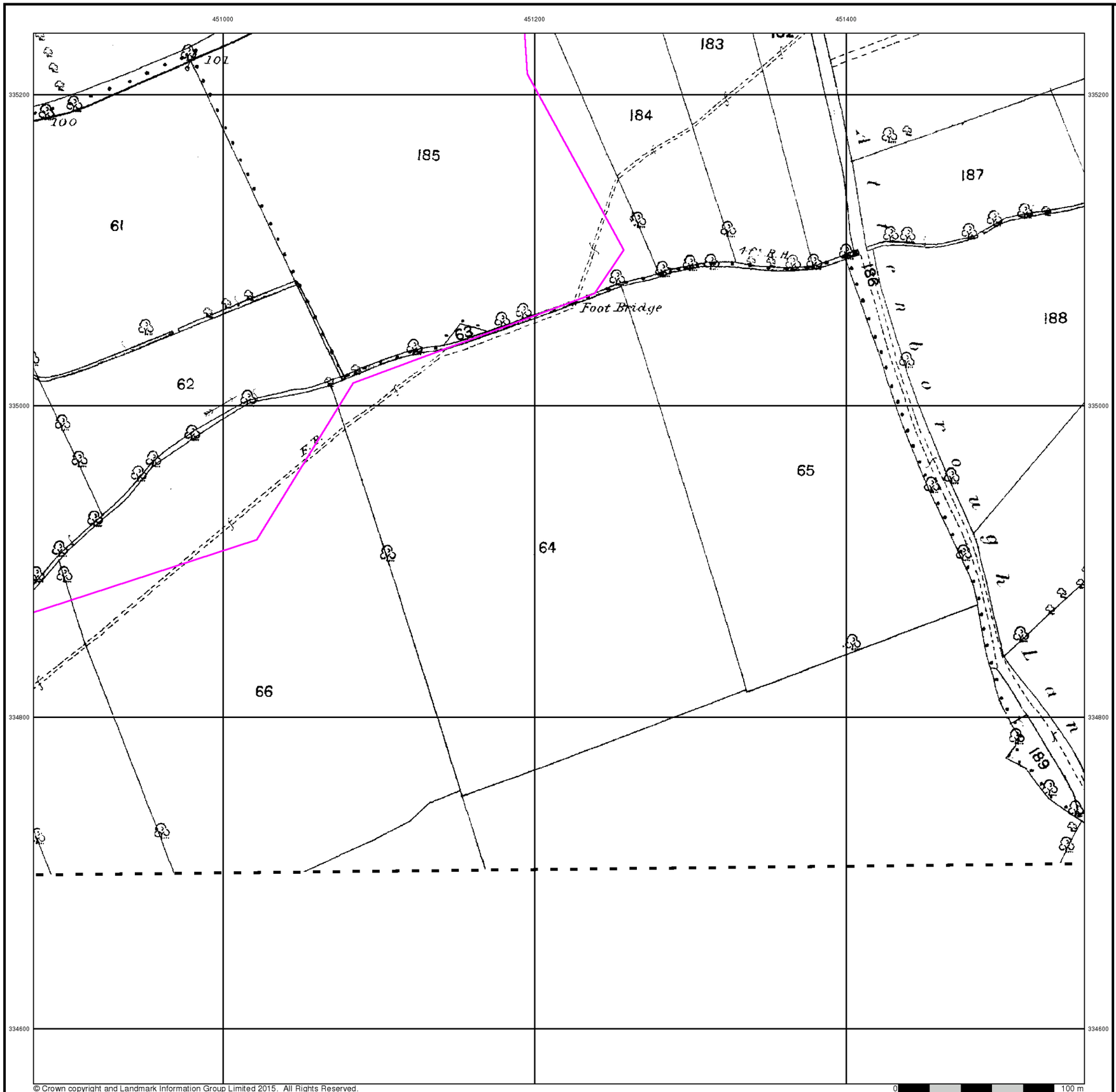
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

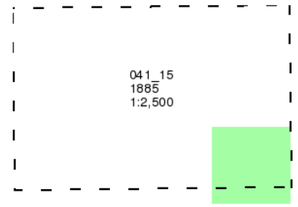
Nottinghamshire

Published 1885

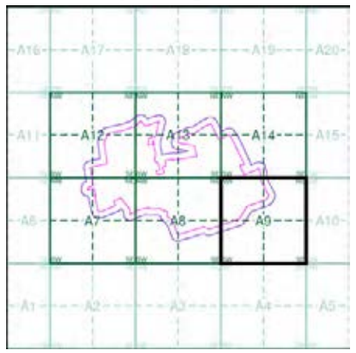
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

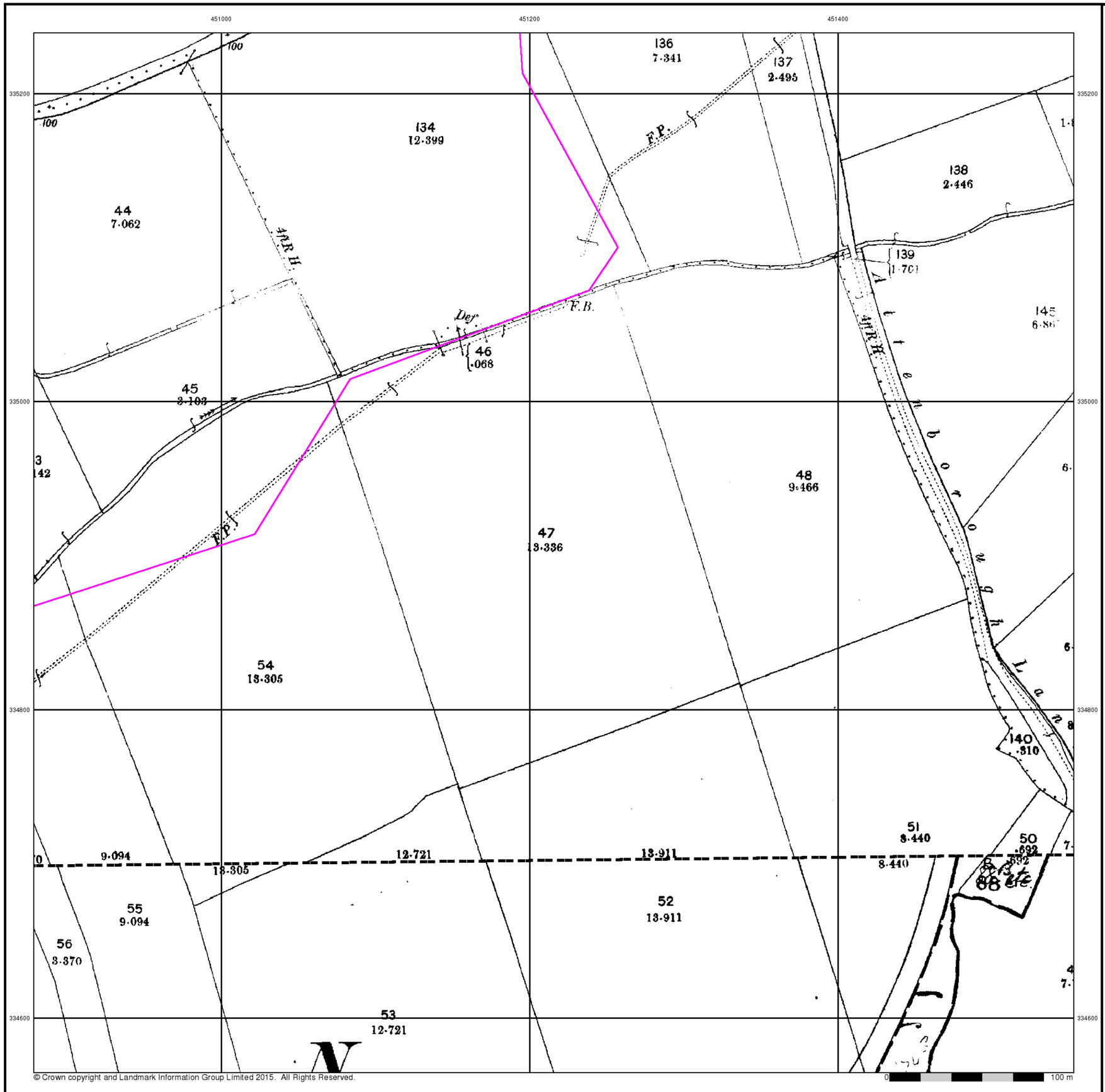
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

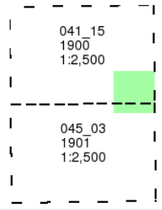
Nottinghamshire

Published 1900 - 1901

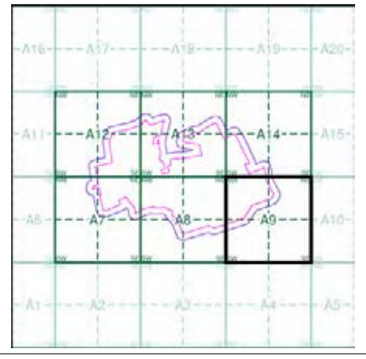
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



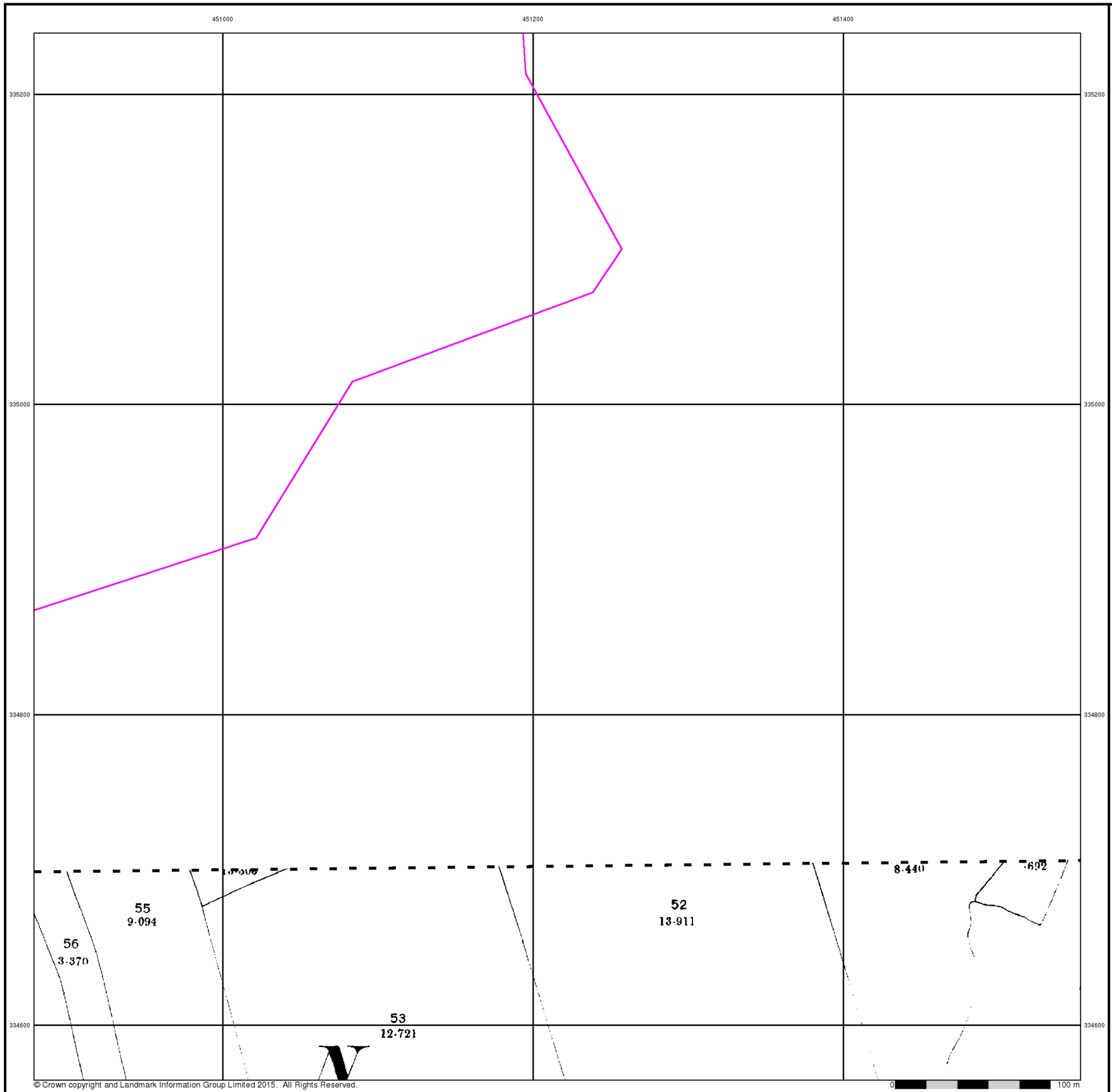
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

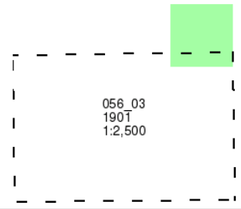
Derbyshire

Published 1901

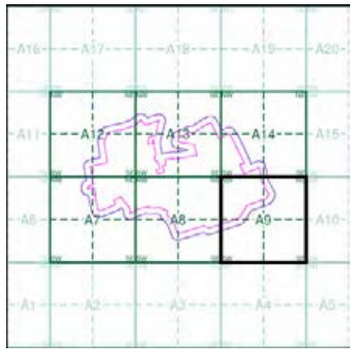
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

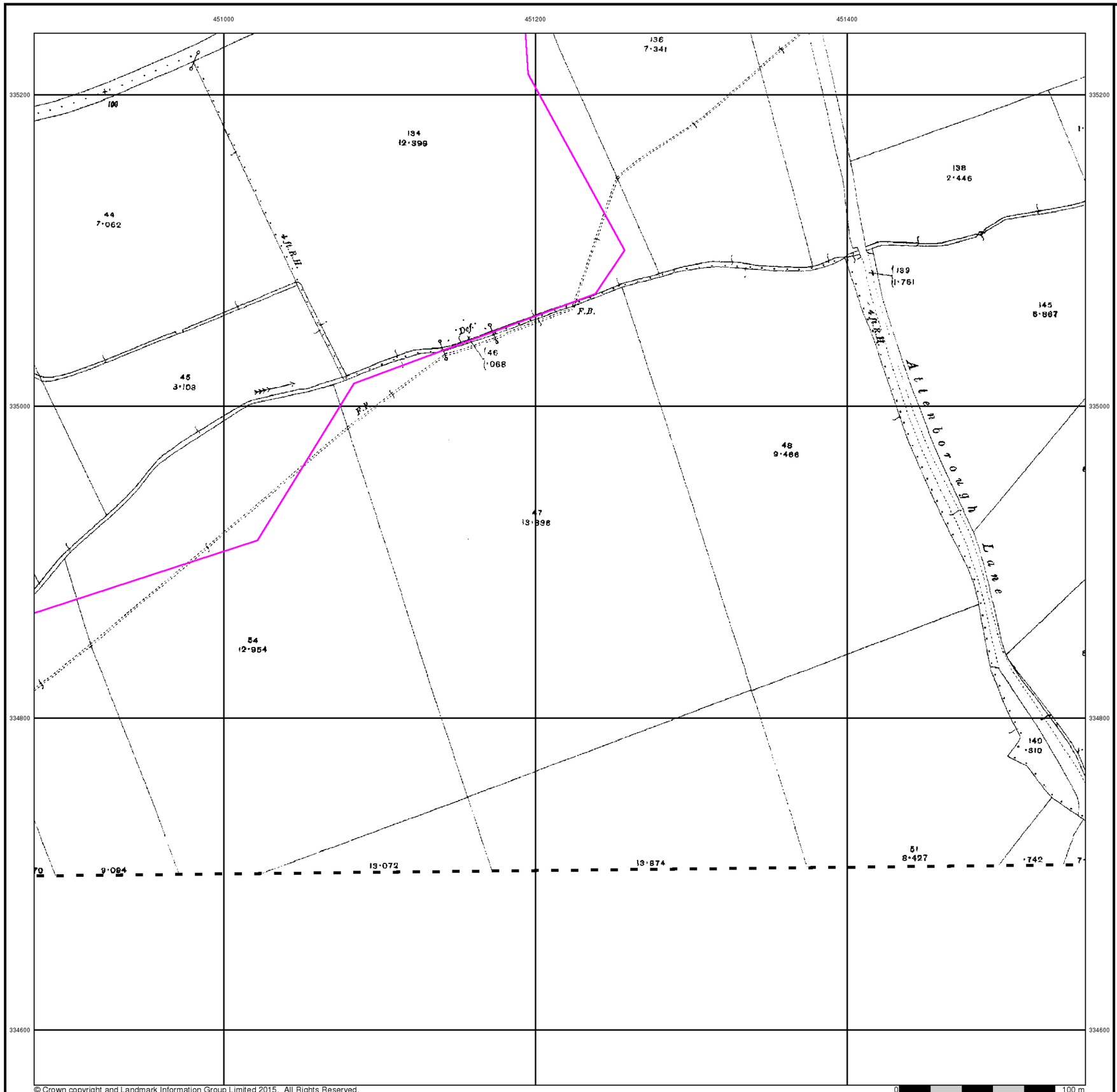
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

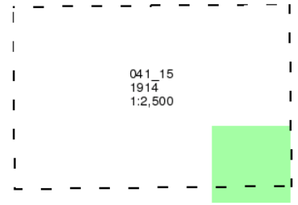
Nottinghamshire

Published 1914

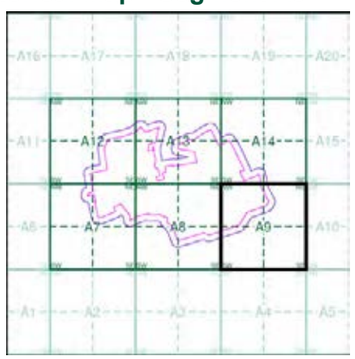
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

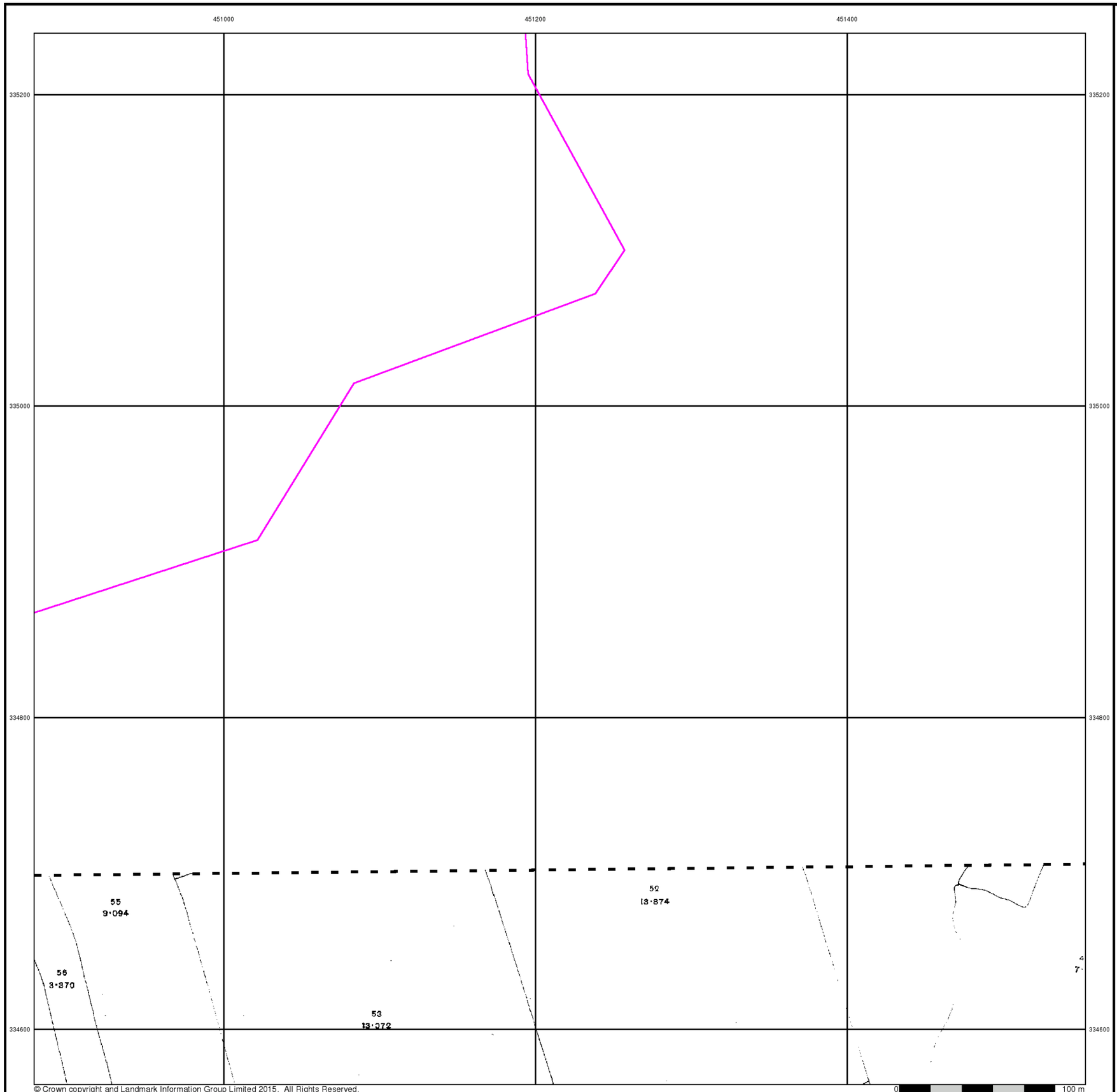
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

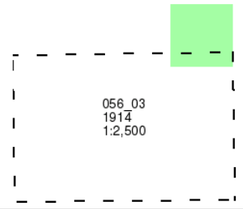
Derbyshire

Published 1914

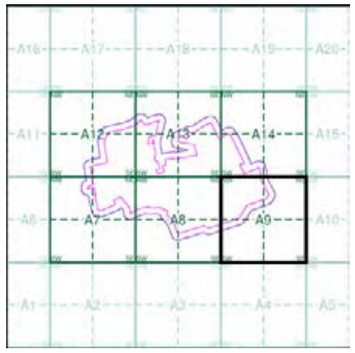
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



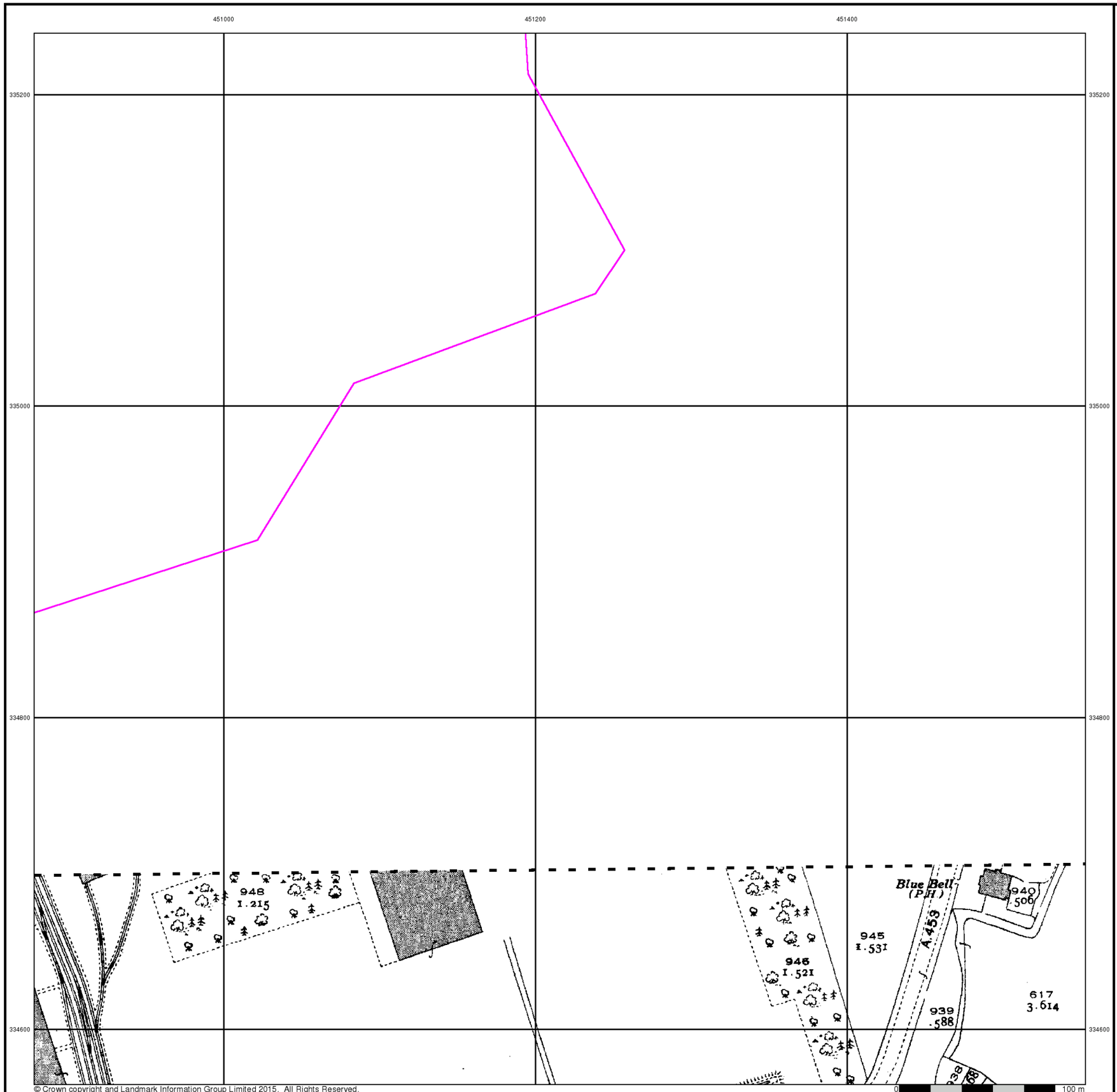
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

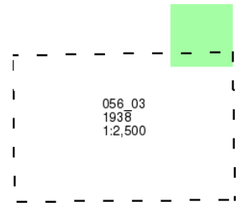
Derbyshire

Published 1938

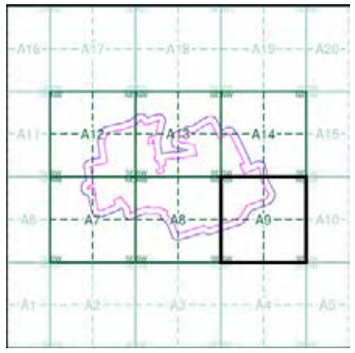
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

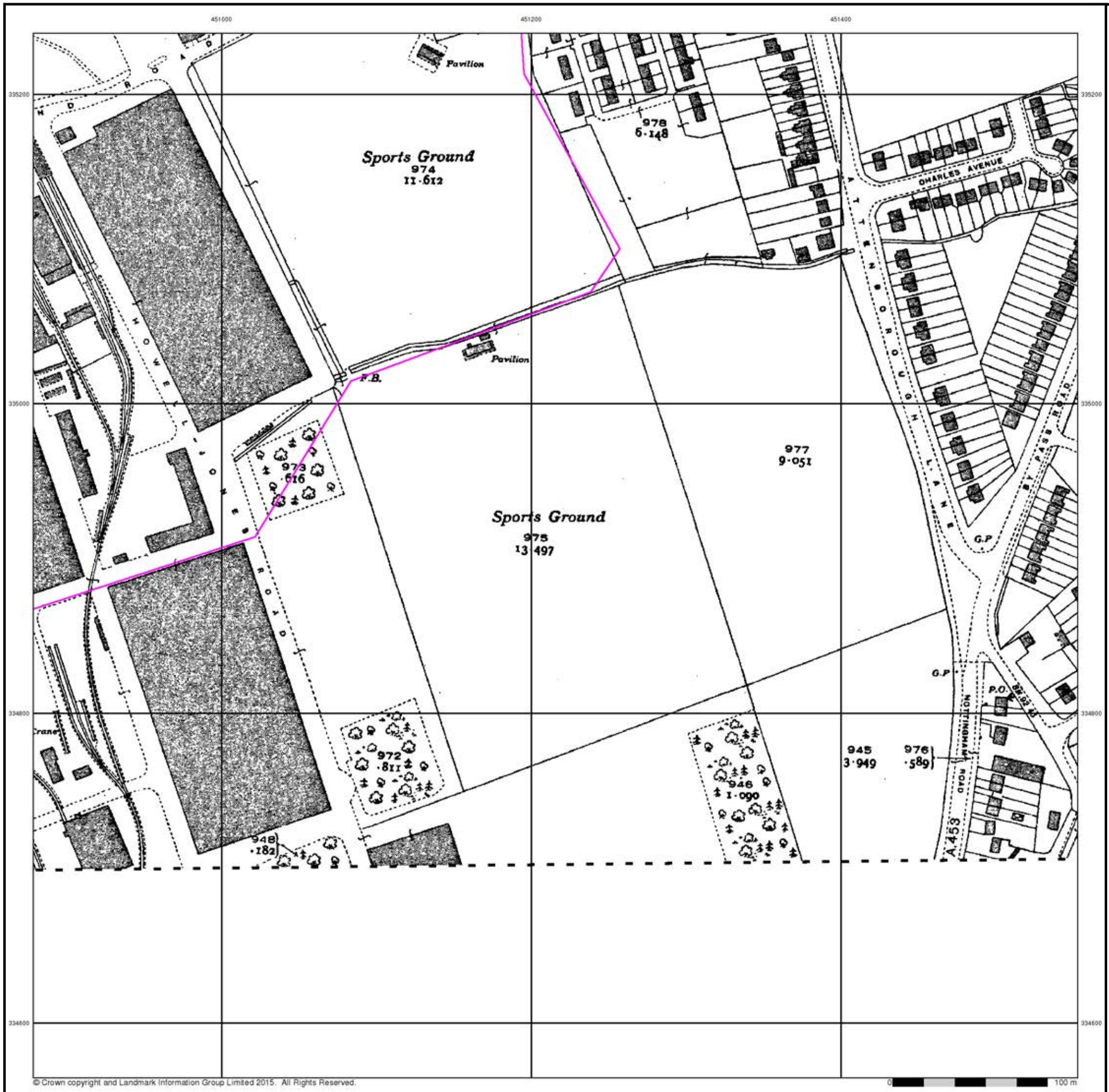
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

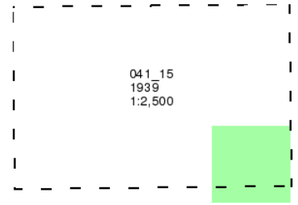
Nottinghamshire

Published 1939

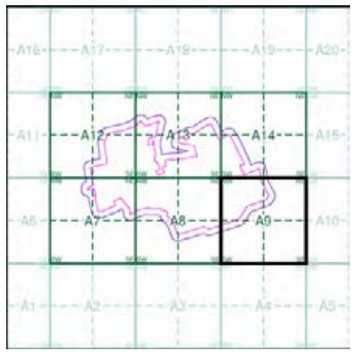
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



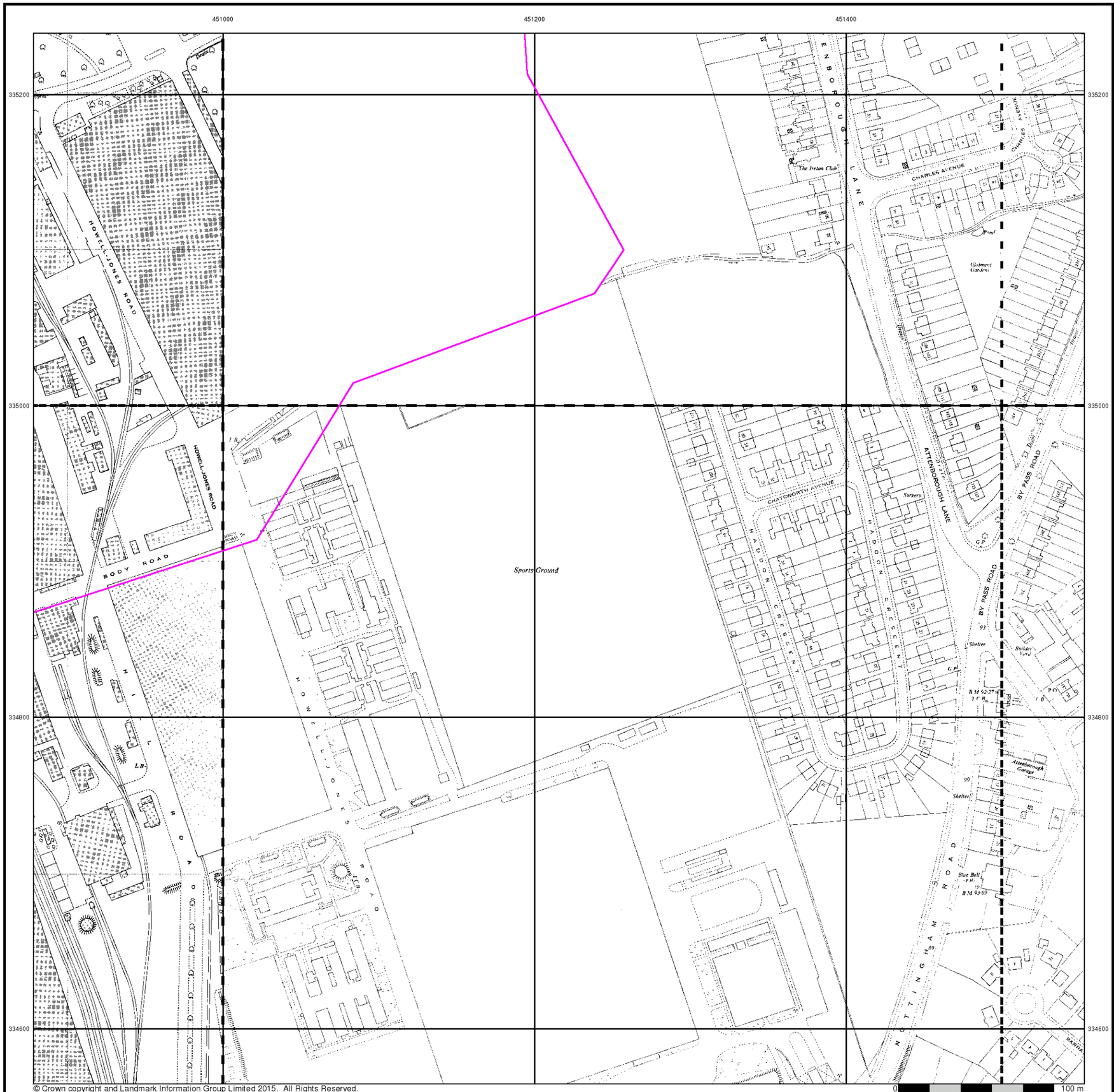
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1956 - 1962

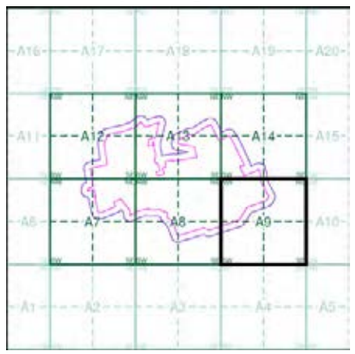
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035SE 1962 1:1,250	SK5135SW 1956 1:1,250	SK5135SE 1956 1:1,250
SK5034NE 1962 1:1,250	SK5134NW 1962 1:1,250	SK5134NE 1956 1:1,250

Historical Map - Segment A9



Order Details

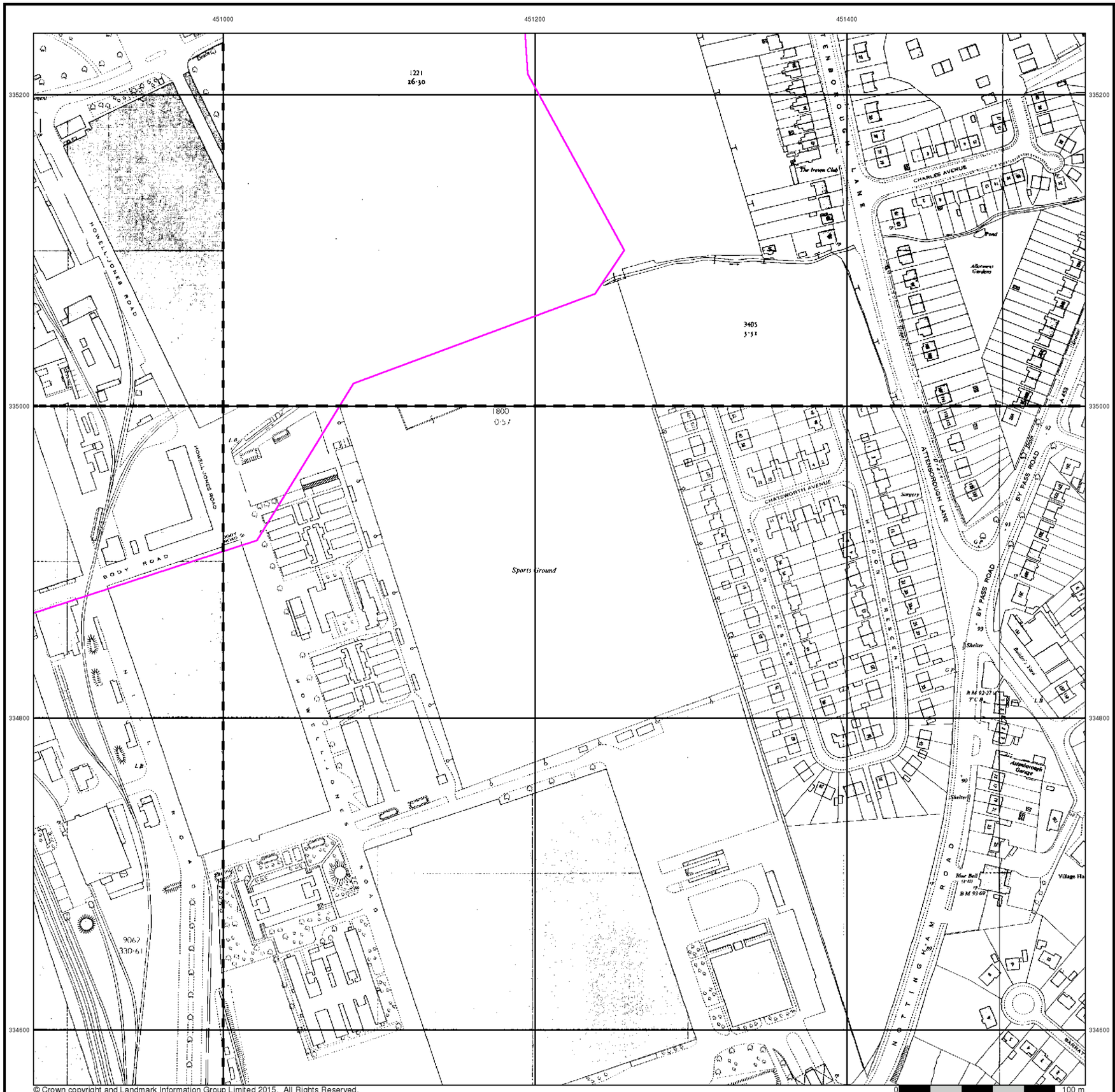
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1956 - 1968

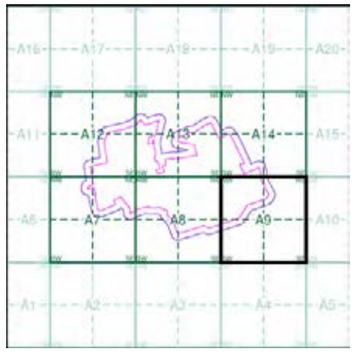
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035 1968 1:2,500	SK5135 1956 1:2,500
SK5034 1963 1:2,500	SK5134 1963 1:2,500

Historical Map - Segment A9



Order Details

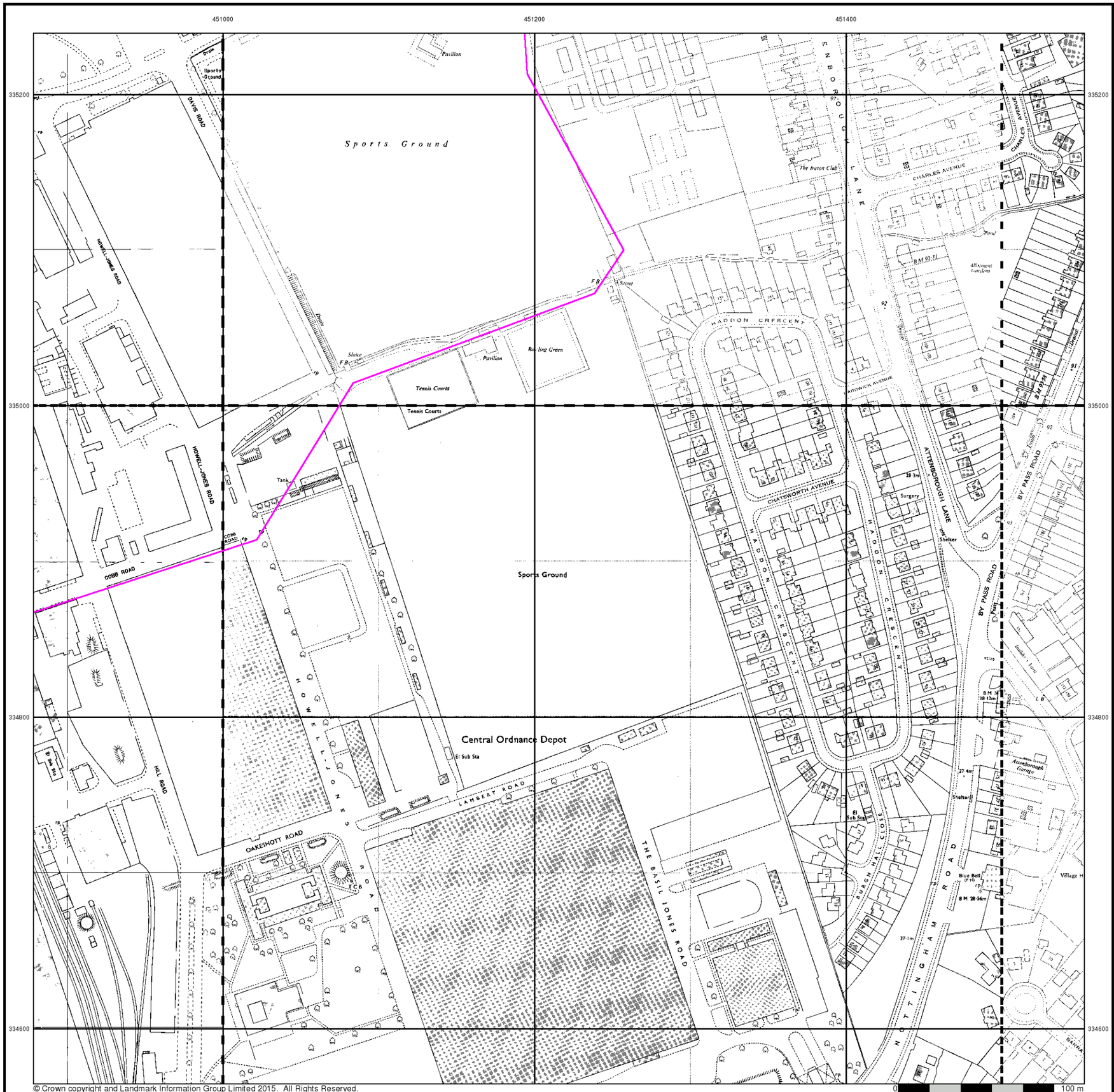
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1962 - 1977

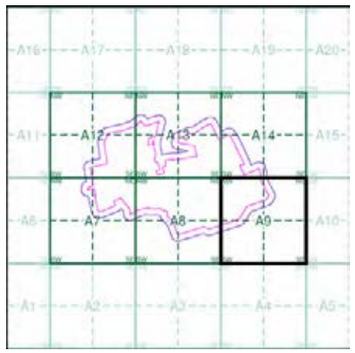
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035SE 1977 1:1,250	SK5135SW 1962 1:1,250	SK5135SE 1962 1:1,250
SK5034NE 1976 1:1,250	SK5134NW 1971 1:1,250	SK5134NE 1962 1:1,250

Historical Map - Segment A9



Order Details

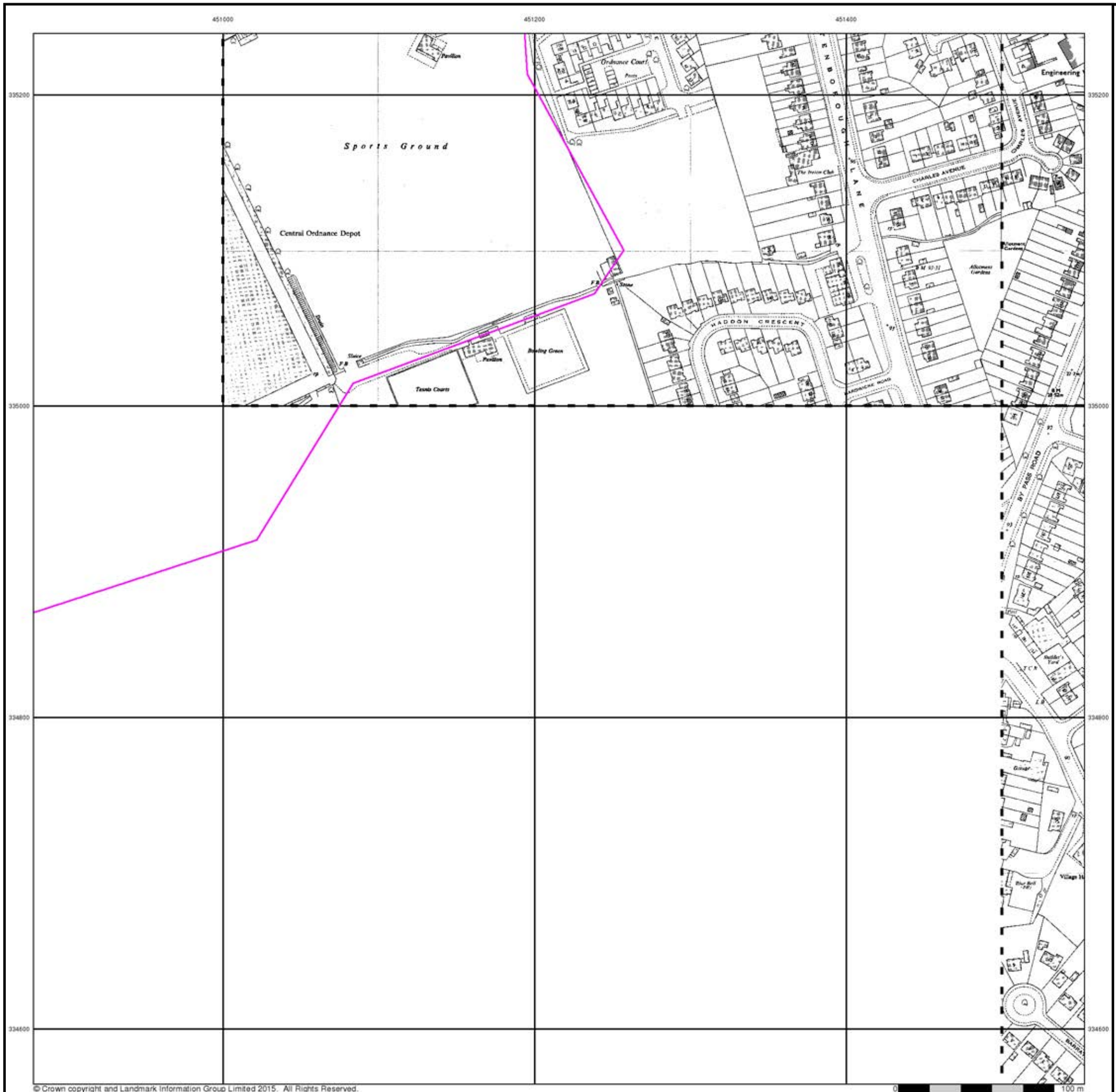
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

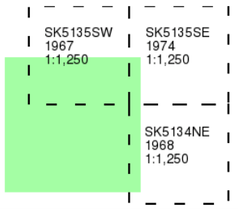
Ordnance Survey Plan

Published 1967 - 1974

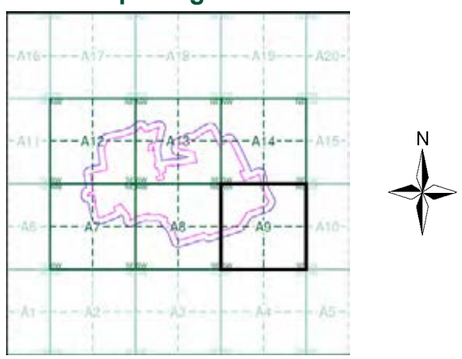
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



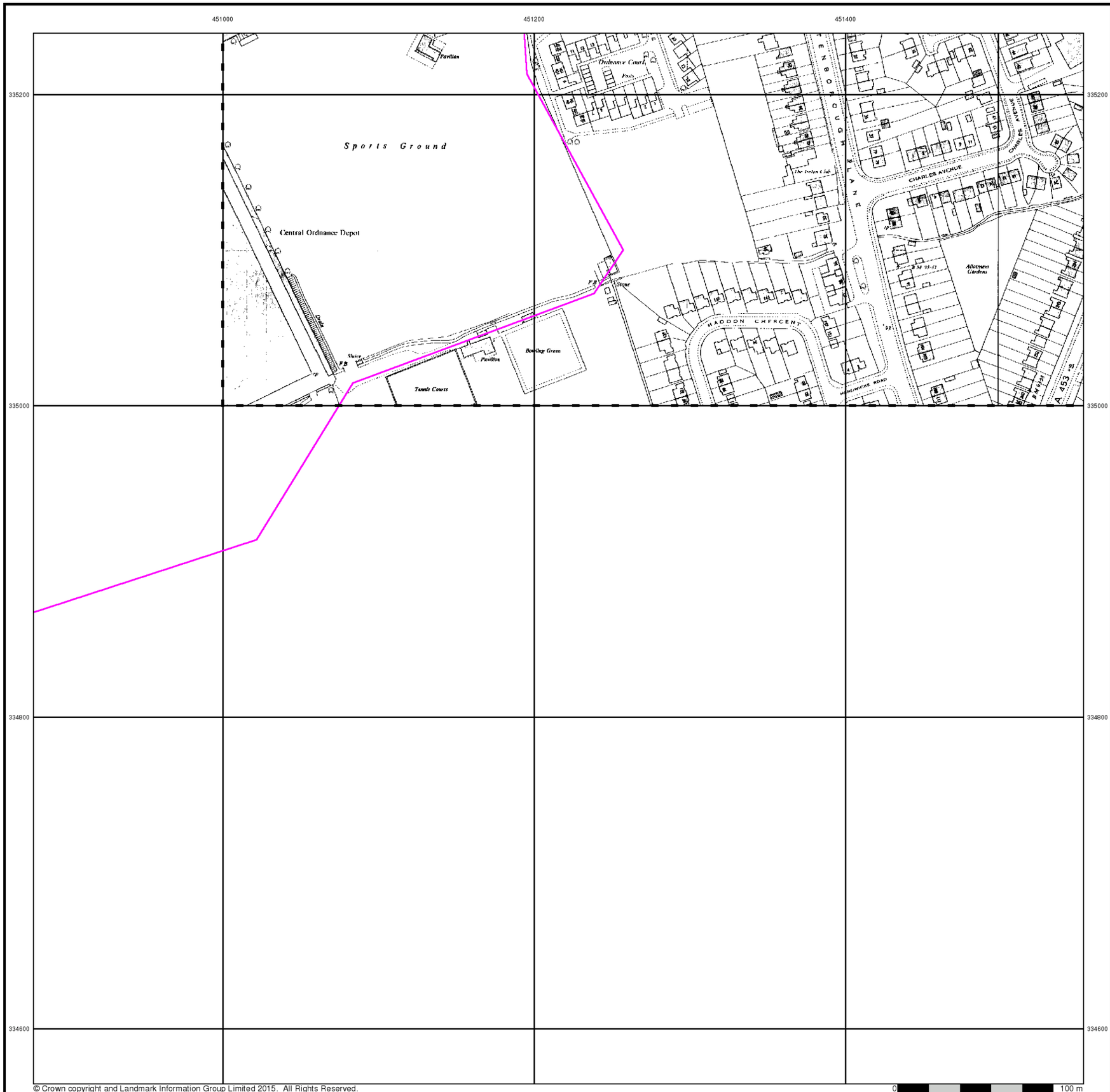
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

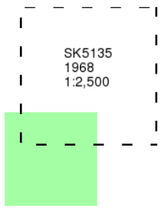
Ordnance Survey Plan

Published 1968

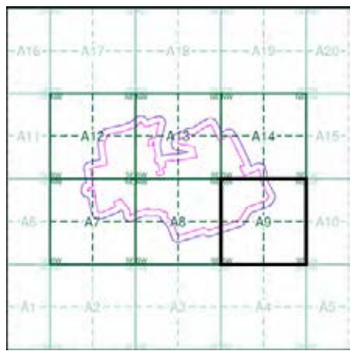
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

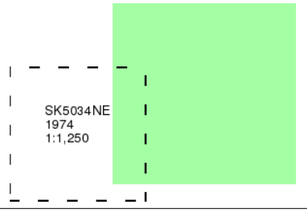
Supply of Unpublished Survey Information

Published 1974

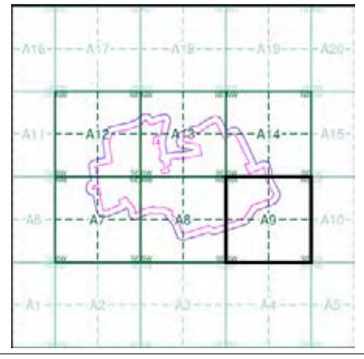
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A9



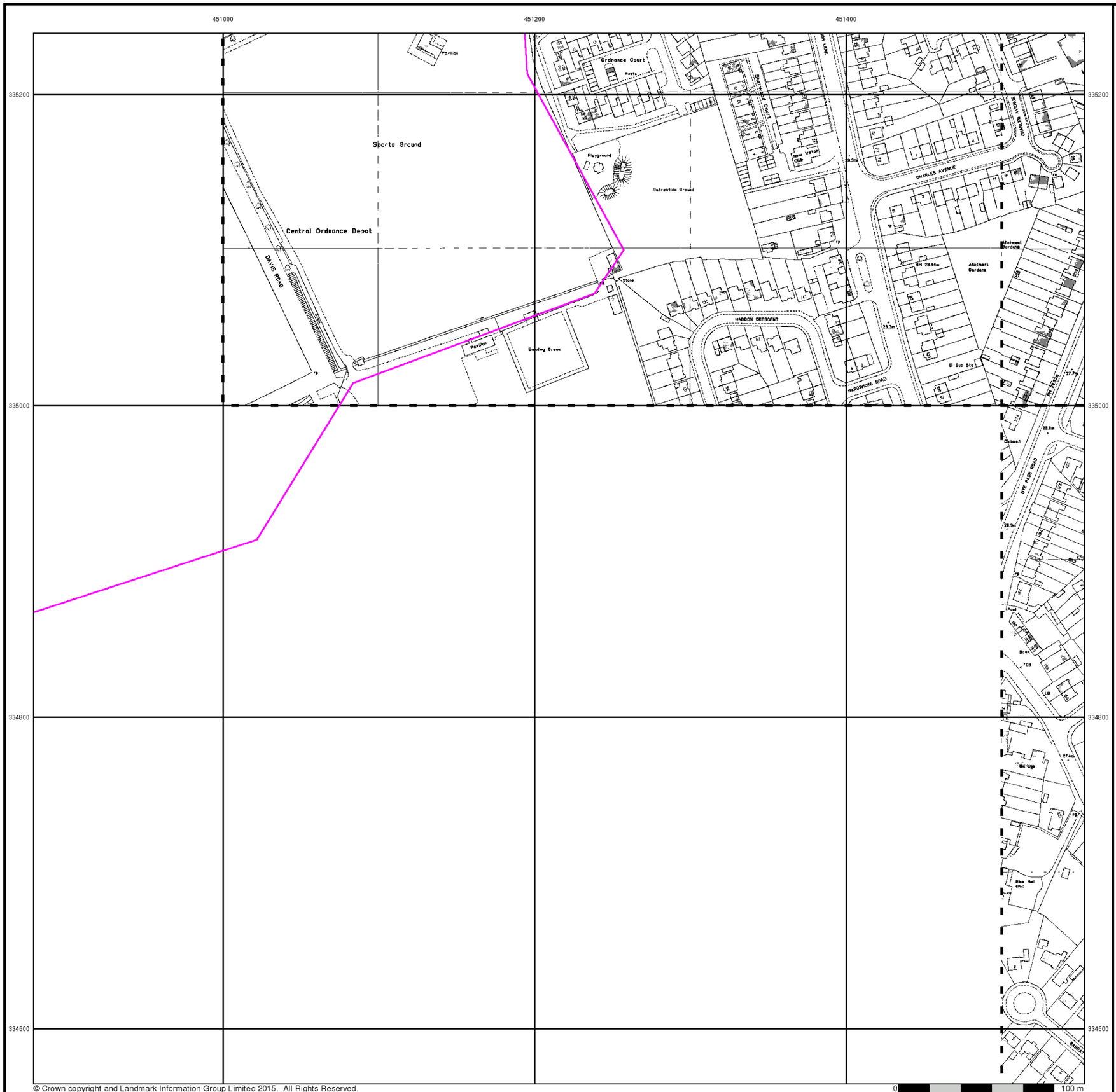
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

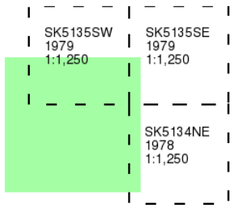
Ordnance Survey Plan

Published 1978 - 1979

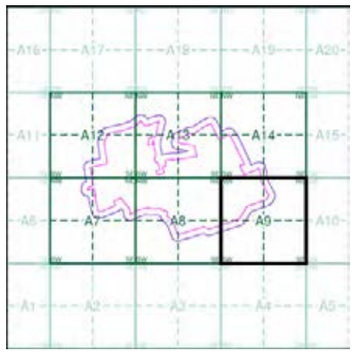
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A9



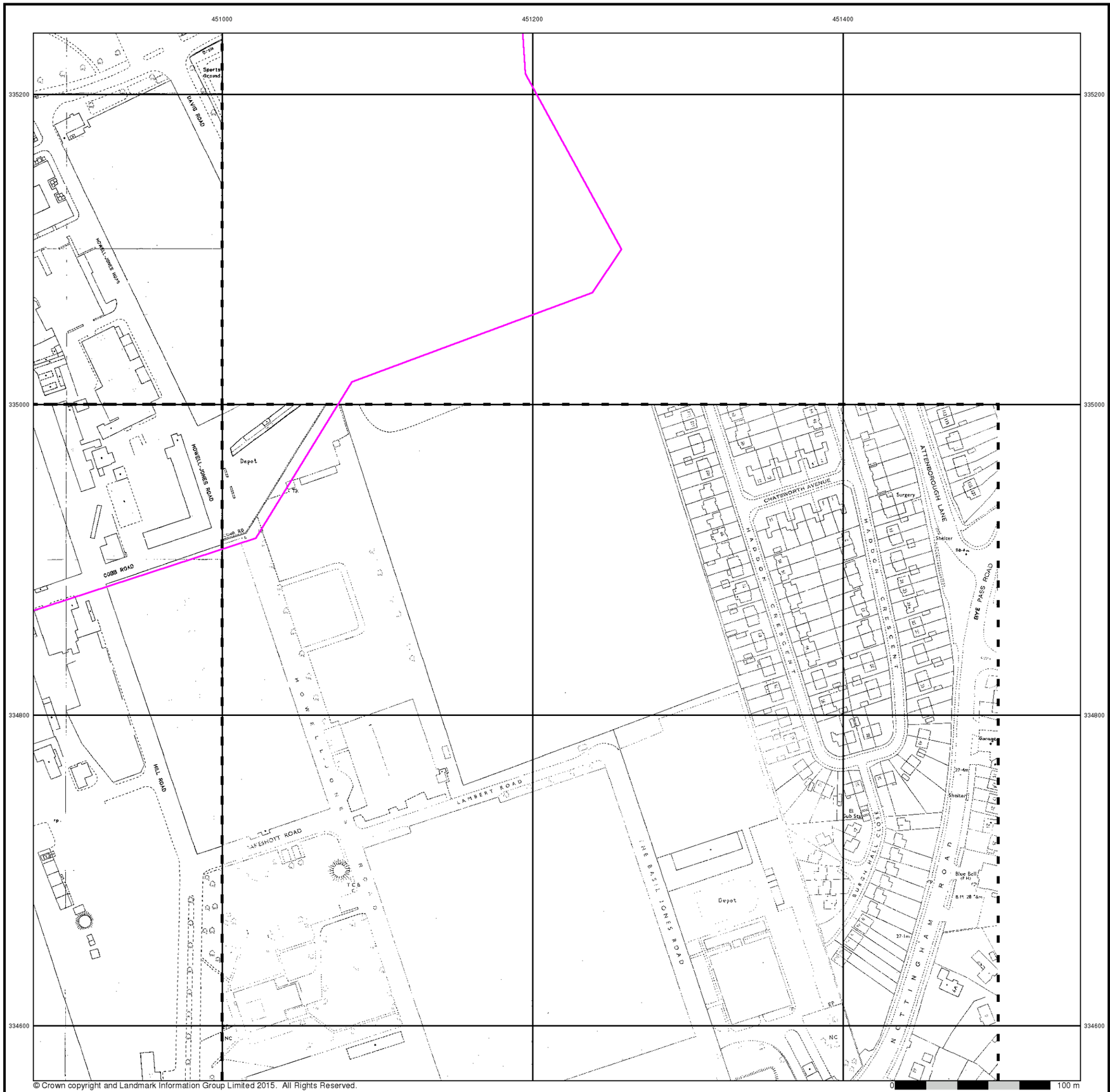
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

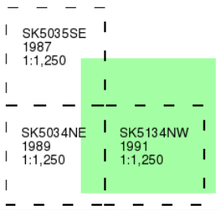
Additional SIMs

Published 1987 - 1991

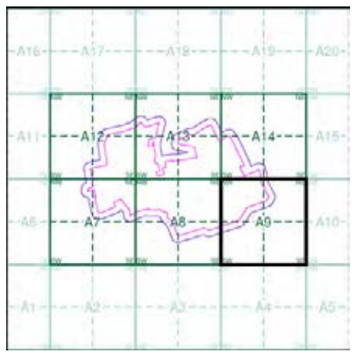
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

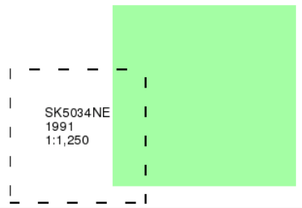
Additional SIMs

Published 1991

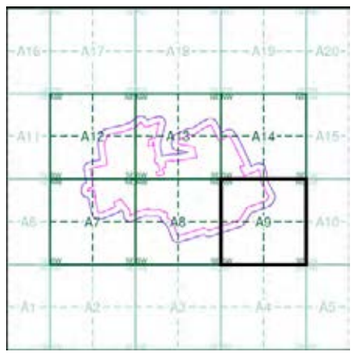
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

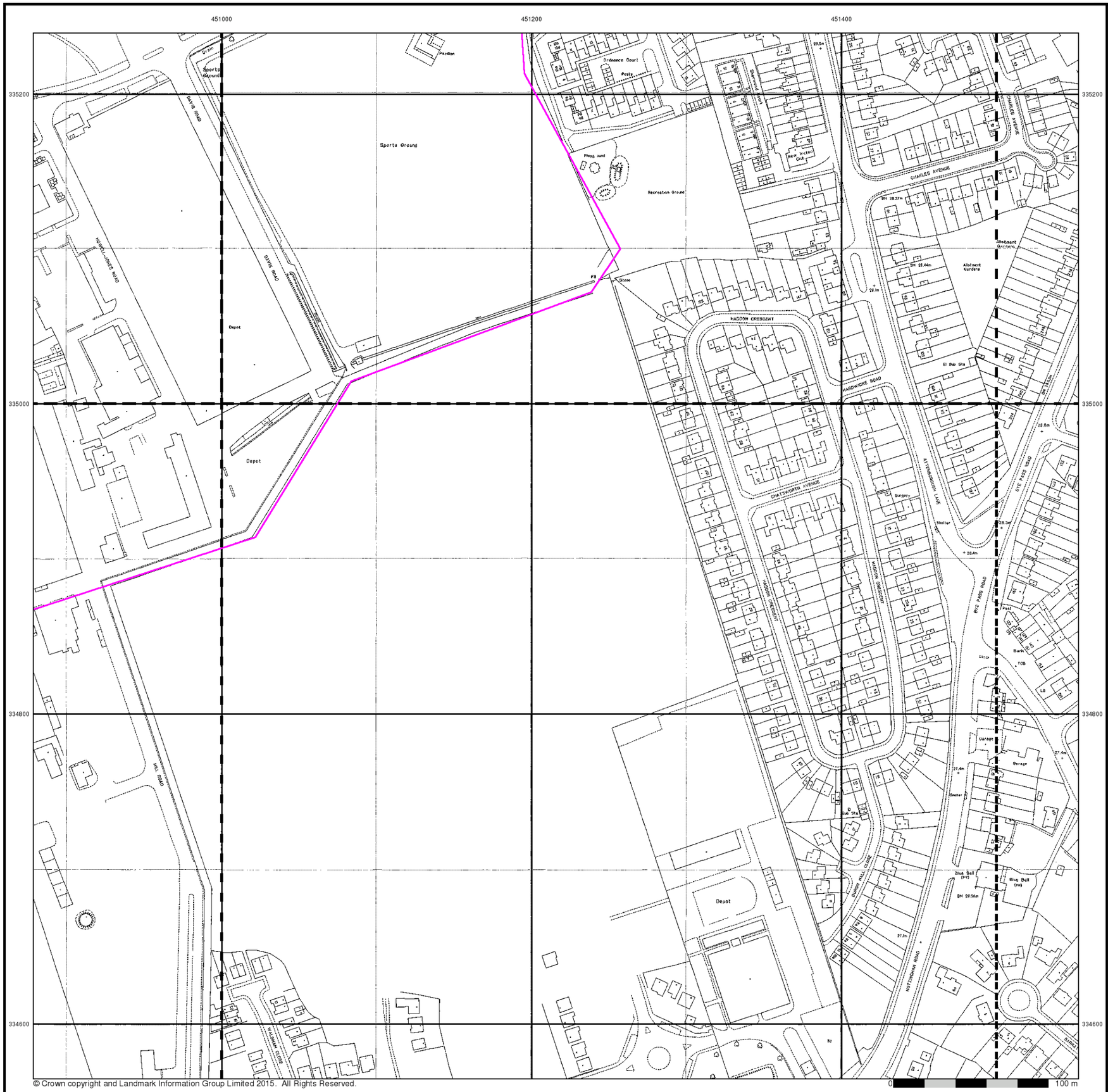
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1993

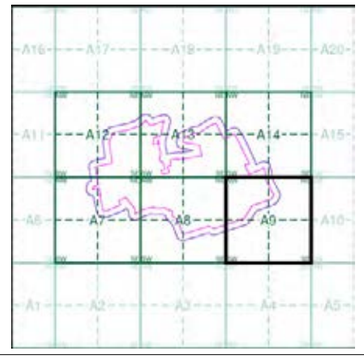
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK5035SE 1993 1:1,250	SK5135SW 1993 1:1,250	SK5135SE 1993 1:1,250
SK5034NE 1993 1:1,250	SK5134NW 1993 1:1,250	SK5134NE 1993 1:1,250

Historical Map - Segment A9



N

Order Details

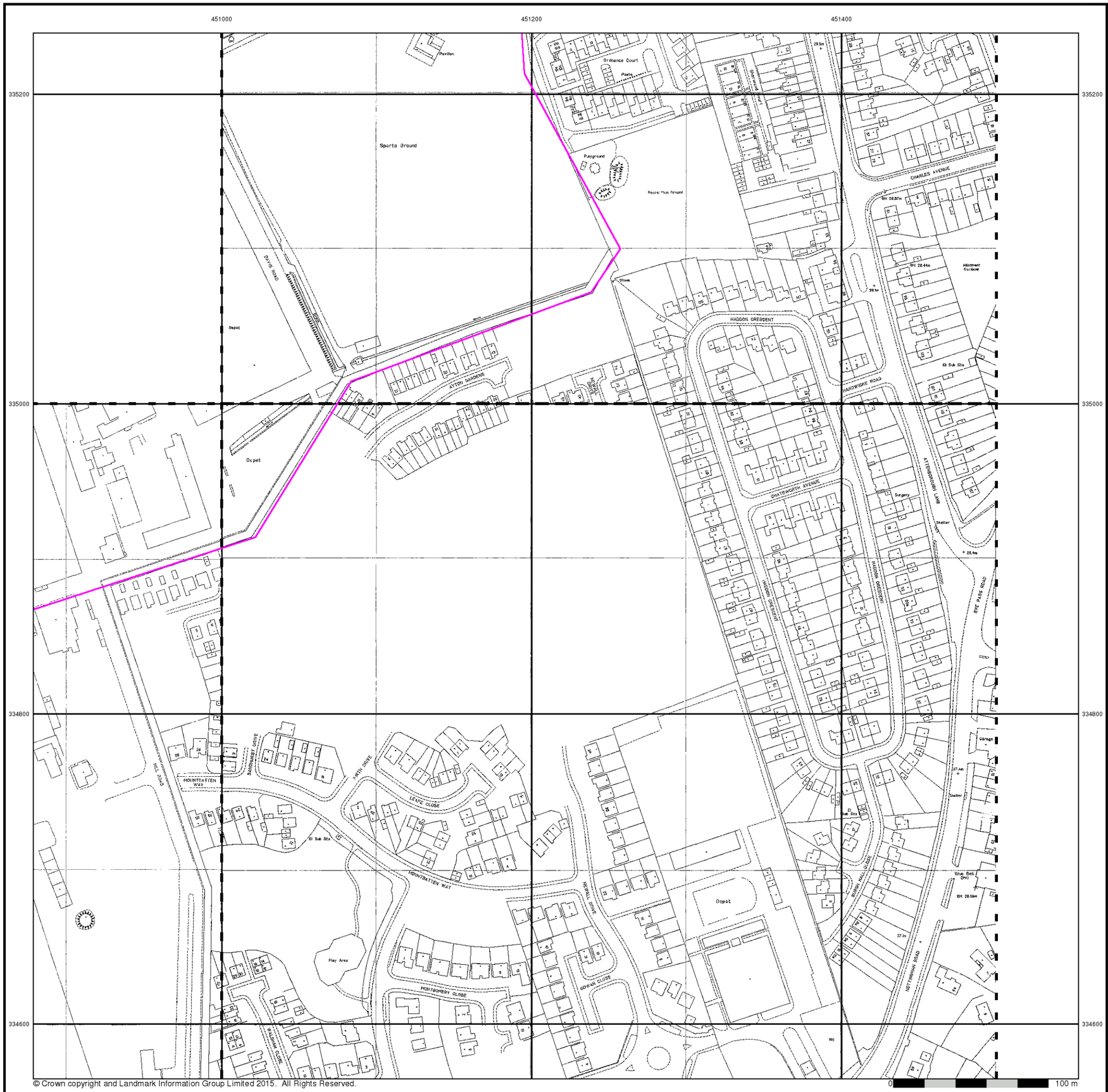
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

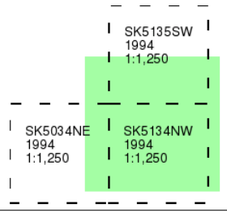
Large-Scale National Grid Data

Published 1994

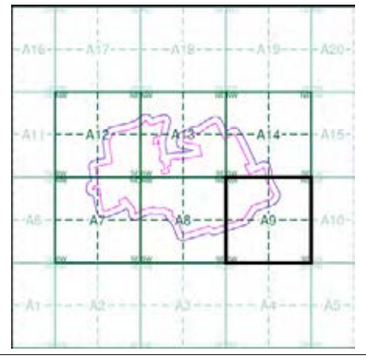
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A9



Order Details

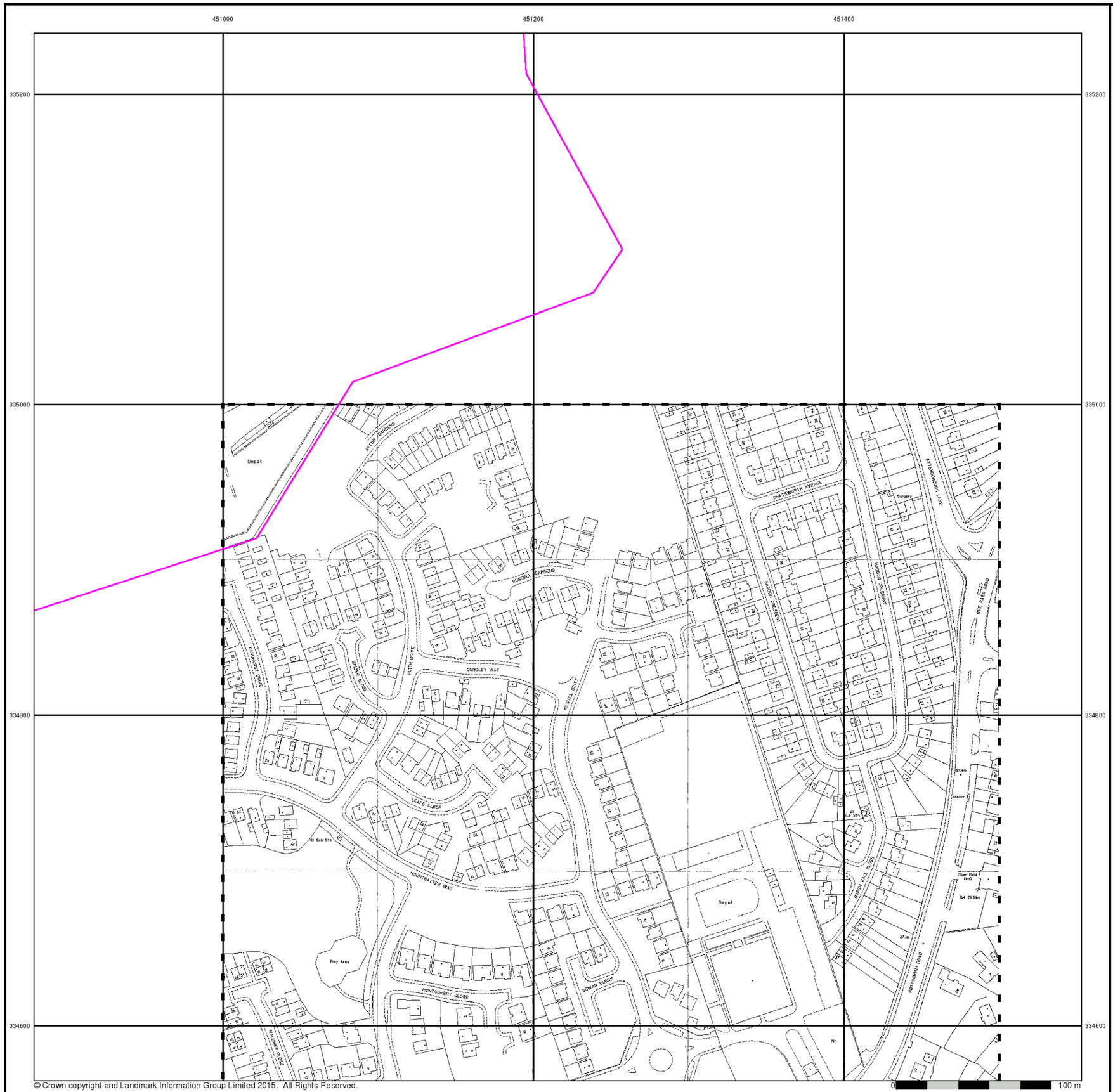
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web: [redacted]uk



Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1994

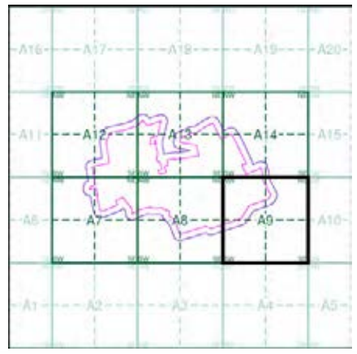
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK5134NW
1994
1:1,250

Historical Map - Segment A9



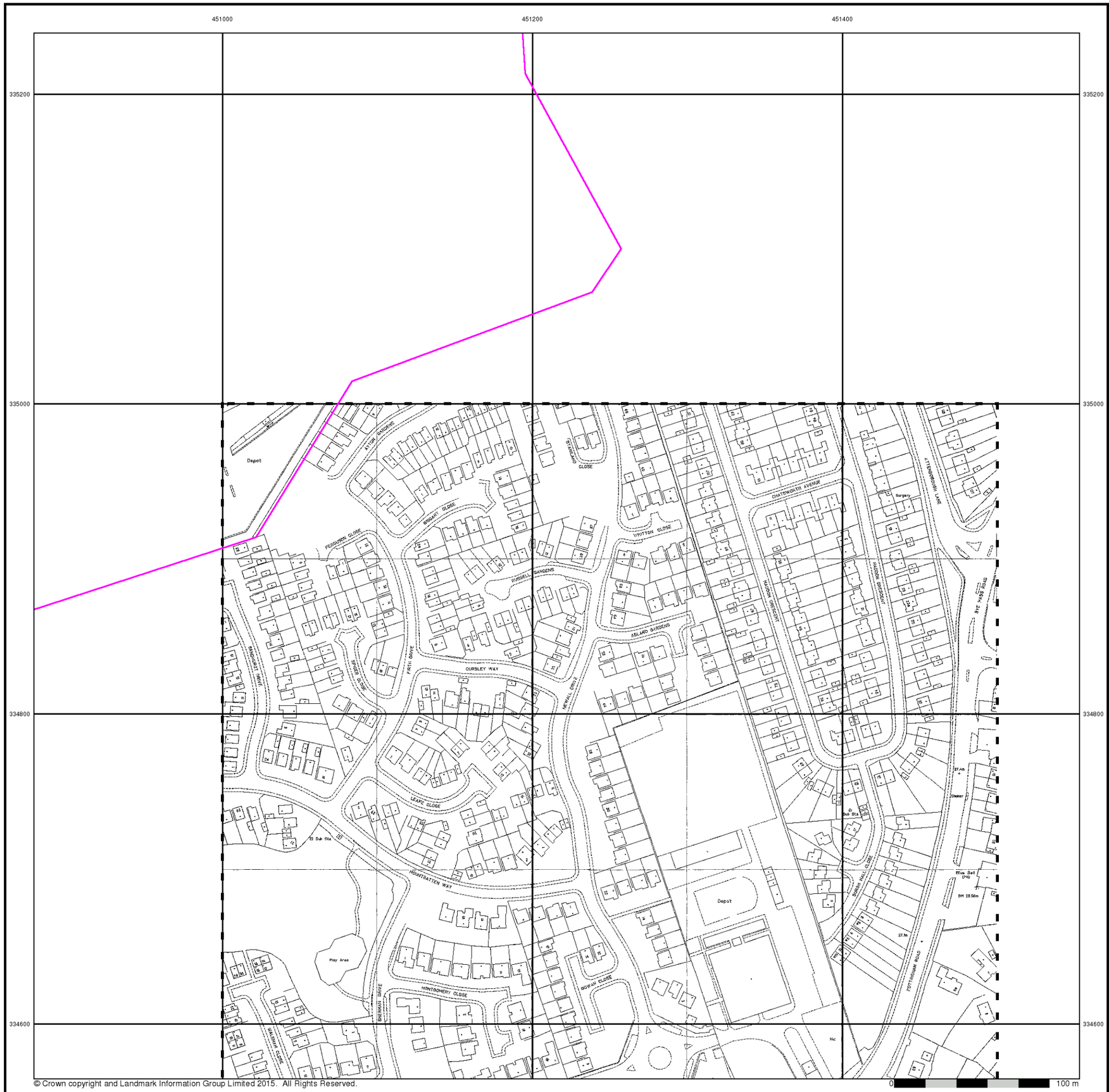
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1994

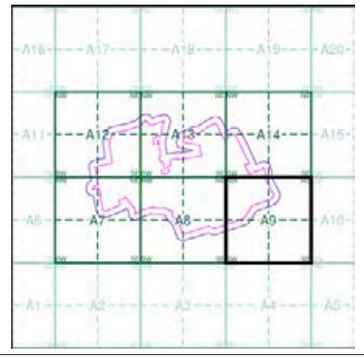
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK5134NW
1994
1:1,250

Historical Map - Segment A9



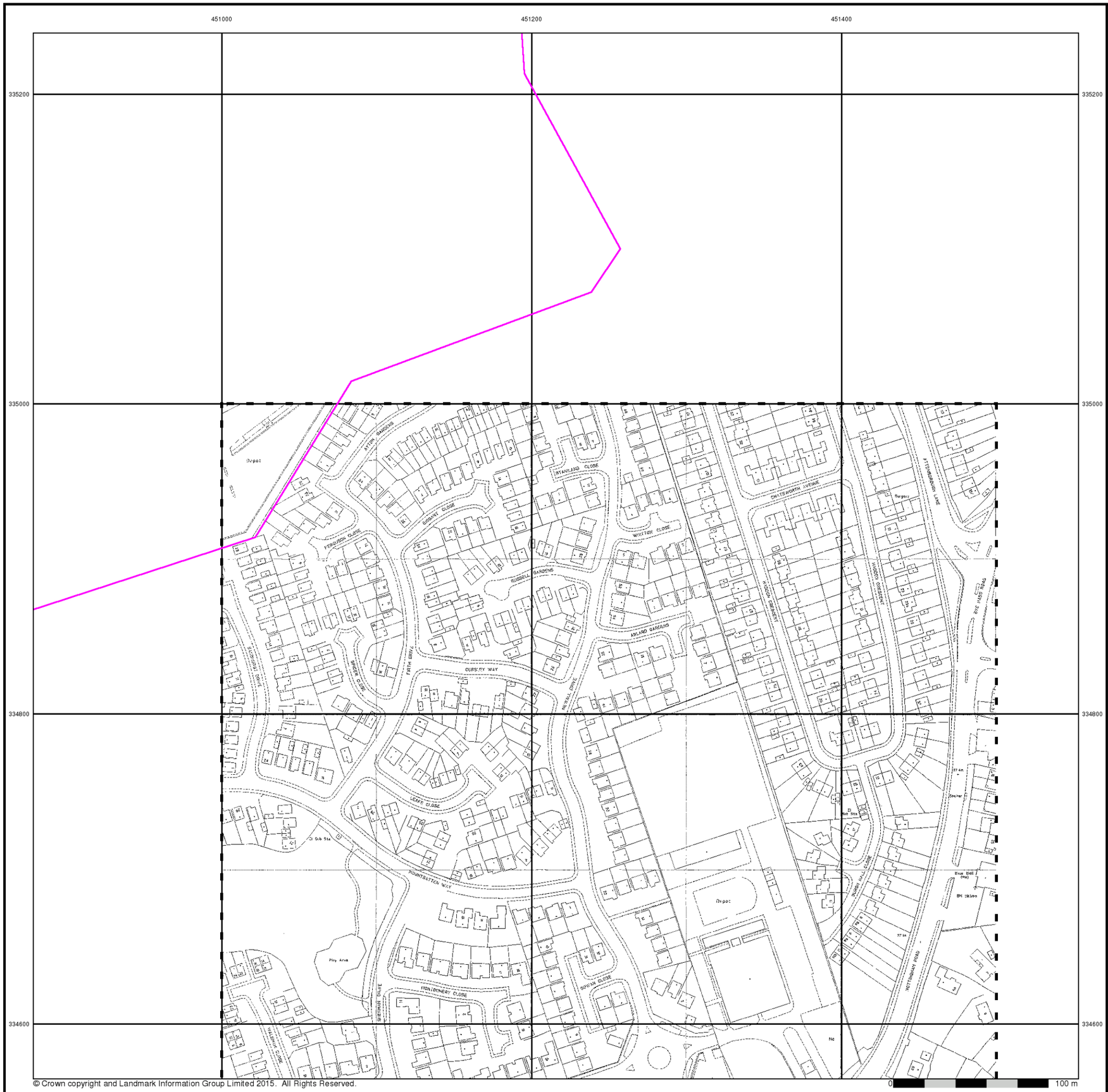
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1995

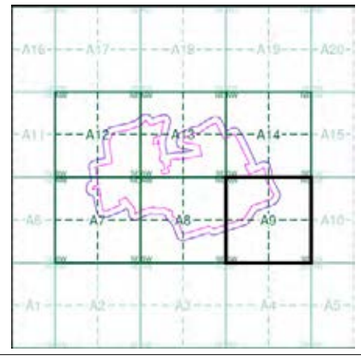
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK5134NW
1995
1:1,250

Historical Map - Segment A9



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

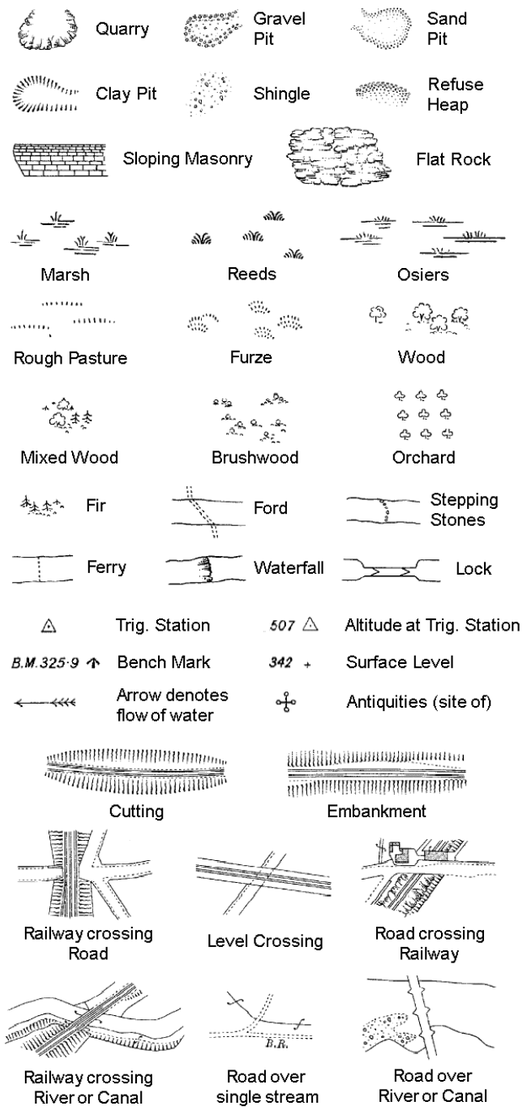
Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Historical Mapping Legends

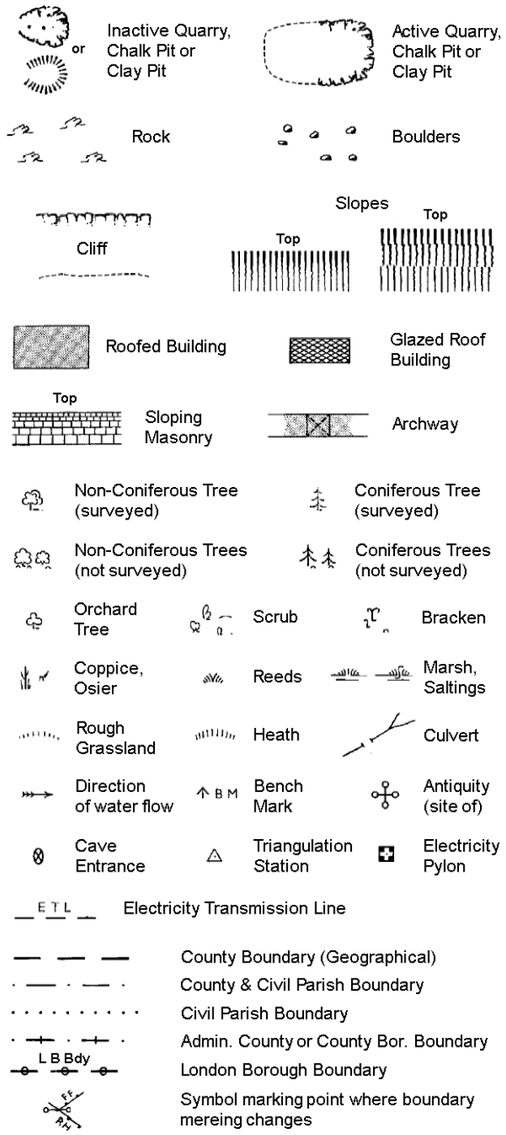
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

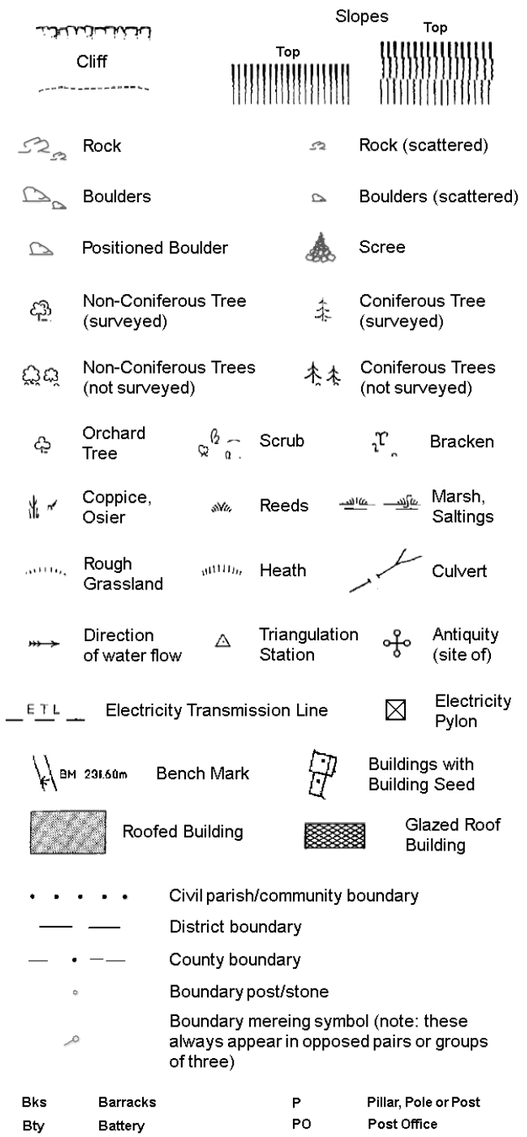
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

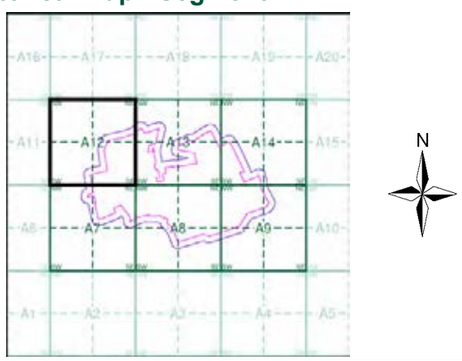
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Nottinghamshire	1:2,500	1885	2
Nottinghamshire	1:2,500	1900	3
Nottinghamshire	1:2,500	1914	4
Nottinghamshire	1:2,500	1939	5
Ordnance Survey Plan	1:1,250	1957 - 1962	6
Ordnance Survey Plan	1:2,500	1958 - 1968	7
Ordnance Survey Plan	1:1,250	1962 - 1977	8
Ordnance Survey Plan	1:1,250	1970 - 1977	9
Supply of Unpublished Survey Information	1:1,250	1973	10
Additional SIMs	1:1,250	1987 - 1989	11
Additional SIMs	1:1,250	1992	12
Large-Scale National Grid Data	1:1,250	1993	13

Historical Map - Segment A12



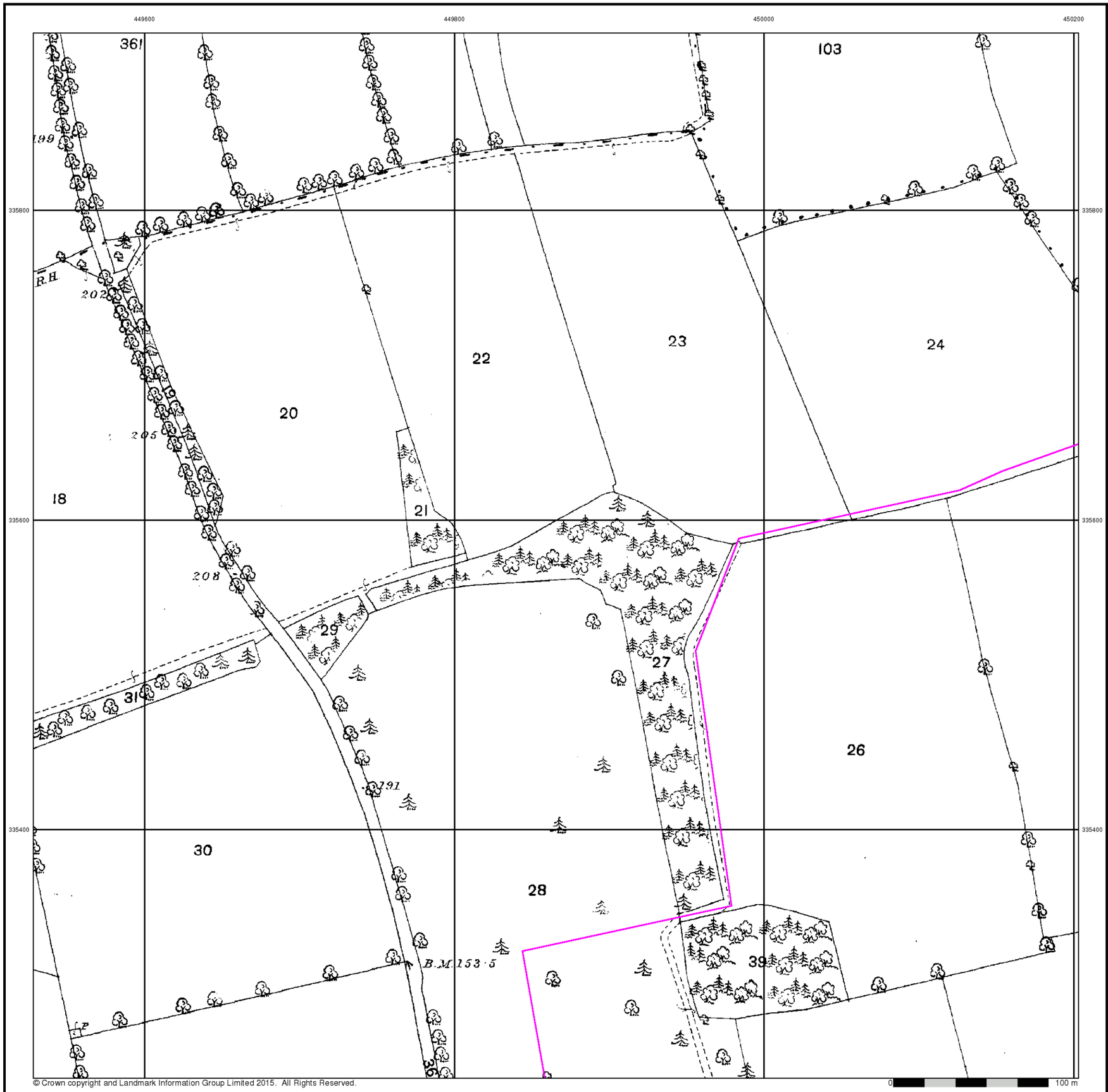
Order Details

Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

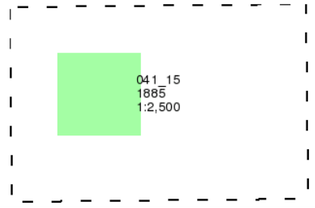
Nottinghamshire

Published 1885

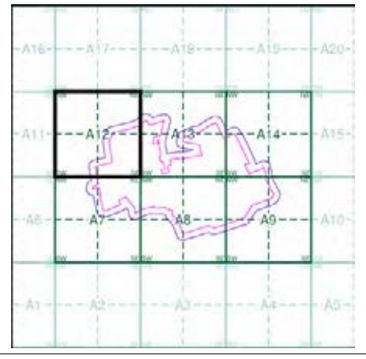
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

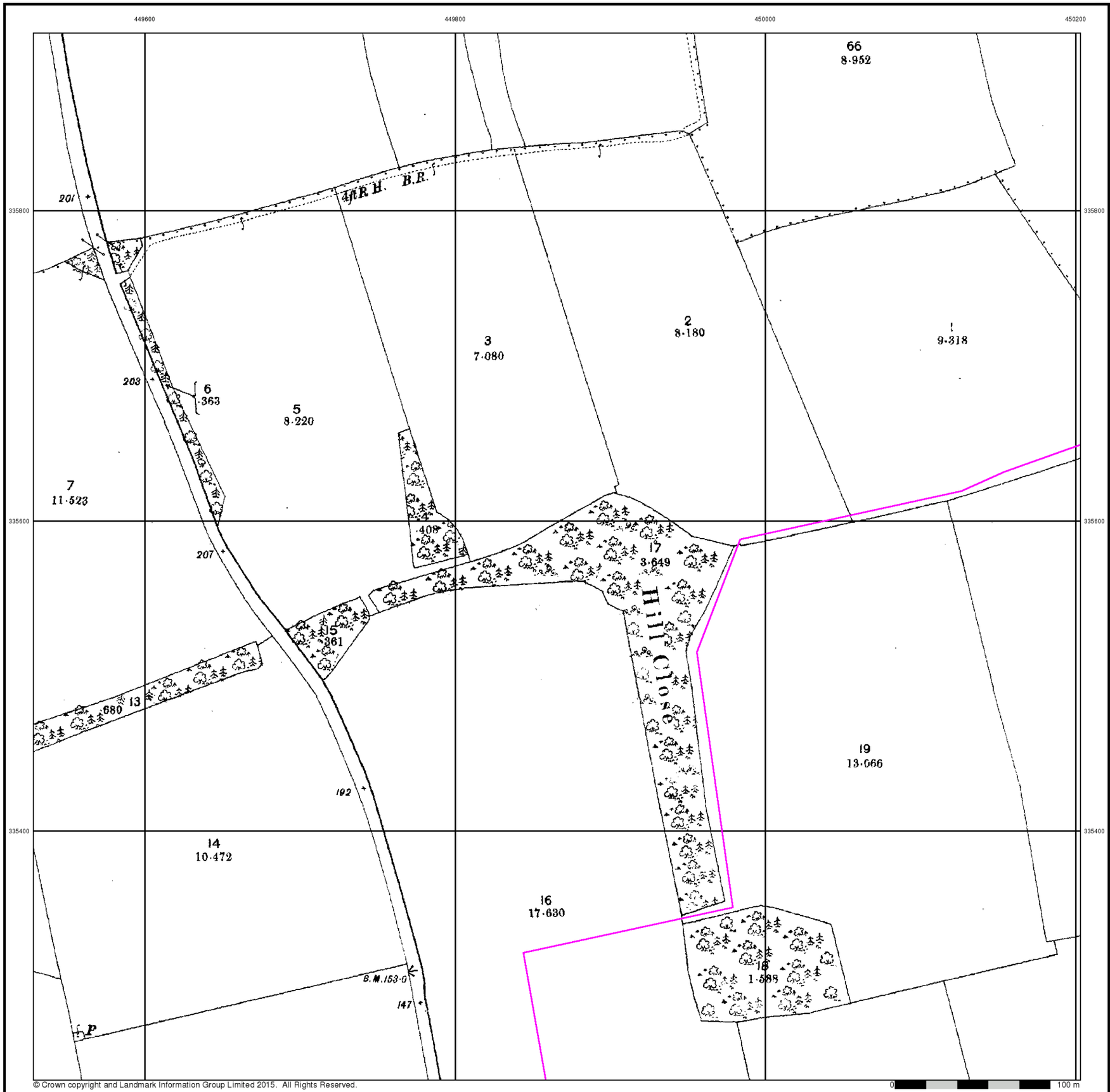
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

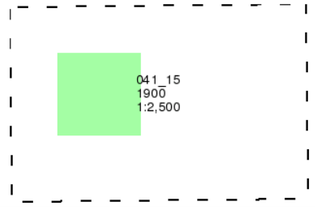
Nottinghamshire

Published 1900

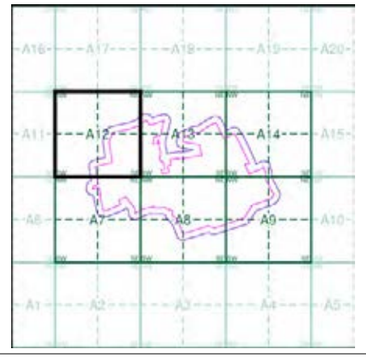
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

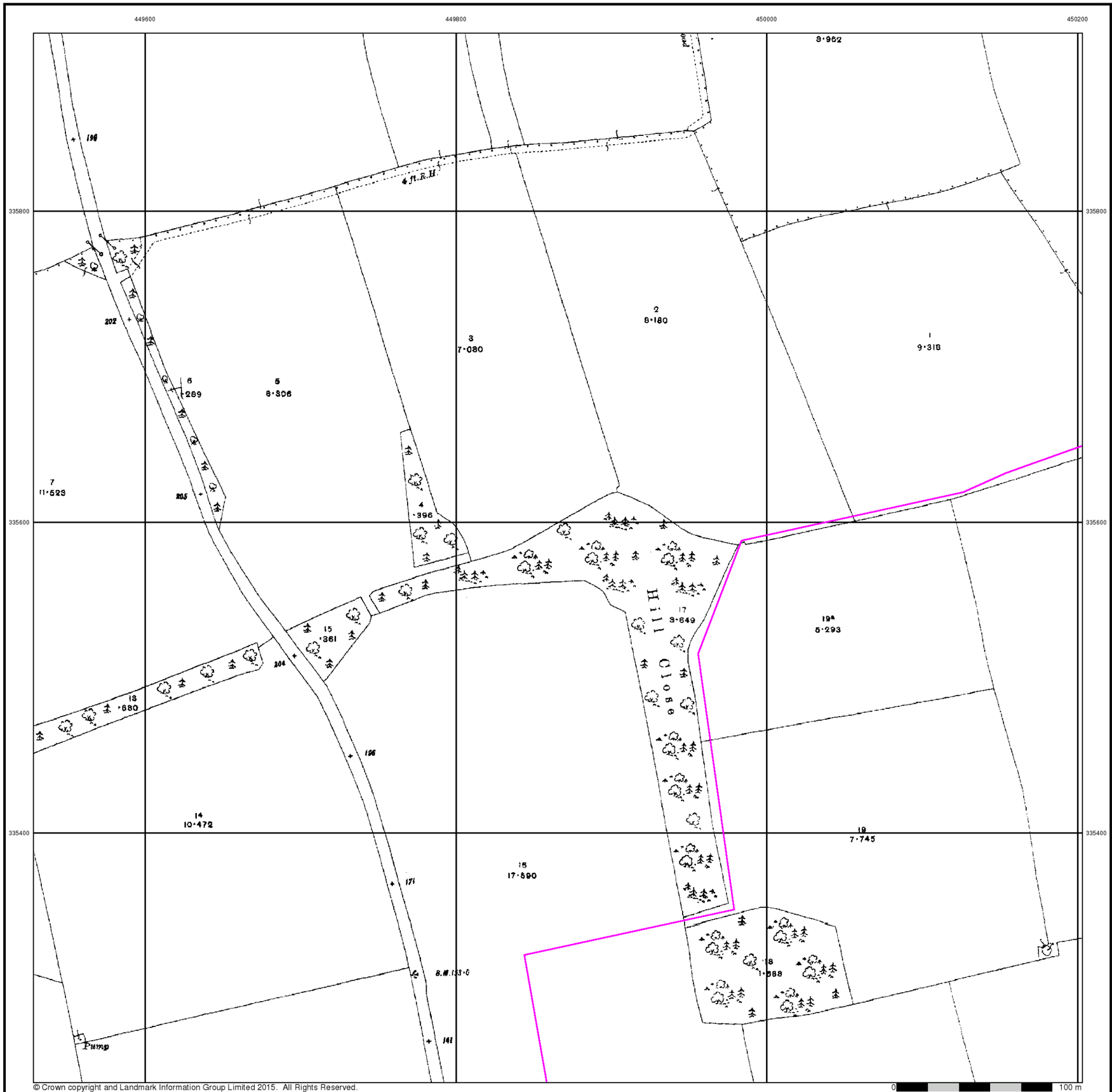
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

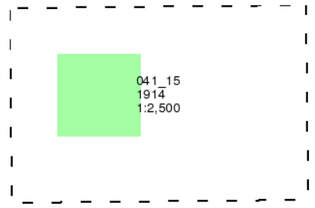
Nottinghamshire

Published 1914

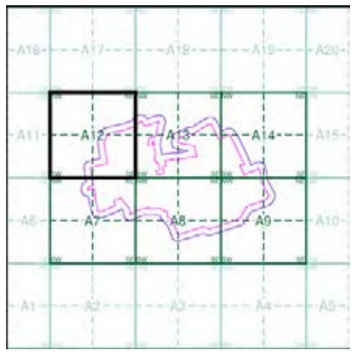
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



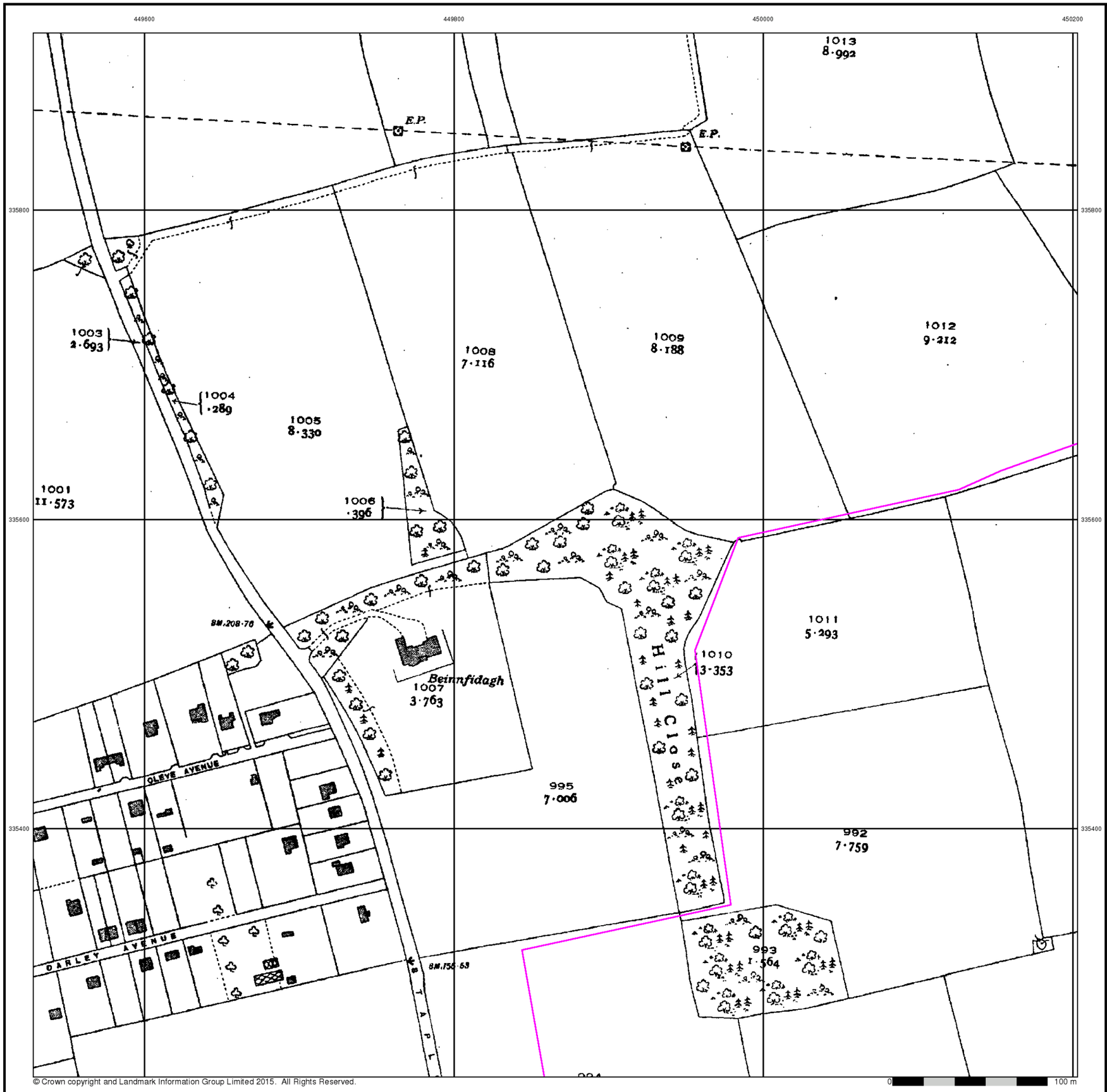
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web: uk



Envirocheck®

LANDMARK INFORMATION GROUP®

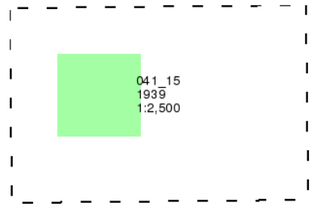
Nottinghamshire

Published 1939

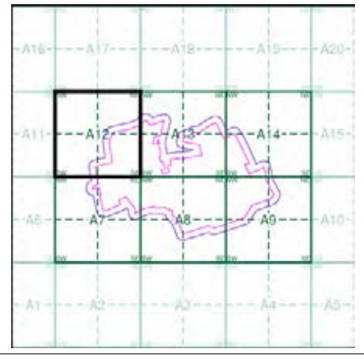
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



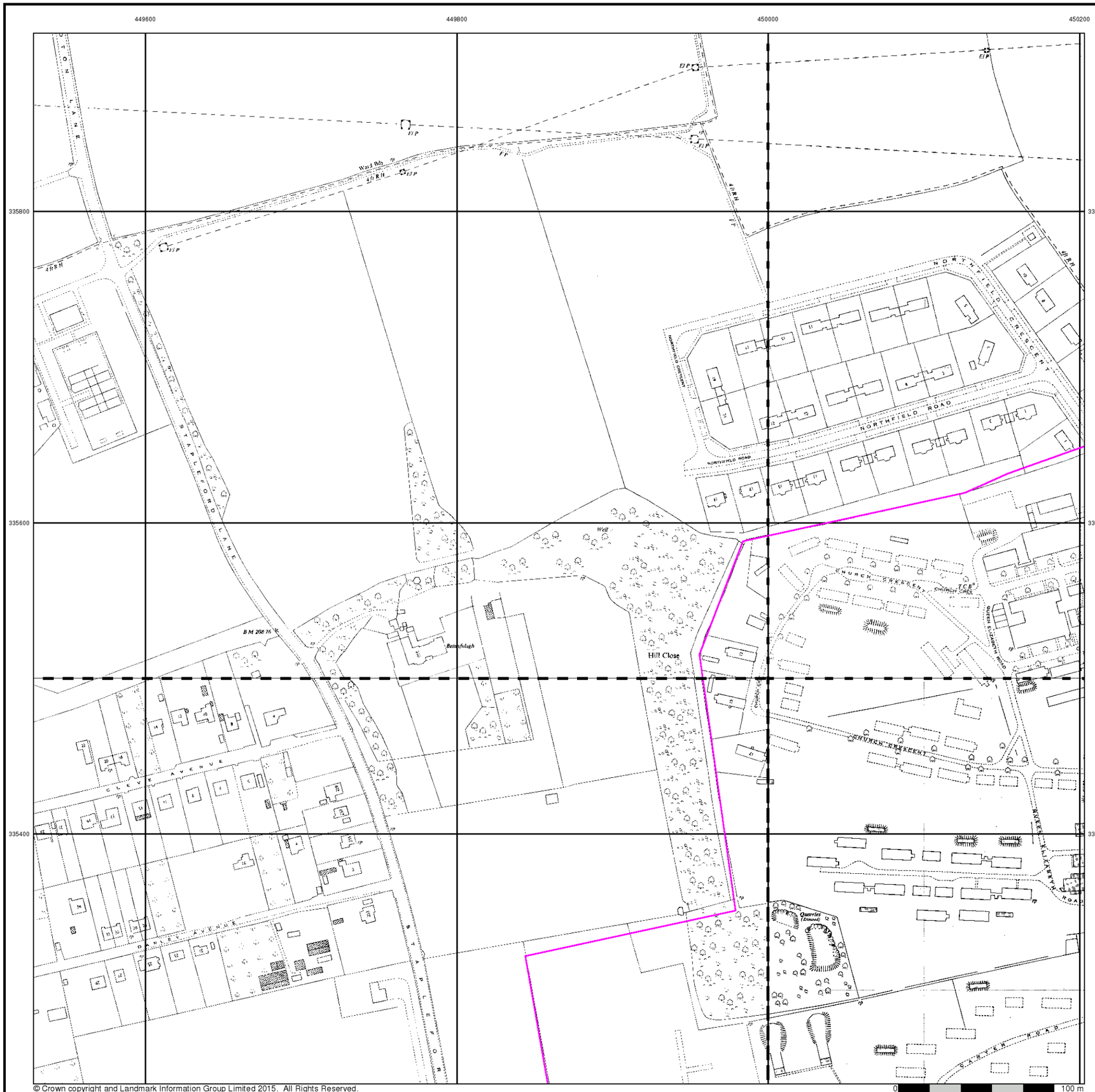
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®
LANDMARK INFORMATION GROUP®

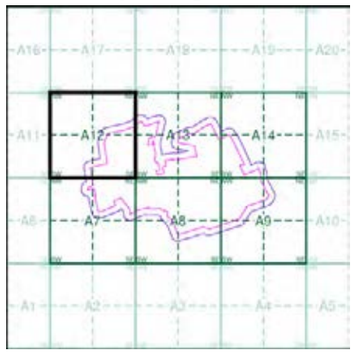
Ordnance Survey Plan
Published 1957 - 1962
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK4935NE 1957 1:1,250	SK5035NW 1962 1:1,250
SK4935SE 1957 1:1,250	SK5035SW 1962 1:1,250

Historical Map - Segment A12



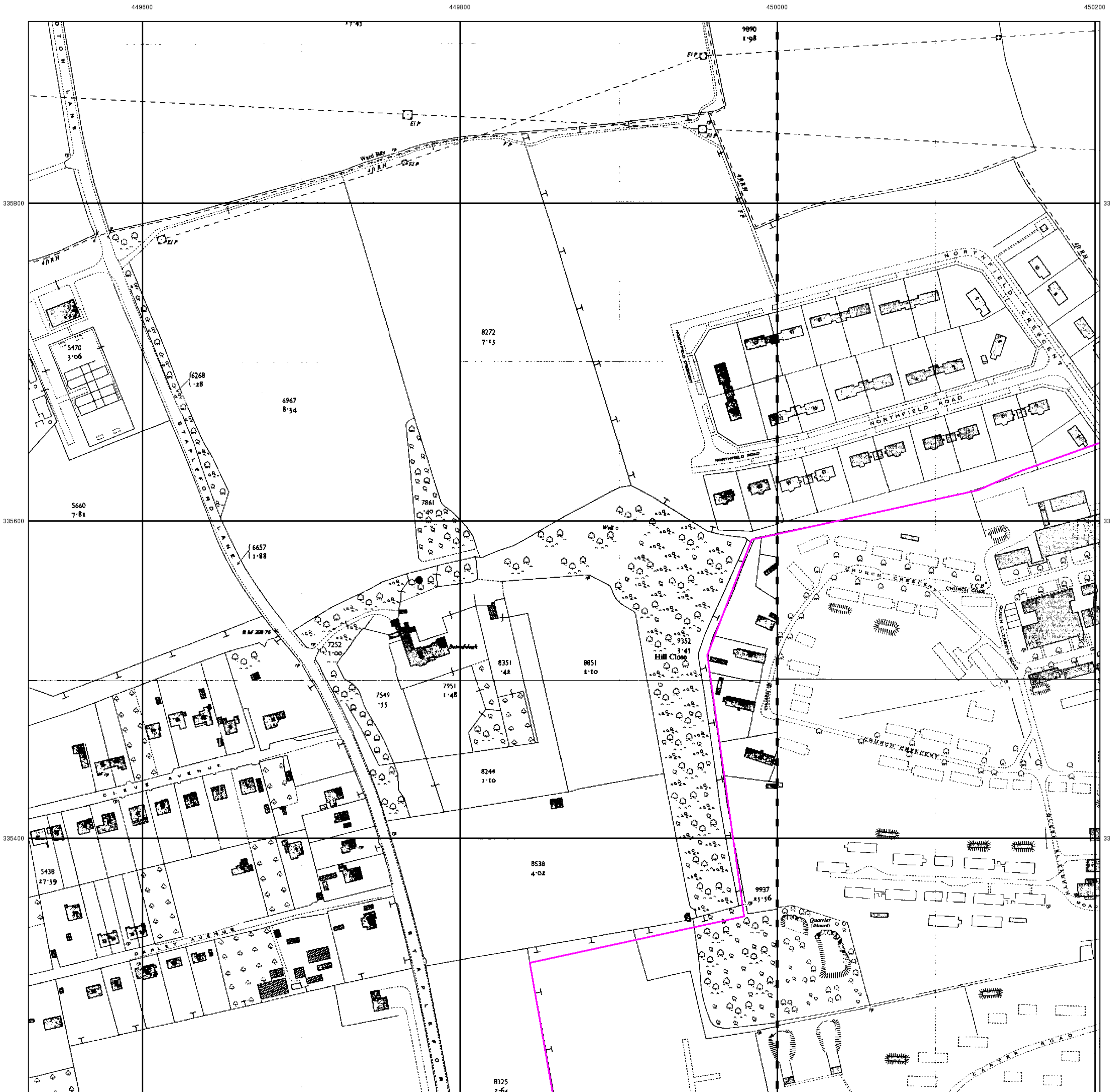
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

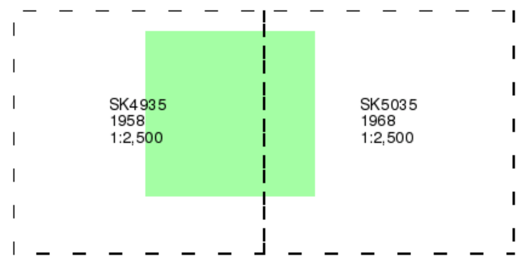
Ordnance Survey Plan

Published 1958 - 1968

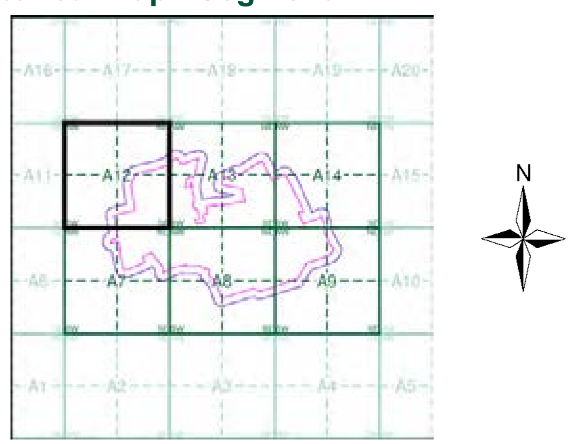
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

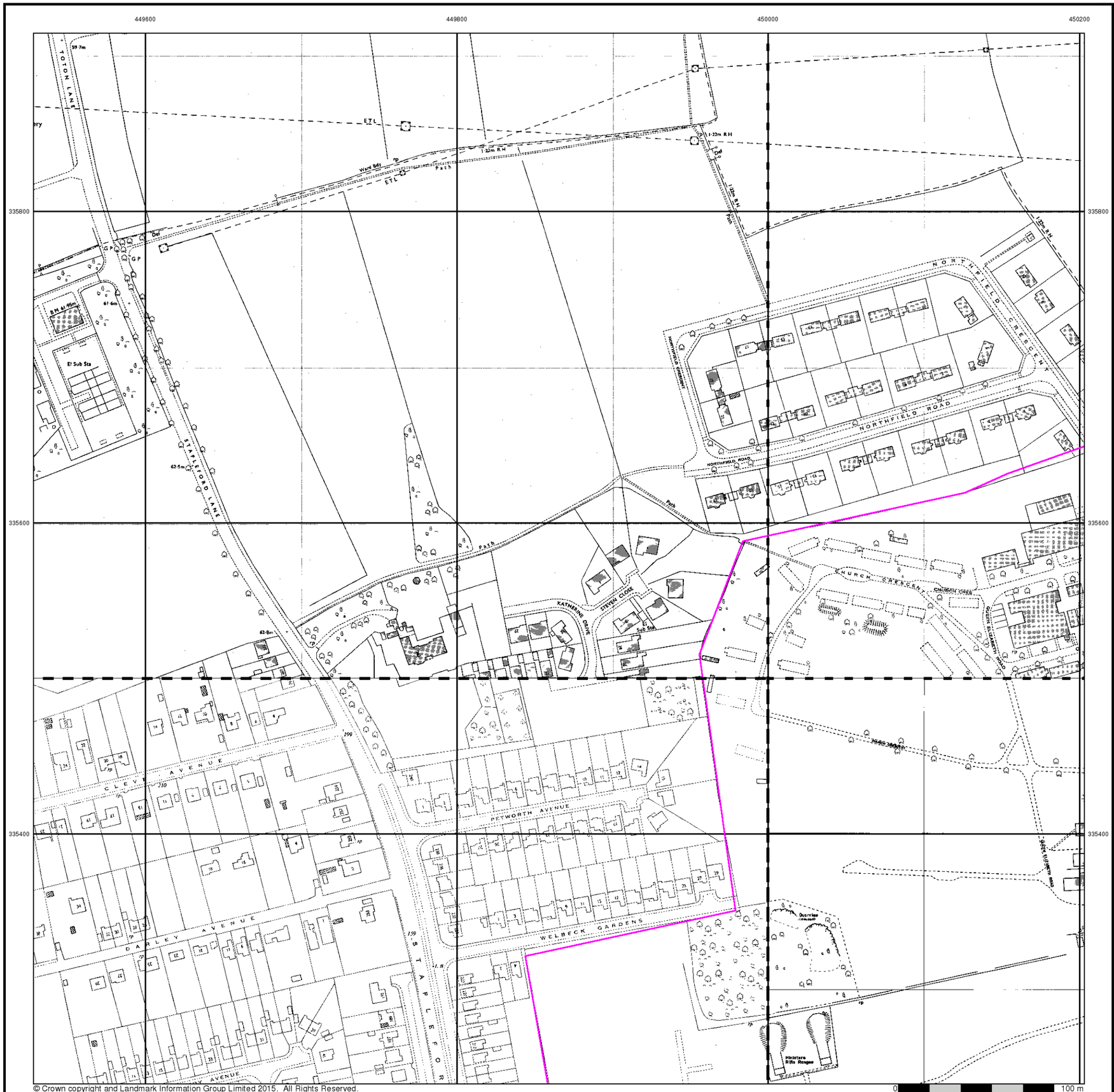
Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web:
[redacted]



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1962 - 1977

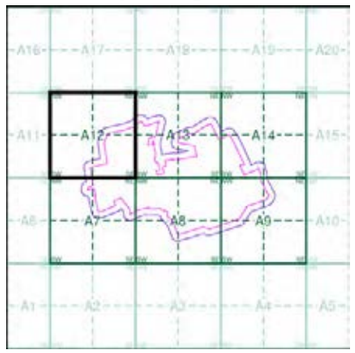
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK4935NE 1971 1:1,250	SK5035NW 1971 1:1,250
SK4935SE 1962 1:1,250	SK5035SW 1977 1:1,250

Historical Map - Segment A12



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web: [redacted].uk

Envirocheck®

LANDMARK INFORMATION GROUP®

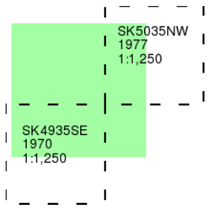
Ordnance Survey Plan

Published 1970 - 1977

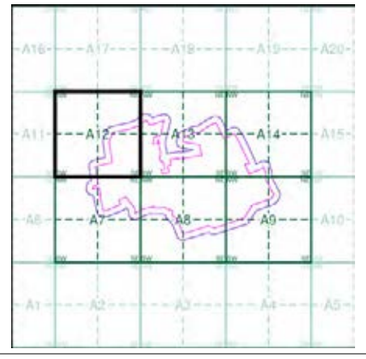
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A12



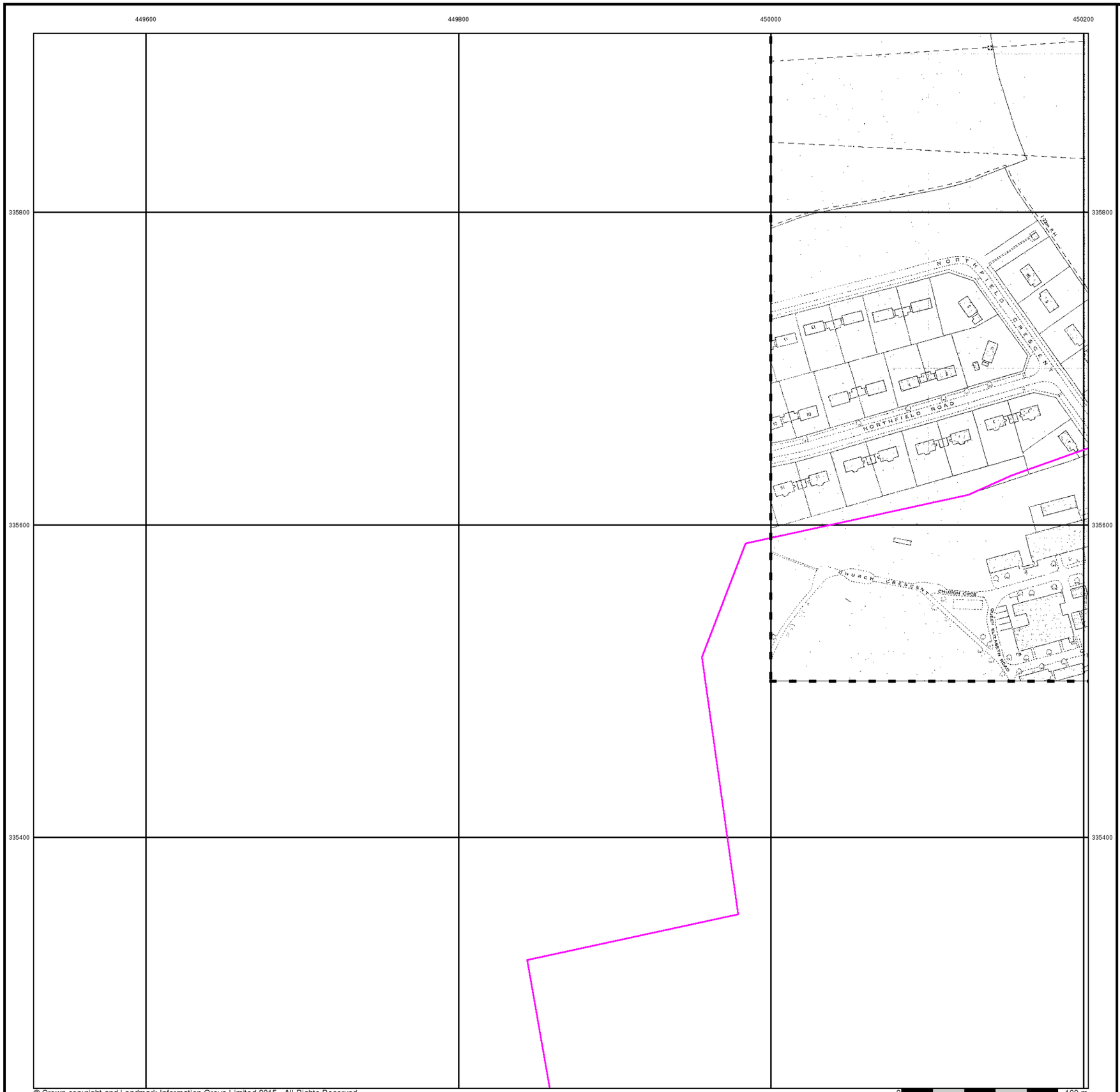
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

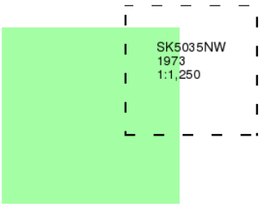
Supply of Unpublished Survey Information

Published 1973

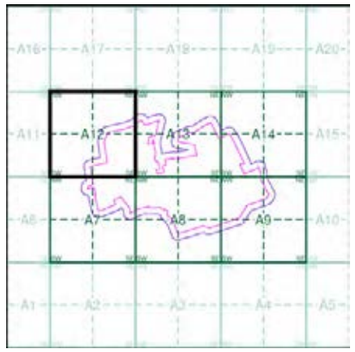
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®
LANDMARK INFORMATION GROUP®

Additional SIMs

Published 1987 - 1989

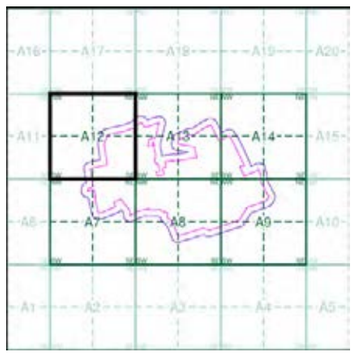
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK4935NE 1988 1:1,250	SK5035NW 1987 1:1,250
SK4935SE 1989 1:1,250	SK5035SW 1987 1:1,250

Historical Map - Segment A12



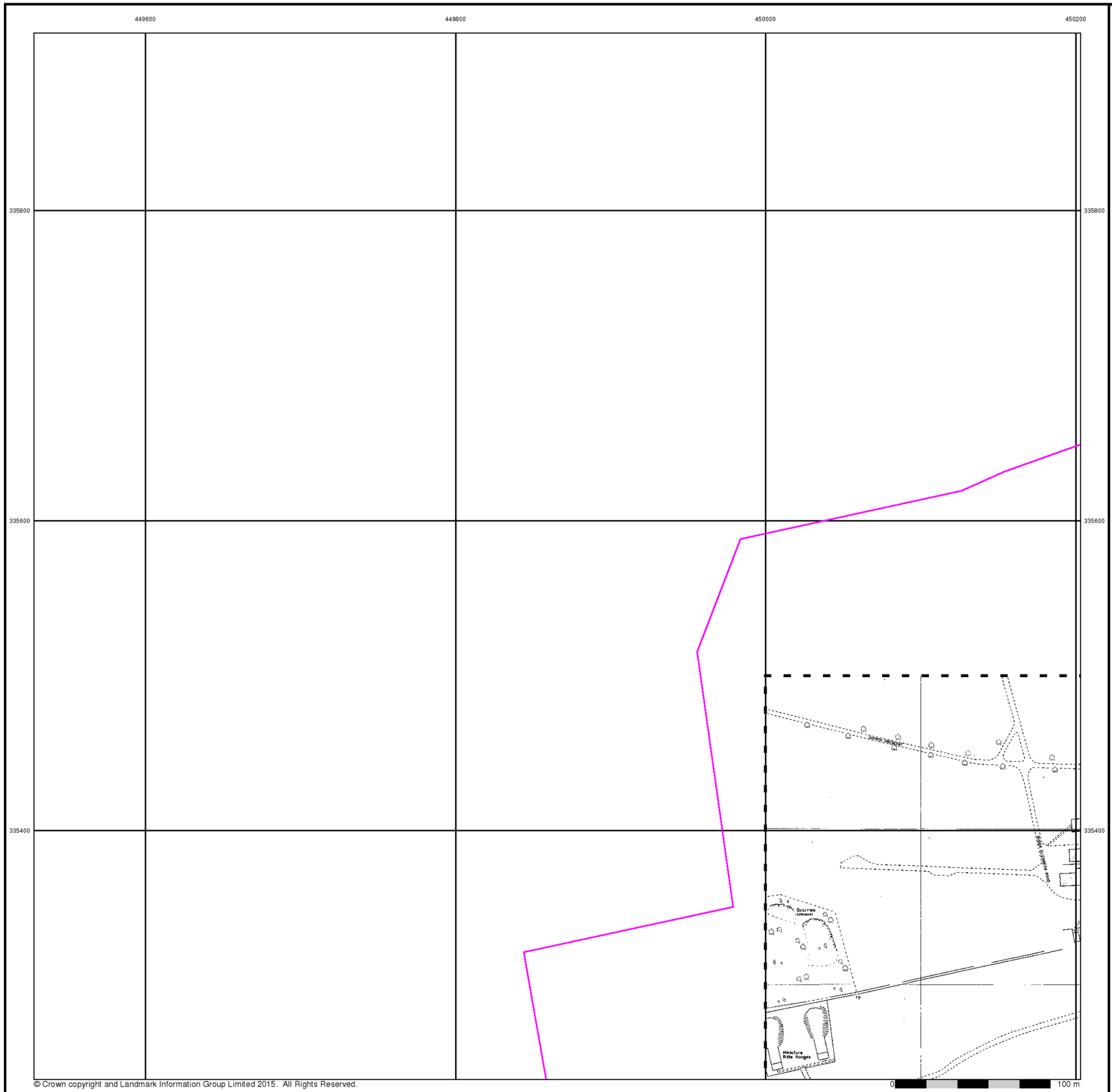
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®
LANDMARK INFORMATION GROUP®

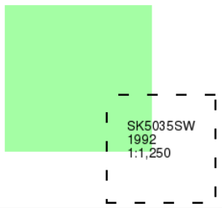
Additional SIMs

Published 1992

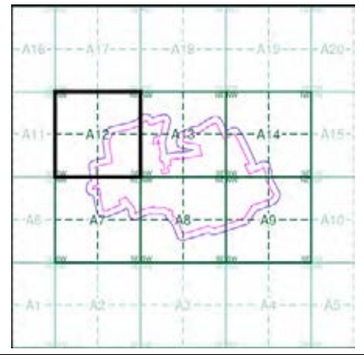
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A12



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

Envirocheck®
LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1993

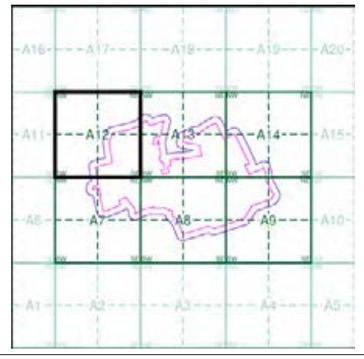
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK4935NE 1993 1:1,250	SK5035NW 1993 1:1,250
SK4935SE 1993 1:1,250	SK5035SW 1993 1:1,250

Historical Map - Segment A12



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

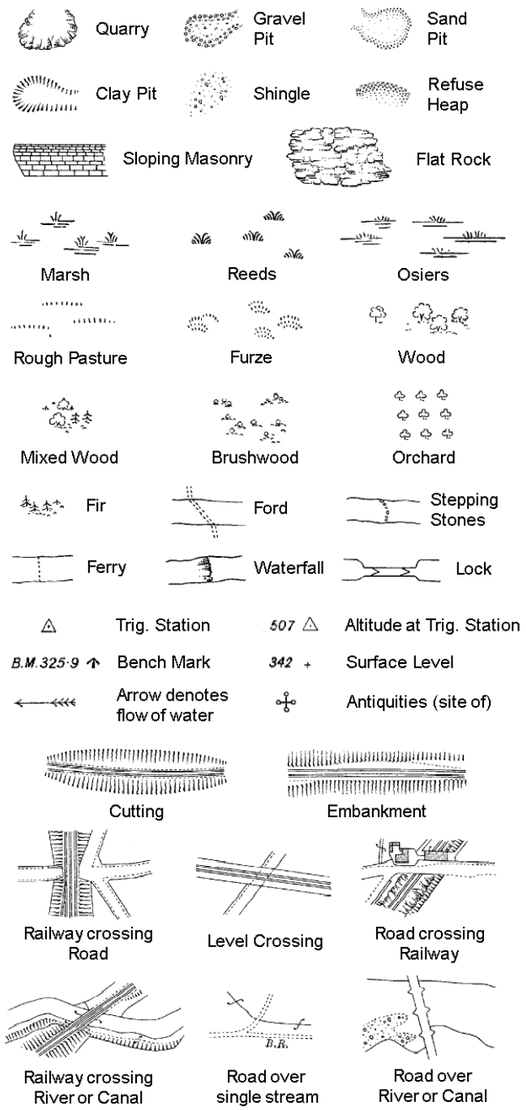
Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

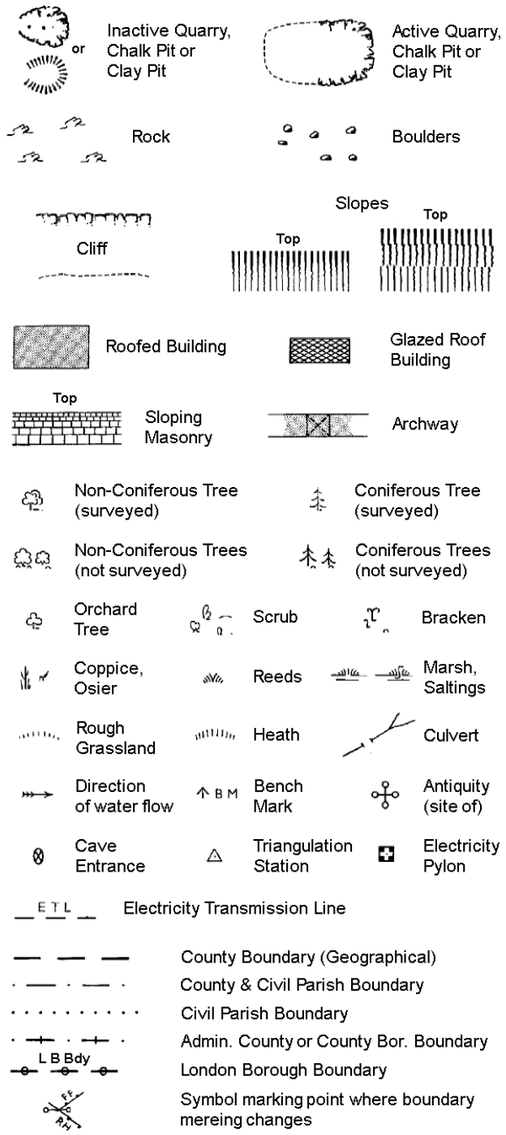
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



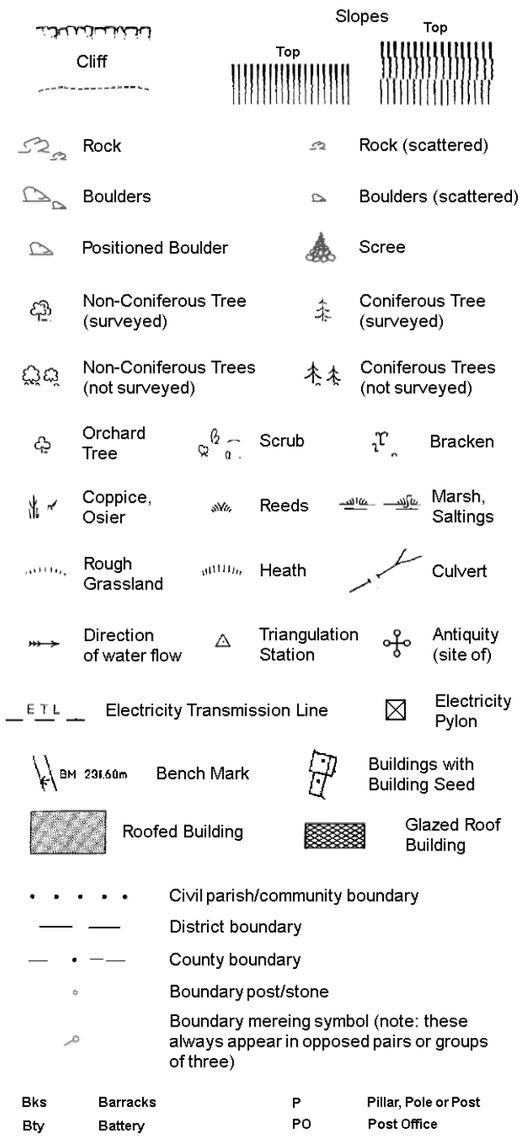
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



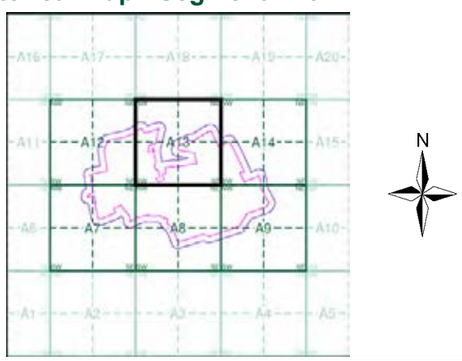
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Nottinghamshire	1:2,500	1885	2
Nottinghamshire	1:2,500	1900	3
Nottinghamshire	1:2,500	1914	4
Nottinghamshire	1:2,500	1939	5
Ordnance Survey Plan	1:1,250	1962	6
Ordnance Survey Plan	1:2,500	1968	7
Ordnance Survey Plan	1:1,250	1971 - 1977	8
Supply of Unpublished Survey Information	1:1,250	1973	9
Supply of Unpublished Survey Information	1:1,250	1974	10
Ordnance Survey Plan	1:1,250	1977	11
Additional SIMs	1:1,250	1987	12
Additional SIMs	1:1,250	1992	13
Large-Scale National Grid Data	1:1,250	1993	14

Historical Map - Segment A13



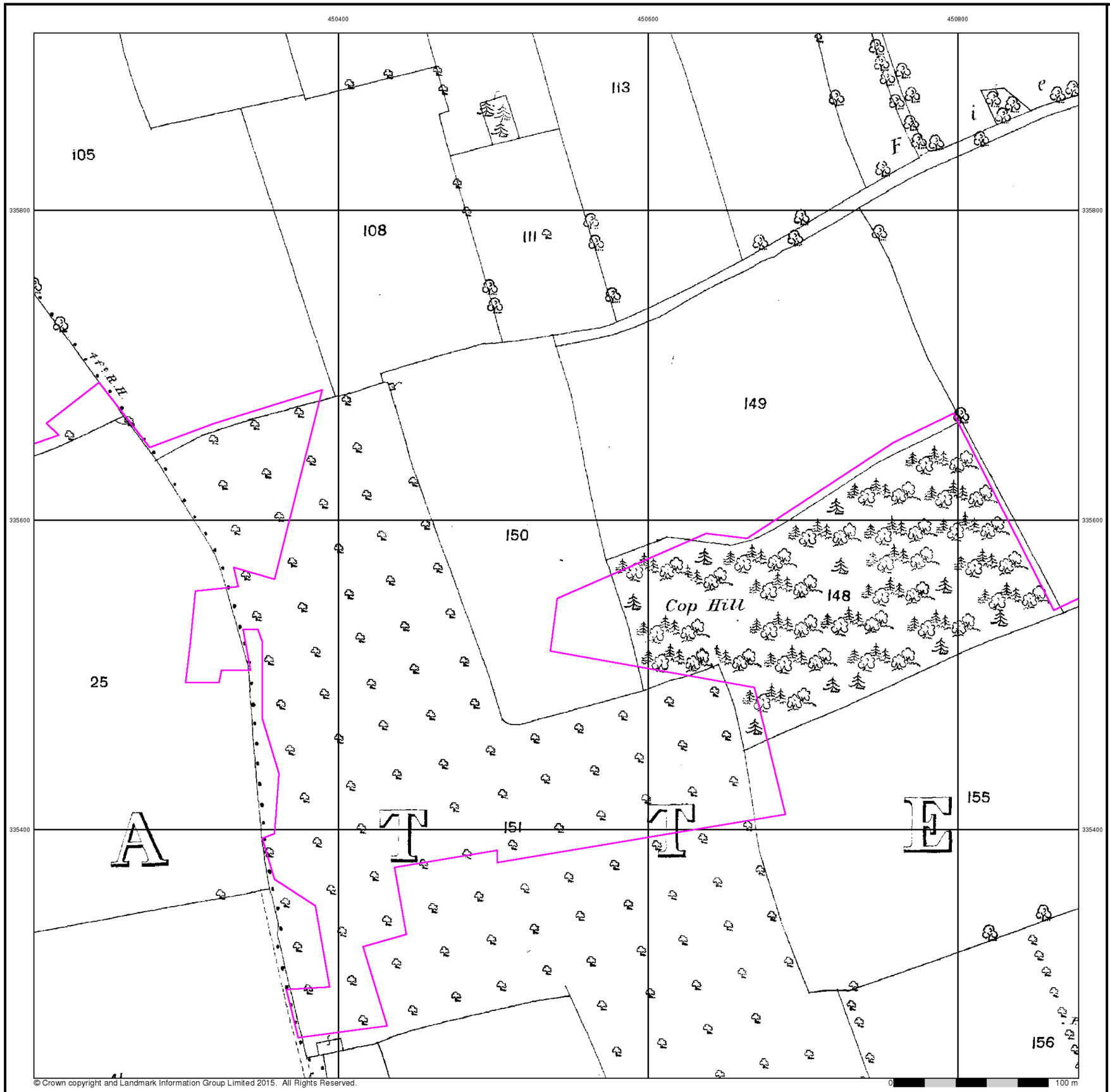
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark® INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

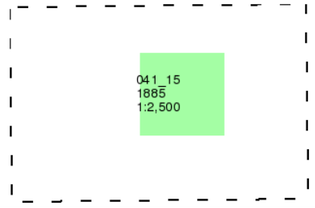
Nottinghamshire

Published 1885

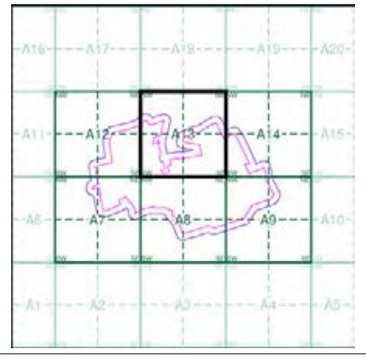
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

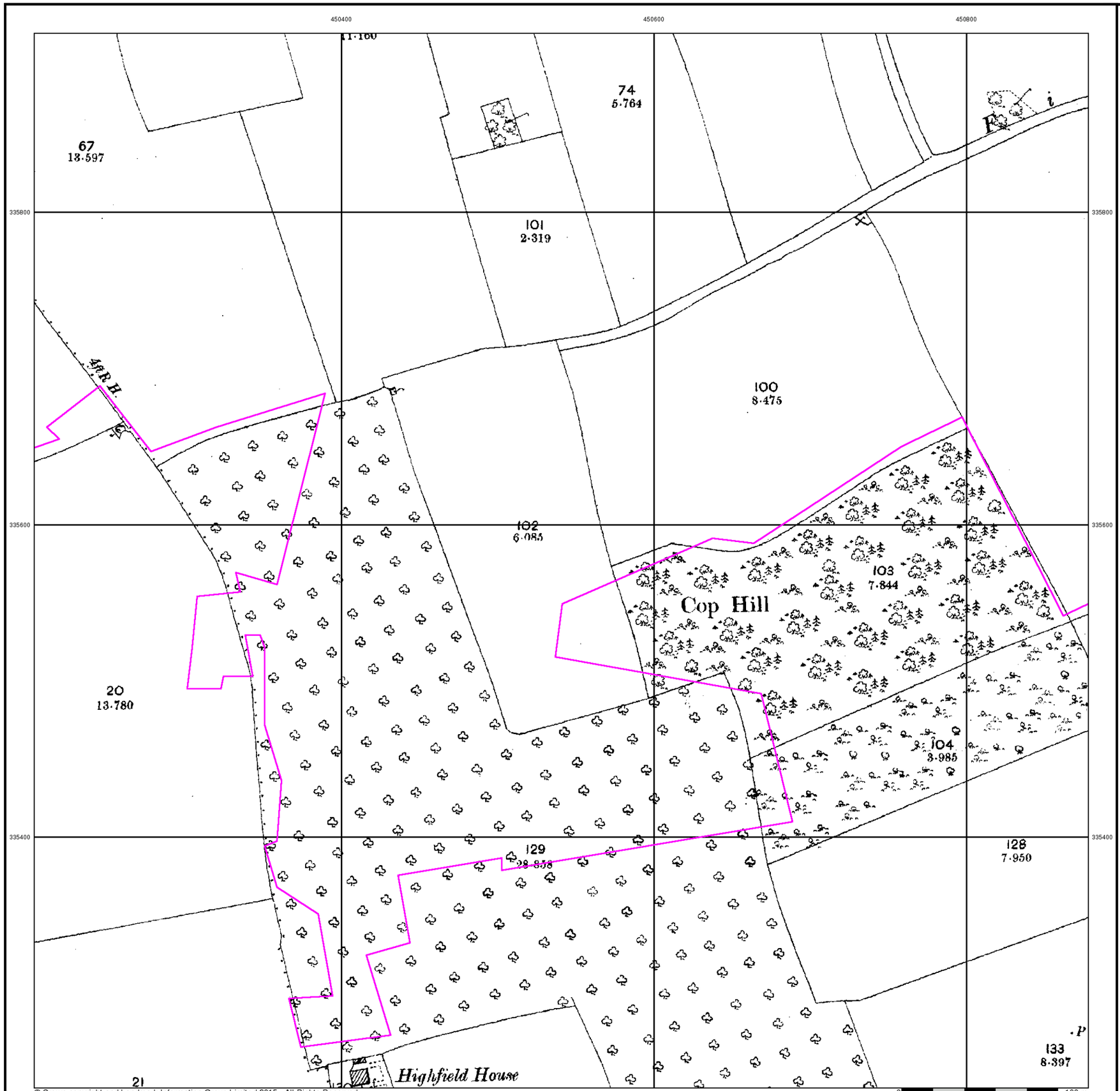
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

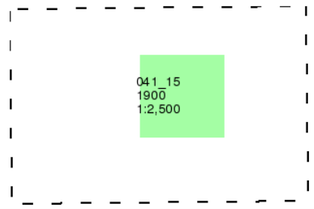
Nottinghamshire

Published 1900

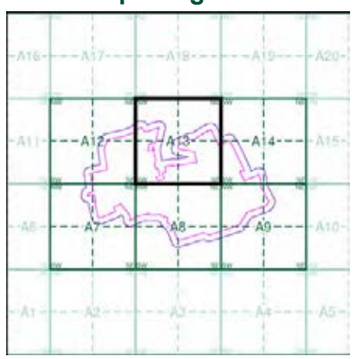
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



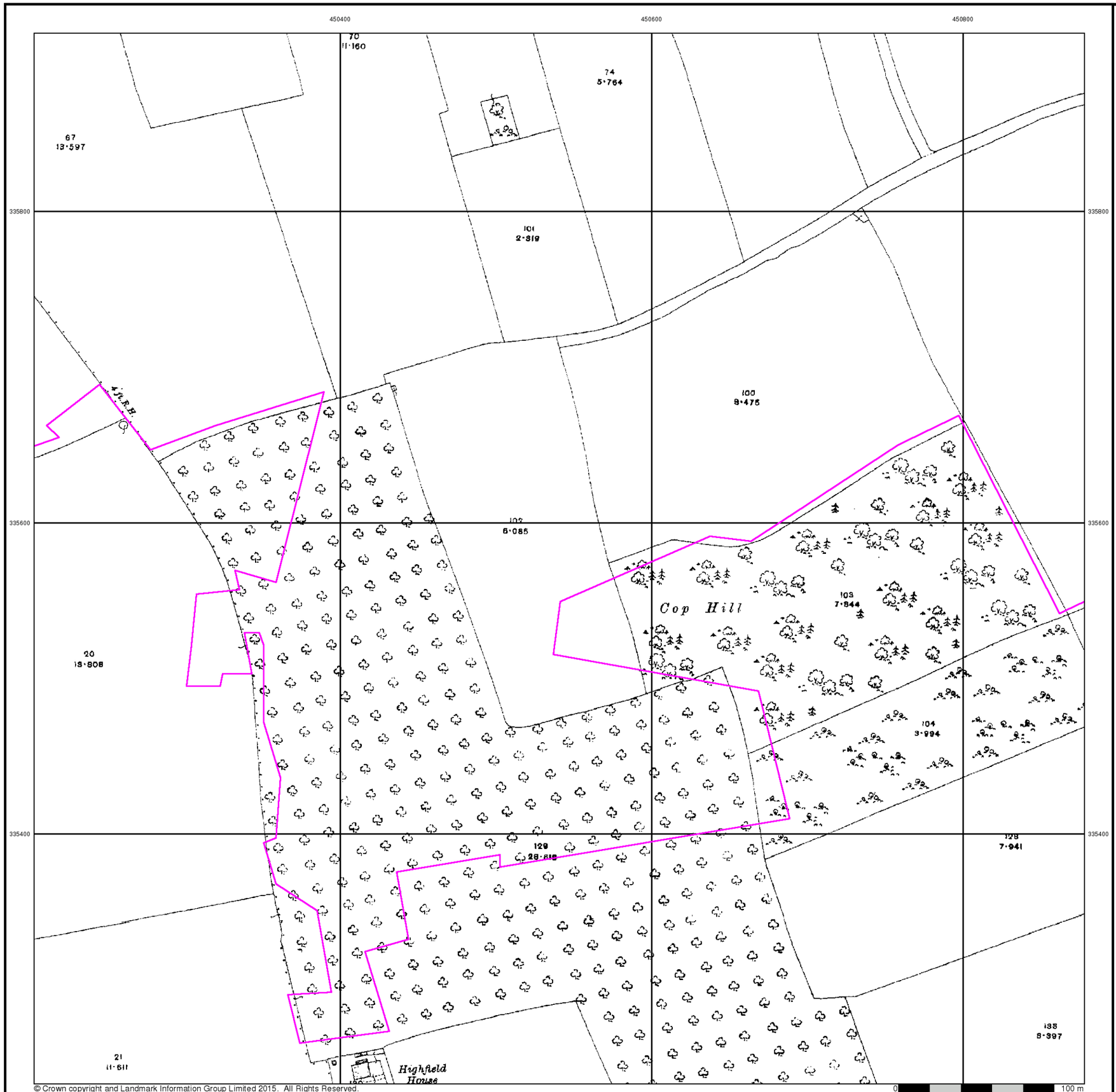
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

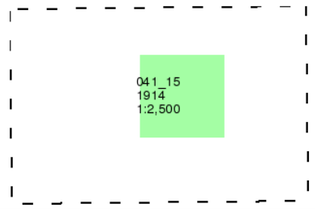
Nottinghamshire

Published 1914

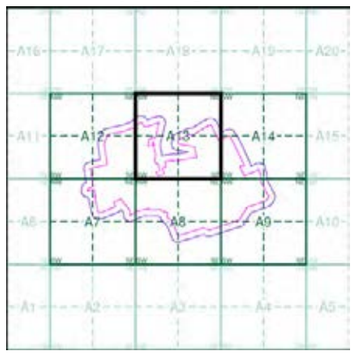
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

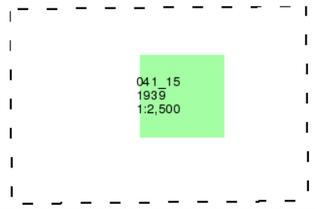
Nottinghamshire

Published 1939

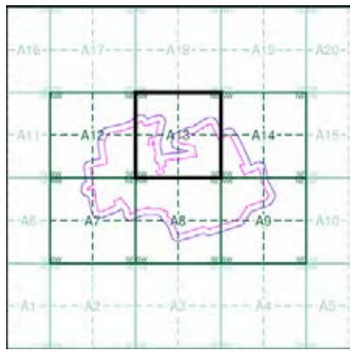
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

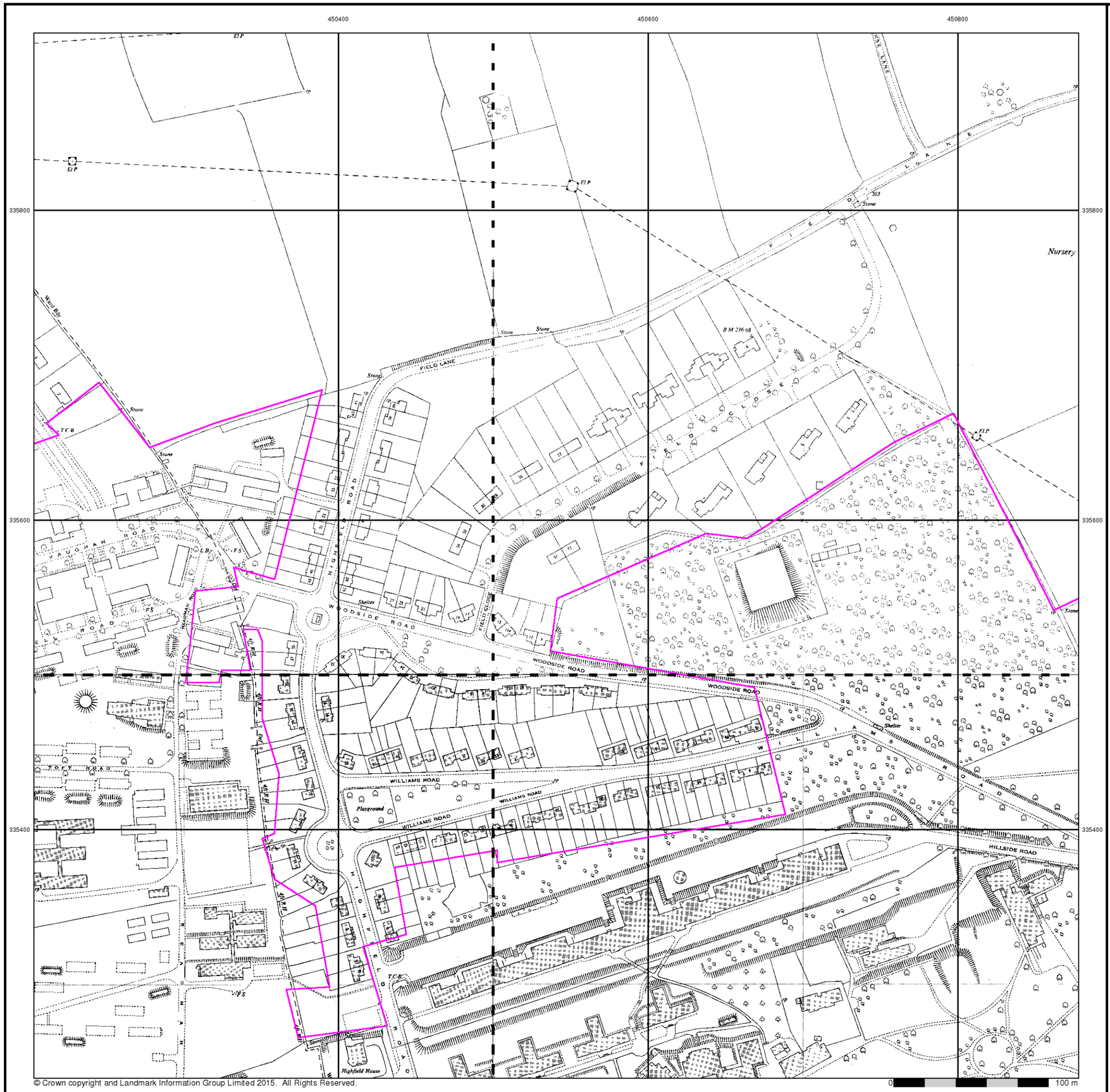


Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP



Envirocheck®

LANDMARK INFORMATION GROUP®

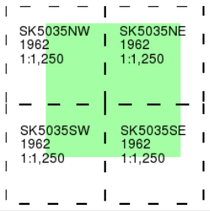
Ordnance Survey Plan

Published 1962

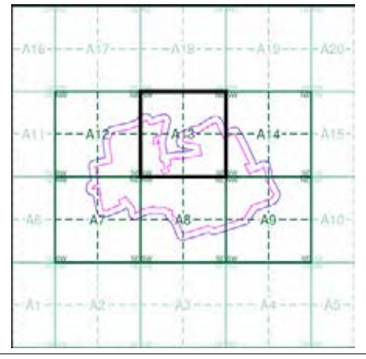
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



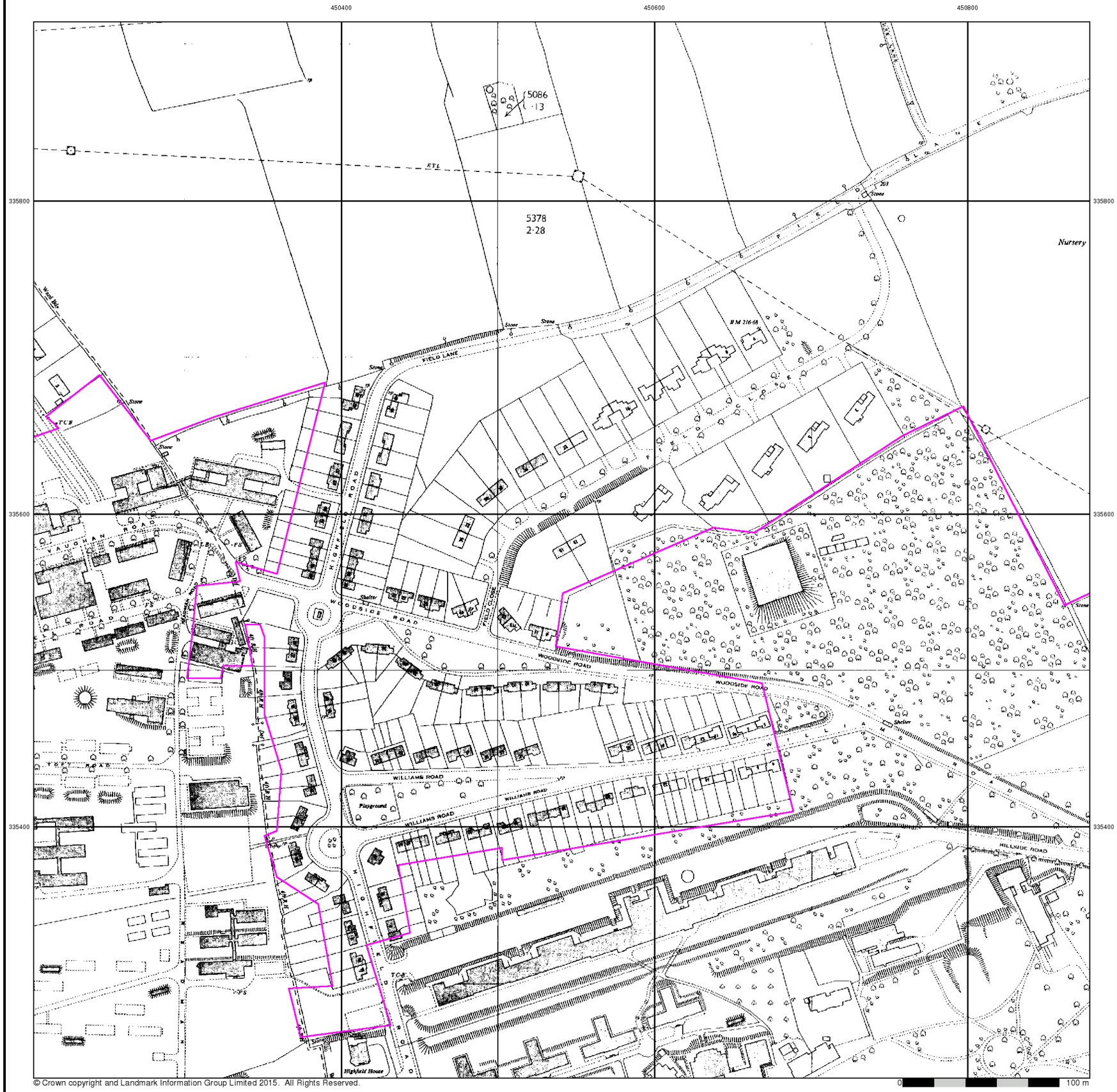
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1968

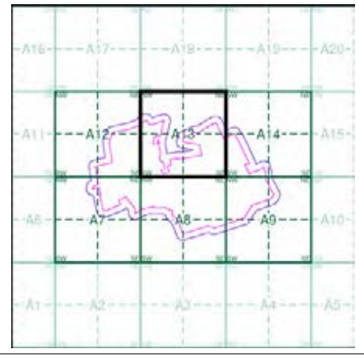
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035
1968
1:2,500

Historical Map - Segment A13



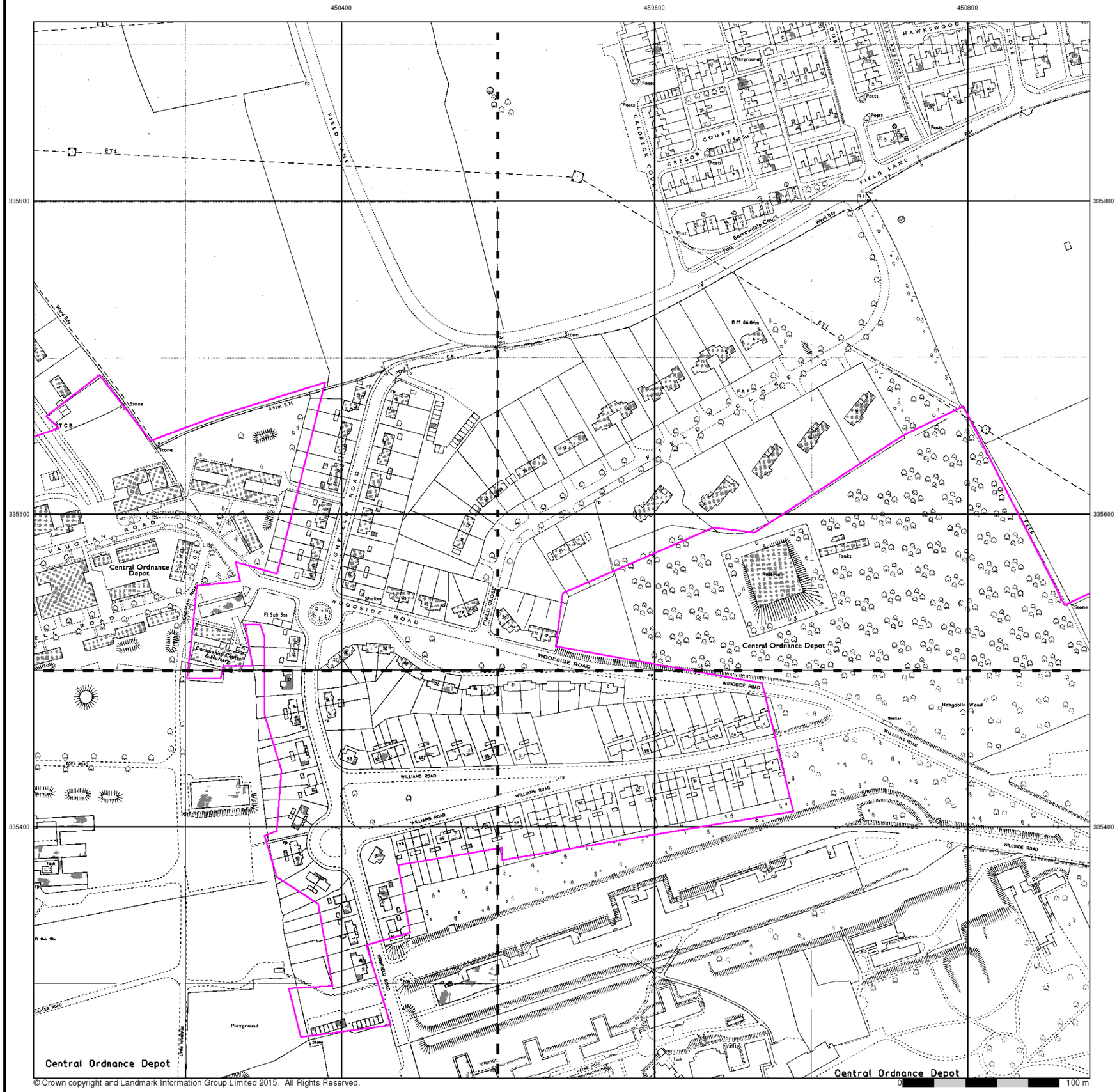
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

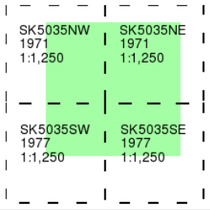
Ordnance Survey Plan

Published 1971 - 1977

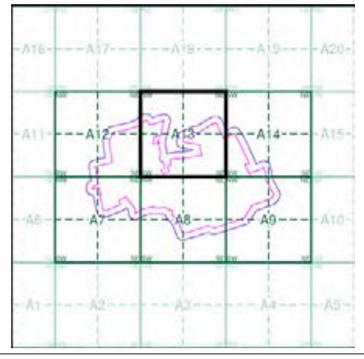
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

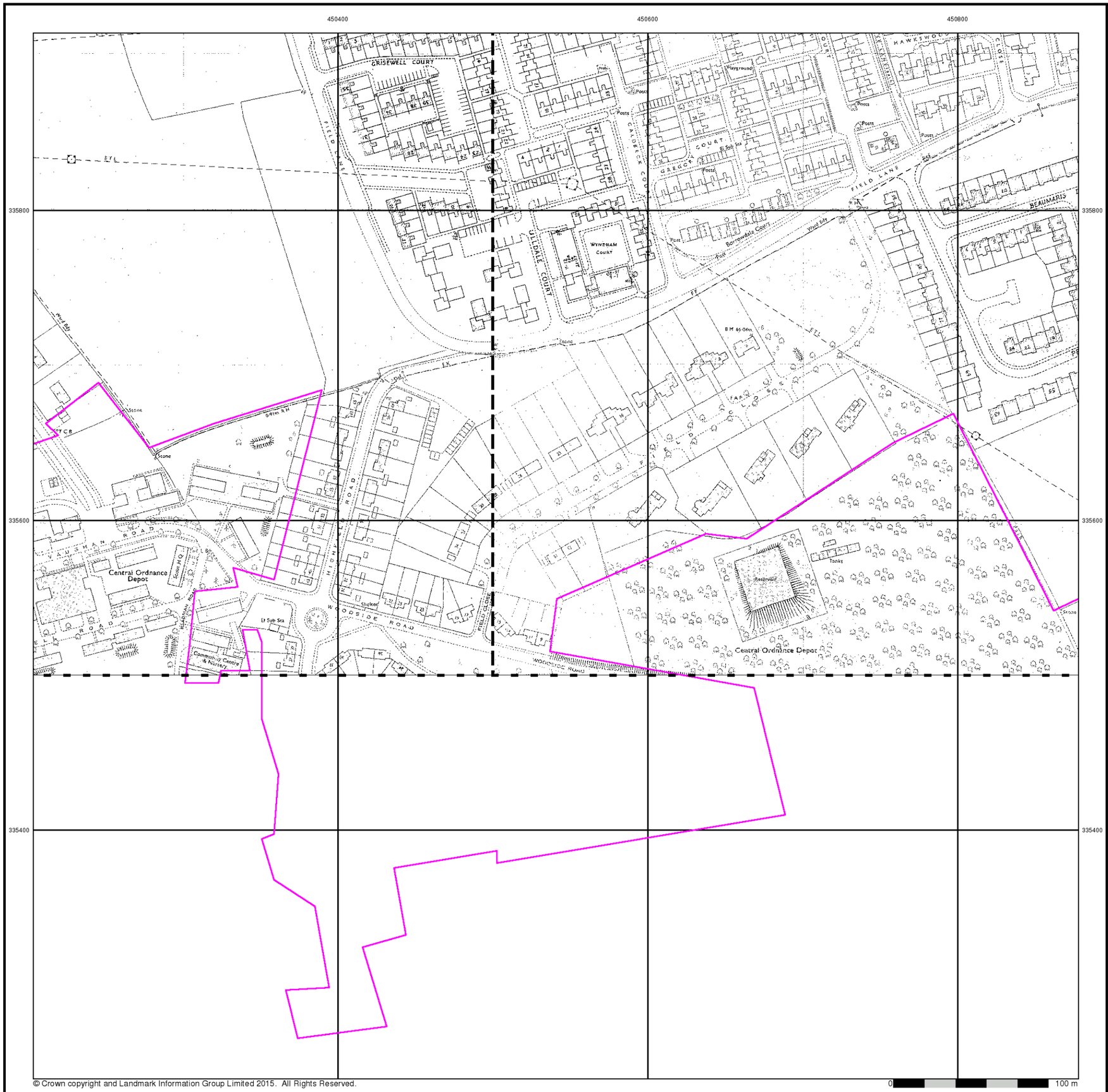
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax



Envirocheck®

LANDMARK INFORMATION GROUP®

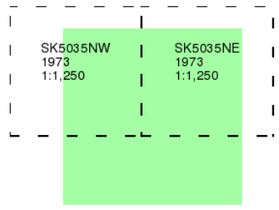
Supply of Unpublished Survey Information

Published 1973

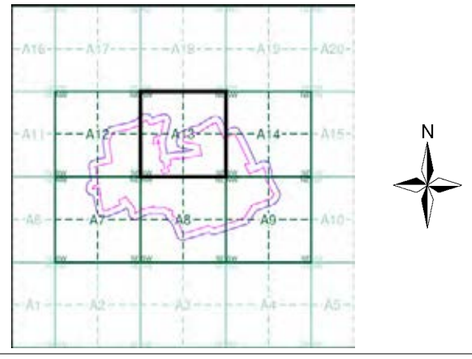
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



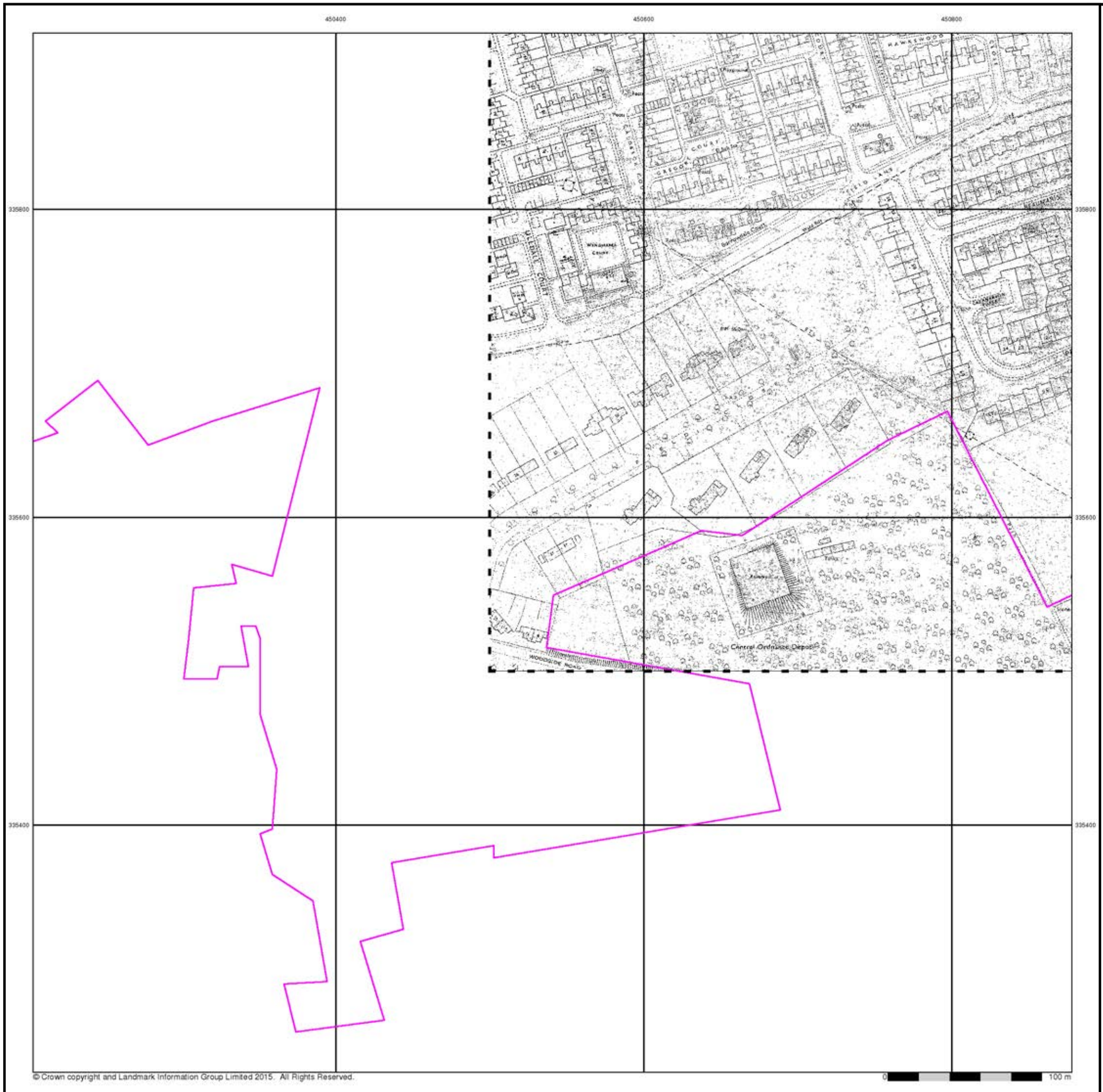
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

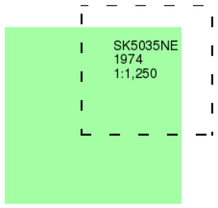
Supply of Unpublished Survey Information

Published 1974

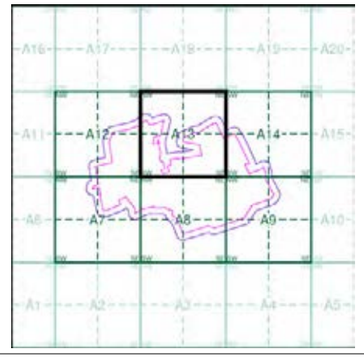
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Envirocheck®

LANDMARK INFORMATION GROUP®

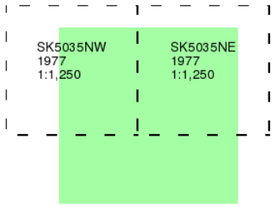
Ordnance Survey Plan

Published 1977

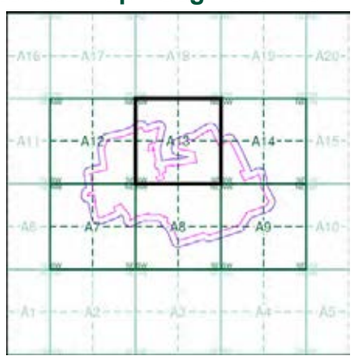
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



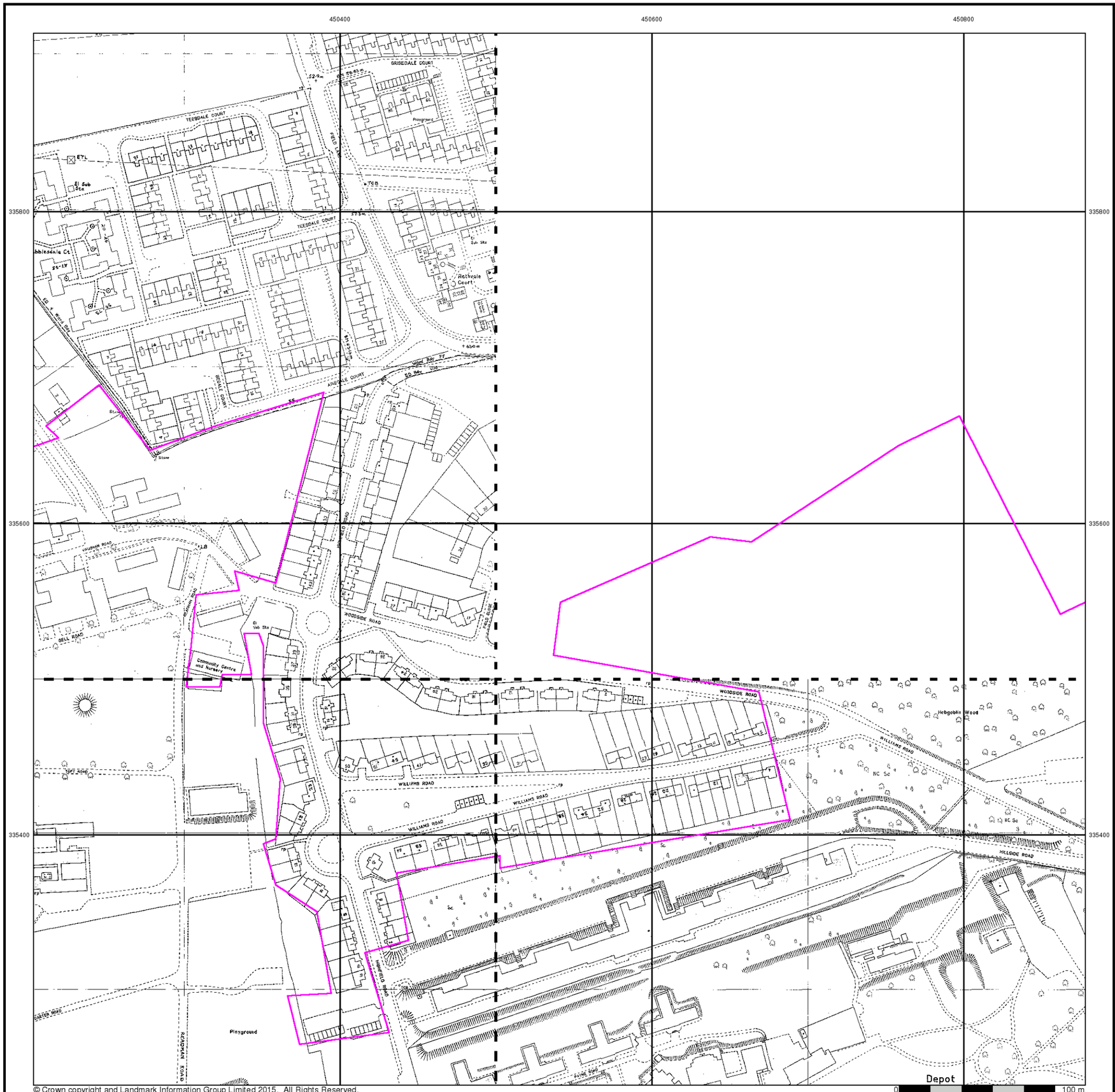
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

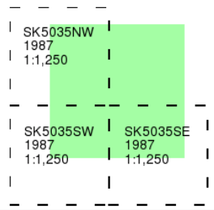
Additional SIMs

Published 1987

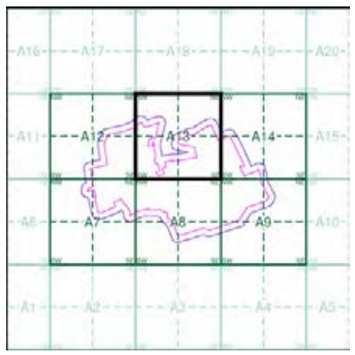
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



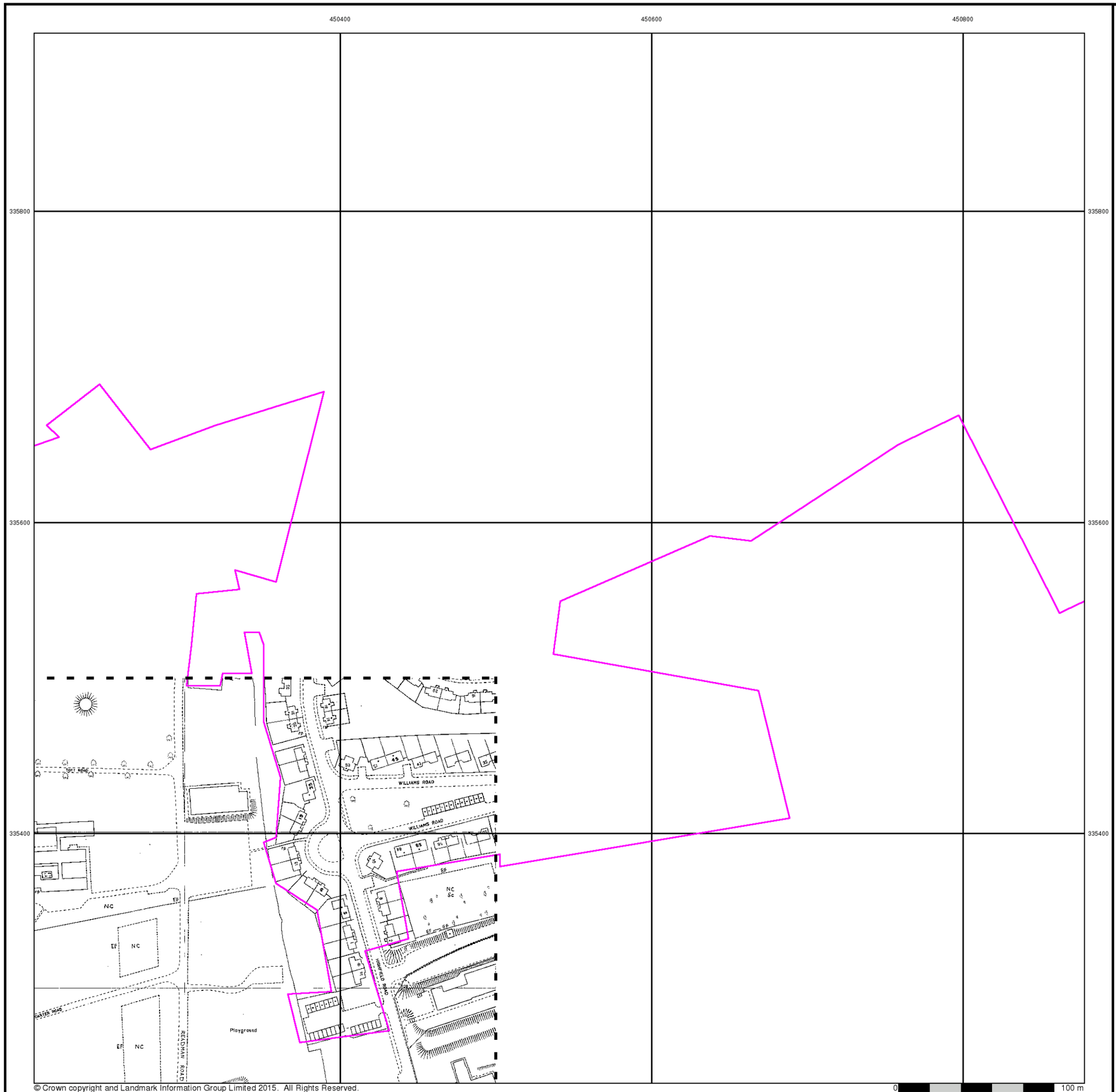
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®
LANDMARK INFORMATION GROUP®

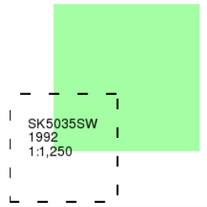
Additional SIMs

Published 1992

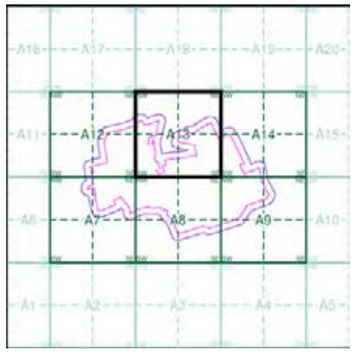
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



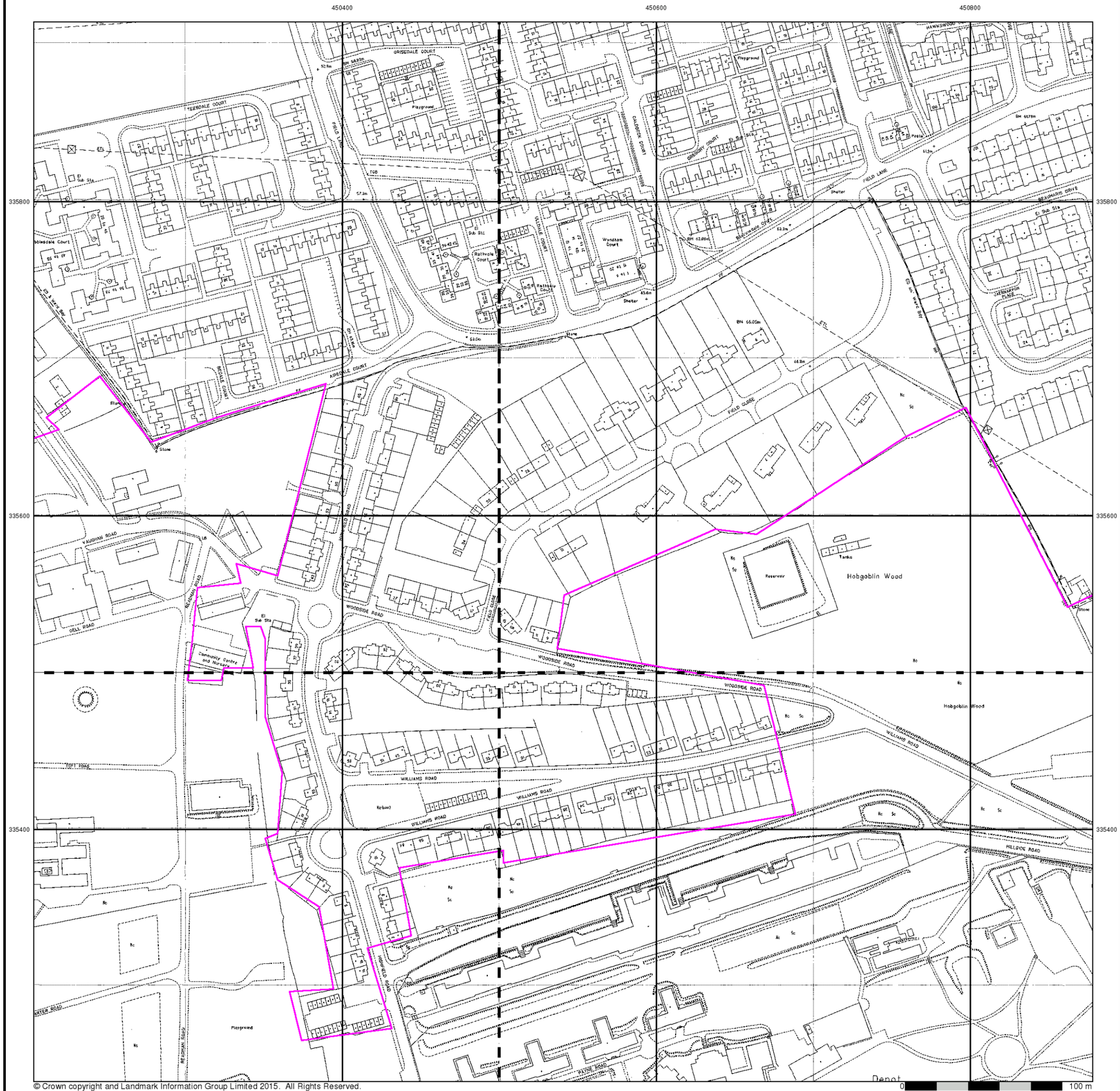
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1993

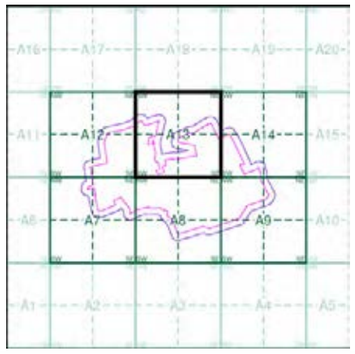
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK5035NW 1993 1:1,250	SK5035NE 1993 1:1,250
SK5035SW 1993 1:1,250	SK5035SE 1993 1:1,250

Historical Map - Segment A13



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

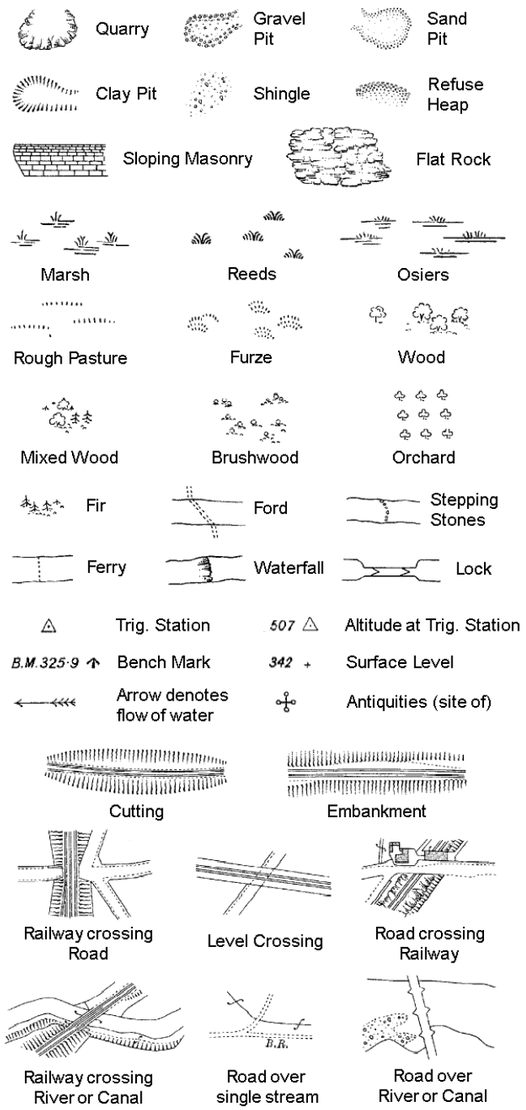
2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web:

Historical Mapping Legends

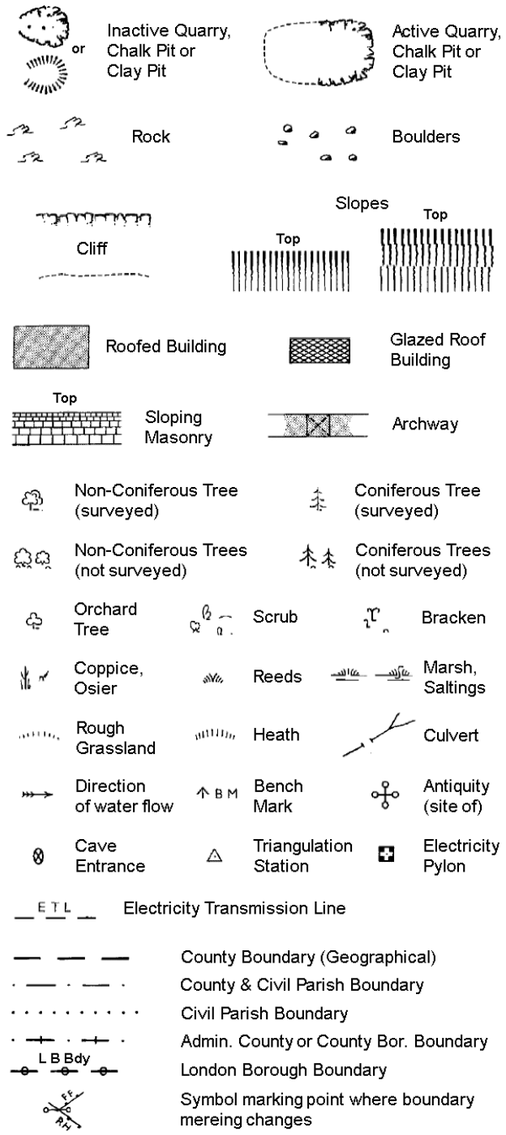
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

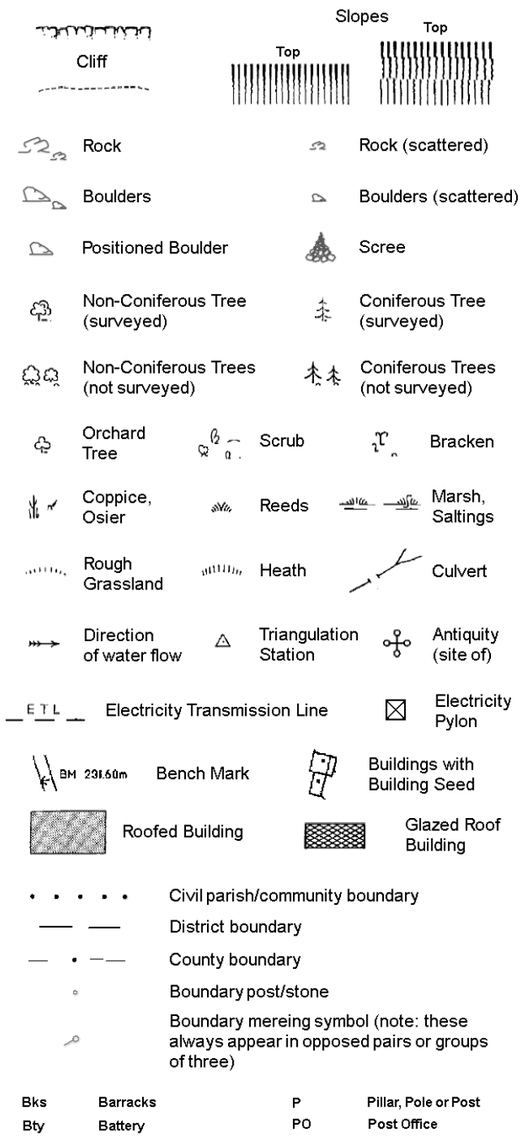
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

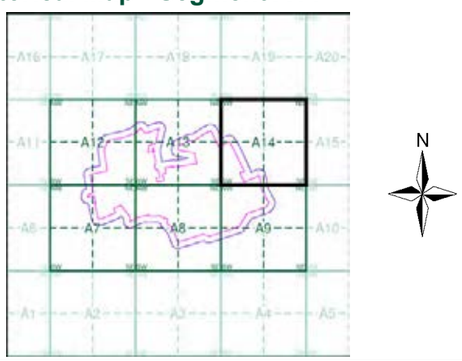
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Nottinghamshire	1:2,500	1885	2
Nottinghamshire	1:2,500	1900	3
Nottinghamshire	1:2,500	1914	4
Nottinghamshire	1:2,500	1939	5
Ordnance Survey Plan	1:1,250	1956 - 1962	6
Ordnance Survey Plan	1:2,500	1956 - 1968	7
Ordnance Survey Plan	1:1,250	1962 - 1977	8
Ordnance Survey Plan	1:1,250	1967 - 1977	9
Ordnance Survey Plan	1:2,500	1968	10
Supply of Unpublished Survey Information	1:1,250	1973 - 1974	11
Supply of Unpublished Survey Information	1:1,250	1974	12
Ordnance Survey Plan	1:1,250	1978 - 1979	13
Additional SIMs	1:1,250	1987 - 1992	14
Large-Scale National Grid Data	1:1,250	1993	15
Large-Scale National Grid Data	1:1,250	1994	16

Historical Map - Segment A14



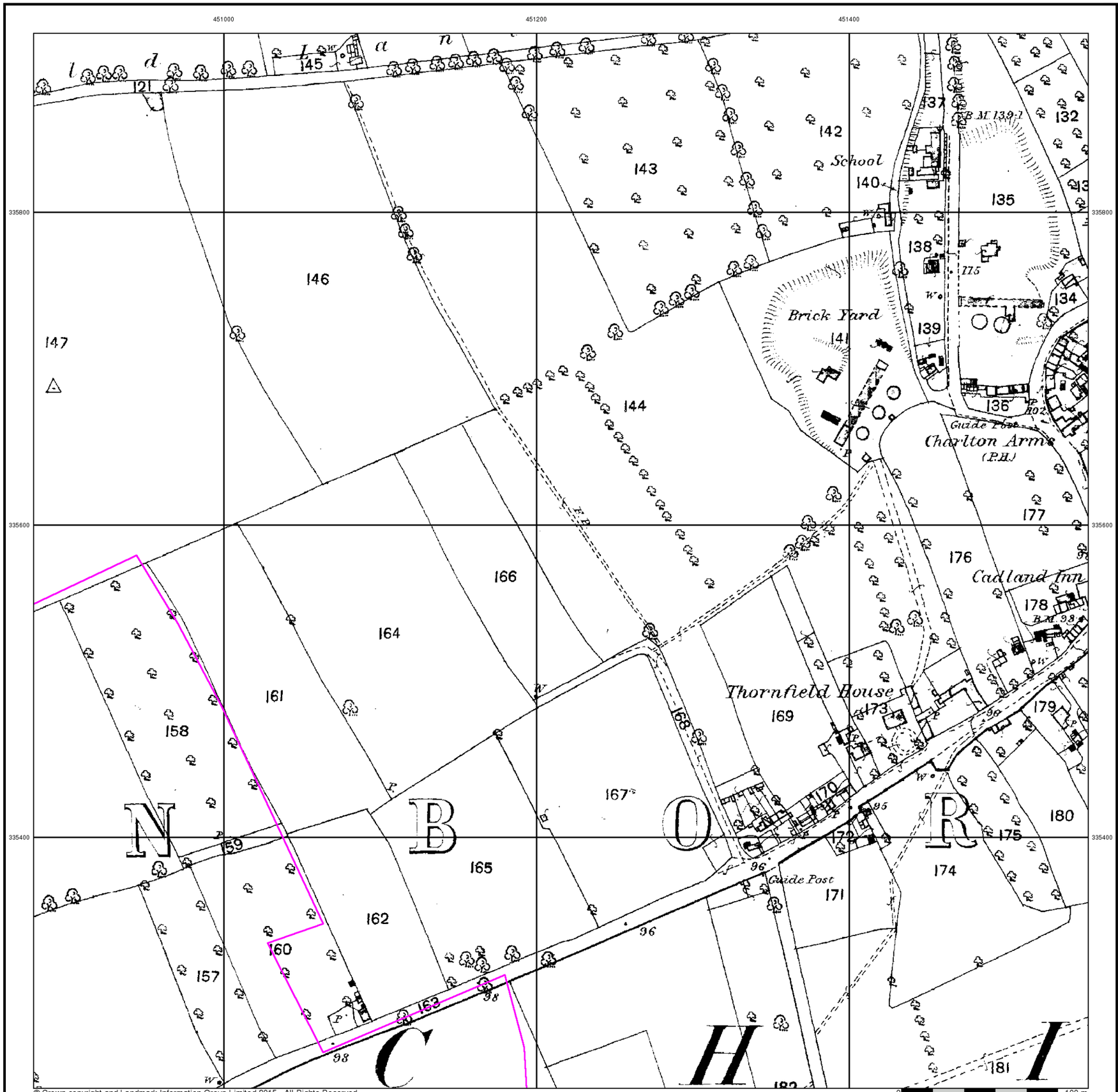
Order Details

Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark® INFORMATION GROUP
Tel:
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

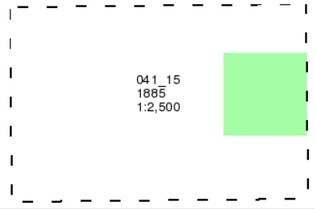
Nottinghamshire

Published 1885

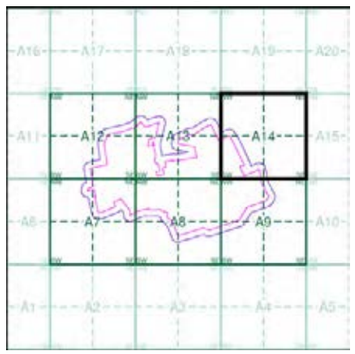
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



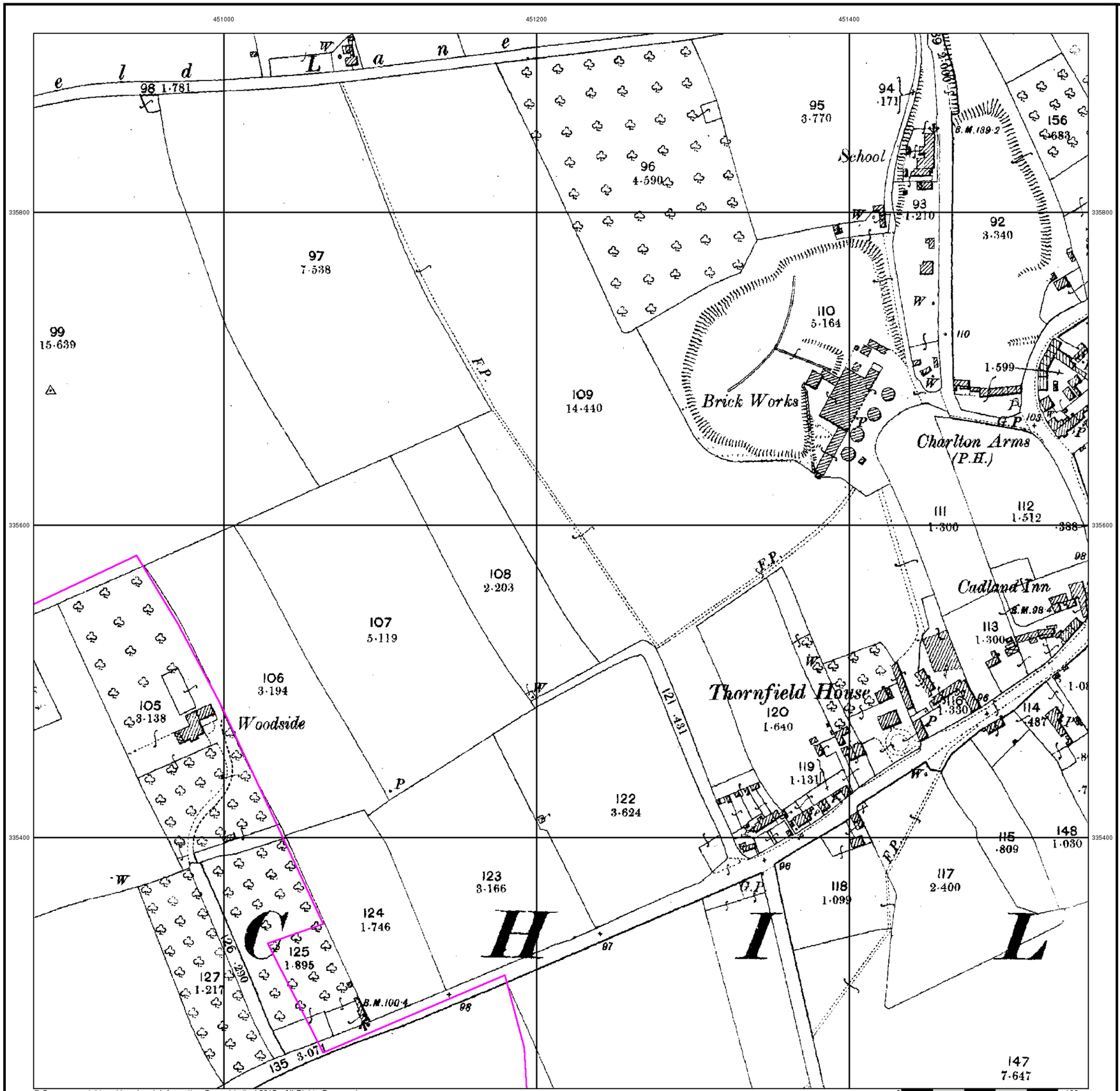
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



0 100 m

Envirocheck®

LANDMARK INFORMATION GROUP®

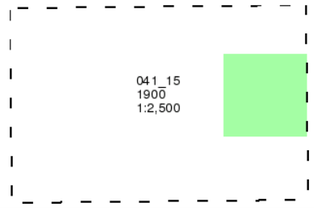
Nottinghamshire

Published 1900

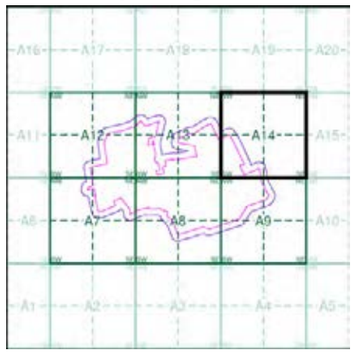
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



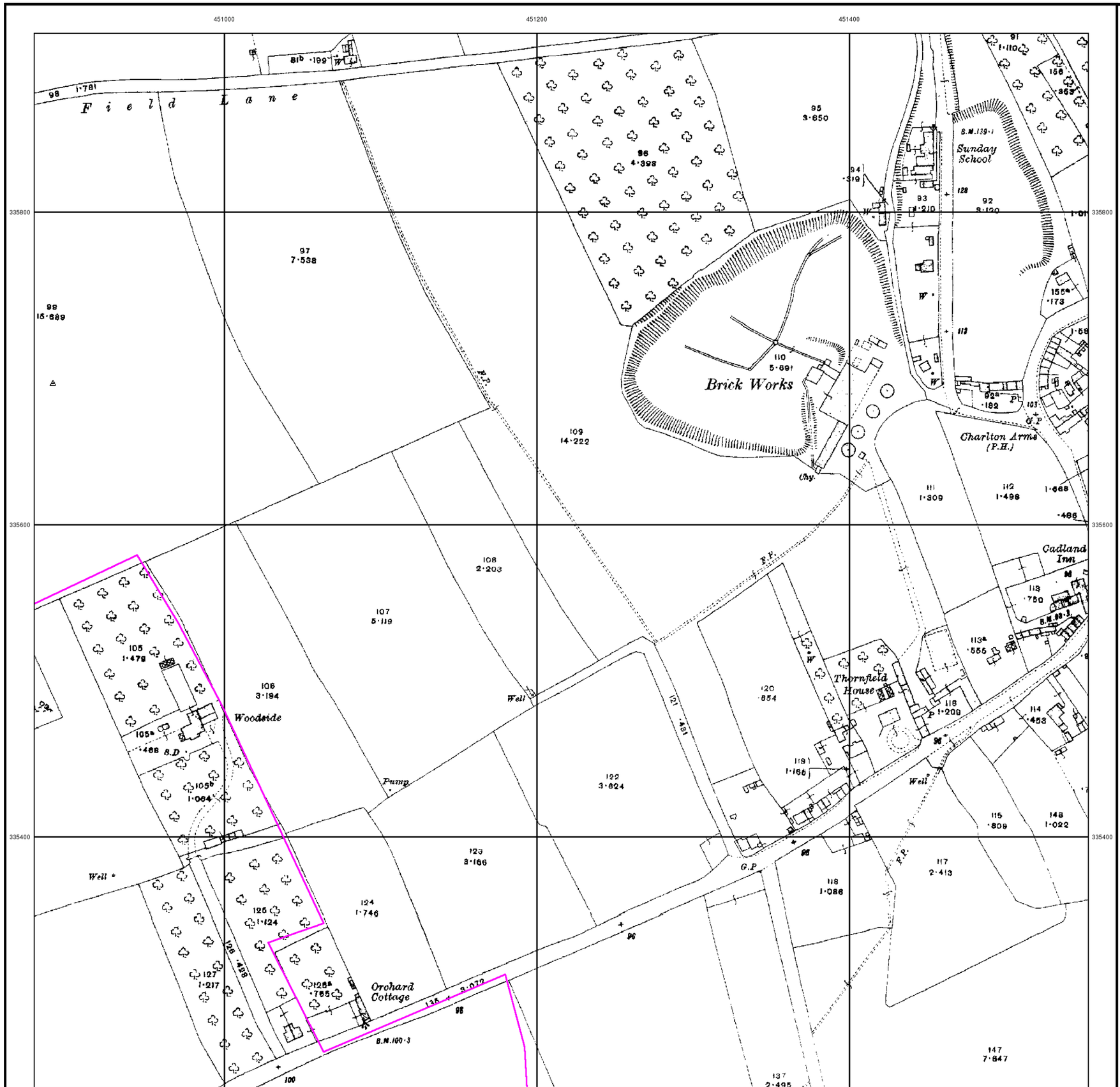
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

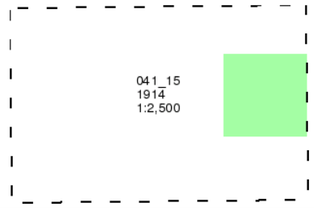
Nottinghamshire

Published 1914

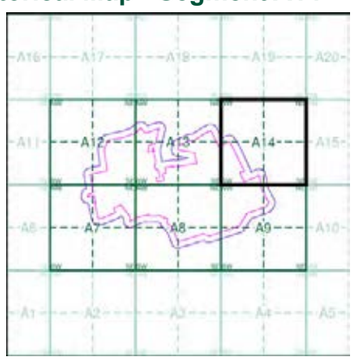
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



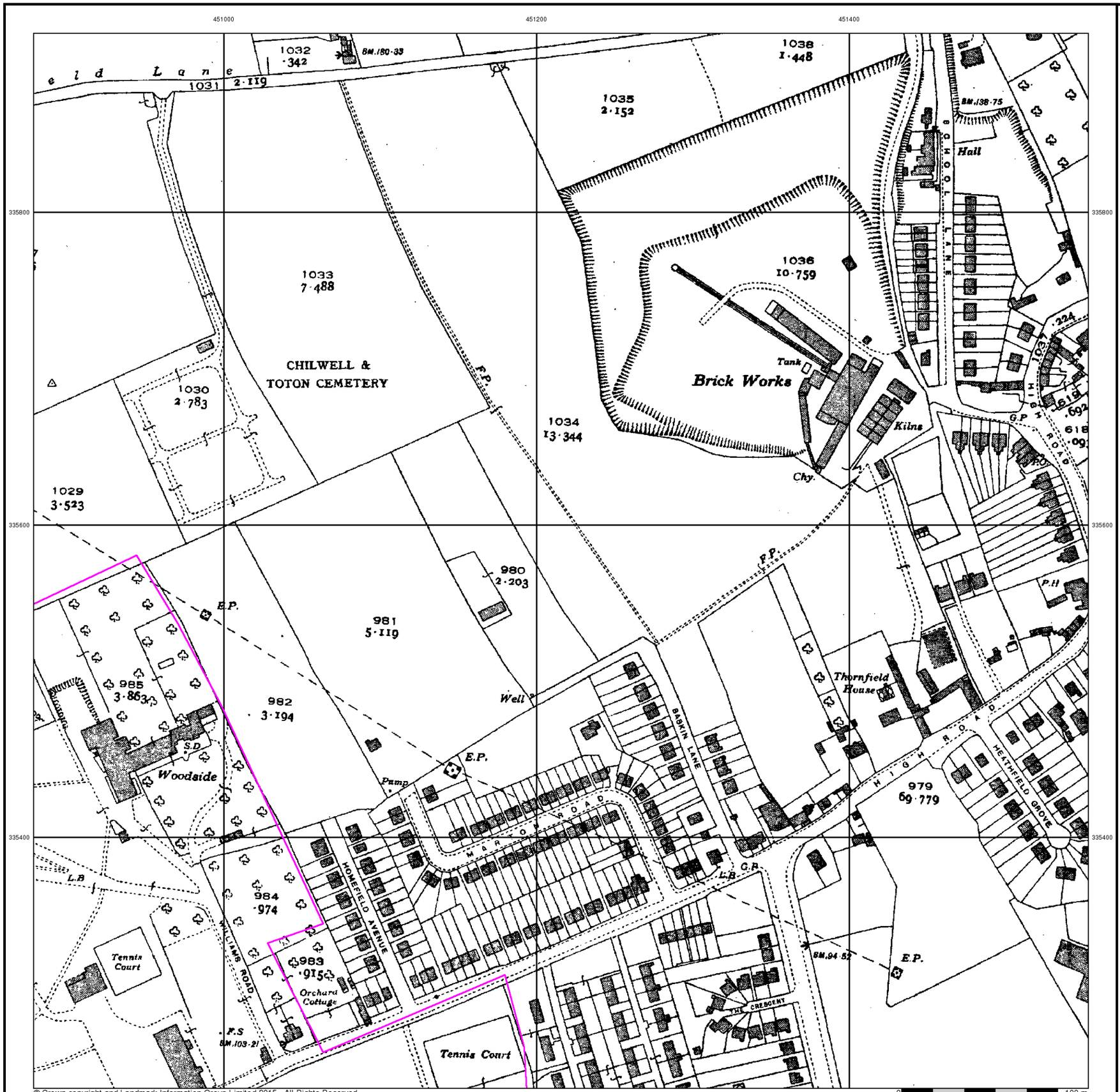
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

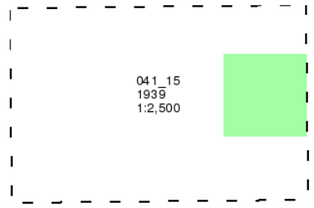
Nottinghamshire

Published 1939

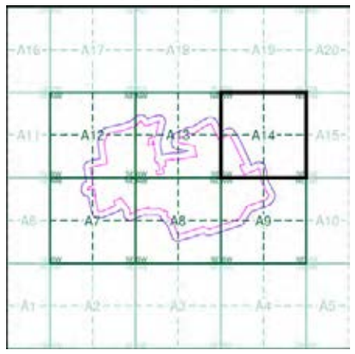
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

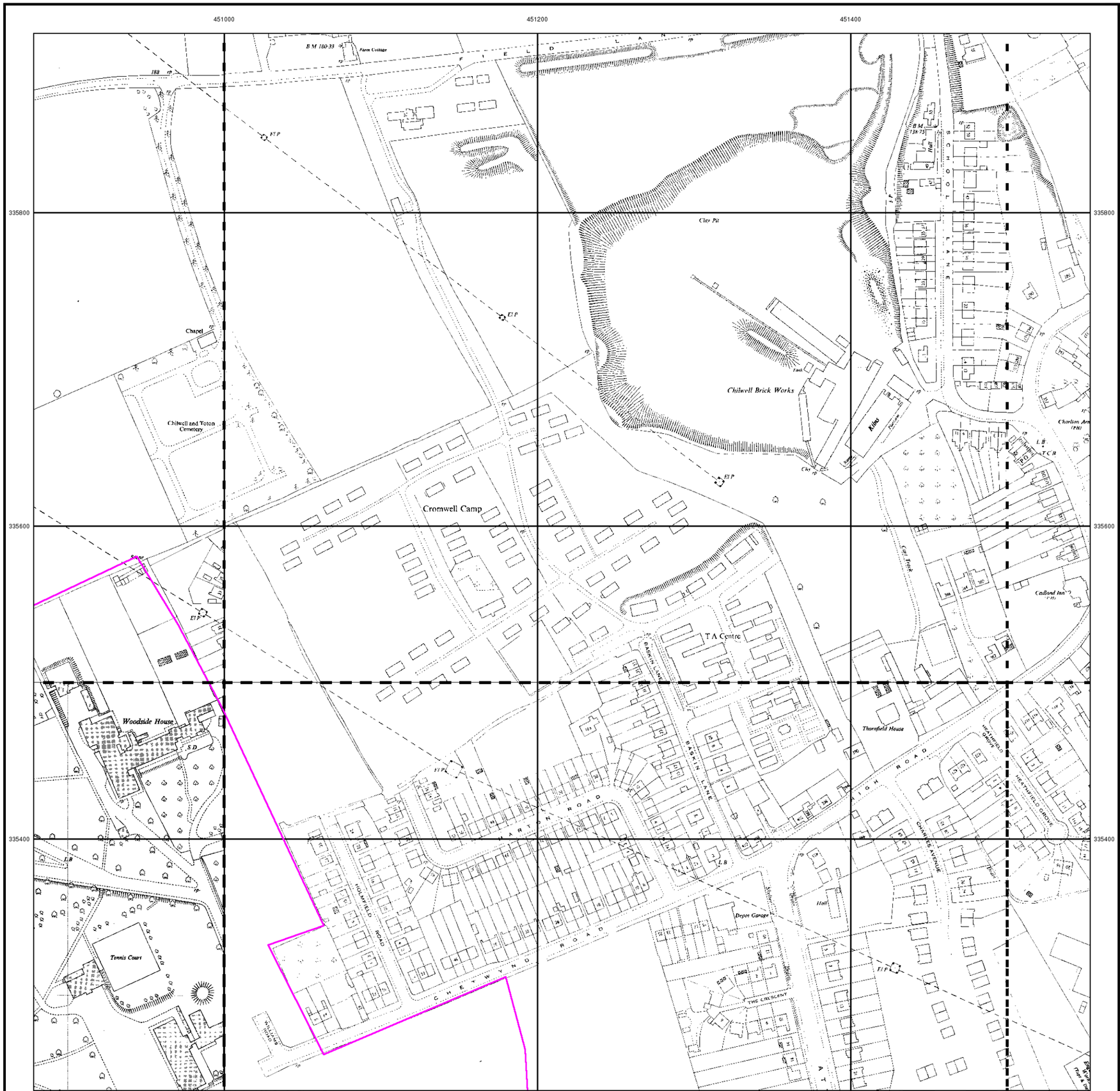
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1956 - 1962

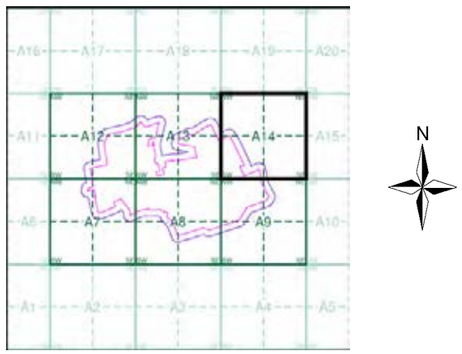
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035NE 1962 1:1,250	SK5135NW 1956 1:1,250	SK5135NE 1956 1:1,250
SK5035SE 1962 1:1,250	SK5135SW 1956 1:1,250	SK5135SE 1956 1:1,250

Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®
LANDMARK INFORMATION GROUP®

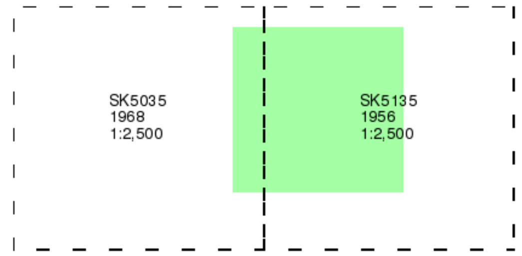
Ordnance Survey Plan

Published 1956 - 1968

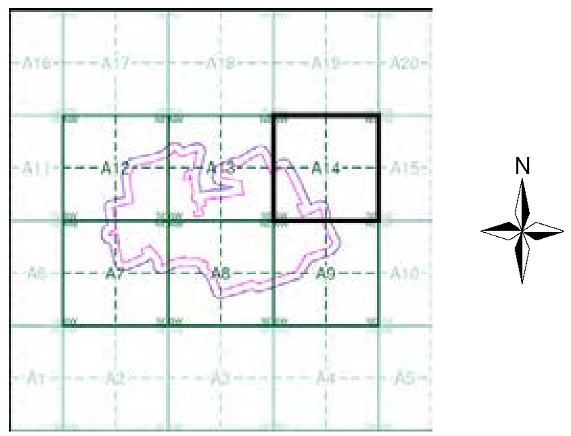
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

Order Number: 105761583_1_1
Customer Ref: Project Moose: Chilwell
National Grid Reference: 450520, 335250
Slice: A
Site Area (Ha): 74.43
Search Buffer (m): 50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web:
[redacted]

Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1962 - 1977

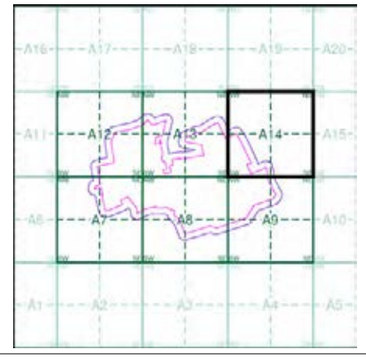
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035NE 1971 1:1,250	SK5135NW 1967 1:1,250	SK5135NE 1967 1:1,250
SK5035SE 1977 1:1,250	SK5135SW 1962 1:1,250	SK5135SE 1962 1:1,250

Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel:
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

Ordnance Survey Plan

Published 1967 - 1977

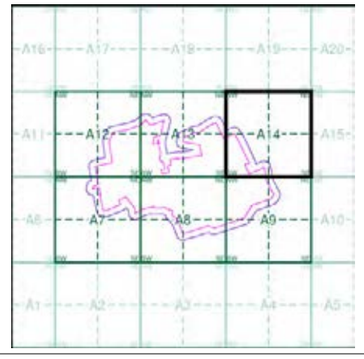
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SK5035NE 1977 1:1,250	SK5135NW 1976 1:1,250	SK5135NE 1972 1:1,250
	SK5135SW 1967 1:1,250	SK5135SE 1974 1:1,250

Historical Map - Segment A14



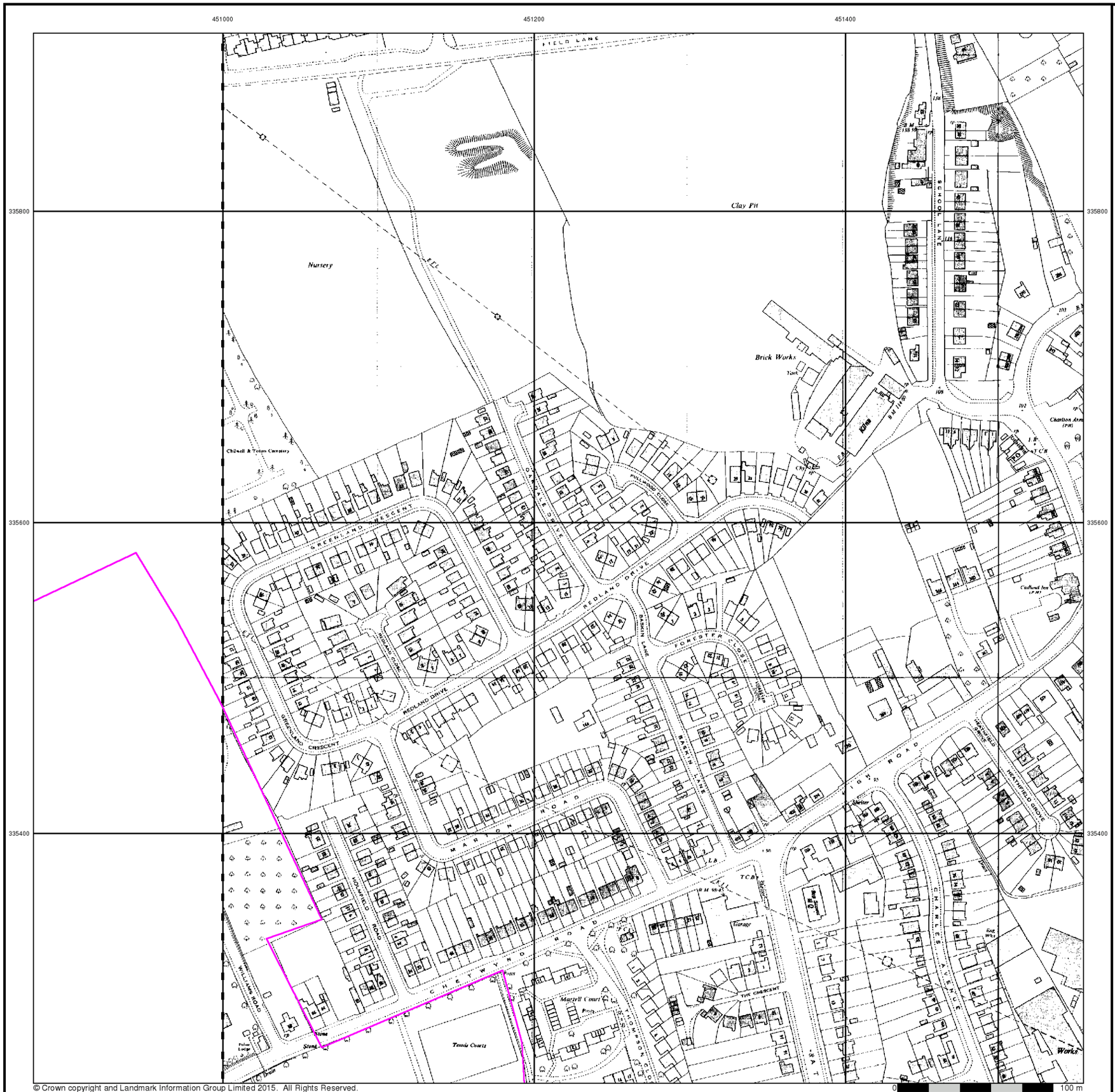
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web: [redacted]uk



Envirocheck®

LANDMARK INFORMATION GROUP®

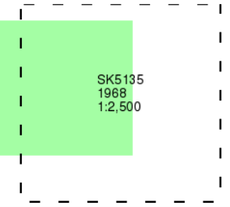
Ordnance Survey Plan

Published 1968

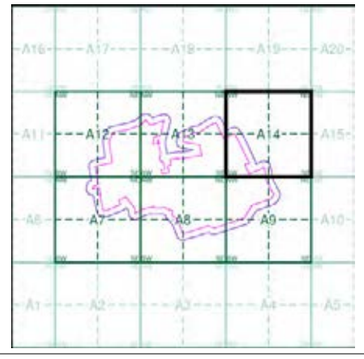
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

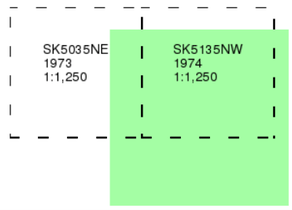
Supply of Unpublished Survey Information

Published 1973 - 1974

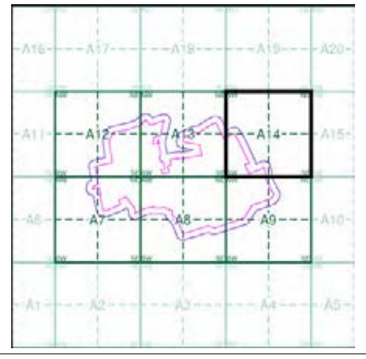
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A14



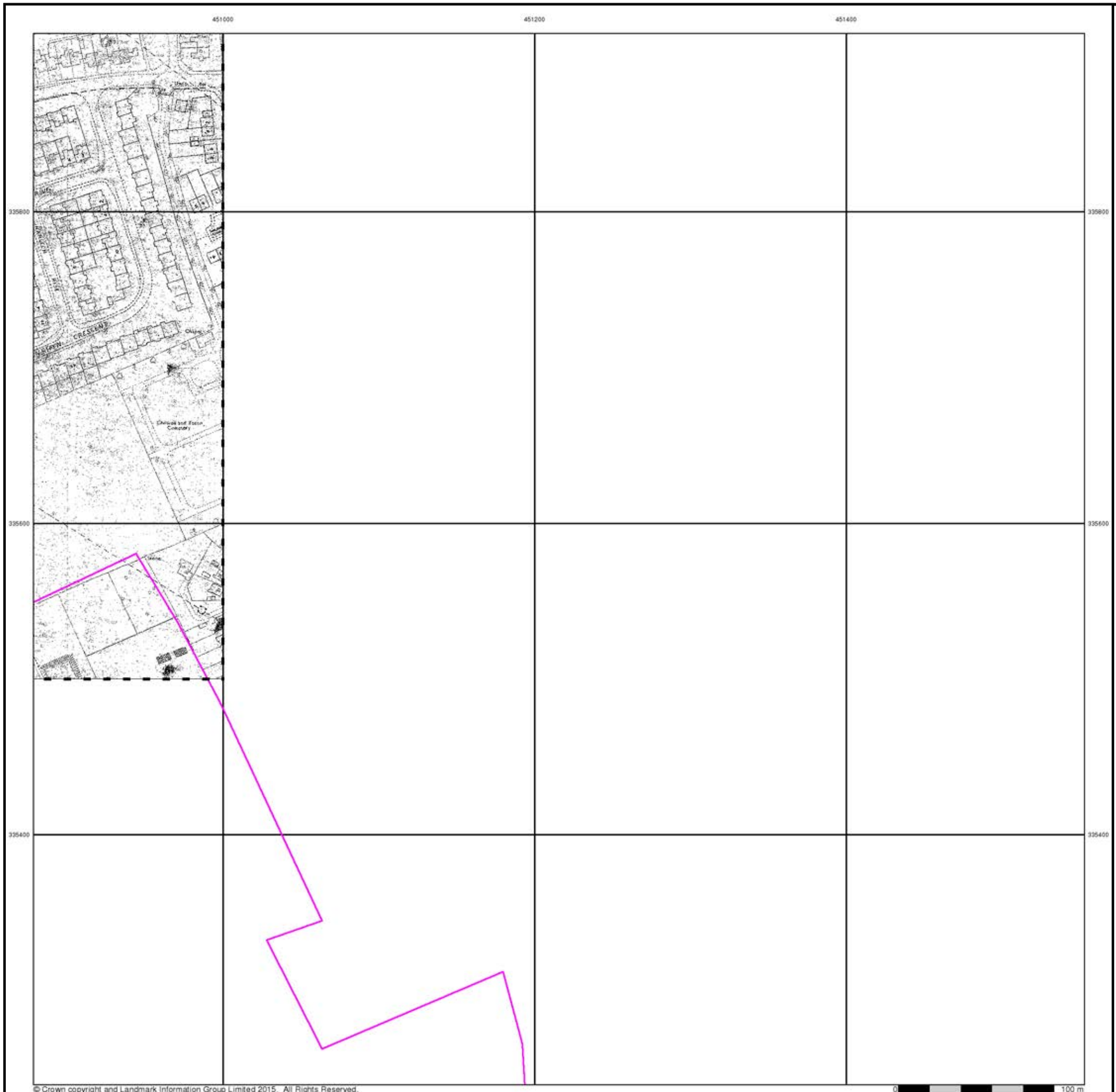
Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Envirocheck®

LANDMARK INFORMATION GROUP®

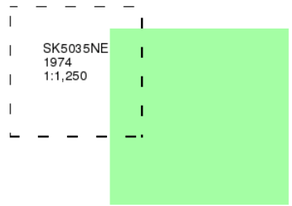
Supply of Unpublished Survey Information

Published 1974

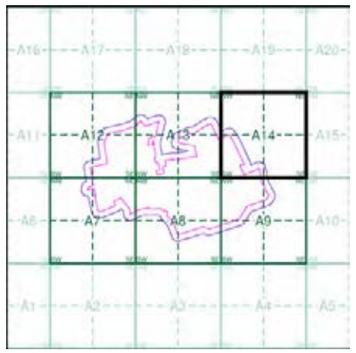
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

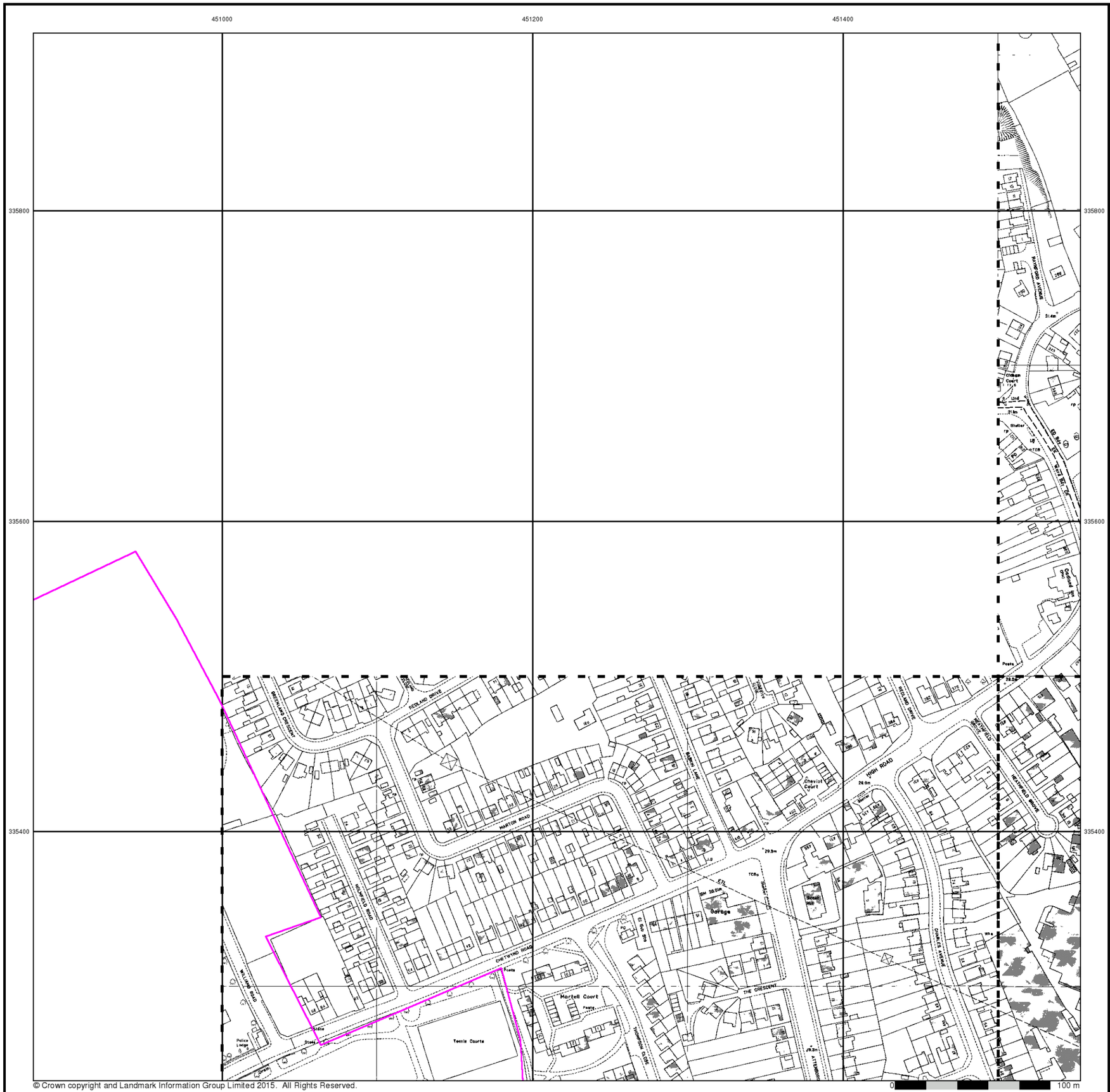
Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]



Envirocheck®

LANDMARK INFORMATION GROUP®

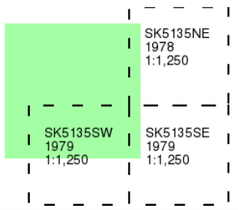
Ordnance Survey Plan

Published 1978 - 1979

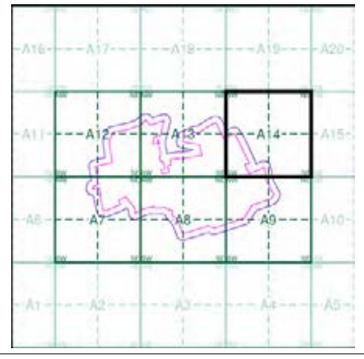
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

0 100 m

Envirocheck®
LANDMARK INFORMATION GROUP®

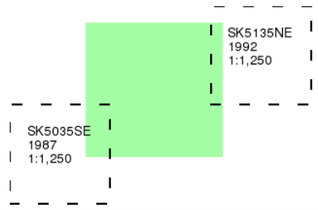
Additional SIMs

Published 1987 - 1992

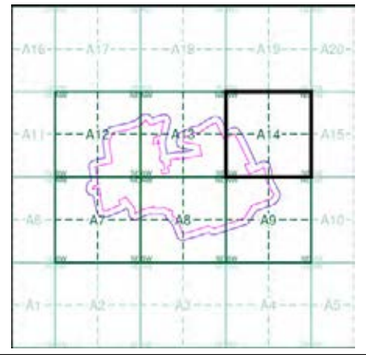
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web: [redacted].uk

Envirocheck®

LANDMARK INFORMATION GROUP®

Large-Scale National Grid Data

Published 1993

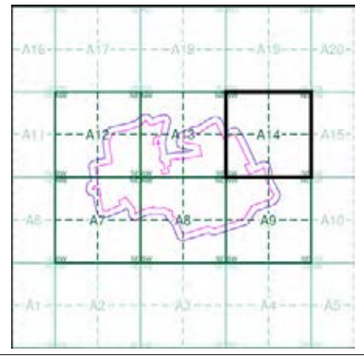
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SK5035NE 1993 1:1,250	SK5135NW 1993 1:1,250	SK5135NE 1993 1:1,250
SK5035SE 1993 1:1,250	SK5135SW 1993 1:1,250	SK5135SE 1993 1:1,250

Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Envirocheck®

LANDMARK INFORMATION GROUP®

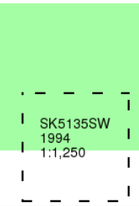
Large-Scale National Grid Data

Published 1994

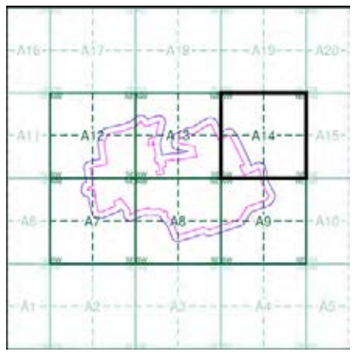
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A14



Order Details

Order Number:	105761583_1_1
Customer Ref:	Project Moose: Chilwell
National Grid Reference:	450520, 335250
Slice:	A
Site Area (Ha):	74.43
Search Buffer (m):	50

Site Details

2, Highfield Road, Beeston, NOTTINGHAM, NG9 5GP

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

Appendix E Extract of Geological Map and Historical Borehole Records

Geology 1:10,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Holocene - Holocene
	LSGR	Landscaped Ground (Undivided)	Unknown/Unclassified Entry	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	BSSG	Beeston Sand and Gravel Member	Sand and Gravel	Pleistocene - Pragian
	HPSG	Holme Pierrepont Sand and Gravel Member	Sand and Gravel	Pleistocene - Pragian
	HETD	Hemington Member	Clay, Silt, Sand and Gravel	Holocene - Pragian
	HEAD	Head	Diamicton	Quaternary - Ryazanian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	COT	Cotgrave Sandstone Member	Sandstone	Carnian - Carnian
	EDW	Edwalton Member	Mudstone	Carnian - Carnian
	GUN	Gunthorpe Member	Mudstone	Ladinian - Anisian
	RDCF	Radcliffe Member	Mudstone and Siltstone	Anisian - Anisian
	GUN	Gunthorpe Member	Siltstone, Dolomitic	Ladinian - Anisian
	TPSF	Tarporley Siltstone Formation	Mudstone, Siltstone and Sandstone	Anisian - Olenekian
	TPSF	Tarporley Siltstone Formation	Sandstone	Anisian - Olenekian
	Fault			

Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

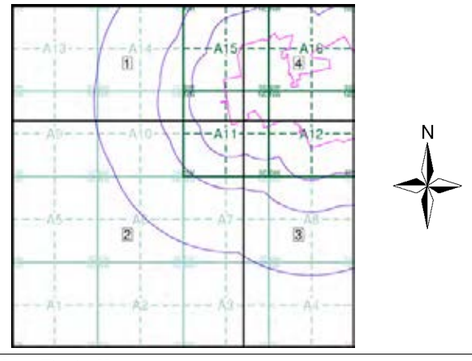
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID:	1	**Map ID:**	2
Map Name:	SK43NE	**Map Name:**	SK43SE
Map Date:	1964	**Map Date:**	1994
Bedrock Geology:	Available	**Bedrock Geology:**	Available
Superficial Geology:	Available	**Superficial Geology:**	Available
Artificial Geology:	Available	**Artificial Geology:**	Available
Faults:	Available	**Faults:**	Available
Landslip:	Available	**Landslip:**	Not Available
Rock Segments:	Available	**Rock Segments:**	Not Available
Map ID:	3	**Map ID:**	4
Map Name:	SK53SW	**Map Name:**	SK53NW
Map Date:	1997	**Map Date:**	1964
Bedrock Geology:	Available	**Bedrock Geology:**	Available
Superficial Geology:	Available	**Superficial Geology:**	Available
Artificial Geology:	Available	**Artificial Geology:**	Available
Faults:	Available	**Faults:**	Available
Landslip:	Available	**Landslip:**	Not Available
Rock Segments:	Not Available	**Rock Segments:**	Available

Geology 1:10,000 Maps - Slice A



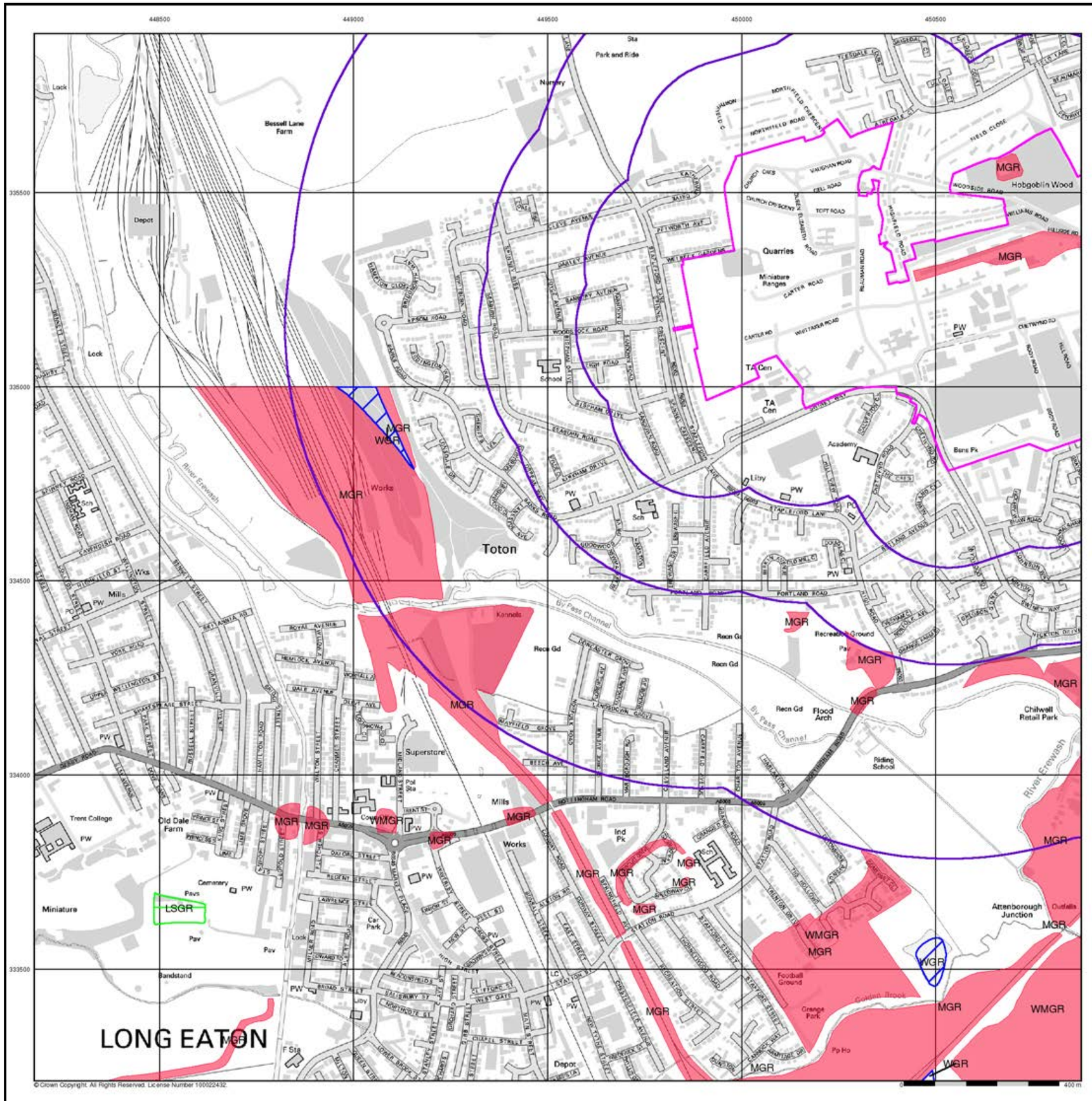
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Tel:
Fax:
Web:



Artificial Ground and Landslip

Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A

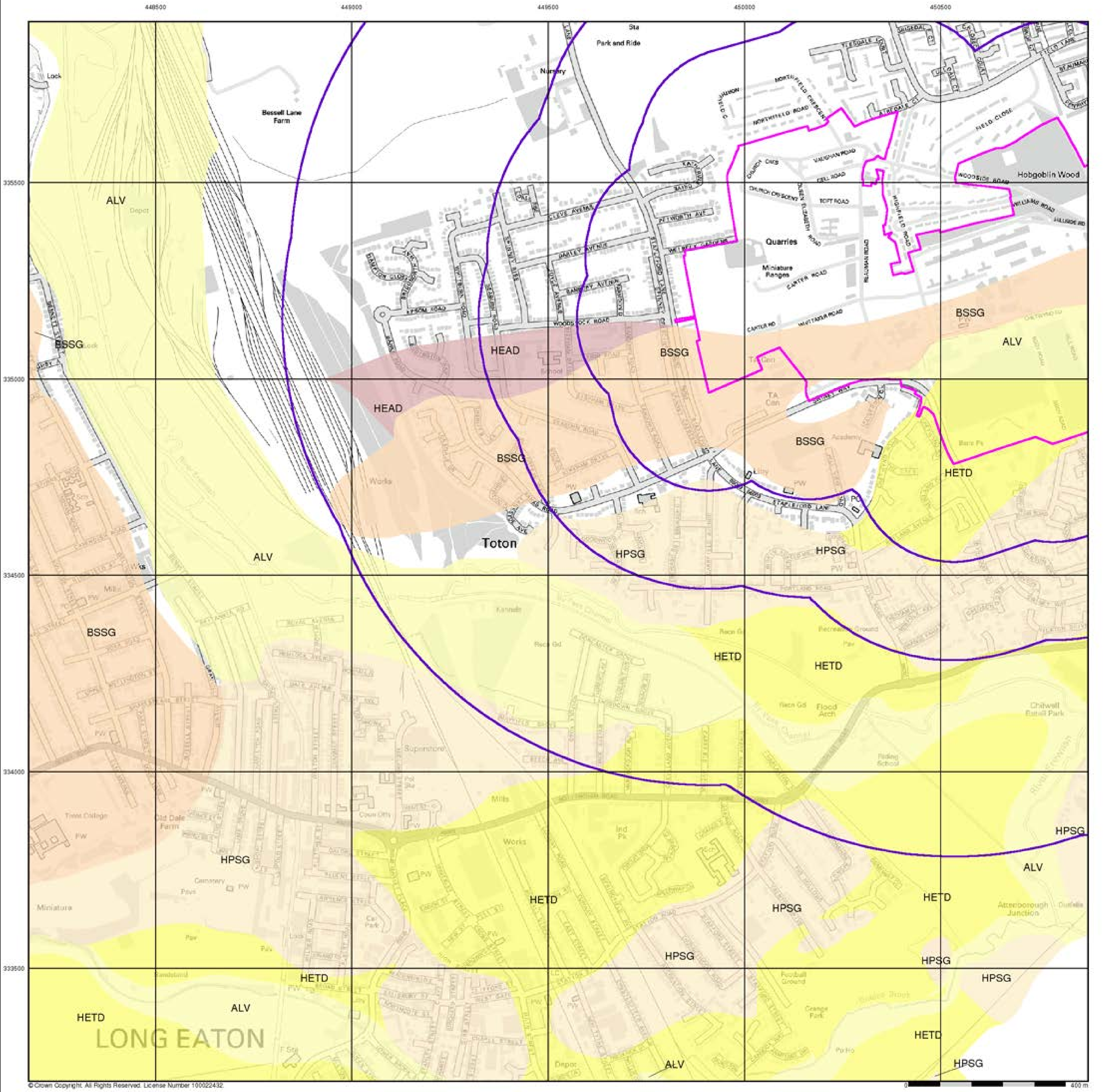
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



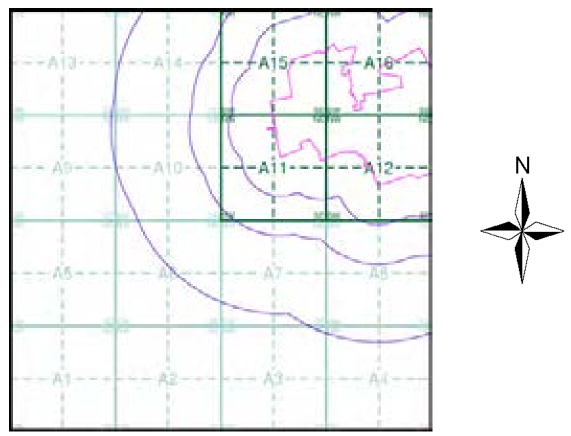
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



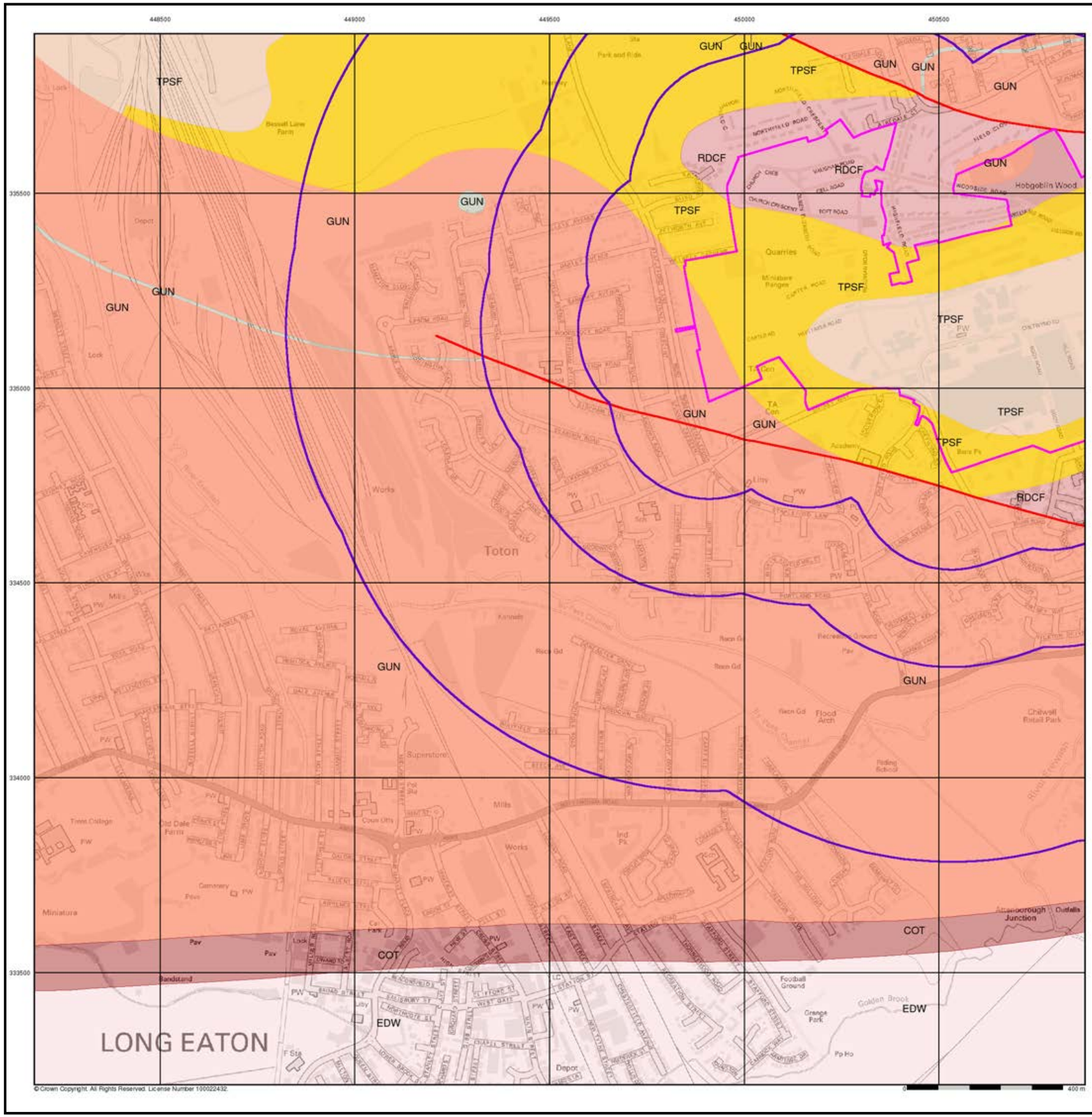
Order Details

Order Number: 114077061_1_1
Customer Ref: 37782-3501
National Grid Reference: 449940, 334950
Slice: A
Site Area (Ha): 75.28
Search Buffer (m): 1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax: [redacted]



Bedrock and Faults

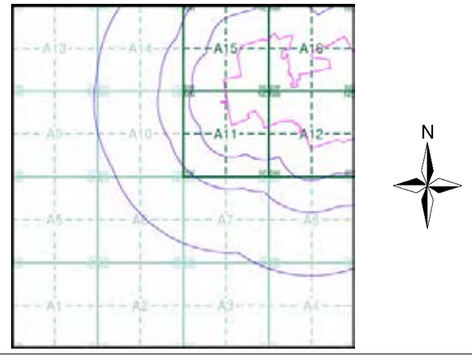
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice A

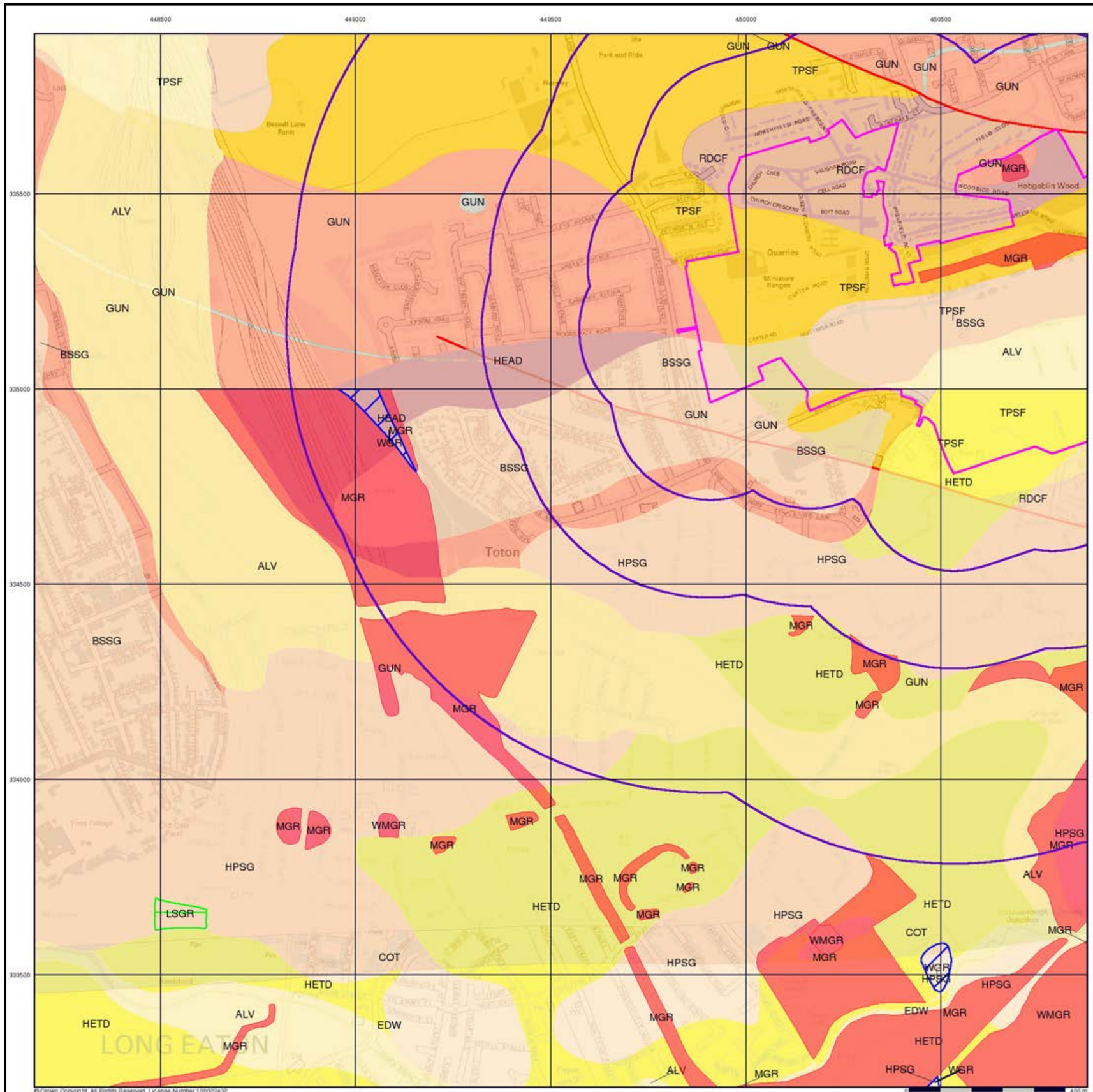


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

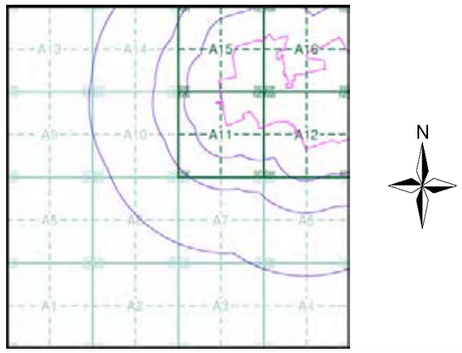
Additional Information

More information on 1:10,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Geology 1:10,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Holocene - Holocene
	WGR	Worked Ground (Undivided)	Void	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	THT	THRUSSINGTON MEMBER	Diamicton	Anglian - Flandrian
	BSSG	Beeston Sand and Gravel Member	Sand and Gravel	Pleistocene - Pragian
	HPSG	Holme Pierrepont Sand and Gravel Member	Sand and Gravel	Pleistocene - Pragian
	HETD	Hemington Member	Clay, Silt, Sand and Gravel	Holocene - Pragian
	HEAD	Head	Diamicton	Quaternary - Ryazanian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	BCMU	Branscombe Mudstone Formation	Mudstone	Rhaetian - Norian
	BCMU	Branscombe Mudstone Formation	Siltstone, Dolomitic	Rhaetian - Norian
	COT	Cotgrave Sandstone Member	Sandstone	Carnian - Carnian
	EDW	Edwalton Member	Mudstone	Carnian - Carnian
	EDW	Edwalton Member	Siltstone, Dolomitic	Carnian - Carnian
	AS	Arden Sandstone Formation	Sandstone	Carnian - Carnian
	GUN	Gunthorpe Member	Mudstone	Ladinian - Anisian
	RDCF	Radcliffe Member	Mudstone and Siltstone	Anisian - Anisian
	GUN	Gunthorpe Member	Siltstone, Dolomitic	Ladinian - Anisian
	TPSF	Tarporley Siltstone Formation	Mudstone, Siltstone and Sandstone	Anisian - Olenekian
	TPSF	Tarporley Siltstone Formation	Sandstone	Anisian - Olenekian
	Fault			

Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

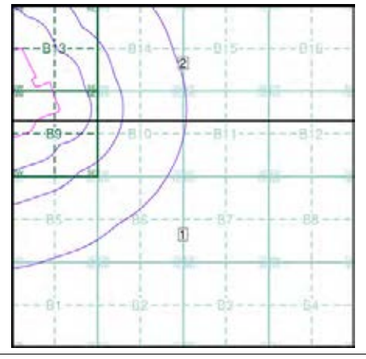
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID:	1	**Map ID:**	2
Map Name:	SK53SW	**Map Name:**	SK53NW
Map Date:	1997	**Map Date:**	1964
Bedrock Geology:	Available	**Bedrock Geology:**	Available
Superficial Geology:	Available	**Superficial Geology:**	Available
Artificial Geology:	Available	**Artificial Geology:**	Available
Faults:	Available	**Faults:**	Available
Landslip:	Available	**Landslip:**	Not Available
Rock Segments:	Not Available	**Rock Segments:**	Available

Geology 1:10,000 Maps - Slice B



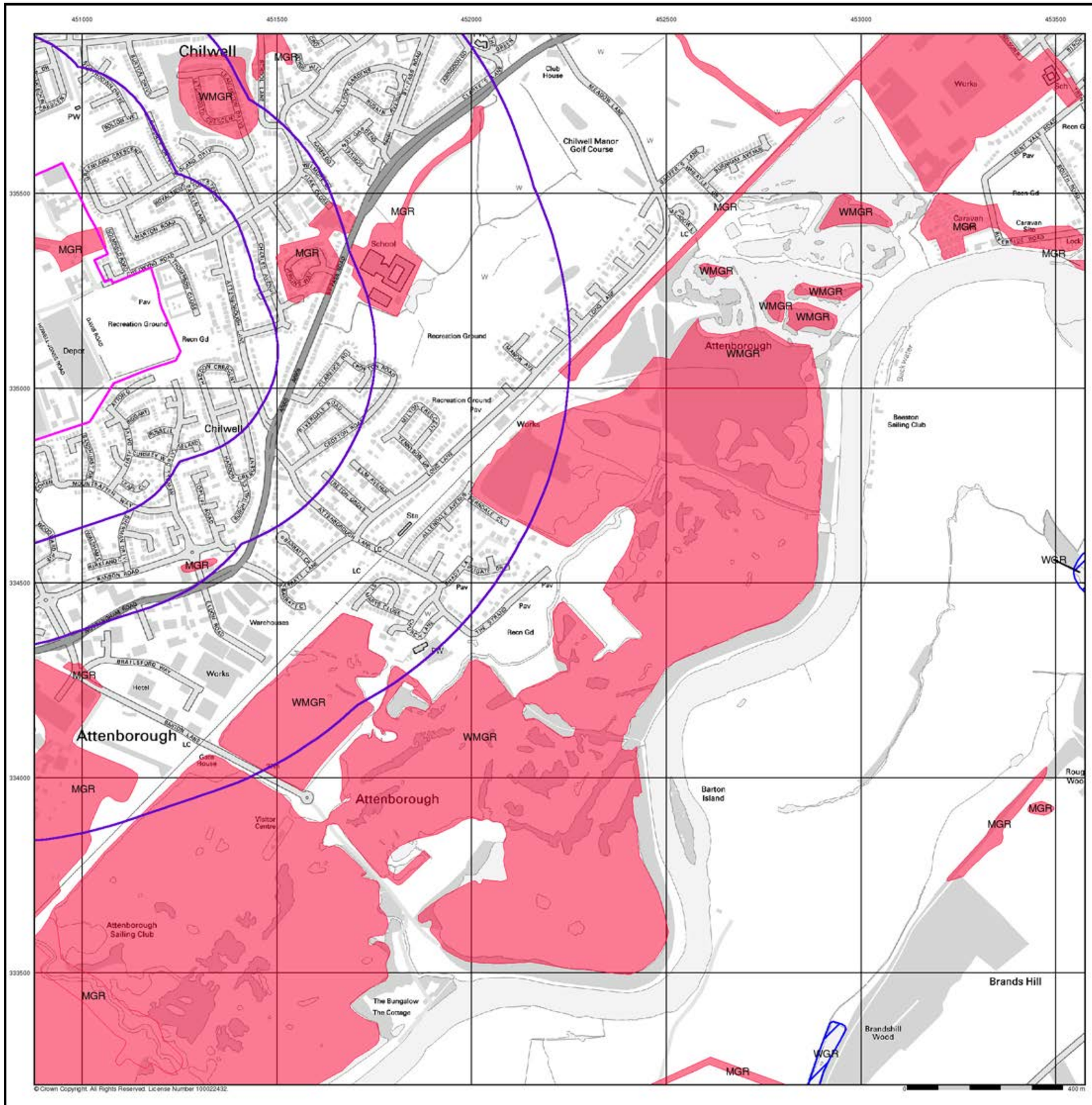
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

Artificial Ground and Landslip

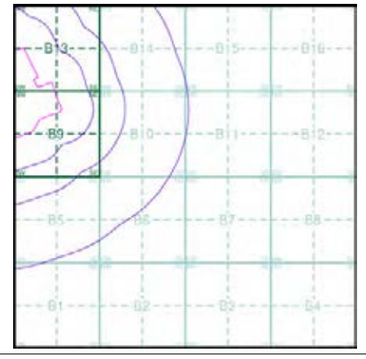
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice B



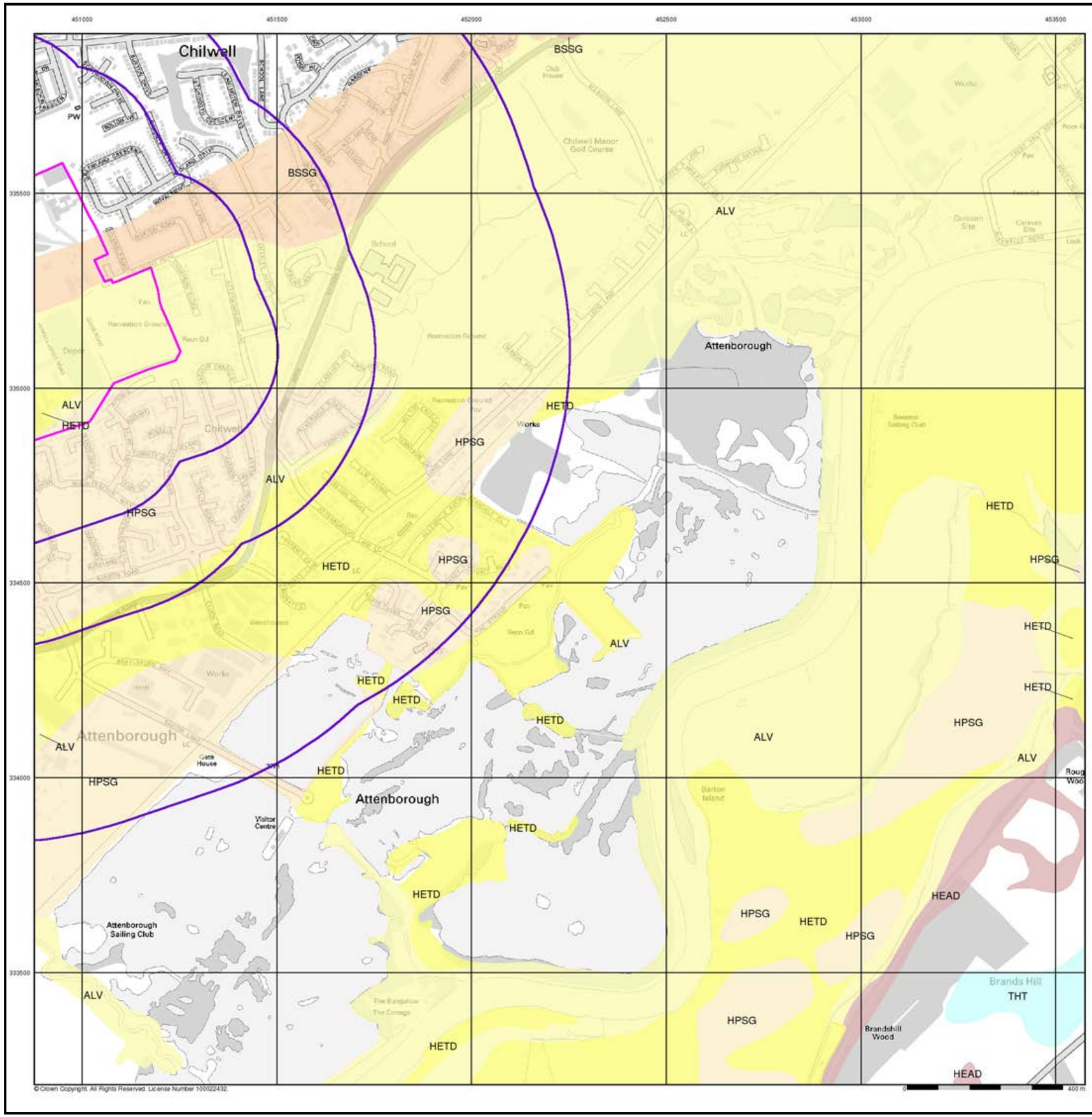
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



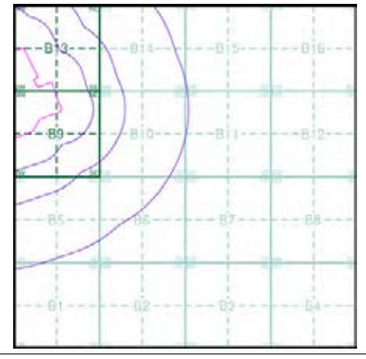
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice B



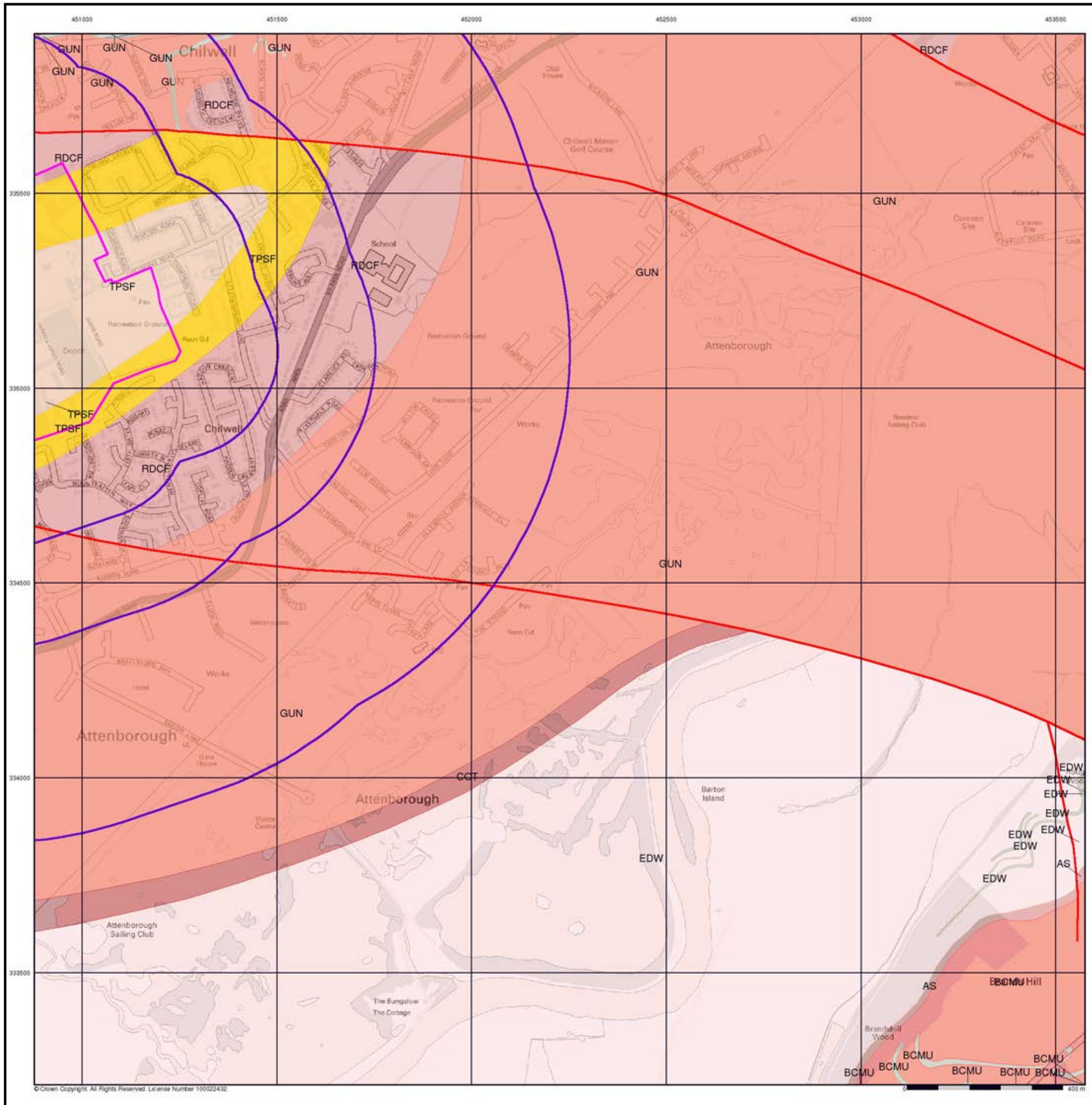
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



Bedrock and Faults

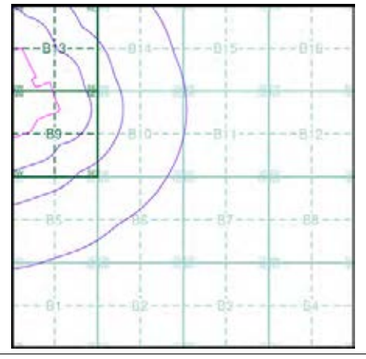
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice B



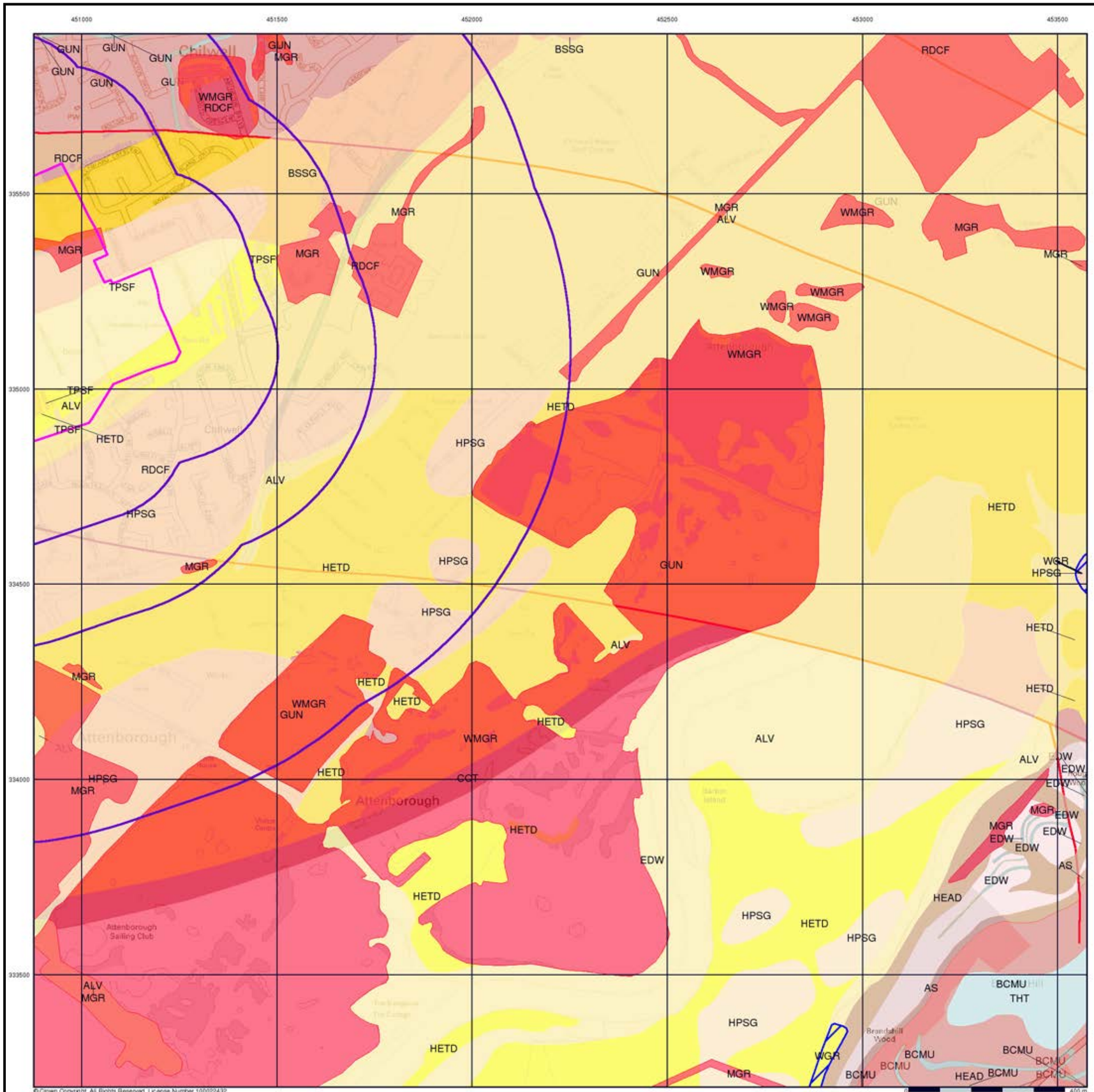
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

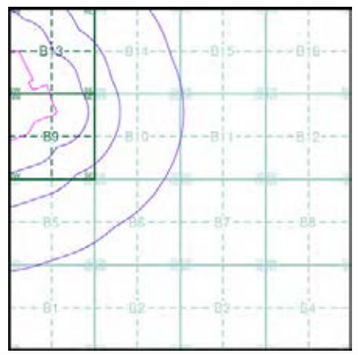
Additional Information

More information on 1:10,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice B



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Geology 1:10,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Holocene - Holocene
	SLIP	Landslide Deposit	Unknown/Unclassified Entry	Quaternary - Quaternary

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Quaternary - Ryazanian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	GUN	Gunthorpe Member	Mudstone	Ladinian - Anisian
	GUN	Gunthorpe Member	Siltstone, Dolomitic	Ladinian - Anisian
	TPSF	Tarporley Siltstone Formation	Sandstone	Anisian - Olenekian
	TPSF	Tarporley Siltstone Formation	Mudstone, Siltstone and Sandstone	Anisian - Olenekian
	NTC	Nottingham Castle Sandstone Formation	Sandstone	Early Triassic - Early Triassic
	LNS	Lenton Sandstone Formation	Sandstone	Early Triassic - Late Permian
	PLCM	Pennine Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Langsettian - Langsettian
	PLCM	Pennine Lower Coal Measures Formation	Sandstone	Langsettian - Langsettian
	WGF	Wingfield Flags	Sandstone	Langsettian - Langsettian
	Fault			
	Rock			

Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

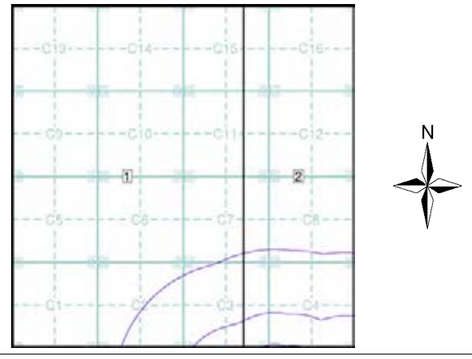
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID:	1	**Map ID:**	2
Map Name:	SK43NE	**Map Name:**	SK53NW
Map Date:	1964	**Map Date:**	1964
Bedrock Geology:	Available	**Bedrock Geology:**	Available
Superficial Geology:	Available	**Superficial Geology:**	Available
Artificial Geology:	Available	**Artificial Geology:**	Available
Faults:	Available	**Faults:**	Available
Landslip:	Available	**Landslip:**	Not Available
Rock Segments:	Available	**Rock Segments:**	Available

Geology 1:10,000 Maps - Slice C



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

Artificial Ground and Landslip

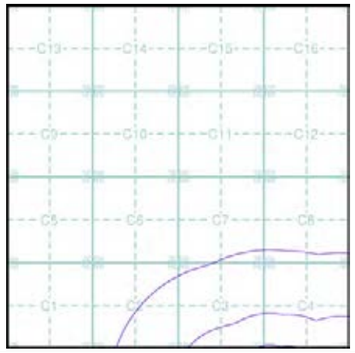
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice C



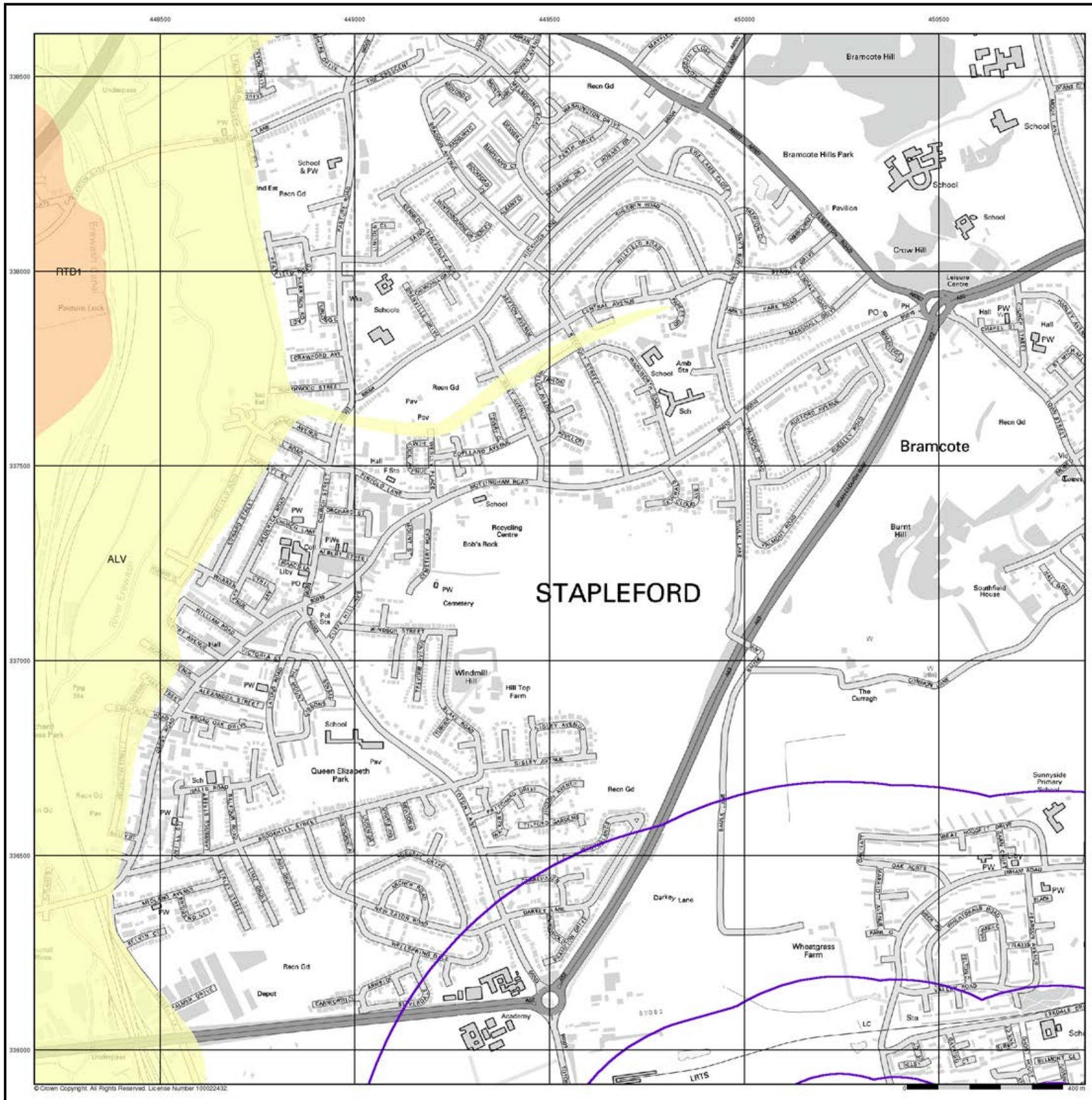
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



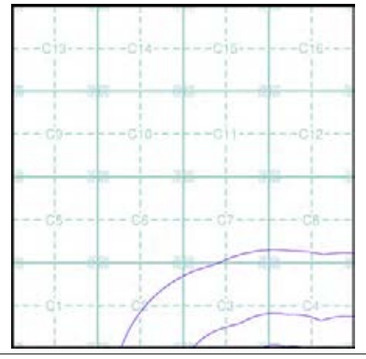
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice C



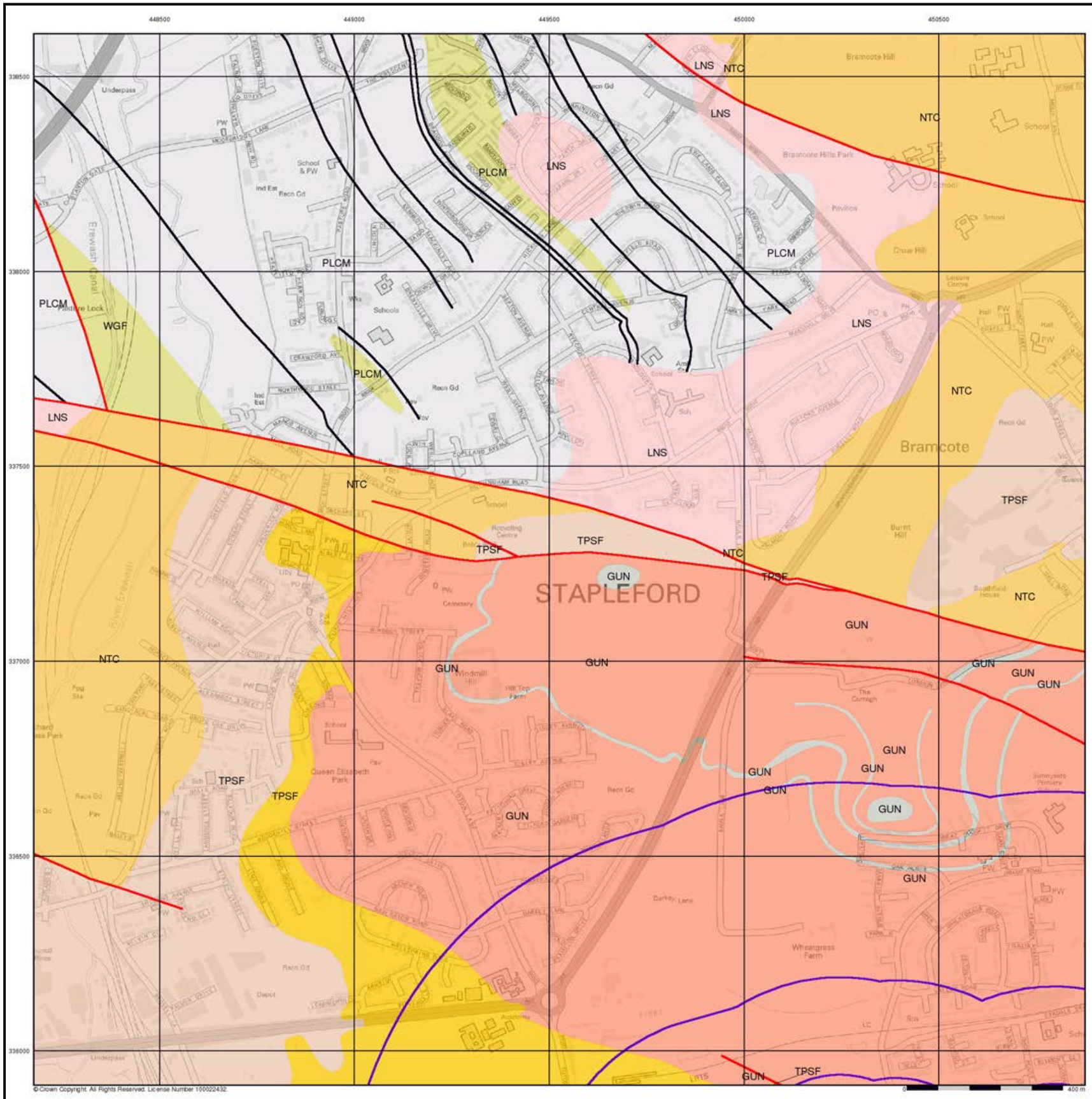
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Bedrock and Faults

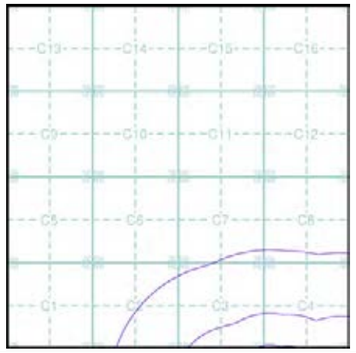
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice C

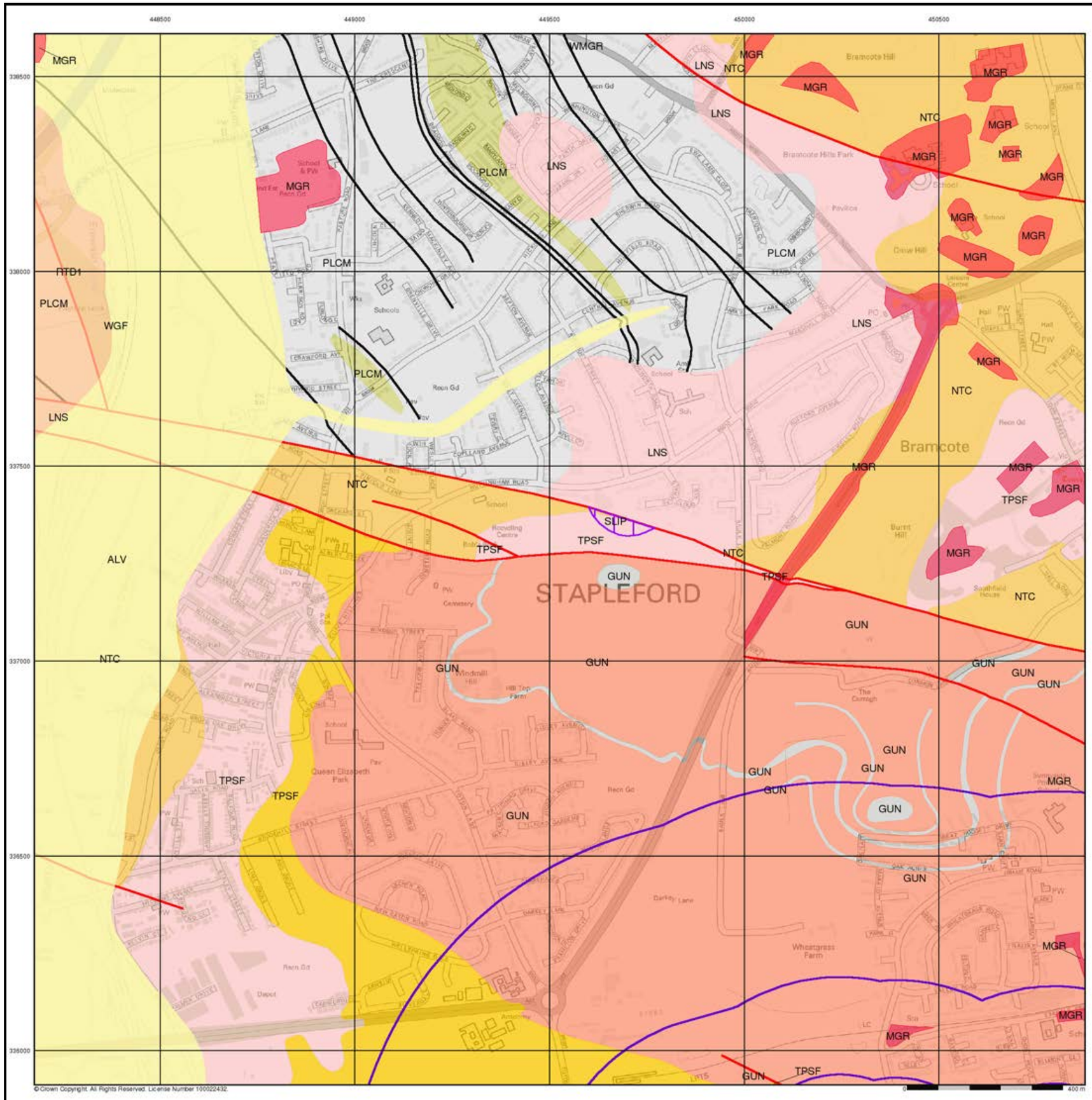


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

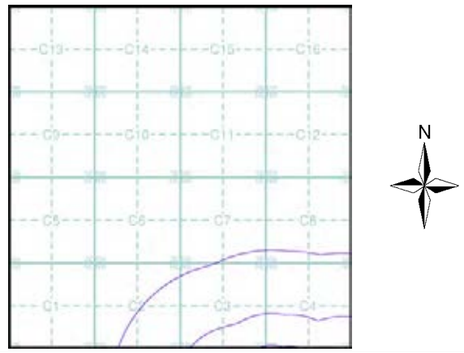
Additional Information

More information on 1:10,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice C



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Geology 1:10,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Holocene - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Holocene - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Flandrian - Pleistocene
	BSSG	Beeston Sand and Gravel Member	Sand and Gravel	Pleistocene - Pragian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	GUN	Gunthorpe Member	Mudstone	Ladinian - Anisian
	GUN	Gunthorpe Member	Siltstone, Dolomitic	Ladinian - Anisian
	RDCF	Radcliffe Member	Mudstone and Siltstone	Anisian - Anisian
	TPSF	Tarporley Siltstone Formation	Mudstone, Siltstone and Sandstone	Anisian - Olenekian
	NTC	Nottingham Castle Sandstone Formation	Sandstone	Early Triassic - Early Triassic
	LNS	Lenton Sandstone Formation	Sandstone	Early Triassic - Late Permian
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Bolsovian - Duckmantian
	Fault			
	Rock			

Geology 1:10,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:10,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around a site. This mapping may be more up to date than previously published paper maps.

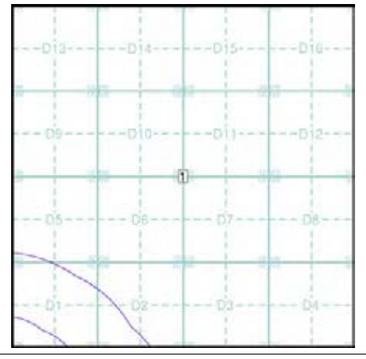
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page.

Please Note: Not all of the layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:10,000 Maps Coverage

Map ID: 1
Map Name: SK53NW
Map Date: 1964
Bedrock Geology: Available
Superficial Geology: Available
Artificial Geology: Available
Faults: Available
Landslip: Not Available
Rock Segments: Available

Geology 1:10,000 Maps - Slice D



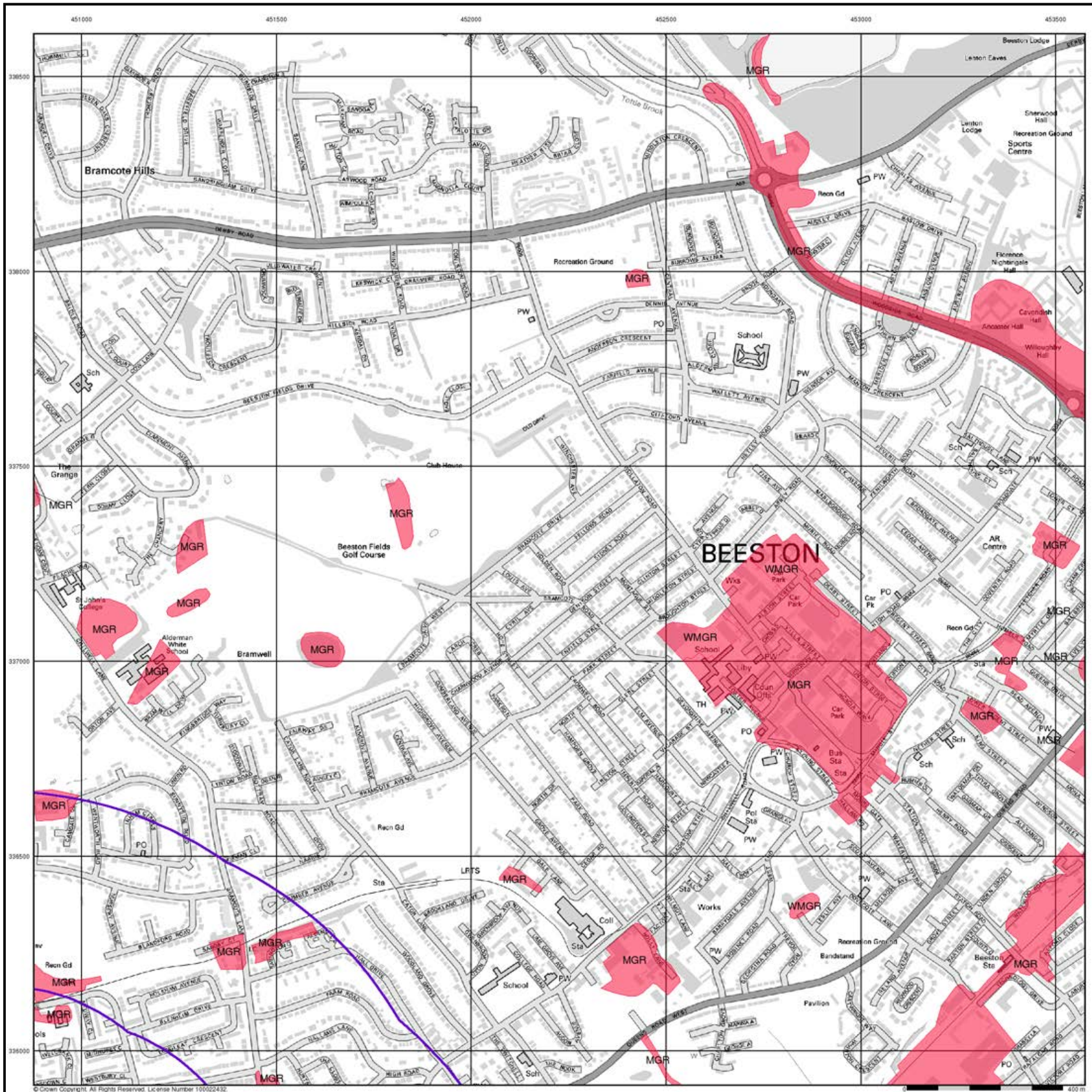
Order Details

Order Number: 114077061_1_1
Customer Ref: 37782-3501
National Grid Reference: 451280, 336210
Slice: D
Site Area (Ha): 75.28
Search Buffer (m): 1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Artificial Ground and Landslip

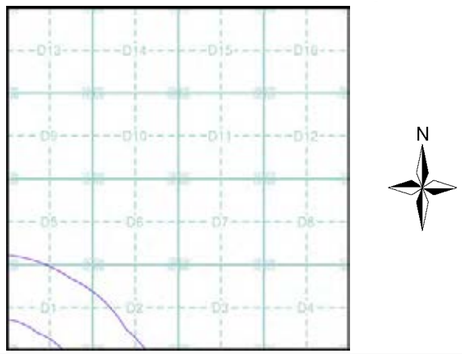
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice D

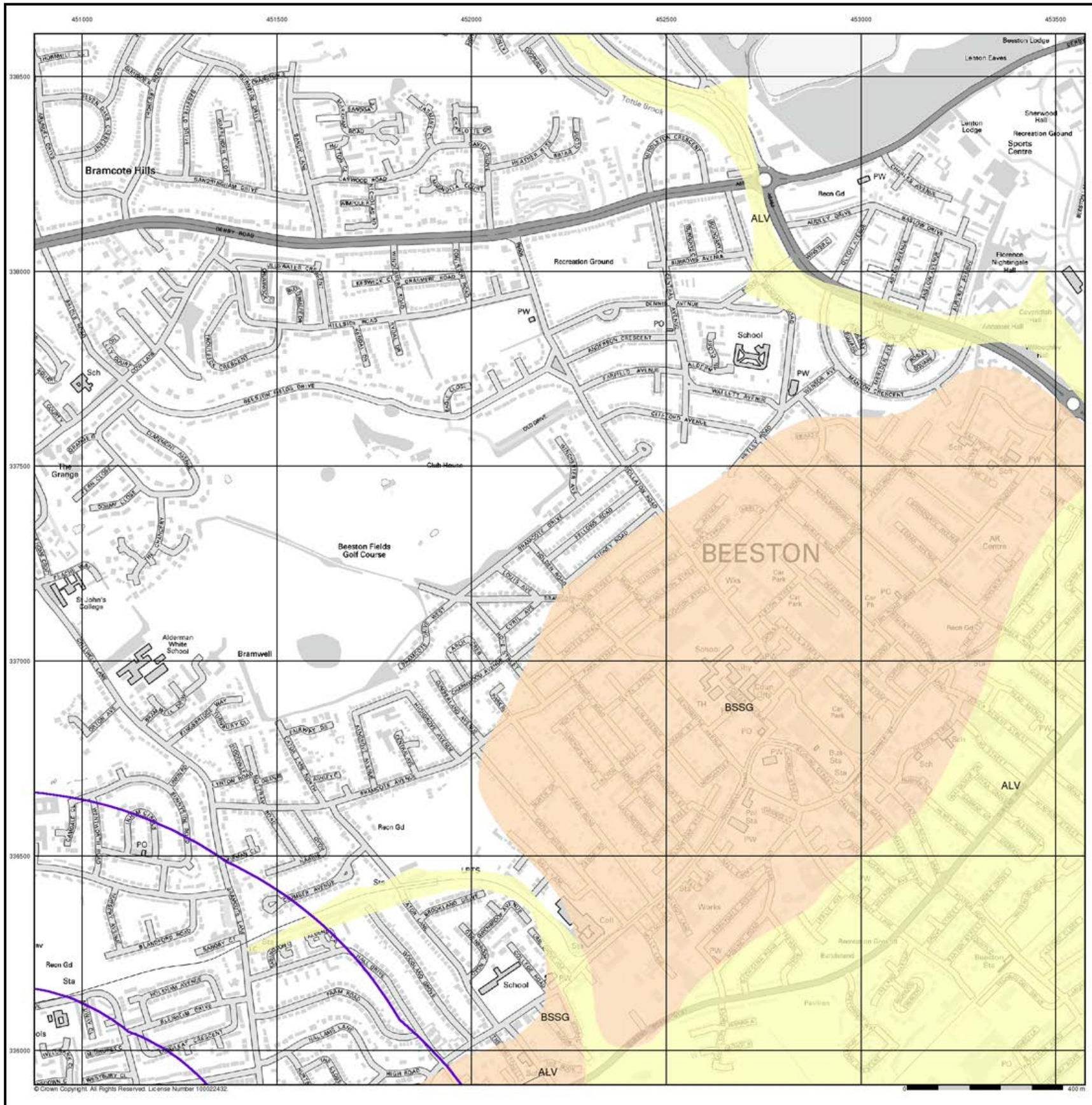


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



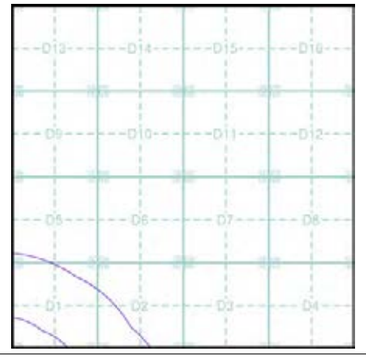
Superficial Geology

BGS 1:10,000 Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice D



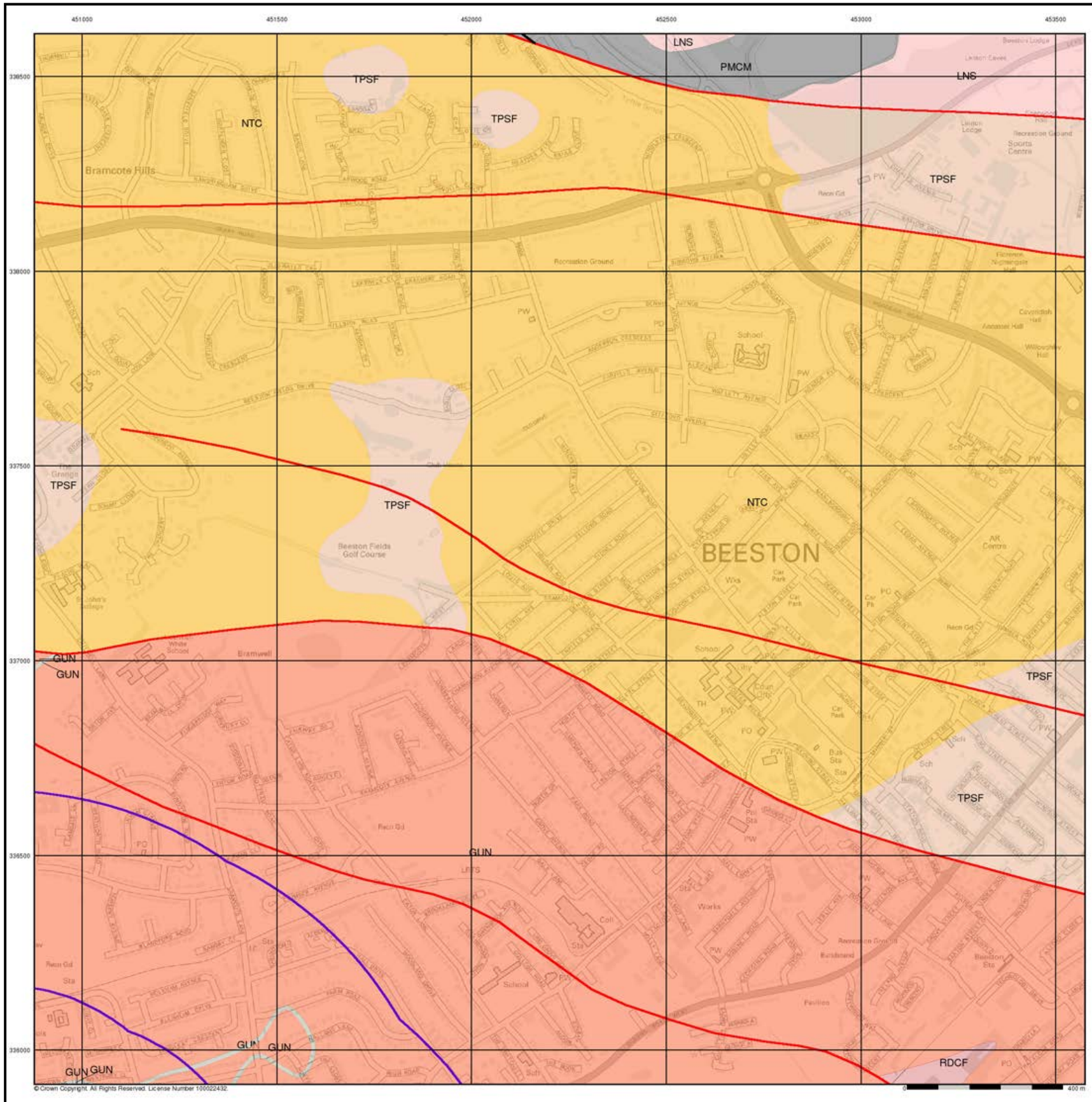
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



peterbrett

Bedrock and Faults

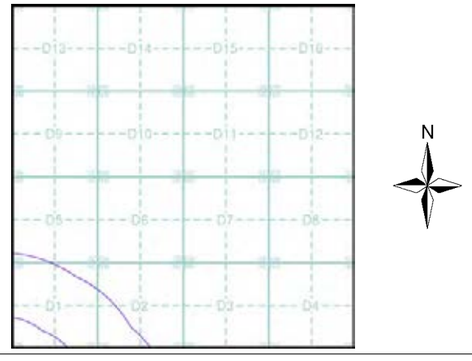
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults and thin beds mapped as lines such as coal seams and mineral veins. These are not restricted by age and could relate to features of any of the 1:10,000 geology datasets.

Bedrock and Faults Map - Slice D



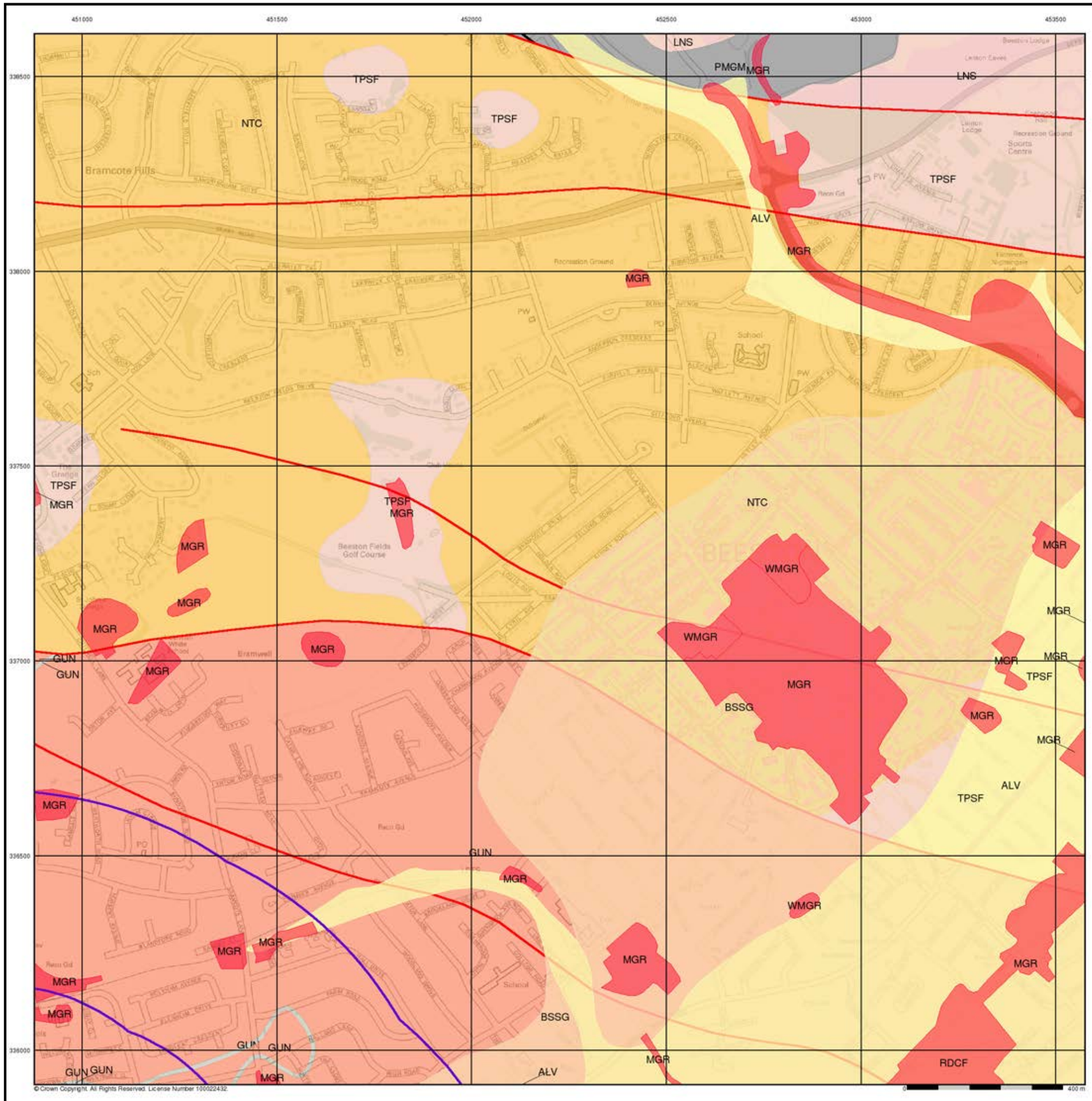
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web: [redacted]uk



Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

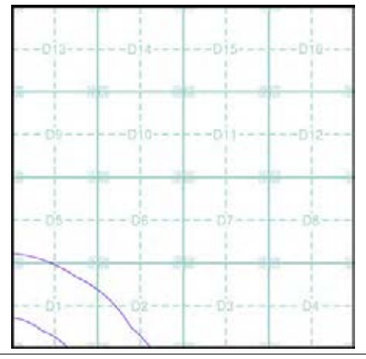
Additional Information

More information on 1:10,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice D



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Site Details: Chetwynd Barracks

Site National Grid Reference: 451480E, 334990N.

BGS Boreholes

Map ID	Hole ID	Easting	Northing	Distance	Quadrant F	Quadrant F	Bearing	BGS Ref	Drilled Length (m)	Borehole Name:
103	BH1	450390	335140	0	A12	NW	NE	Sk53nw574	7.4	Chetwynd Barracks Chilwell 1
104	WS3	450820	335090	0	A12	NE	E	Sk53nw578	4	Chetwynd Barracks Chilwell Ws3
105	TP1	450330	335440	0	A16	SW	NE	Sk53nw582	3	Chetwynd Barracks Chilwell Tp1
106	TP6	450820	335320	0	A16	SE	NE	Sk53nw583	1.7	Chetwynd Barracks Chilwell Tp6
122	-	450900	335010	0	B9	NW	W	Sk53nw373	61.57	Central Ordnance Depot Chilwell
123	-	450880	335060	0	B9	NW	W	Sk53nw446	70.71	Central Shell Filling Factory
124	-	450990	335010	0	B9	NW	W	Sk53nw508	61.57	Chilwell Central Ordnance Dept
125	BH2	450910	335010	0	B9	NW	W	Sk53nw575	6.95	Chetwynd Barracks Chilwell 2
125	WS5	450920	335050	0	B9	NW	W	Sk53nw579	1.7	Chetwynd Barracks Chilwell Ws5
125	WS6	450940	334980	0	B9	NW	W	Sk53sw418	0.7	Chetwynd Barracks Chilwell Ws6/6a
125	WS6A	450940	334980	0	B9	NW	W	Sk53sw418	1	Chetwynd Barracks Chilwell Ws6/6a
126	WS1	450900	335480	0	B13	SW	NW	Sk53nw576	1.4	Chetwynd Barracks Chilwell Ws1
126	WS2	450920	335480	0	B13	SW	NW	Sk53nw577	1.5	Chetwynd Barracks Chilwell Ws2
127	WS7	450980	335000	0	B9	NW	W	Sk53nw580	0.7	Chetwynd Barracks Chilwell Ws7/7a
127	WS7A	450980	335000	0	B9	NW	W	Sk53nw580	4	Chetwynd Barracks Chilwell Ws7/7a
128	WS8	451030	335020	0	B9	NW	W	Sk53nw581	4	Chetwynd Barracks Chilwell Ws8
129	TP7	450950	335470	0	B13	SW	NW	Sk53nw584	3	Chetwynd Barracks Chilwell Tp7
130	WS9	450950	334930	0	B9	NW	W	Sk53sw419	4	Chetwynd Barracks Chilwell Ws9

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS9
Excavation Method Drive-in Window Sampler	**Dimensions** 101mm to 2.00m 86mm to 3.00m	**Ground Level (mOD)** 29.18	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451133 E 334723 N	**Dates** 26/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.18)	Reinforced CONCRETE		
				29.00	0.18	MADE GROUND. Brick Rubble		
					(0.17)			
				28.83	0.35			
0.35	D1				(0.10)	MADE GROUND. Brownish grey, very gravelly fine and *medium SAND*. Gravel is *angular* to sub-rounded. fine to coarse ash, brick and quartz.		
0.50	J1			28.73	0.45			
0.50	D2							
0.65	D3				(0.45)	Firm greyish brown slightly gravelly and sandy CLAY. Gravel is sub-rounded to rounded fine to coarse quartz		
0.90	D4			28.28	0.90	.....from 0.65m becoming brown		
1.00-1.45	CPT N=14		2,4/3,3,4,4			Yellowish brown gravelly and silty fine and medium SAND. Gravel is *sub-rounded to rounded f/c quartz*		
1.00-2.00	C1				(0.50)			
				27.78	1.40	Brown silty gravely fine to coarse SAND. Gravel consists of subanglar to subrounded fine to medium flint and quartz		
2.00-3.00	C2		Water strike(1) at 2.00m.					▽1
2.00-2.45	CPT N=37		7,8/8,10,9,10		(1.50)			
				26.28	2.90	Brown slightly silty slightly gravelly fine to coarse *SAND*. Gravel consists of subangular to rounded fine to medium *flint and quartz*		
3.00-4.00	C3				(1.10)			
				25.18	4.00			
						Complete at 4.00m		

Remarks
Location : Nr Dutch Barn
Excavating from 0.00m to 0.70m for 1 hour.

Scale (approx)	Logged By
1:25	[redacted]

Figure No. SI0601.WS9

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Trial Pit Number** TP7
Excavation Method Trial Pit	**Dimensions**	**Ground Level (mOD)** 34.40	**Client** Mott MacDonald	**Job Number** SI0601
	Location 450993 E 352117 N	**Dates** 24/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D1			34.25	0.15	TOPSOIL dark brown very silty fine SAND, some roots		
0.50	D2					Brown very sandy SILT/fine SAND (medium dense) becoming very sandy SILT		
0.50	B1				(1.35)			
0.90	B2							
1.60	D3			32.90	1.50	Grey brown very sandy SILT		
2.00	D4					... from 1.90m very silty fine sand		
					(1.50)	... from 2.20m red brown very sandy silt with some fine and medium sandstone gravel		
3.00	D5			31.40	3.00	Complete at 3.00m		

Plan

Remarks

Location : Nr Building 108A
Dry and stable

Scale (approx)	Logged By	Figure No.
1:40	[redacted]	SI0601.TP7

May Gurney

May Gurney Geotechnical

Excavation Method Drive-In Window Sampler	**Dimensions** 101mm to 1.00m 86mm to 2.00m 101mm to 3.00m	**Ground Level (mOD)** 29.32	**Site** Chilwell, Chetwynd Barracks	**Number** WS8
	Location 451192 E 334788 N	**Dates** 24/06/03	**Client** Mott MacDonald	**Job Number** SI0601
			Engineer	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						TARMAC		
0.20-1.00	C1			29.12	(0.20) 0.20	MADE GROUND. Brick Rubble		
					(0.70)			
1.00-1.45 1.00-2.00	CPT N=9 C2		3,5/3,2,2,2	28.42	0.90	Stiff mottled dark grey greenish grey sandy CLAY with a little rounded fine to medium flint gravel.		
					(0.60)			
				27.82	1.50	Brown gravelly clayey fine to coarse SAND. Gravel consists of subangular to rounded fine to medium sandstone and quartz		
				27.62	(0.20) 1.70	Yellowish brown silty gravelly fine to medium SAND. Gravel consists of subangular fine to coarse flint and quartz		
2.00-3.00 2.00-2.45	C3 CPT N=28		Water strike(1) at 2.00m. 4,3/5,7,8,8					▽1
					(2.30)			
3.00-4.00	C4							
				25.32	4.00	Complete at 4.00m		

Remarks
Location : Nr Pump House
Descriptions taken from drillers logs. Blowing sand from 2.00m

Scale (approx)	Logged By
1:25	[redacted]

Figure No.
SI0601.WS8

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS7A
Excavation Method Drive-in Window Sampler	**Dimensions** 101mm to 2.00m 101mm to 3.00m 86mm to 4.00m	**Ground Level (mOD)** 29.47	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451095 E 334767 N	**Dates** 24/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				29.37	0.10	TARMAC		
0.20	D1				(0.60)	MADE GROUND. Light greyish brown very gravelly and silty fine and medium SAND. Gravel is angular to sub-angular medium to coarse quartzite and brick (Slight diesel odour)		
0.50	J1					...from 0.5m becoming greyish brown (Slight diesel odour)		
0.50	D2							
0.70	D3			28.77	0.70			
					(0.30)	MADE GROUND. Dark grey very gravelly fine to coarse SAND. Gravel is angular to sub-angular fine to coarse ash, charcoal, brick and concrete. (Slight diesel odour)		
1.00-1.45	CPT N=4		1/1,,1,2	28.47	1.00	Soft brownish grey sandy CLAY.		
1.00	J2							
1.00-2.00	C1				(0.40)			
				28.07	1.40			
					(0.20)	Soft yellowish brown very sandy gravelly CLAY. Gravel consists of subrounded fine to medium flint and quartz		
				27.87	1.60	Brown silty gravelly fine to medium SAND. Gravel consists of subangular to subrounded fine to medium flint and quartz		
					(0.40)			
2.00-3.00	C2		Water strike(1) at 2.00m.	27.47	2.00	Brown slighty silty slightly gravelly fine to coarse SAND. Gravel consists of subangular to subrounded fine to medium flint		▽1
2.00-2.45	CPT N=29		4,5/7,7,7,8					
						...from 2.60m gravelly sand		
3.00-4.00	C3		C3 emptied into B1. Poor Recovery		(2.00)			
3.00-4.00	B1							
				25.47	4.00			
						Complete at 4.00m		

Remarks
Location : Nr Plant Room

Scale (approx)	Logged By
1:25	[redacted]

Figure No. SI0601.WS7A

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS7
Excavation Method Drive-in Window Sampler	**Dimensions**	**Ground Level (mOD)** 29.45	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451094 E 334768 N	**Dates** 24/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				29.35	0.10	TARMAC		
0.30	D1				(0.60)	MADE GROUND. Light greyish brown very gravelly and silty fine and medium SAND. Gravel is angular to sub-angular medium to coarse quartzite and brick (Slight diesel odour)		
0.50	J1					.....from 0.5m becoming greyish brown (slight diesel odour)		
0.60-0.70	D2			28.75	0.70	Complete at 0.70m		

Remarks
Location : Nr Plant Room
WS Abandoned at 0.70m. Concrete obstruction

Scale (approx)	Logged By
1:25	[redacted]

Figure N
SI0601.WS7

May Gurney

May Gurney Geotechnical

			Site Chilwell, Chetwynd Barracks	**Number** WS2
Excavation Method Drive-in Window Sampler	**Dimensions** 101mm to 1.00m 86mm to 1.50m	**Ground Level (mOD)** 48.18	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451092 E 335278 N	**Dates** 26/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						Reinfoced CONCRETE		
				48.08	0.10			
0.20	D1				(0.20)	MADE GROUND. Angular to sub-angular medium to coarse sandy hardcore		
0.30-1.00	C1			47.88	0.30	Firm brown CLAY		
					(0.20)			
				47.68	0.50	Very weak greenish grey weathered MUDSTONE, thinly laminated and closely jointed with dark brown staining on joint faces		
1.00-1.50 1.00-1.45 1.00-1.50	D2 CPT N=8 C2		C2 emptied into D2 5,2/2,2,2,2		(1.00)			
1.50-1.95	CPT N=24		11,4/12,4,4,4	46.68	1.50			
						Complete at 1.50m		

Remarks
Location: Nr Woodside House
WS abandoned at 1.50m. Problems with rods moving off line

Scale (approx)	Logged By
1:25	[redacted]

Figure No. SI0601.WS2

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS1
Excavation Method Drive-in Window Sampler	**Dimensions** 101mm to 1.40m	**Ground Level (mOD)** 47.94	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451073 E 335273 N	**Dates** 26/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.12)	TARMAC		
0.15	D1			47.82 47.74	0.12 0.20	MADE GROUND. Dark brownish grey very gravelly fine and medium SAND Gravel is angular to sub-angular fine to coarse ash, brick and concrete		
					(0.25)	MADE GROUND. Granite Boulder		
0.50	J1			47.49	0.45	Very weak light brown weathered MUDSTONE		
1.00-1.40 1.00-1.45 1.00-1.40	D2 CPT N=15 C1		C1 emptied into D2 2,2/3,3,4,5		(0.95)			
				46.54	1.40	Complete at 1.40m		

Remarks
Location: Corner of Woodside House
WS abandoned at 1.40m Problems with rods moving off line

Scale (approx) 1:25

Logged By [redacted]

Figure No. SI0601.WS1

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS6A
Excavation Method Drive-in Window Sampler	**Dimensions**	**Ground Level (mOD)** 29.64	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451124 E 334787 N	**Dates** 24/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						TARMAC		
				29.56	0.08	MADE GROUND. Greyish brown very gravelly and silty fine and medium SAND. Gravel is angular to subangular fine to coarse quartzite.		
0.20	D1				(0.27)			
				29.29	0.35	MADE GROUND. Soft redish brown sandy CLAY with occasional brick (slight diesel odour)		
0.40	D2							
0.50	J1							
					(0.65)	.....from 0.70m becoming very soft		
0.80-1.00	D3							
				28.64	1.00			
						Complete at 1.00m		

Remarks
Location : Nr Building 285
WS Abandoned at 1.0m. Concrete obstruction
Excavating from 0.00m to 1.00m for 1 hour.

Scale (approx)	Logged By
1:25	[redacted]

Figure No. SI0601.WS6A

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			***Number*** **WS6**
Excavation Method Drive-in Window Sampler	***Dimensions***	**Ground Level (mOD)** 29.65	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451123 E 334788 N	**Dates** 24/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				29.57	0.08	TARMAC		
0.20	D1				(0.27)	MADE GROUND. Greyish brown very gravelly and silty fine and medium SAND. Gravel is angular to sub-angular fine to coarse quartzite		
0.40	D2			29.30	0.35	MADE GROUND. Soft redish brown sandy CLAY with occasional brick (slight diesel odour)		
0.50	J1				(0.35)			
				28.95	0.70	Complete at 0.70m		

Remarks
Location: Nr Building 285
WS Abandoned at 0.7m. Concrete obstruction
Excavating from 0.00m to 0.70m for 1 hour.

Scale (approx)	Logged By
1:25	[redacted]

Figure No. SI0601.WS6

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS5
Excavation Method Drive-in Window Sampler	**Dimensions**	**Ground Level (mOD)** 29.92	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451108 E 334834 N	**Dates** 25/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						TARMAC		
				29.83	0.09			
0.15	D1			29.80	0.12	MADE GROUND. Yellowish brown fine and medium SAND		
					(0.13)			
				29.67	0.25	MADE GROUND. Grey very gravelly fine and medium SAND. Gravel is angular to sub-angular fine to coarse quartzite hardcore		
0.35	D2							
0.50	J1					MADE GROUND. Dark brownish grey very gravelly and silty fine and medium SAND. Gravel is angular to sub-angular quartz, ash and brick		
0.70	D3							
					(1.25)			
1.00-1.45	CPT N=14		1,1/2,2,4,6					
1.00-1.70	C1							
				28.42	1.50	MADE GROUND. Firm to stiff reddish brown and brownish grey sandy CLAY with some angular brick and ash gravel ...from 1.60m concrete obstruction		
					(0.20)			
				28.22	1.70			
						Complete at 1.70m		

Remarks
Location : Nr Building 285
1.00 - 1.70m Poor recovery
WS Abandonded at 1.70m.
Excavating from 0.00m to 1.00m for 1 hour.

Scale (approx) 1:25	**Logged By** [redacted]
Figure No. SI0601.WS5	

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Borehole Number** BH2
Boring Method Cable Percussion	**Diameter** 100mm cased to 6.50m	**Ground Level (mOD)**	**Client** Mott MacDonald
	Location Chilwell	**Dates** 09/07/03-10/07/03	**Engineer**
			Job Number SI0601
			Sheet 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.30)	CONCRETE		
0.30	D1					0.30 (0.30)	MADE GROUND: Dark brown silty fine and medium SAND with some angular fine and medium ash and brick gravel		
0.80	D2					0.60 0.80	MADE GROUND, concrete slab		
1.20-1.65	SPT N=22			6,6/6,6,5,5		(0.80)	MADE GROUND. Dark brown silty fine to coarse ash SAND with much angular fine to coarse ash and brick gravel		
1.30	D3								
1.60	D4					1.60	MADE GROUND. Medium dense mottled yellowish brown and yellowish grey silty fine and medium SAND with some subangular fine and medium ash flint and brick gravel		
2.00-2.45	SPT N=13	2.00		2,3/3,3,3,4		(0.50)			
2.00-3.00	B1			Blowing sands encountered		2.10	Yellowish brown silty fine and medium SAND with some subrounded to rounded fine to coarse flint and coarse gravel		▼1
2.10	W1								
2.10	D5								▽1
				SLOW(1) at 2.60m, rose to 2.10m in 20 mins.		(0.90)			
3.00-3.45	CPT N=15	3.00	2.10	1,1/2,3,5,5		3.00	Medium dense brown slighty silty fine and medium SAND with some subangular to subrounded fine and medium flint and quartz gravel		
3.00-4.00	B2								
4.00-4.45	CPT N=12	4.00	2.80	1,1/1,2,4,5					
4.00-5.00	B3								
5.00-5.45	CPT N=17	5.00	3.10	1,1/3,4,5,5		(3.95)			
5.00-6.50	B4						...from 6.00m: Brown silty fine and medium SAND		
6.50-6.95	CPT N=13	6.50	0.00	3,3/3,3,3,4					
				Hole abandoned at 6.95m		6.95	Complete at 6.95m		

Remarks
Overnight blowing sands raised level of borehole to 1.0m bgl. Hole Abandoned with no installation.
Excavating from 0.00m to 1.20m for 2.5 hours.

Scale (approx)	Logged By
1:50	[redacted]

Figure No. SI0601.BH2

(For Survey use only) GEOLOGICAL CLASSIFICATION	NATURE OF STRATA If measurements start below ground surface, state how far	THICKNESS Feet	THICKNESS Inches	DEPTH Feet	DEPTH Inches
Made Ground	Top soil.	-	6	-	6
	Made up ground.	1	0	1	6
	Concrete.	-	6	2	0
Alluvium	Clay and stones.	1	0	3	0
	Sand and gravel.	20	0	23	0
Kenper Marl	Red mottled clay.	7	0	30	0
Kenper & Bunter Sandstones	Sandstone.	125	0	155	0
Kenper Red Marl	Red marl.	47	0	202	0
		202	0	202	0

Sgd.
R.J.W.
1.2.67.

141 BURTON-UPON-TRENT SK53 11

141 / 169

SECTION OF Borelole No. 1. at Chilwell

3 "

SK53NW/446 SK5088 3506

Maps: One-inch Six-inch County

Height above O.D. Latitude Longitude

Communicated by Date of Sinking

Made by Dip of Strata

	Thickness.	Depth from Surface.

2,000 L.D. 6/23

C. ISLER & Co., Ltd.

ARTESIAN & CONSULTING WELL ENGINEERS,

BEAR LANE, SOUTHWARK, S.E.1.

Telegraphic Address: "ISLER, LONDON."
Telephone No.: Hop 4460 (3 Lines).

BIRMINGHAM BRANCH: 58 Summer Row.
LEEDS BRANCH: 210 Wellington Street.
And at LIVERPOOL and WORTHING.

Da[illegible] 19
C[illegible] 19

O.D. /

CHART

of Borehole at Central Shell Filling Factory — Central Ordnance Depot. Chilwell. Notts.

Bored by

Water Levels: Standing ....Ft. Pumping ....Ft.

Supply 28,296 Galls. per Hour. Analysis if made

Lined with 30 Ft. of 6" Tubes 6" above / below Surface ....Ft.

" 146 " 11½ " level

Boring Stage above / below Ground or Street Level GR. ....Ft.

Stratum.		Thickness Ft.	in	Total Ft.	in	W. level Rods in	Rods out
Fill + River Terrace Dpts?	Top Soil.	2	-				
	Ballast.	19	-	21	-		
Sneinton Formation	Red Marl.	4	-	25	-		
	Light Sandy Marl.	4	-	29	-		
Nottingham Castle Sandstone Fm.	Red Sandstone & Pebbles.	33	-	62	-		
	Red Marl.	3	-	65	-		
	Red Sandstone & "	5	-	70	-		
	Light Sandstone & "	33	6	103	6		
	Light Sandstone & Red "	48	-	151	6		
	Red Marl.	22	6	174	-		
? Leaton Sandstone Fm.	Red Sandstone.	25	-	199	-		
	Soft Light Grey Sandstone	4	-	206	-		
	Hard Light "	24	-	230	-		
? Carboniferous	Dark Shale	2	-	232	-		

GEOLOGICAL CLASSIFICATION	If measurements start below ground surface, state how far	Feet	Inches	Feet	Inches	
Made Ground	Top soil.	-	0·15 6	-	0·15 6	
	Made up ground.	1	0·30 0	1	0·46 6	
	Concrete.	-	0·15 6	2	0·61 0	MG
Alluvium	Clay and stones.	1	0·30 0	3	0·91 0	
	Sand and gravel.	20	6·10 0	23	7·01 0	Sa G
Kemper Marl	Red mottled clay.	7	2·13 0	30	9·14 0	
Kemper + Bunter Sandstones	Sandstone.	125	38·10 0	155	47·24 0	Waterforms Sst
Kemper Red Marl	Red marl.	47	14·33 0	202	61·57 0	M St
		202	61·57 0	202	61·57 0	

SK53/1D

SK53NW/373

Sqz.
R.J.W.
1.2.67.

May Gurney

May Gurney Geotechnical

Excavation Method Trial Pit	**Dimensions**	**Ground Level (mOD)** 49.30	**Site** Chilwell, Chetwynd Barracks
	Location 451102 E 335286 N	**Dates** 24/06/03	**Client** Mott MacDonald
			Engineer

Trial Pit Number TP6

Job Number SI0601

Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10	D1			49.05	(0.25) 0.25	TOPSOIL dark brown very silty fine and medium SAND with some coarse sandstone gravel ... from 0.15m brown		
			PP 0.50m > 220kN/m2		(0.85)	*Hard mottled green grey yellow grey and yellow brown* SILT/CLAY		
0.80	D3							
			PP 1.00m >220kN/m2	48.20	1.10	Brown grey very thinly bedded, closely jointed weak MUDSTONE with some silt/clay bands		
1.40-1.50	B1				(0.60)			
				47.60	1.70	Complete at 1.70m		

Plan

Remarks

Location : Nr Woodside house
Dry and stable

Scale (approx)	Logged By	Figure No.
1:40	[redacted]	SI0601.TP6

May Gurney

May Gurney Geotechnical

Site	Trial Pit Number
Chilwell, Chetwynd Barracks	TP1

Excavation Method	Dimensions	Ground Level (mOD)	Client	Job Number
Trial Pit		59.55	Mott MacDonald	SI0601
	Location 450504 E 335228 N	**Dates** 30/04/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.10	D1					TOPSOIL brown SILT / fine SAND, many fine roots		
				59.45	0.10 (0.15)	Mottled red brown and green grey SAND / SILT with some fine and medium mudstone gravel, some roots		
0.25	D2		PP 0.30m >220kN/m2	59.30	0.25	Hard red brown friable CLAY/SILT with some to much weak *angular fine to coarse mudstone gravel*, occasional roots to 1.00m		
0.50	D3							
						.....from 0.90m red brown highly weathered mudstone clay matrix with much fine to coarse relic mudstone *gravel some thin light greenish grey bands*		
					(2.35)			
1.50	D4					.....*from 1.60m some thin yellow green grey thinly* bedded closely fissured weak mudstone bands		
2.20	D5							
				56.95	2.60	Hard mottled yellow grey and green grey closely fissured friable CLAY/SILT, *some weak mudstone bands*		
2.80	D6				(0.40)			
				56.55	3.00	Complete at 3.00m		

Plan

Remarks

Dry and stable
Location : Nr Gymnasium

Scale (approx)	Logged By	Figure No.
1:25	[redacted]	SI0587.TP1

May Gurney

May Gurney Geotechnical

Site Chilwell, Chetwynd Barracks			**Number** WS3
Excavation Method Drive-in Window Sampler	**Dimensions** 101mm to 3.00m 86mm to 4.00m	**Ground Level (mOD)** 29.85	**Client** Mott MacDonald	**Job Number** SI0601
	Location 451069 E 334843 N	**Dates** 25/06/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.25)	Reinforced CONCRETE		
0.25-1.00	C1			29.60	0.25	MADE GROUND. Grey very gravelly fine and medium SAND. Gravel is angular to sub-angular fine to coarse quartzite concrete and slag		
				29.35	(0.25) 0.50	Soft dark brown grey sandy CLAY		
1.00-1.45 1.00-2.00	CPT N=18 C2		1,1/4,4,5,5		(0.80)	...from 0.80m firm to stiff greenish grey sandy CLAY		
				28.55	1.30	Greenish grey and grey gravelly fine and medium SAND. Gravel consists of subrounded to subangular fine to medium flint and quartzite		
2.00-2.45 2.00-3.00	CPT N=23 C3		4,4/7,4,6,6		(1.20)			
				27.35	2.50	Brown gravelly fine to coarse SAND. Gravel consists of subangular fine to medium flint		
3.00-4.00	C4		Water strike(1) at 3.00m.		(1.50)	...from 3.20m gravel becoming coarser		▽1
				25.85	4.00	Complete at 4.00m		

Remarks
Location : Carpark outside building 22

Scale (approx)	Logged
1:25	

Figure No. SI0601.WS3

May Gurney

May Gurney Geotechnical

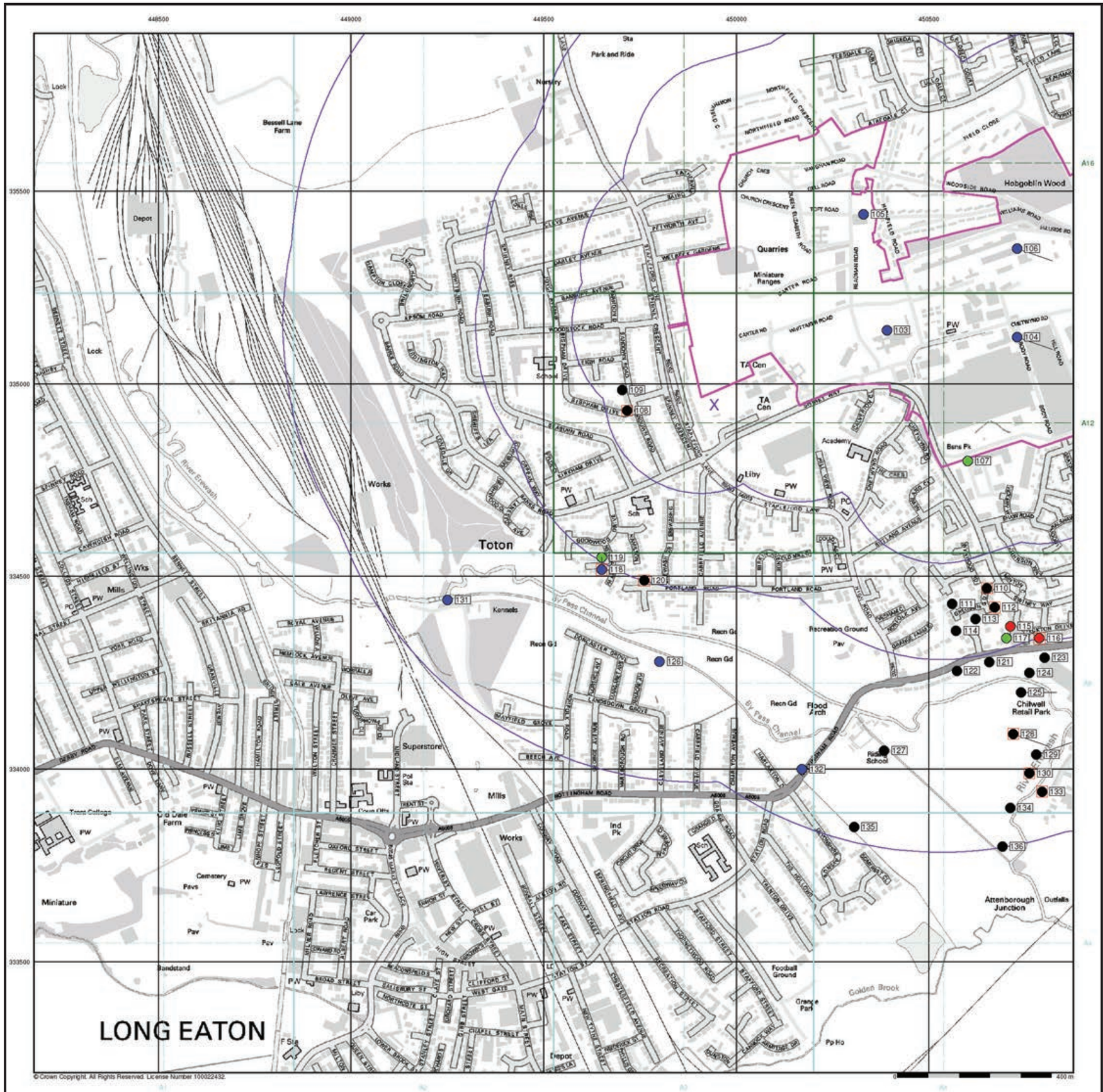
Site Chilwell, Chetwynd Barracks			**Borehole Number** BH1
Boring Method Cable Percussion	**Diameter** 100mm cased to 5.00m	**Ground Level (mOD)**	**Client** Mott MacDonald	**Job Number** SI0601
	Location Chilwell	**Dates** 07/07/03-08/07/03	**Engineer**	**Sheet** 1/1

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00	D1					(0.40) 0.40	MADE GROUND. Dark brown gravelly silty fine and medium SAND. Gravel consists of angular fine to coarse brick and concrete.			
0.40	D2						Loose brown fine SAND/SILT			
1.20-1.65 1.20-1.45	SPT N=5 D3			1/1,1,1,2		(2.50)	...from 1.20m: firm brown CLAY with some dark brown organic specks			
				Soakaway test at 2.00m - Water level after 1hr = 0.00m - no change.						
2.90-3.90 3.00-3.45 3.00-3.45	B1 SPT N=20 D4	1.50		2,2/3,5,5,7		2.90	Medium dense brown silty gravelly SAND. Gravel consists of subangular to subrounded fine and medium flint and quartz			
3.70	W1			slow(1) at 3.90m, rose to 3.70m in 20 mins.		(2.10)			▼1 ▽1	
4.00-4.45 4.00-5.00 4.00-4.45	D5 B2 SPT N=8	4.00	3.70	1,1/2,2,2,2						
5.00-5.38 5.00-5.38	SPT 50/225 D6	5.00	4.00	1,3/10,15,25		5.00 (0.40)	Stiff mottled greenish grey and yellowish brown very sandy CLAY with some clayey sand bands			
5.40-6.00	D7					5.40 (0.60)	Yellowish grey weakly cemented fine to medium grained SANDSTONE			
6.00-6.50	B3					6.00	Dense yellowish brown slightly silty slightly gravelly SAND. Gravel consists of subangular to rounded fine and medium quartz and flint			
6.50-6.60 6.50-6.60 6.50-7.30	SPT 50*/95 D8 B4	7.30	4.30	18,32/		(1.40)				
7.30-7.43 7.30-7.40	SPT 50*/125 D9	7.30	4.30	20,30/		7.40	...from 7.30m: gravelly SAND			
							Complete at 7.40m			

Remarks
Chiselling from 5.40m to 6.00m for 0.5 hours. Excavating from 0.00m to 1.20m for 1 hour.

Scale (approx)	Logged
1:50	[redacted]

Figure No. SI0601.BH1



pba peterbrett

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

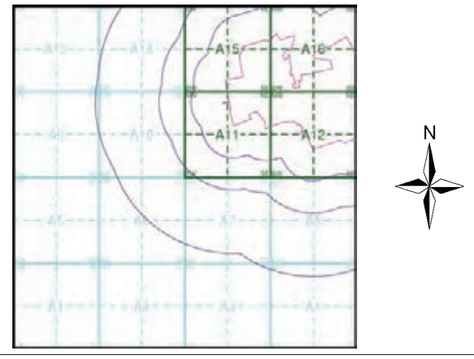
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

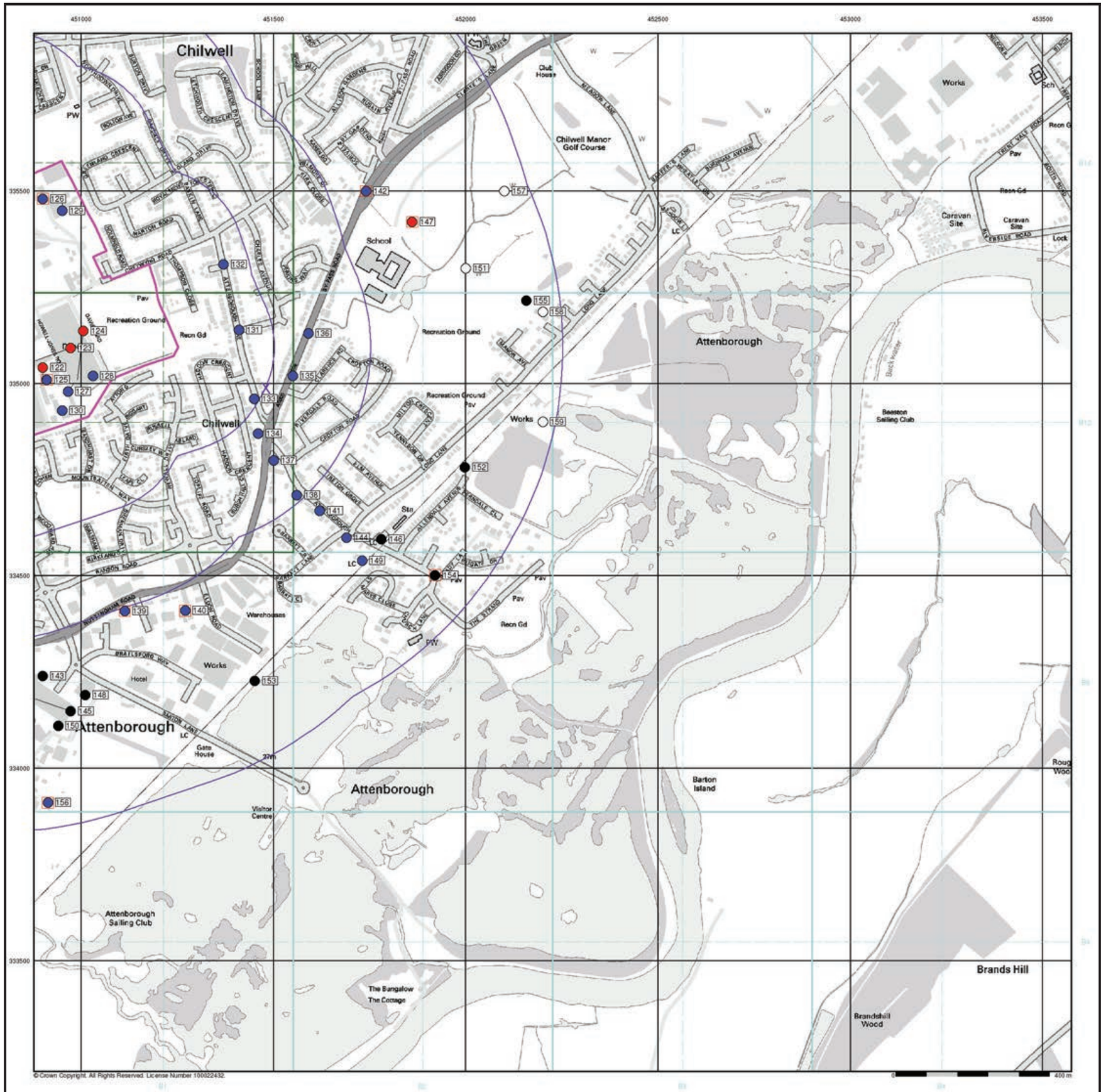


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

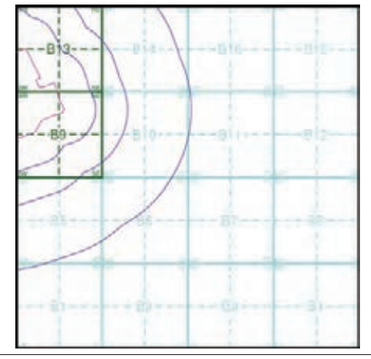
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice B



Order Details

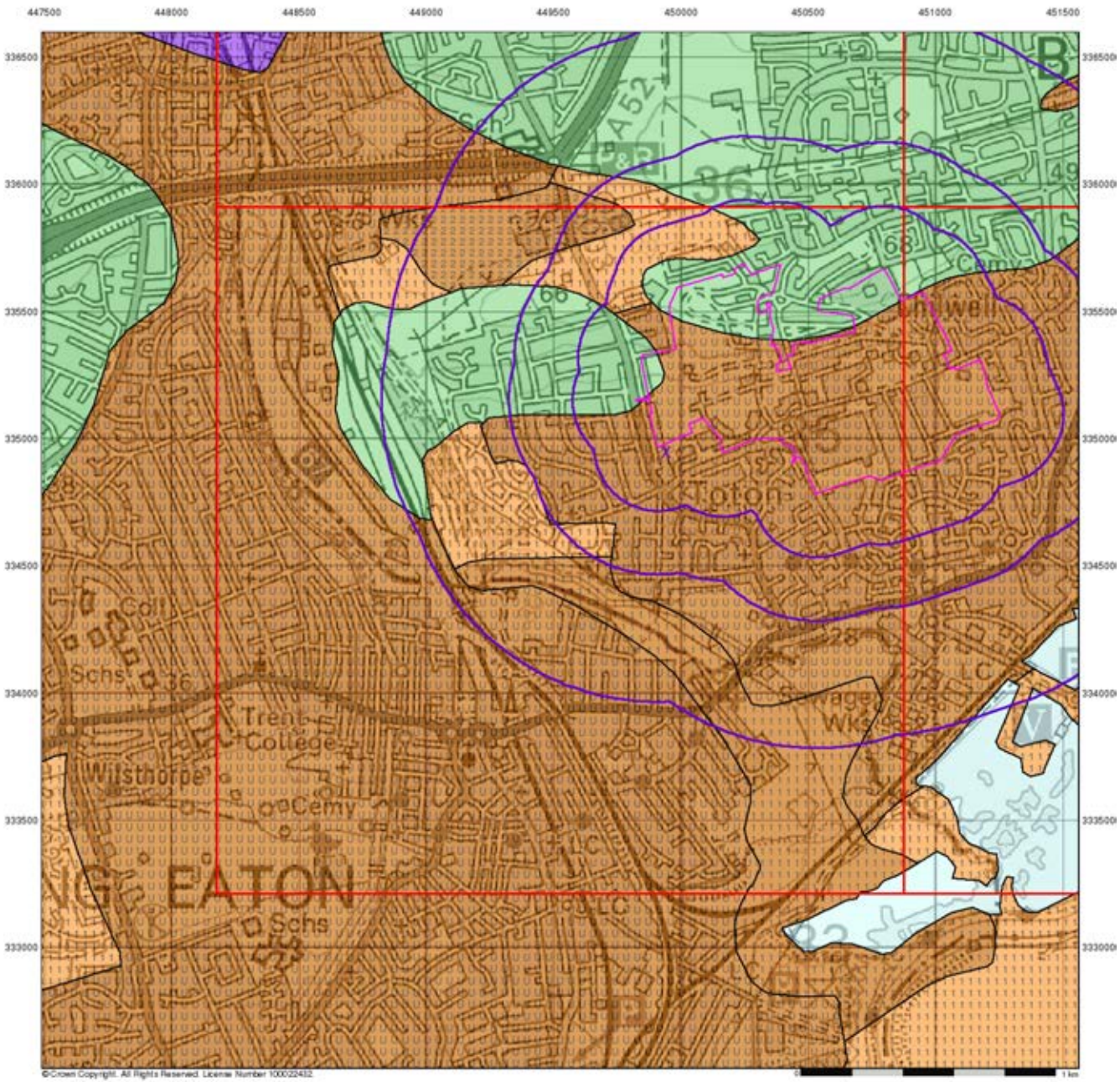
Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

Appendix F Landmark Envirocheck Report



Groundwater Vulnerability

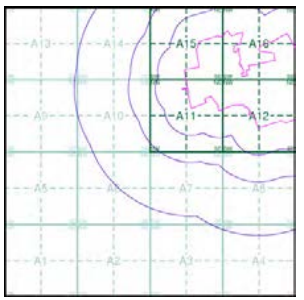
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice A



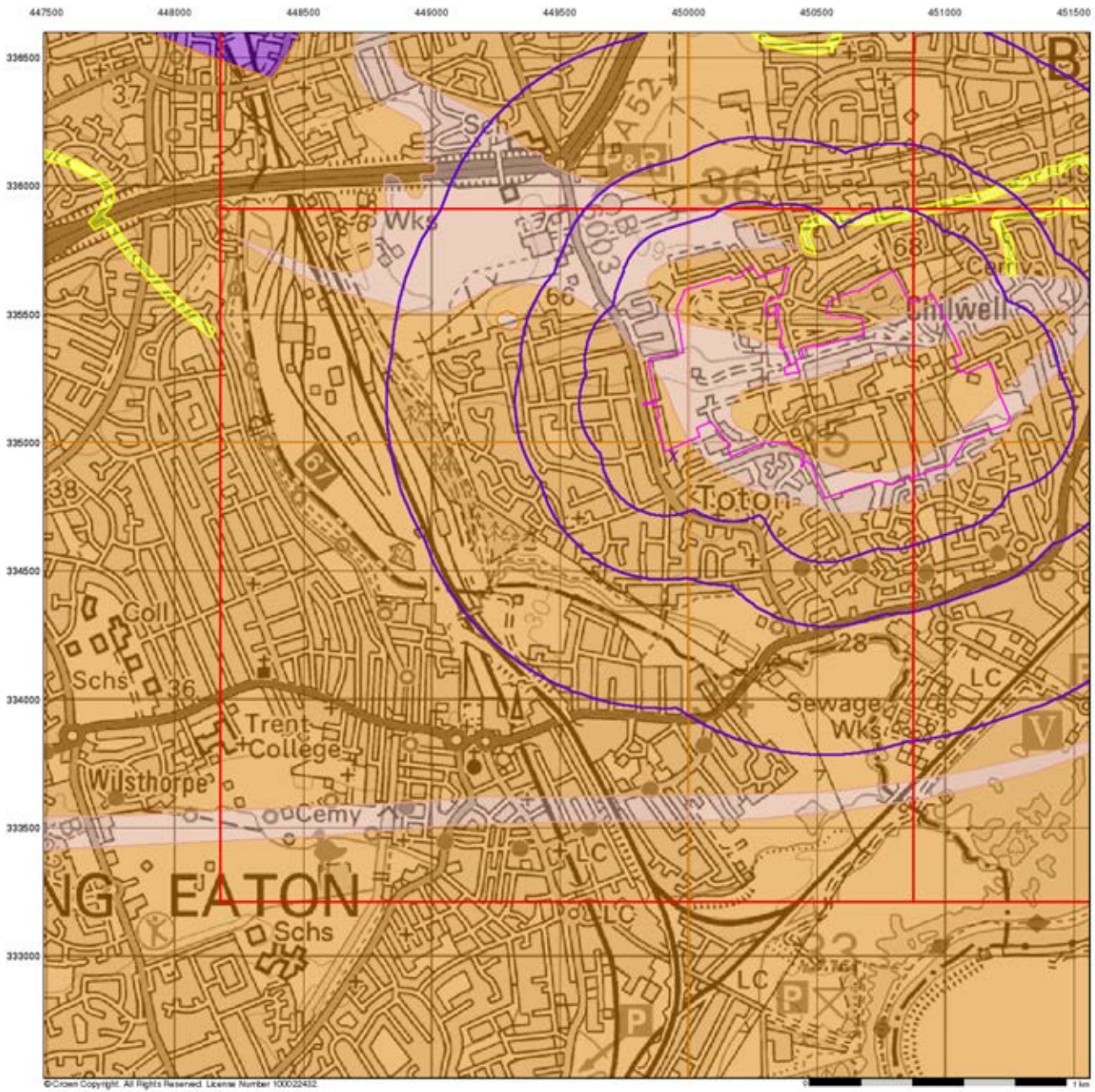
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Bedrock Aquifer Designation

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

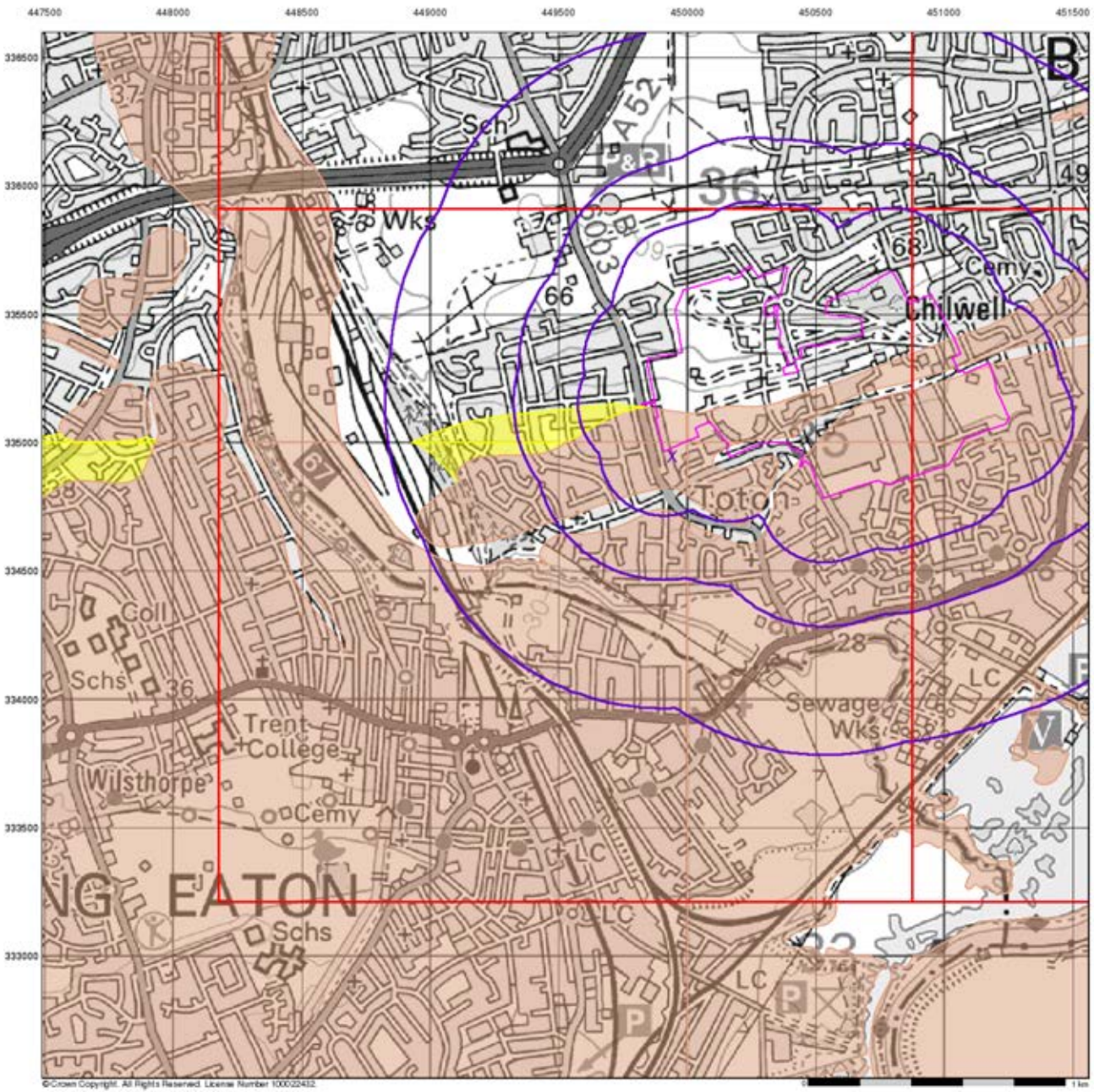
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



Superficial Aquifer Designation

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

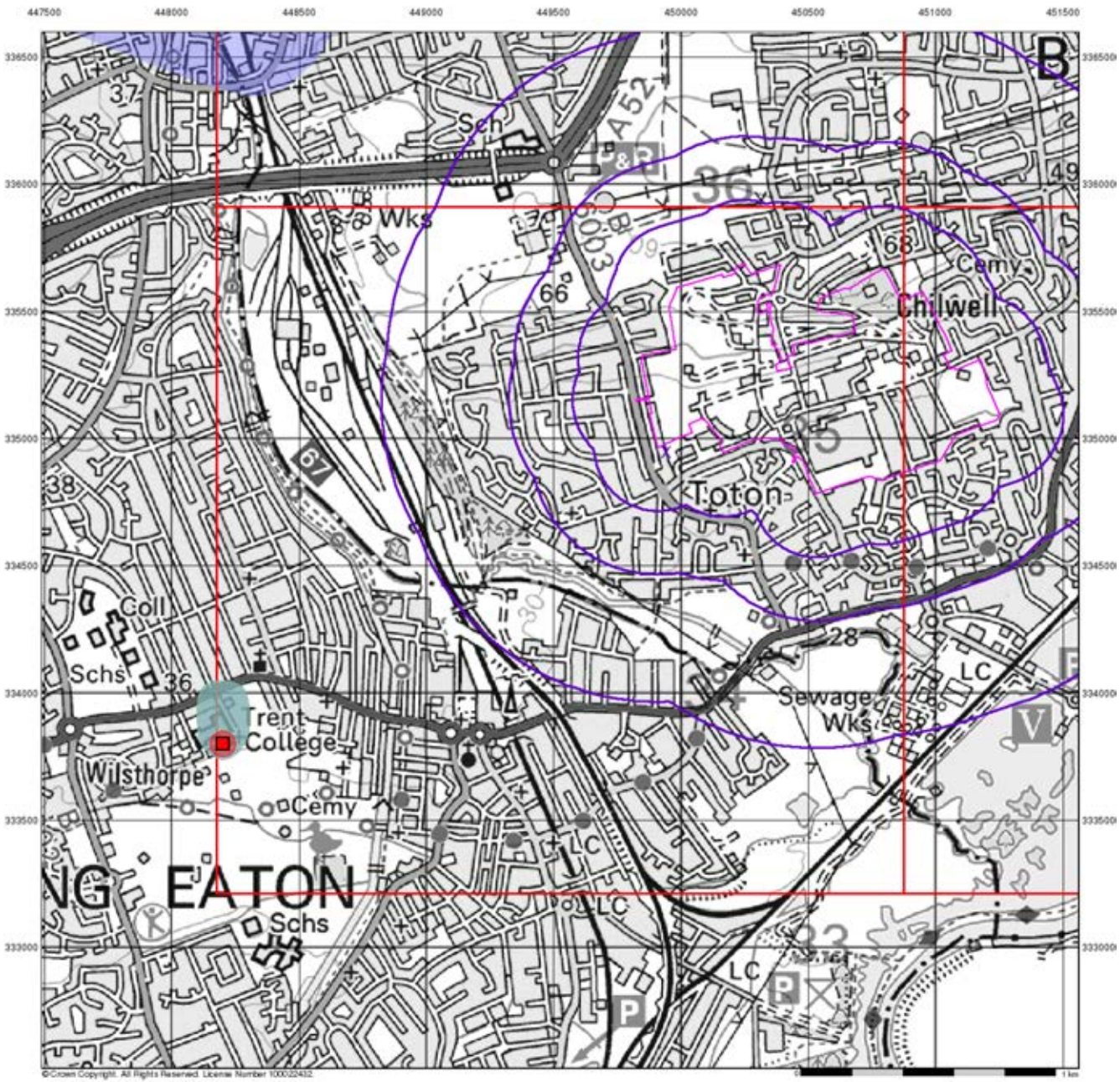
Site Sensitivity Context Map - Slice A

Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Source Protection Zones

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Borehole

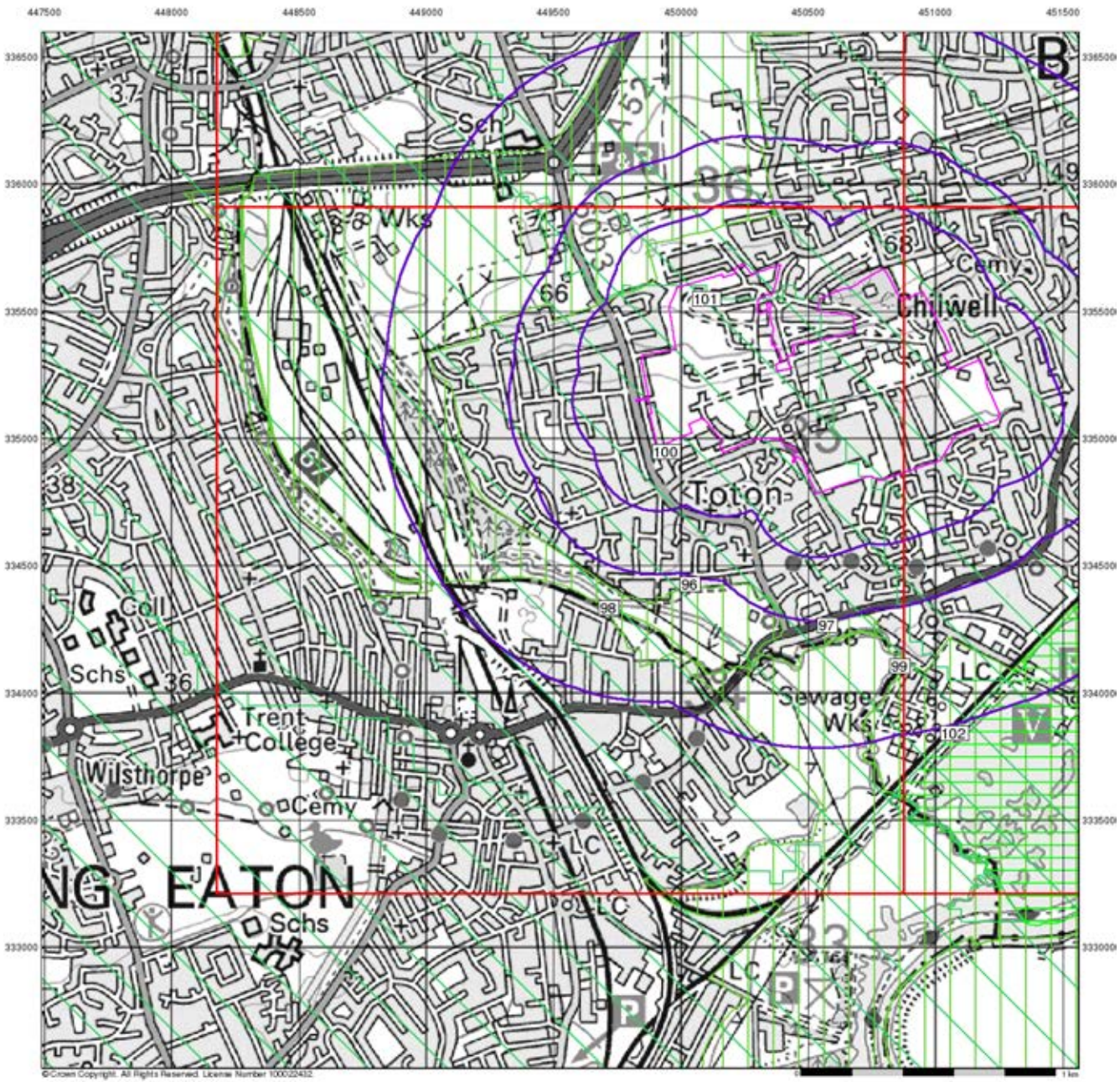
Site Sensitivity Context Map - Slice A

Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Sensitive Land Uses

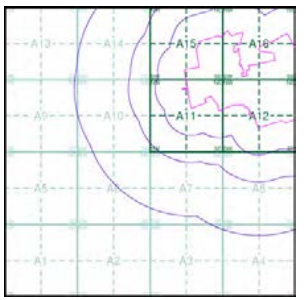
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



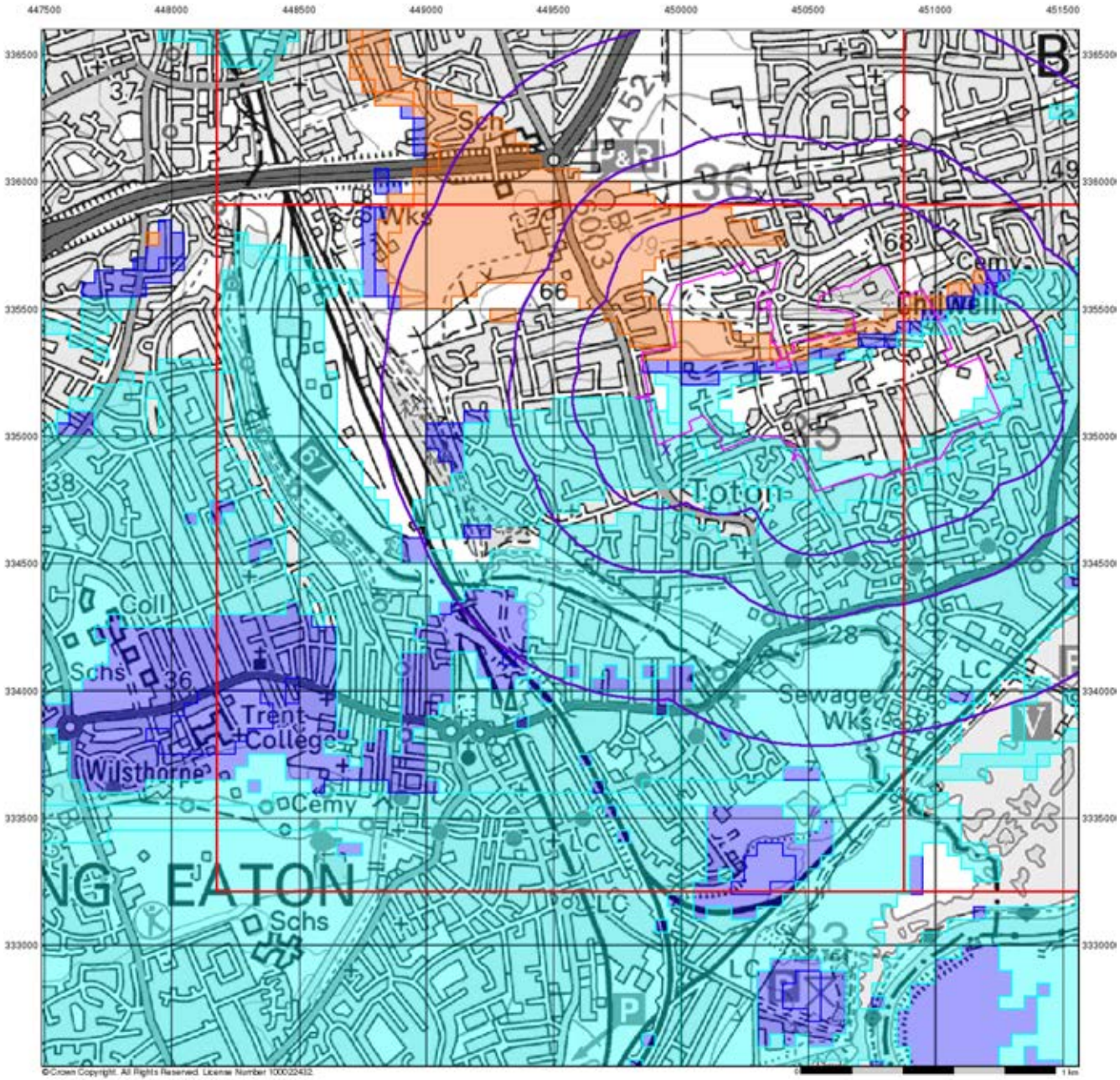
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



BGS Flood GFS Data

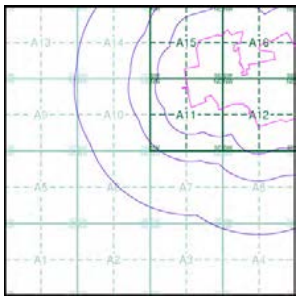
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
449940, 334950

Slice:
A

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Contents

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1	2			
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 1	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)	pg 2	2		n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 2	22	2	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying	pg 5	2			
Heap, unknown constituents	pg 5				5
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits					
Former Marshes					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 5	5	3		12

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 8	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 9	Yes	Yes	n/a	n/a
Salt Mining Related Features					
Subsidence Insurance Claims	pg 9		1	n/a	n/a
Subsidence Investigations	pg 9		3	n/a	n/a
Motion Map Data (1:2,500)					
Motion Map (100m)	pg 10	251	237	n/a	n/a

Report Version v50.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Hill Farm Quarries Location: , Chilwell, Beeston, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 168478 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Tarporley Siltstone Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A15SE (N)	0	1	450030 335330
1	**BGS Recorded Mineral Sites** Site Name: Hill Farm Quarries Location: , Chilwell, Beeston, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 168479 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Tarporley Siltstone Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A15SE (N)	0	1	450010 335345
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11NE (E)	0	2	449944 334946
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Extractive Industries or Potential Excavations from 1924-1949** Use: Unspecified Pit First Map Published Date: 1939 Last Map Published Date: Not Applicable	A16SE (NE)	0	-	450786 335304
3	**Extractive Industries or Potential Excavations from 1924-1949** Use: Reservoir First Map Published Date: 1939 Last Map Published Date: Not Applicable	A16SE (NE)	0	-	450659 335519
4	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16SW (NE)	0	-	450337 335484
5	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A12SE (E)	0	-	450630 334878
6	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A11NE (NE)	0	-	450123 335033
7	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16SW (NE)	0	-	450289 335511
8	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A12SW (E)	0	-	450520 334815
9	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A12SE (E)	0	-	450635 334852
10	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A12SE (E)	0	-	450691 334873
11	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A11NE (NE)	0	-	450095 335109
12	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A11NE (NE)	0	-	450101 335069

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A12NW (NE)	0	-	450513 335215
14	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A12NE (E)	0	-	450577 335138
15	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16SW (NE)	0	-	450202 335419
16	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A15SE (N)	0	-	450160 335490
17	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: 1962	A16SW (NE)	0	-	450203 335497
18	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16SW (NE)	0	-	450260 335510
19	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A15SE (N)	0	-	450067 335528
20	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A15SE (N)	0	-	450041 335541
21	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A15NE (N)	0	-	450137 335585
22	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16NW (NE)	0	-	450351 335589
23	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16NW (NE)	0	-	450346 335645

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Pit First Map Published Date: 1962 Last Map Published Date: N/A	A16SE (NE)	0	-	450784 335313
25	**Extractive Industries or Potential Excavations from 1950-1980** Use: Quarries (Disused) First Map Published Date: 1962 Last Map Published Date: N/A	A15SE (N)	0	-	450030 335312
26	**Extractive Industries or Potential Excavations from 1950-1980** Use: Well First Map Published Date: 1957 Last Map Published Date: N/A	A15NE (N)	82	-	449900 335595
27	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	A16NE (NE)	83	-	450697 335707

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**General Quarrying** Use: Not Supplied Date of Mapping: 1984	A15SE (N)	0	-	450034 335326
28	**General Quarrying** Use: Not Supplied Date of Mapping: 1984	A15SE (N)	0	-	450010 335347
29	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1983	A8NE (SE)	565	-	450817 334266
30	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1939	A7NW (SW)	677	-	449567 334382
31	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1921 - 1939	A6NE (SW)	696	-	449408 334484
32	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1939	A6NE (SW)	729	-	449524 334348
33	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1955	A6NE (SW)	754	-	449375 334435
34	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A16SE (NE)	0	-	450671 335554
35	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12NW (E)	0	-	450357 334989
36	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12NW (E)	0	-	450466 334977
37	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12SW (SE)	0	-	450403 334697
38	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A11NE (N)	0	-	449899 335152
39	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A11SE (SE)	4	-	449993 334849
40	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A11SE (SE)	106	-	450021 334899
41	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A11SE (S)	166	-	449899 334801
42	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A8NE (SE)	515	-	450603 334264
43	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (SE)	528	-	450325 334300
44	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NE (SE)	544	-	450771 334257
45	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (S)	565	-	449899 334402
46	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NW (S)	583	-	449825 334389
47	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (S)	600	-	450128 334341

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (S)	610	-	450142 334315
49	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A7NW (S)	628	-	449802 334347
50	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A10SW (SW)	899	-	449095 334586
51	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A6NW (SW)	971	-	449154 334356
52	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A6NW (SW)	984	-	449074 334447
53	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A6NW (SW)	994	-	449038 334488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
54	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449944 335000
55	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
56	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	451050 335000
57	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	449944 334946
58	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	450000 334946
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450996 335000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450911 334928
59	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450911 334928
60	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450996 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449944 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	451050 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	449944 334946
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	450000 334946
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	449944 334946
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	450000 334946
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449944 335000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
61	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	449944 334946

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
62	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	450000 334946
63	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449944 335000
64	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
65	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16NE (NE)	0	1	450709 335582
66	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	1	450483 335371
67	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A16SE (NE)	0	1	450567 335479
68	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(NE)	0	1	450928 335532
69	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450996 335000
70	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450911 334928
71	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	0	1	450505 335000
72	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	451050 335000
73	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	0	1	450000 334690
74	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449944 335000
75	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
76	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	449944 334946
77	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	450000 334946
78	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	228	1	449918 334738
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449969 335119
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	450000 335114
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	0	1	450210 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	450101 334925

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	143	1	449938 334825
79	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	1	449944 334946
80	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	450911 334928
81	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	1	450000 335461
82	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	1	449944 335000
83	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	1	450032 335455
84	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	4	1	450000 334946
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(E)	0	1	451050 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	450000 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	64	1	450000 335720
	Subsidence Investigations Site Investigation Date: 21st July 2014 Root Survey: No CCTV Drain Survey: No Depth of Foundation Footing: Not Supplied Soil Classification: Not Supplied			-	
	Subsidence Investigations Site Investigation Date: 8th September 2010 Root Survey: No CCTV Drain Survey: No Depth of Foundation Footing: Not Supplied Soil Classification: Not Supplied			-	
	Subsidence Investigations Site Investigation Date: 28th February 2005 Root Survey: No CCTV Drain Survey: Yes Depth of Foundation Footing: Not Supplied Soil Classification: Not Supplied			-	
	Subsidence Insurance Claims Case Date: 8th April 2005 Movement Trend Indication: No significant movement (< 0.50mm) Damage Classification: Not Supplied			-	

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
85	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450834 334900
85	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450828 334901
85	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450834 334904
86	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450778 334912
87	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450700 334930
87	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450703 334933
88	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A11NE (NE)	0	-	450105 335062
88	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11NE (NE)	0	-	450108 335058
89	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NW (E)	0	-	450450 334982
89	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NW (E)	0	-	450449 334982
90	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SW (E)	0	-	450529 334817
90	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SW (E)	0	-	450529 334813
90	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SW (E)	0	-	450526 334813
91	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SW (NE)	0	-	450214 335551
92	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SW (NE)	0	-	450228 335551
92	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16SW (NE)	0	-	450231 335555
93	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A16SE (NE)	0	-	450703 335388
93	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16SE (NE)	0	-	450704 335388
94	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	0	-	450231 335372
94	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SW (NE)	0	-	450232 335367

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450705 335087
95	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450704 335083
95	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450709 335094
96	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450573 335113
96	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450574 335108
97	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SE (NE)	0	-	450655 335371
97	**Motion Map** Average Velocity Gradient (mmyear): -0.7	A16SE (NE)	0	-	450650 335368
98	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450805 335056
99	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NE (E)	0	-	450783 335061
100	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450762 335066
100	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450760 335067
100	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450765 335058
100	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450766 335057
101	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NW (E)	0	-	450493 334967
102	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	0	-	450292 335432
103	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NE (E)	0	-	450795 334957
104	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12NW (E)	0	-	450304 335067
105	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SE (E)	0	-	450546 334789
106	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SE (NE)	0	-	450612 335283
106	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A16SE (NE)	0	-	450613 335283

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SE (NE)	0	-	450613 335279
106	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	0	-	450609 335279
107	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16SW (NE)	0	-	450293 335509
108	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SW (E)	0	-	450521 334872
108	**Motion Map** Average Velocity Gradient (mmyear): 1.2	A12SW (E)	0	-	450514 334869
109	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A11NE (E)	0	-	450162 334952
109	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A11NE (E)	0	-	450166 334947
109	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11NE (E)	0	-	450164 334948
110	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450792 335051
111	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450718 335068
111	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450715 335065
112	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	0	-	450869 334876
112	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	0	-	450869 334872
112	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SE (E)	0	-	450869 334868
113	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SE (NE)	0	-	450602 335350
113	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SE (NE)	0	-	450600 335351
113	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SE (NE)	0	-	450601 335346
113	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SE (NE)	0	-	450598 335347
114	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450875 335110
114	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450873 335111

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
114	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450874 335115
115	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450791 335129
115	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450794 335124
115	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450791 335121
115	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A12NE (E)	0	-	450784 335122
116	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NW (E)	0	-	450258 335069
117	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450856 335025
117	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450857 335025
118	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450777 335042
118	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450771 335048
118	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450770 335048
119	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450632 335075
120	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NW (E)	0	-	450434 335119
120	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NW (E)	0	-	450428 335120
120	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NW (E)	0	-	450425 335117
121	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A12SE (E)	0	-	450726 334895
121	**Motion Map** Average Velocity Gradient (mmyear): 1.1	A12SE (E)	0	-	450722 334896
121	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12SE (E)	0	-	450723 334892
121	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SE (E)	0	-	450719 334893
122	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SE (E)	0	-	450823 334870

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SE (E)	0	-	450821 334866
123	**Motion Map** Average Velocity Gradient (mmyear): 1.1	A16NW (N)	0	-	450218 335668
123	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NW (N)	2	-	450211 335665
123	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16NW (N)	3	-	450214 335669
124	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NW (E)	0	-	450417 335029
125	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450749 334951
125	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450744 334952
125	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450744 334948
126	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450543 334997
126	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A12NW (E)	0	-	450534 334995
127	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A12NE (E)	0	-	450799 335034
127	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450804 335029
128	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450838 335021
128	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450835 335014
129	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12NE (E)	0	-	450628 334909
130	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450791 335117
130	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450785 335110
130	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450784 335110
131	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450600 335159
131	**Motion Map** Average Velocity Gradient (mmyear): -0.6	A12NE (E)	0	-	450599 335155

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450597 335156
132	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	0	-	450479 335296
132	**Motion Map** Average Velocity Gradient (mmyear): 1.1	A16SW (NE)	0	-	450476 335293
133	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16SE (NE)	0	-	450661 335251
133	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	0	-	450664 335247
133	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SE (NE)	0	-	450659 335248
134	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16SE (NE)	0	-	450584 335269
134	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SE (NE)	0	-	450581 335266
135	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450685 335071
135	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NE (E)	0	-	450681 335072
135	**Motion Map** Average Velocity Gradient (mmyear): -0.8	A12NE (E)	0	-	450684 335067
135	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450676 335069
136	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A16SE (NE)	0	-	450615 335339
137	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16SE (NE)	0	-	450585 335338
137	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16SE (NE)	0	-	450588 335333
138	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450833 335099
138	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450832 335100
138	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450833 335095
138	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450831 335096
139	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450821 334931

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
139	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NE (E)	0	-	450823 334926
140	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NE (E)	0	-	450658 334964
141	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16SE (NE)	0	-	450566 335265
141	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A16SE (NE)	0	-	450569 335260
141	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	0	-	450562 335261
141	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	0	-	450562 335257
141	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SE (NE)	0	-	450561 335257
142	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NW (E)	0	-	450463 334958
143	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SW (NE)	0	-	450526 335347
144	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450783 335106
144	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450776 335108
145	**Motion Map** Average Velocity Gradient (mmyear): 1.3	A12NE (E)	0	-	450748 335110
146	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A12NE (E)	0	-	450800 335094
146	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450800 335091
146	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450795 335087
147	**Motion Map** Average Velocity Gradient (mmyear): -0.9	A12NE (E)	0	-	450763 335103
147	**Motion Map** Average Velocity Gradient (mmyear): -0.8	A12NE (E)	0	-	450760 335103
147	**Motion Map** Average Velocity Gradient (mmyear): -0.7	A12NE (E)	0	-	450760 335099
148	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450846 334917
148	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450845 334913

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
149	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SE (NE)	0	-	450579 335327
149	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16SE (NE)	0	-	450576 335328
149	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	0	-	450576 335324
149	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16SE (NE)	0	-	450574 335324
150	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450783 335090
150	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450786 335085
150	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450783 335086
151	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SE (NE)	0	-	450636 335383
152	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450758 335092
152	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450750 335093
152	**Motion Map** Average Velocity Gradient (mmyear): 0.9	A12NE (E)	0	-	450763 335086
152	**Motion Map** Average Velocity Gradient (mmyear): 0.9	A12NE (E)	0	-	450760 335083
153	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NE (E)	0	-	450852 334908
153	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450859 334902
153	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450851 334904
154	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NW (E)	0	-	450404 335008
154	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NW (E)	0	-	450404 335004
154	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NW (E)	0	-	450401 335005
154	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NW (E)	0	-	450407 334999
155	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450611 334958

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
156	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SW (E)	0	-	450521 334831
156	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SW (E)	0	-	450522 334827
157	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16SW (NE)	0	-	450229 335567
158	**Motion Map** Average Velocity Gradient (mmyear): 0.9	A16SE (NE)	0	-	450540 335331
158	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16SW (NE)	0	-	450532 335333
159	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450875 335062
160	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450843 335068
161	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450713 335097
162	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450764 335082
162	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450770 335076
162	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450761 335079
163	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12NW (E)	0	-	450220 334972
163	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NW (E)	0	-	450221 334975
164	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450621 335212
165	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (NE)	0	-	450587 335219
165	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (NE)	0	-	450583 335220
165	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (NE)	0	-	450584 335216
165	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (NE)	0	-	450581 335217
165	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (NE)	0	-	450582 335212
166	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450818 335005

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
166	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NE (E)	0	-	450815 335014
166	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12NE (E)	0	-	450816 335009
167	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450623 335049
167	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450624 335056
168	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NE (E)	0	-	450545 335066
169	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450782 335009
169	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A12NE (E)	0	-	450782 335001
170	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450863 334987
171	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450602 335045
171	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NE (E)	0	-	450598 335042
172	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450687 335193
172	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450687 335189
173	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450665 335198
174	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (NE)	0	-	450579 335213
174	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NE (NE)	0	-	450574 335210
175	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450648 335031
176	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450751 335004
177	**Motion Map** Average Velocity Gradient (mmyear): -0.7	A12NW (E)	0	-	450498 335060
178	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NW (E)	0	-	450493 334902
178	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SW (E)	0	-	450493 334898

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
178	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SW (E)	0	-	450494 334894
179	**Motion Map** Average Velocity Gradient (mmyear): 1.0	A12SE (E)	0	-	450558 334884
179	**Motion Map** Average Velocity Gradient (mmyear): 1.0	A12SE (E)	0	-	450559 334884
180	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450589 335198
181	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450799 334989
181	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12NE (E)	0	-	450800 334985
181	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450803 334980
182	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450583 335037
182	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450580 335034
182	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450574 335035
183	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NW (NE)	0	-	450272 335102
183	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NW (NE)	0	-	450274 335098
184	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A11NE (E)	0	-	450195 334961
184	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A11NE (E)	0	-	450189 334962
185	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SW (E)	0	-	450538 334880
185	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12SW (E)	0	-	450534 334881
185	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SE (E)	0	-	450539 334876
185	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SW (E)	0	-	450536 334877
186	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450635 335184
186	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NE (E)	0	-	450634 335180

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
187	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NE (E)	0	-	450707 335164
188	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450813 334973
188	**Motion Map** Average Velocity Gradient (mmyear): 1.2	A12NE (E)	0	-	450811 334970
189	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450788 334979
190	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NE (E)	0	-	450582 335025
191	**Motion Map** Average Velocity Gradient (mmyear): -0.6	A12NE (E)	0	-	450715 334991
192	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12NE (E)	0	-	450851 334957
193	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450672 334993
194	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	0	-	450612 335242
195	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SE (NE)	0	-	450600 335245
195	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SE (NE)	0	-	450600 335241
196	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NE (E)	0	-	450872 335180
196	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NE (E)	0	-	450874 335176
196	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450868 335177
197	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NE (E)	0	-	450661 335056
198	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NE (E)	0	-	450649 335059
198	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450643 335056
198	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A12NE (E)	0	-	450641 335057
199	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450826 335015
200	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NE (E)	0	-	450682 335214

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
200	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450680 335215
201	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SE (NE)	0	-	450546 335245
201	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SE (NE)	0	-	450542 335242
202	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12NE (E)	0	-	450729 335033
203	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12NE (E)	0	-	450604 335061
204	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NE (E)	0	-	450614 334904
205	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12NW (E)	0	-	450250 334985
205	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12NW (E)	0	-	450252 334989
206	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SE (E)	0	-	450655 334891
207	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12NE (E)	0	-	450861 334999
208	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12SE (E)	0	-	450668 334884
208	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	0	-	450665 334881
209	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NE (E)	0	-	450658 335208
210	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16SW (NE)	2	-	450302 335514
211	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16SW (NE)	7	-	450534 335528
211	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	9	-	450531 335525
212	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	7	-	450738 334844
213	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SW (NE)	8	-	450362 335383
213	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SW (NE)	10	-	450366 335387
213	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SW (NE)	11	-	450367 335386

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
213	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SW (NE)	11	-	450365 335383
213	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SW (NE)	12	-	450369 335390
214	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16NW (NE)	9	-	450386 335626
214	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	14	-	450390 335625
214	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	15	-	450390 335621
214	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NW (NE)	15	-	450390 335621
215	**Motion Map** Average Velocity Gradient (mmyear): -0.8	A16SW (NE)	9	-	450365 335379
216	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	9	-	450368 335447
216	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SW (NE)	10	-	450368 335451
216	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SW (NE)	10	-	450369 335447
216	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16SW (NE)	11	-	450368 335455
216	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	12	-	450371 335451
216	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	13	-	450371 335451
216	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SW (NE)	14	-	450371 335454
217	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	10	-	450371 335443
218	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	10	-	450393 335653
218	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	13	-	450397 335656
219	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	10	-	450853 334847
219	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SE (E)	12	-	450849 334843
219	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	15	-	450853 334842

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
219	**Motion Map** Average Velocity Gradient (mmyear): -0.6	A12SE (E)	17	-	450850 334839
219	**Motion Map** Average Velocity Gradient (mmyear): -0.8	A12SE (E)	18	-	450853 334838
220	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	14	-	450427 335357
220	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SW (NE)	17	-	450425 335353
220	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A16SW (NE)	21	-	450420 335354
221	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16SW (NE)	15	-	450401 335338
221	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SW (NE)	16	-	450402 335342
222	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	16	-	450742 334834
222	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	24	-	450744 334826
223	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16SW (NE)	17	-	450378 335571
223	**Motion Map** Average Velocity Gradient (mmyear): -0.8	A16SW (NE)	19	-	450379 335571
223	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16SW (NE)	20	-	450380 335566
223	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	20	-	450380 335566
224	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16NW (NE)	18	-	450381 335578
225	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	19	-	450840 334833
226	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A15SE (N)	19	-	449921 335359
227	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SE (E)	19	-	450802 334821
228	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	20	-	450464 335393
228	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16SW (NE)	22	-	450470 335396
228	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	23	-	450468 335396

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
228	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16SW (NE)	27	-	450467 335401
228	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16SW (NE)	27	-	450467 335401
229	**Motion Map** Average Velocity Gradient (mmyear): 0.9	A16SW (NE)	20	-	450533 335402
230	**Motion Map** Average Velocity Gradient (mmyear): -1.2	A16SW (NE)	21	-	450513 335399
230	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SW (NE)	23	-	450519 335401
230	**Motion Map** Average Velocity Gradient (mmyear): 1.5	A16SW (NE)	26	-	450519 335405
231	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A15NE (N)	22	-	450117 335654
231	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A15NE (N)	23	-	450115 335654
231	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A15NE (N)	25	-	450118 335658
232	**Motion Map** Average Velocity Gradient (mmyear): -1.7	A16SE (NE)	23	-	450559 335412
233	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12SE (E)	23	-	450804 334817
233	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	24	-	450806 334817
233	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	24	-	450798 334814
233	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	26	-	450803 334813
233	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SE (E)	28	-	450805 334813
233	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	30	-	450803 334809
233	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	35	-	450803 334805
233	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	36	-	450807 334804
233	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SE (E)	40	-	450806 334800
234	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A15NE (N)	24	-	450049 335636

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
234	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A15NE (N)	27	-	450050 335640
234	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A15NE (N)	32	-	450049 335644
235	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	24	-	450600 334781
235	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	33	-	450601 334772
236	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SE (NE)	24	-	450621 335427
237	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A15NE (N)	24	-	450073 335643
238	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16SE (NE)	25	-	450655 335436
239	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11NE (NW)	25	-	449869 335030
240	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A11NE (W)	28	-	449883 334957
241	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A11NE (E)	28	-	450137 334937
242	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NW (E)	29	-	450333 334971
242	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NW (E)	32	-	450332 334967
243	**Motion Map** Average Velocity Gradient (mmyear): 1.0	A16NE (NE)	32	-	450546 335583
244	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A15SE (N)	32	-	449940 335563
245	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A11NW (NW)	32	-	449824 335182
246	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16NW (NE)	33	-	450268 335713
247	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12SE (E)	34	-	450748 334813
247	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	35	-	450746 334813
247	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	38	-	450750 334809
247	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SE (E)	39	-	450746 334809

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
248	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A11NE (W)	36	-	449884 334941
248	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A11NE (W)	38	-	449886 334936
248	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A11NE (W)	39	-	449879 334942
249	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SW (E)	37	-	450529 334748
249	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SW (E)	41	-	450531 334743
249	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SW (E)	41	-	450526 334744
250	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A15SW (N)	38	-	449819 335248
251	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NE (NE)	38	-	450834 335676
251	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	41	-	450835 335680
252	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12SW (E)	39	-	450459 334857
253	**Motion Map** Average Velocity Gradient (mmyear): 3.4	A11NW (NW)	41	-	449823 335207
254	**Motion Map** Average Velocity Gradient (mmyear): 1.1	A16NW (NE)	42	-	450407 335577
255	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A11NE (E)	42	-	450082 335003
255	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A11NE (E)	43	-	450083 335002
256	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SW (NE)	43	-	450403 335566
257	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16NW (NE)	44	-	450415 335603
258	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12NW (E)	46	-	450209 334913
258	**Motion Map** Average Velocity Gradient (mmyear): -0.7	A12NW (E)	51	-	450212 334908
258	**Motion Map** Average Velocity Gradient (mmyear): -1.0	A12NW (E)	54	-	450216 334907
259	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A15SE (N)	47	-	449918 335450

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
259	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A15SE (N)	49	-	449916 335442
259	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A15SE (N)	51	-	449913 335451
259	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A15SE (N)	51	-	449914 335447
260	**Motion Map** Average Velocity Gradient (mmyear): 0.7	A16NE (NE)	47	-	450789 335711
260	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	51	-	450790 335715
260	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	54	-	450793 335719
261	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A11NE (E)	47	-	450109 334980
261	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11NE (E)	49	-	450106 334981
261	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A11NE (E)	49	-	450109 334976
262	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A11NW (NW)	48	-	449777 335139
262	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A11NW (NW)	49	-	449775 335144
263	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A11NW (NW)	48	-	449815 335212
263	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11NW (NW)	50	-	449813 335213
264	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A11NE (E)	49	-	450109 334968
264	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A11NE (E)	50	-	450108 334964
264	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A11NE (E)	51	-	450107 334972
265	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SW (E)	49	-	450526 334737
266	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	50	-	450605 334755
266	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12SE (E)	54	-	450605 334751
267	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	52	-	450572 334742

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
267	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	58	-	450576 334737
268	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SE (E)	53	-	450809 334788
268	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A12SE (E)	55	-	450813 334786
268	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A12SE (E)	56	-	450816 334786
268	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	57	-	450810 334783
268	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	59	-	450813 334782
268	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	61	-	450817 334781
268	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SE (E)	62	-	450812 334778
268	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	65	-	450817 334777
269	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16NE (NE)	53	-	450849 335682
269	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NE (NE)	55	-	450852 335681
270	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NW (NE)	53	-	450420 335724
271	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12NW (E)	54	-	450357 334945
272	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A11SE (E)	56	-	450147 334890
273	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12NW (E)	57	-	450215 334903
273	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12SW (E)	63	-	450219 334899
273	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SW (E)	67	-	450219 334895
274	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A11NE (E)	58	-	450082 334978
275	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16NW (NE)	64	-	450328 335729
275	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A16NW (NE)	67	-	450330 335732

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
276	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16SW (NE)	64	-	450499 335450
277	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	64	-	450787 335728
278	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SW (E)	65	-	450383 334874
278	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SW (E)	68	-	450382 334870
278	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SW (E)	71	-	450379 334871
279	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A16NW (NE)	66	-	450455 335668
279	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16NW (NE)	67	-	450457 335675
279	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NW (NE)	69	-	450459 335671
279	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A16NW (NE)	69	-	450458 335667
279	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16NW (NE)	71	-	450460 335671
280	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	66	-	450452 335656
280	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	67	-	450455 335663
280	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16NW (NE)	68	-	450455 335659
280	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16NW (NE)	70	-	450458 335663
280	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NW (NE)	71	-	450457 335655
280	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A16NW (NE)	72	-	450459 335659
281	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A11NE (SW)	66	-	449896 334901
282	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A15SE (N)	67	-	449893 335476
283	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16NE (NE)	68	-	450787 335732
283	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	75	-	450780 335738

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
283	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	76	-	450787 335740
284	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	68	-	450453 335652
284	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	68	-	450452 335648
284	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	71	-	450455 335647
284	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NW (NE)	72	-	450457 335651
285	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SE (E)	68	-	450816 334773
285	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A12SE (E)	71	-	450820 334772
285	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A12SE (E)	72	-	450817 334769
285	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SE (E)	73	-	450819 334769
286	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SW (E)	68	-	450221 334894
286	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SW (E)	72	-	450221 334890
286	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SW (E)	74	-	450225 334889
286	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SW (E)	76	-	450221 334886
286	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12SW (E)	78	-	450225 334885
287	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16NE (NE)	69	-	450865 335686
287	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NE (NE)	71	-	450864 335690
287	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	74	-	450866 335694
287	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16NE (NE)	74	-	450869 335689
288	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A15NE (N)	71	-	450041 335683
289	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A15NE (N)	71	-	450136 335710

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
290	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A15SE (N)	72	-	449870 335404
291	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16NW (NE)	75	-	450355 335747
292	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	77	-	450784 335741
292	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A16NE (NE)	82	-	450783 335745
292	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A16NE (NE)	83	-	450780 335746
292	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16NE (NE)	86	-	450783 335749
293	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12NW (E)	77	-	450293 334915
294	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SW (E)	77	-	450373 334868
295	**Motion Map** Average Velocity Gradient (mmyear): -0.9	A16NW (NE)	81	-	450408 335759
296	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11SE (E)	81	-	450192 334868
296	**Motion Map** Average Velocity Gradient (mmyear): 0.1	A11SE (E)	82	-	450193 334868
296	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A11SE (E)	84	-	450190 334864
296	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A11SE (E)	85	-	450193 334864
296	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A11SE (E)	88	-	450197 334863
296	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11SE (E)	89	-	450194 334860
297	**Motion Map** Average Velocity Gradient (mmyear): 1.0	A11SE (E)	81	-	450121 334876
297	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11SE (SE)	85	-	450119 334872
297	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A11SE (SE)	89	-	450118 334868
297	**Motion Map** Average Velocity Gradient (mmyear): 0.9	A11SE (SE)	93	-	450116 334865
297	**Motion Map** Average Velocity Gradient (mmyear): -1.1	A11SE (SE)	95	-	450111 334866

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
298	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A16SW (NE)	82	-	450461 335544
299	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A16NE (NE)	83	-	450875 335696
299	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NE (NE)	85	-	450875 335700
300	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A11NW (NW)	85	-	449765 335212
301	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16NE (NE)	86	-	450782 335749
301	**Motion Map** Average Velocity Gradient (mmyear): 0.4	A16NE (NE)	96	-	450778 335758
302	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	87	-	450822 334756
302	**Motion Map** Average Velocity Gradient (mmyear): -0.4	A12SE (E)	88	-	450826 334755
302	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	88	-	450824 334755
302	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12SE (E)	92	-	450824 334751
302	**Motion Map** Average Velocity Gradient (mmyear): -0.5	A12SE (E)	93	-	450827 334751
302	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SE (E)	94	-	450821 334748
302	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SE (E)	96	-	450825 334747
302	**Motion Map** Average Velocity Gradient (mmyear): -0.2	A12SE (E)	98	-	450828 334746
302	**Motion Map** Average Velocity Gradient (mmyear): -0.3	A12SE (E)	100	-	450826 334743
303	**Motion Map** Average Velocity Gradient (mmyear): 0.2	A12SE (E)	88	-	450817 334753
304	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A12NW (E)	88	-	450329 334911
305	**Motion Map** Average Velocity Gradient (mmyear): -0.1	A11SE (SW)	93	-	449912 334874
306	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16NW (N)	95	-	450244 335784
306	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A16NW (N)	99	-	450247 335787

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
306	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A16NW (N)	99	-	450247 335787
307	**Motion Map** Average Velocity Gradient (mmyear): 0.8	A15SE (N)	95	-	449865 335474
308	**Motion Map** Average Velocity Gradient (mmyear): 0.3	A16NW (NE)	97	-	450465 335743
308	**Motion Map** Average Velocity Gradient (mmyear): 0.5	A16NW (NE)	99	-	450467 335742
309	**Motion Map** Average Velocity Gradient (mmyear): 0.6	A12SE (E)	97	-	450621 334711
310	**Motion Map** Average Velocity Gradient (mmyear): -1.0	A11NW (W)	98	-	449815 334944
311	**Motion Map** Average Velocity Gradient (mmyear): 0.0	A12SE (E)	98	-	450600 334703
312	**Motion Map** Average Velocity Gradient (mmyear): -1.2	A11NW (W)	99	-	449814 334940

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Nottinghamshire	041_15	1885
Nottinghamshire	041_15	1885
Nottinghamshire	041_15	1885
Nottinghamshire	041_15	1885
Derbyshire	056_03	1885
Derbyshire	056_03	1885
Nottinghamshire	041_15	1900
Nottinghamshire	041_15	1900
Nottinghamshire	041_15	1900
Nottinghamshire	041_15	1900
Nottinghamshire	045_03	1901
Nottinghamshire	045_03	1901
Derbyshire	056_03	1901
Derbyshire	056_03	1901
Nottinghamshire	041_15	1914
Nottinghamshire	041_15	1914
Nottinghamshire	041_15	1914
Nottinghamshire	041_15	1914
Derbyshire	056_03	1914
Derbyshire	056_03	1914
Derbyshire	056_03	1938
Derbyshire	056_03	1938
Nottinghamshire	041_15	1939
Nottinghamshire	041_15	1939
Nottinghamshire	041_15	1939
Nottinghamshire	041_15	1939

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Nottinghamshire	041_SE	1884
Nottinghamshire	045_NE	1884
Derbyshire	056_NW	1887
Derbyshire	051_SW	1889
Leicestershire	005_NW	1901
Nottinghamshire	041_SE	1901
Nottinghamshire	041_SW	1901
Nottinghamshire	045_NE	1901
Nottinghamshire	045_NW	1901
Derbyshire	051_SW	1901
Derbyshire	056_NE	1901
Derbyshire	056_NW	1901
Leicestershire	005_NW	1921
Nottinghamshire	041_SE	1921
Nottinghamshire	041_SW	1921
Nottinghamshire	045_NE	1921
Derbyshire	051_SW	1921
Derbyshire	056_NE	1921
Derbyshire	056_NW	1921
Nottinghamshire	045_NW	1938
Derbyshire	051_SW	1938
Derbyshire	056_NW	1938
Nottinghamshire	041_SE	1939
Derbyshire	056_NE	1939
Ordnance Survey Plan	SK43SE	1955
Ordnance Survey Plan	SK53NW	1955
Ordnance Survey Plan	SK53SW	1955
Ordnance Survey Plan	SK43NE	1956
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SK53SW	1983
Ordnance Survey Plan	SK53NW	1984
Ordnance Survey Plan	SK43NE	1985
Ordnance Survey Plan	SK43SE	1995

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Man Made Mining Cavities Peter Brett Associates	November 2016	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2016	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	September 2016	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Subsidence Insurance Claims SP Property Services	November 2016	Quarterly
Subsidence Investigations CET Structures Ltd	November 2016	Quarterly

Motion Map Data (1:2,500)	Version	Update Cycle
Motion Map		
Nigel Press Associates - Hampshire	February 2011	As notified
Nigel Press Associates - Cambridge	January 2011	As notified
Nigel Press Associates - Ipswich	January 2011	As notified
Nigel Press Associates - Norwich	January 2011	As notified
Nigel Press Associates - Peterborough	January 2011	As notified
Nigel Press Associates - Barnstaple	July 2010	As notified
Nigel Press Associates - Derbyshire	July 2010	As notified
Nigel Press Associates - Humberside	July 2010	As notified
Nigel Press Associates - Kent	July 2010	As notified
Nigel Press Associates - Lincolnshire	July 2010	As notified
Nigel Press Associates - Nottinghamshire	July 2010	As notified
Nigel Press Associates - Birmingham	May 2009	As notified
Nigel Press Associates - Bournemouth	May 2009	As notified
Nigel Press Associates - Brighton	May 2009	As notified
Nigel Press Associates - Bristol	May 2009	As notified
Nigel Press Associates - Cardiff	May 2009	As notified
Nigel Press Associates - Central London	May 2009	As notified
Nigel Press Associates - Cheltenahm	May 2009	As notified
Nigel Press Associates - Coventry	May 2009	As notified
Nigel Press Associates - Crawley	May 2009	As notified
Nigel Press Associates - Edinburgh	May 2009	As notified
Nigel Press Associates - Exeter	May 2009	As notified
Nigel Press Associates - Glasgow	May 2009	As notified
Nigel Press Associates - Isle of Wight	May 2009	As notified
Nigel Press Associates - Leeds	May 2009	As notified
Nigel Press Associates - Leicester	May 2009	As notified
Nigel Press Associates - Liverpool	May 2009	As notified
Nigel Press Associates - Manchester	May 2009	As notified
Nigel Press Associates - Milton Keynes	May 2009	As notified
Nigel Press Associates - Newcastle	May 2009	As notified
Nigel Press Associates - Northwich	May 2009	As notified
Nigel Press Associates - Nottingham	May 2009	As notified
Nigel Press Associates - Oxford	May 2009	As notified
Nigel Press Associates - Plymouth	May 2009	As notified
Nigel Press Associates - Portsmouth	May 2009	As notified
Nigel Press Associates - Preston	May 2009	As notified
Nigel Press Associates - Reading	May 2009	As notified
Nigel Press Associates - Sheffield	May 2009	As notified
Nigel Press Associates - Stoke	May 2009	As notified
Nigel Press Associates - Swindon	May 2009	As notified
Nigel Press Associates - Tonbridge	May 2009	As notified
Nigel Press Associates - North London	November 2008	As notified
Nigel Press Associates - Head Office	September 2008	As notified

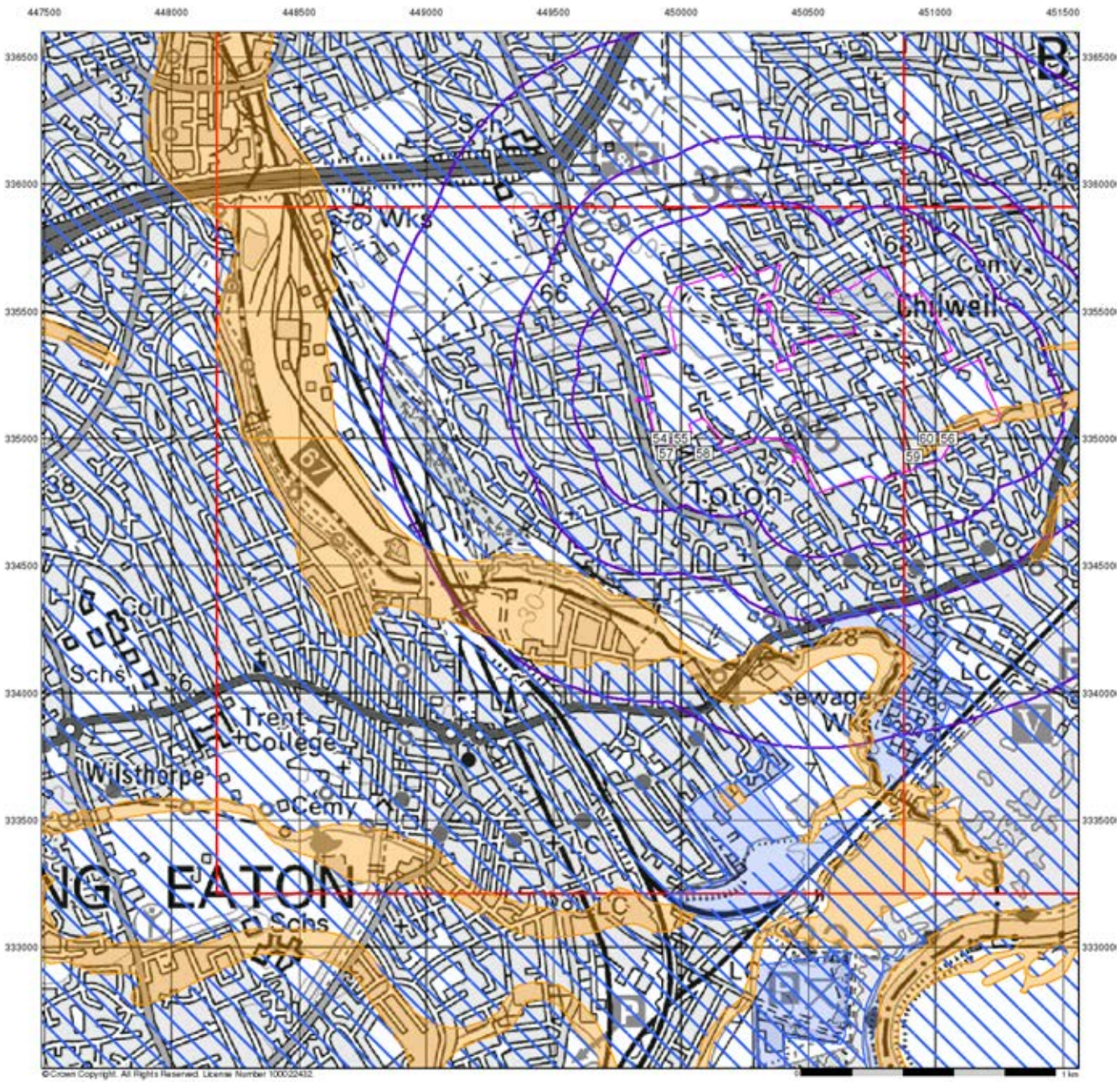
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, [redacted]	[redacted]
2	**Ove Arup & Partners** [redacted]	[redacted]
-	**Landmark Information Group Limited** [redacted]	[redacted]



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

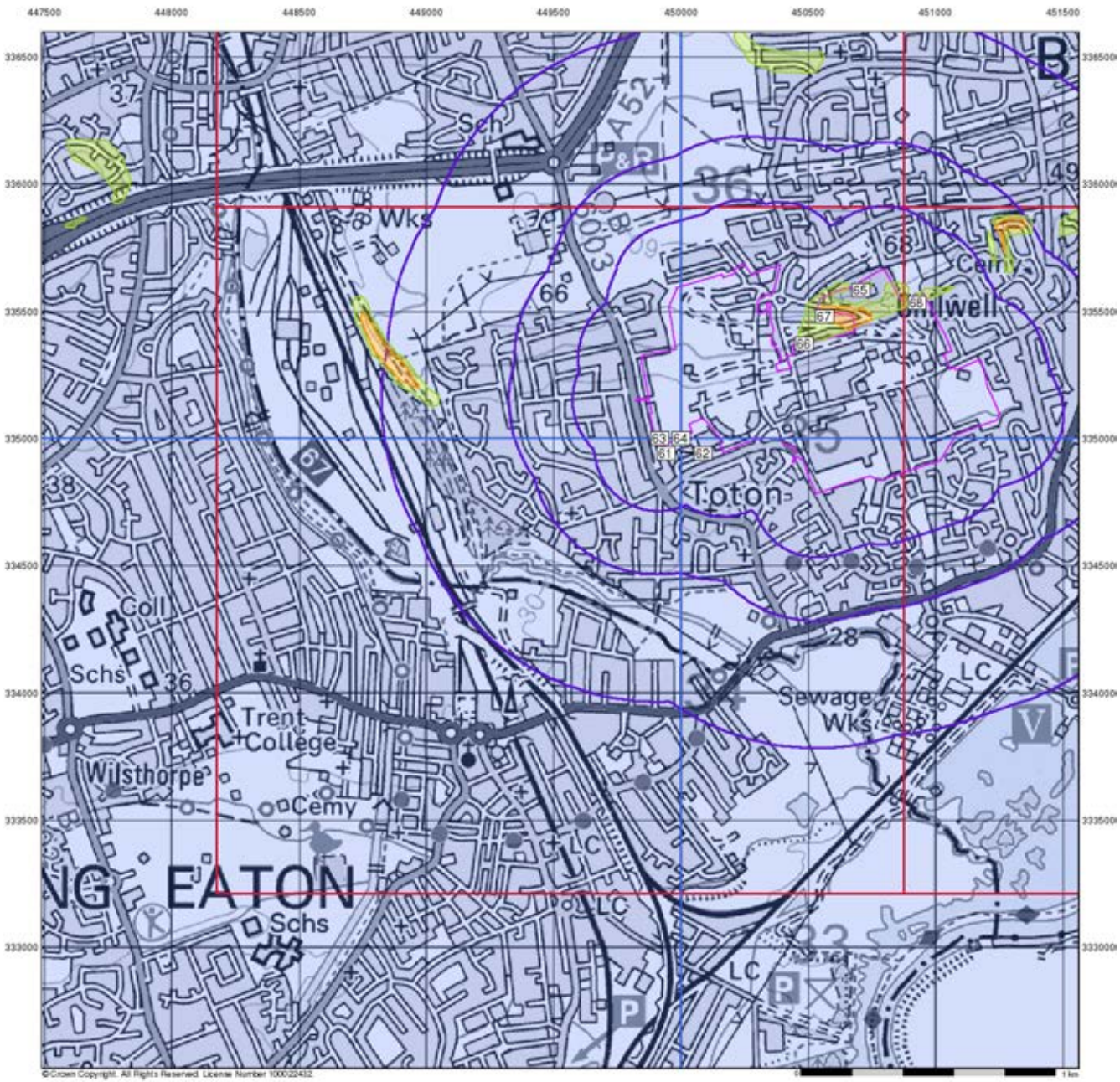
Mining and Ground Stability - Slice A

Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A

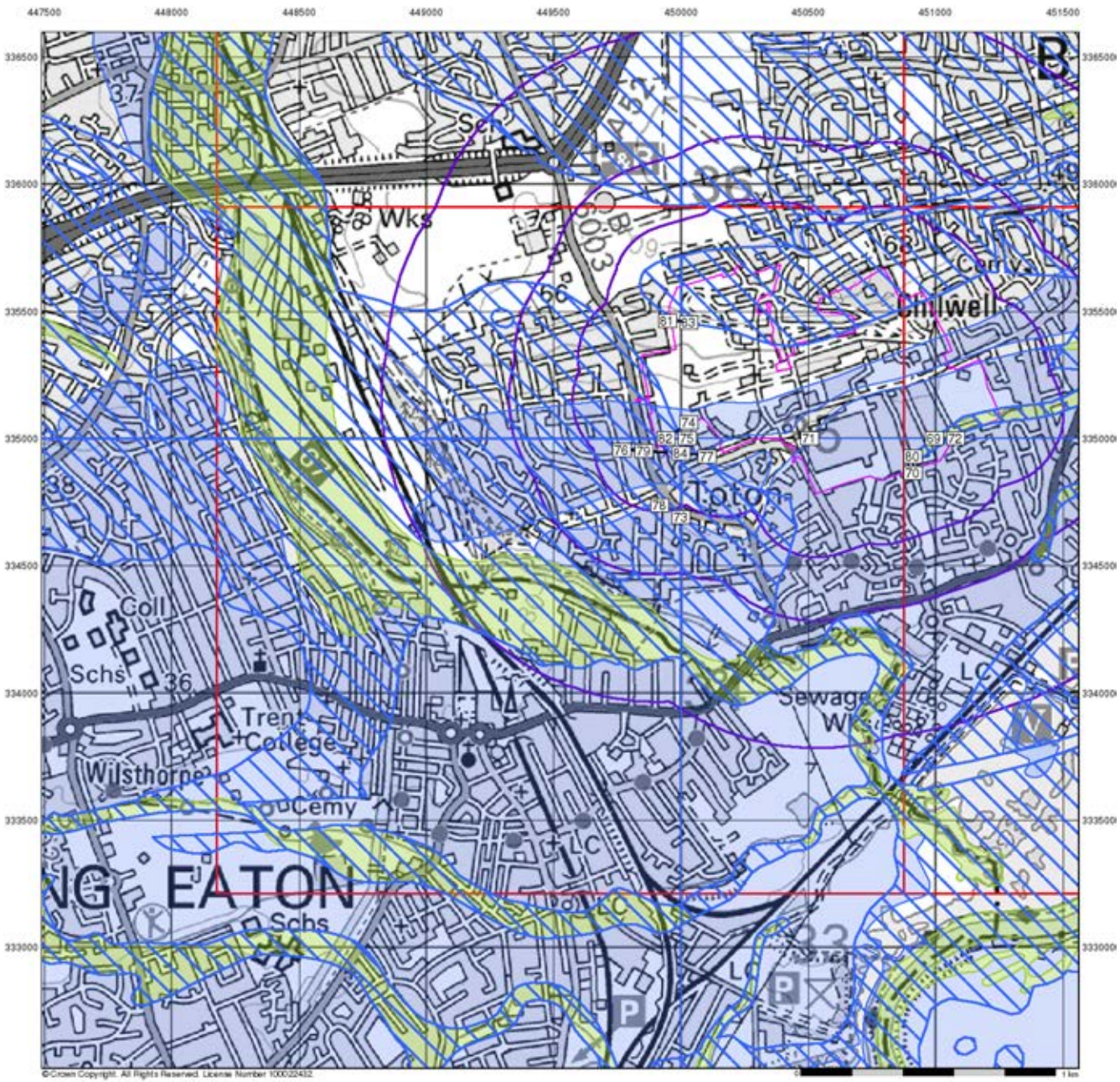
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A

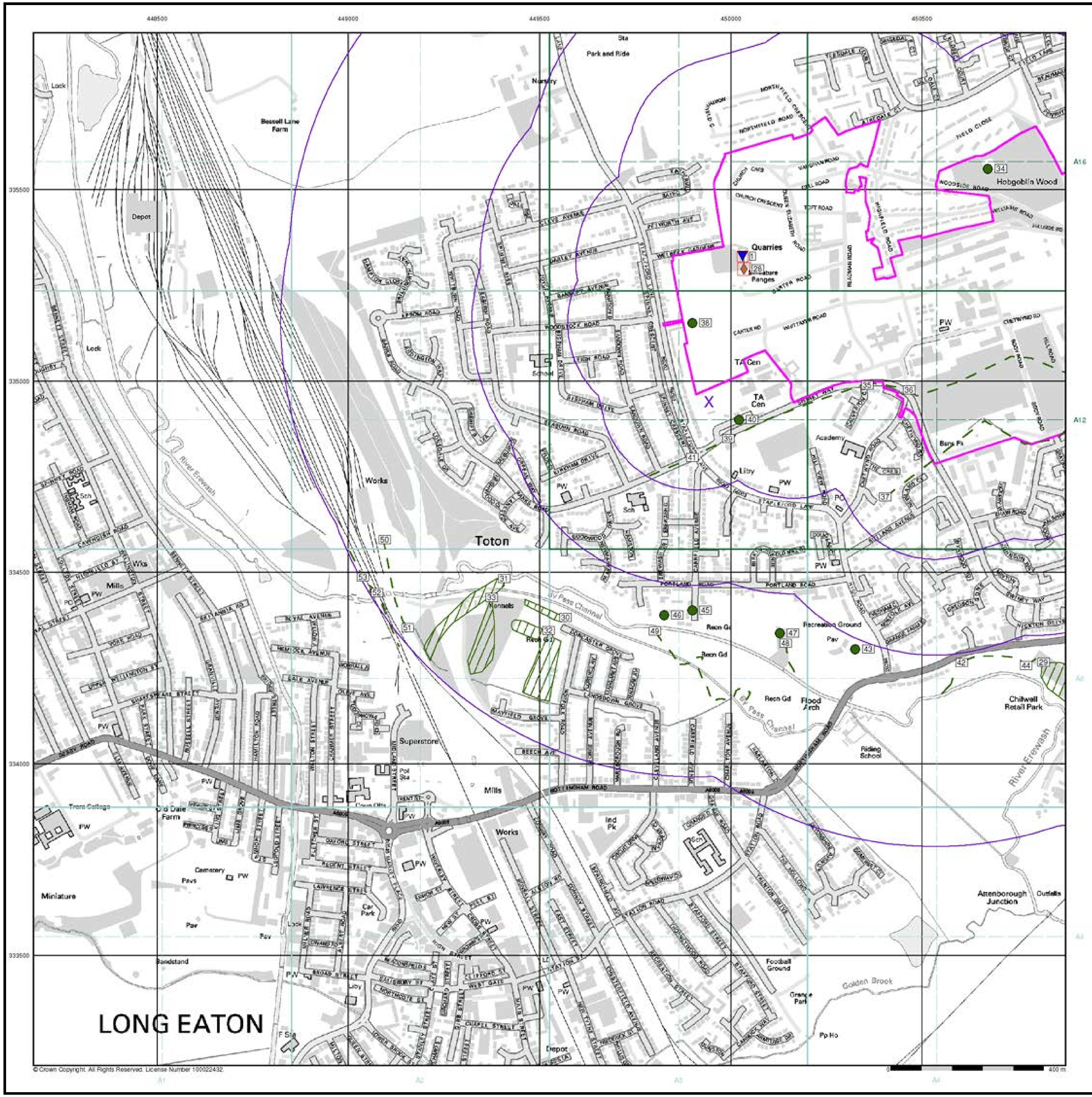
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Historical Land Use Information (1:10,000)

General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Map ID
- Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

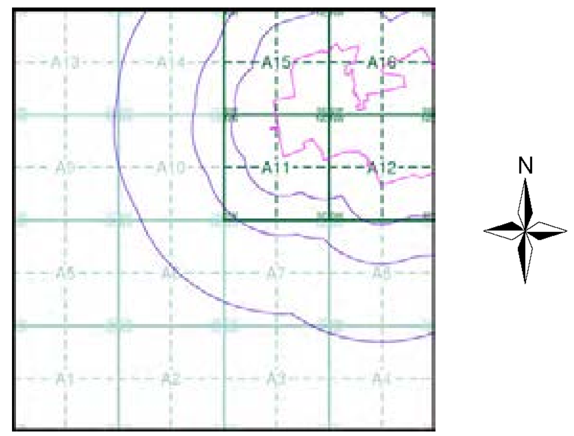
Historical Land Use

	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

- Potential Mining Area
- BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



Order Details

Order Number: 114077061_1_1
Customer Ref: 37782-3501
National Grid Reference: 449940, 334950
Slice: A
Site Area (Ha): 75.28
Search Buffer (m): 1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel:
Fax:
Web:
[redacted]

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
449940, 334950

Slice:
A

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3		5		10
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 6		2		
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 6	Yes			
Pollution Incidents to Controlled Waters	pg 7	1		1	2
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality	pg 7				2
River Quality Biology Sampling Points	pg 8				1
Substantiated Pollution Incident Register					
River Quality Chemistry Sampling Points	pg 9				1
Water Abstractions	pg 9				(*1)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 10	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 10	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines					n/a
Detailed River Network Offline Drainage	pg 11	Yes			n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 12				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage		2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 12	5	3		12
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 14	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 14	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 19	2			
BGS Urban Soil Chemistry	pg 19	Yes	Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 23	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability	pg 23	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 24	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 24	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 25	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 26		15	9	10
Fuel Station Entries	pg 29		3		1
Points of Interest - Commercial Services	pg 29		2		2
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 29	6			5
Points of Interest - Public Infrastructure	pg 30		2		3
Points of Interest - Recreational and Environmental	pg 31	2	2	4	6
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 33		1		3
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 33	2			
Ramsar Sites					
Sites of Special Scientific Interest	pg 33				1
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	2	450900 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	2	450950 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	2	451000 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SE (NE)	0	2	450650 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	2	450850 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	0	2	450900 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (N)	0	2	449950 335050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	0	2	450950 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (NE)	0	2	450000 335000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (E)	0	2	450050 334950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	2	450500 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	2	450550 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A16SE (NE)	0	2	450650 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	2	450500 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SE (NE)	0	2	450600 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	2	450700 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SE (NE)	0	2	450800 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A16SE (NE)	0	2	450850 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (N)	0	2	449944 335000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (E)	0	2	449944 334946
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	0	2	449944 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	0	2	449950 335250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (N)	0	2	450000 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	2	450300 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A16SW (NE)	0	2	450500 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A11NE (N)	0	2	450000 335200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	0	2	450900 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	0	2	449944 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	0	2	449944 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	2	450350 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	0	2	451200 335000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SE (N)	0	2	450000 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11NE (E)	4	2	450000 334946
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	10	2	451000 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (S)	33	2	450000 334700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	55	2	451050 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	62	2	450000 335750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	77	2	451050 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	100	2	451100 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	121	2	451100 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	166	2	451150 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	189	2	451150 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	212	2	451200 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A11SE (S)	216	2	449944 334750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	233	2	451200 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	278	2	451250 335600
1	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: Not Given Location: The Crescent, TOTON Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: T/61/21051/O/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 25th January 1992 Revocation Date: Not Supplied Discharge Type: Storm sewage overflow discharge Discharge Environment: Freshwater Stream/River Receiving Water: The Butts Brook **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A12SW (E)	31	3	450500 334780
1	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: Storm Water Sewer Location: The Crescent, TOTON Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: CT/61/40188/O/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 14th August 1995 Revocation Date: Not Supplied Discharge Type: Storm sewage overflow discharge Discharge Environment: Freshwater Stream/River Receiving Water: The Butts Brook **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A12SW (E)	33	3	450500 334775
2	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: The Crescent Attenborough, Beeston, Nottingham, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/61/40188/O Permit Version: 1 Effective Date: 14th August 1995 Issued Date: 14th August 1995 Revocation Date: 12th June 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The Butts Brook **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12SW (E)	73	3	450440 334810
3	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Woodstock Road Storm Overflow, Woodstock Road, Toton Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/62/21206/O Permit Version: 1 Effective Date: 26th February 1992 Issued Date: 26th February 1992 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Trent **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A11SE (SE)	142	3	450000 334850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Stapleford Lane/Banks Road Jcn Sso, Stapleford Lane/Banks Road Jcn, Toton Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/40189/O Permit Version: 1 Effective Date: 14th August 1995 Issued Date: 14th August 1995 Revocation Date: 7th November 2000 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Trent **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A11SE (S)	164	3	449960 334810
5	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Portland Road/Carrfield Avenue Sso, Portland Rd/Carrfield Avenue Jcn, Toton, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/12377/O Permit Version: 1 Effective Date: 1st May 1986 Issued Date: 1st May 1986 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	A7NE (S)	616	3	449910 334350
6	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Portland Road - Sws Portland Road, Toton, Broxtowe, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/00272/O Permit Version: 1 Effective Date: 12th October 1955 Issued Date: 12th October 1955 Revocation Date: 2nd April 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	673	3	450200 334200
7	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Banks Road - Surface Water Sewer, Toton, Broxtowe, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/00673/O Permit Version: 1 Effective Date: 7th October 1959 Issued Date: 7th October 1959 Revocation Date: 2nd April 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A7NW (S)	675	3	449800 334300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: Not Given Location: Beeston/Stapleford Sewerage Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: CT/61/03670/O/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 2nd January 1974 Revocation Date: Not Supplied Discharge Type: Sewerage And Other Matter Discharge - Sewerage And Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A8SW (SE)	697	3	450400 334100
8	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: Not Given Location: High Road PS , TOTON Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: CT/61/03670/O/8 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 2nd January 1974 Revocation Date: Not Supplied Discharge Type: Sewerage Emergency Discharge Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A8SW (SE)	702	3	450400 334095
9	**Discharge Consents** Operator: Miller Civil Engineering Ltd Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Miller Civil Engineering Ltd, Toton Sewage Works, Barton Lane, Toton Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/45146/T Permit Version: 1 Effective Date: 25th March 1997 Issued Date: 25th March 1997 Revocation Date: 28th August 1998 Discharge Type: Miscellaneous Discharges - Mine / Groundwater As Raised Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	857	3	450800 333970
9	**Discharge Consents** Operator: Geoffrey Barker Property Type: GROUNDWATER REMEDIATION SITES/CIVIL ENGINEERING Location: Toton Pumped Groundwater Toton Sewage Treatment Works, Barton Lane, Toton, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/45278/T Permit Version: 1 Effective Date: 27th January 1999 Issued Date: 27th January 1999 Revocation Date: 18th May 2000 Discharge Type: Miscellaneous Discharges - Mine / Groundwater As Raised Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	871	3	450780 333950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
10	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland/Carrfield Avenue/Sws Cleveland Avenue, Carrfield Avenue, Long Eaton, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/00710/O Permit Version: 1 Effective Date: 5th January 1960 Issued Date: 5th January 1960 Revocation Date: 2nd April 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash (Tributary) **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A7SE (S)	866	3	449900 334100
11	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Cleveland/Carrfield Avenue/Sws Cleveland Avenue, Carrfield Avenue, Long Eaton, Derbyshire Authority: Environment Agency, Midlands Region Catchment Area: River Erewash Catchment Reference: T/61/00710/O Permit Version: 1 Effective Date: 5th January 1960 Issued Date: 5th January 1960 Revocation Date: 2nd April 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash (Tributary) **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A7SW (S)	873	3	449800 334100
12	**Discharge Consents** Operator: North Midland Construction Plc Property Type: Not Given Location: Toton Water Reclamation Works, Barton Lane, Toton, NOTTINGHAM Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: T/61/22883/T/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 4th March 1994 Revocation Date: Not Supplied Discharge Type: Trade Effluent Discharge Environment: Freshwater Stream/River Receiving Water: River Erewash **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	897	3	450730 333910
13	**Local Authority Pollution Prevention and Controls** Name: Co-Op Location: Swiney Way, Toton, NOTTINGHAM, Nottinghamshire, NG9 6GZ Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 7/98 Dated: 31st December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revokedRevoked** Positional Accuracy: Automatically positioned to the address	A11SE (SE)	90	4	450156 334854
14	**Local Authority Pollution Prevention and Controls** Name: Tesco Extra Location: Swiney Way, Toton, NOTTINGHAM, NG9 6EZ Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 1/03 Dated: 30th May 2003 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A11SE (S)	150	4	449987 334836
	Nearest Surface Water Feature	A12SE (E)	0	-	450712 334874

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Bypass Road, CHILWELL Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Unknown Note: Fish Affected; Dead Fish & Funus In Watercourse Incident Date: 4th July 1998 Incident Reference: 2804692 Catchment Area: Trent Catchment : Trent To Confluence With Erewash Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (E)	0	3	450650 335150
16	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage (Non-PLC): Septic Tank Location: A6, WHATSTANDWELL Authority: Environment Agency, Midlands Region Pollutant: Crude Sewage Note: River Derwent; Sewage From Manhole To Watercourse; Amenity Effected Incident Date: 13th October 1997 Incident Reference: 2803514 Catchment Area: Trent Catchment : Derwent To Confluence With Amber Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A11SW (SW)	422	3	449700 334600
17	**Pollution Incidents to Controlled Waters** Property Type: Construction Location: Rear Of Chilwell Retail Park, Off Nottingham Road , TOTON Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Amenity Affected; Drilling Caused A Hole; Watercourse Running Through Contami Incident Date: 6th August 1998 Incident Reference: 2804886 Catchment Area: Trent Catchment : River Erewash Receiving Water: Watercourse Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (SE)	589	3	450600 334200
18	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: Bottom Carfield Avenue, TOTON Authority: Environment Agency, Midlands Region Pollutant: Oils - Unknown Note: River Erewash; Diesel++; Amenity Effected Incident Date: 12th February 1998 Incident Reference: 2804007 Catchment Area: Trent Catchment : River Erewash Receiving Water: Watercourse Cause of Incident: Deliberate Disposal To Drain Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (S)	666	3	449900 334300
	River Quality Name: Erewash R GQA Grade: River Quality C Reach: Fb Stapleford To A6005 Rd Br. Toton Estimated Distance (km): 8.2 Flow Rate: Flow less than 2.5 cumecs Flow Type: River Year: 2000	A7NE (S)	651	3	449955 334317
	River Quality Name: Erewash R GQA Grade: River Quality C Reach: A6005 Rd Br Toton To Conf. R. Trent Estimated Distance (km): 2 Flow Rate: Flow less than 2.5 cumecs Flow Type: River Year: 2000	A7SE (S)	674	3	450193 334157

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**River Quality Biology Sampling Points** Name: Erewash Reach: A6005 Rd Bridge To Ton To Confluence River Trent Estimated Distance: 2.00 Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Biology GQA Grade E - Poor Year: 1995 GQA Grade: River Quality Biology GQA Grade D - Fair Year: 2000 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2002 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2003 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2004 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2005 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2006 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2007 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2008 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2009 GQA Grade: River Quality Biology GQA Grade B - Good	A8SW (SE)	674	3	450280 334160

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**River Quality Chemistry Sampling Points** Name: Erewash River Reach: Footbridge Stapleford To A6005 Road Bridge Toton Estimated Distance: 8.20 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied	A8SW (SE)	661	3	450301 334165
	Water Abstractions Operator: Erewash Borough Council Licence Number: 03/28/61/0041 Permit Version: Not Supplied Location: Long Eaton Authority: Environment Agency, Midlands Region Abstraction: Industrial Processing (Miscellaneous) Abstraction Type: Not Supplied Source: Brook Daily Rate (m3): 91 Yearly Rate (m3): 2273 Details: Golden Brook; Status: Revoked; Lapsed Or Cancelled Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1963	3	449300 333100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	A11NE (E)	0	3	449944 334946
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	A11NW (NW)	0	3	449805 335108
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	A15SE (N)	0	3	450084 335438
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (NE)	0	2	450000 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (NE)	0	2	450000 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (NE)	0	2	450000 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A11NE (N)	0	2	449944 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A11NE (E)	0	2	449944 334946
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A15SE (N)	0	2	450000 335461
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A15SE (N)	0	2	450032 335455
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A12NW (E)	0	2	450330 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A11NE (NE)	0	2	450176 335084
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (E)	0	2	449944 334946
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (E)	0	2	450000 334946
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11SE (S)	0	2	450000 334690
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (N)	0	2	449944 335000
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A11NE (NE)	0	2	450000 335000
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A12SW (SE)	0	3	450284 334659
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Water Storage Areas None				
	Flood Defences None				
	Detailed River Network Lines None				
20	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12NE (E)	0	3	450641 335131
21	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12NE (E)	0	3	450561 335110
22	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12NE (E)	0	3	450584 335131
23	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12NE (E)	0	3	450550 335122
24	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12NW (E)	0	3	450535 335118
25	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	A12NW (E)	0	3	450496 335108

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**Historical Landfill Sites** Licence Holder: Ministry of Defence Location: Barton Lane, Chilwell, Nottingham, Nottinghamshire Name: MOD Barton Lane, Chilwell Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD22282 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3000/0174 BGS Ref: Not Supplied Other Ref: 5/U/23/53SW	A8NE (SE)	564	3	450828 334266
	Local Authority Landfill Coverage Name: Broxtowe Borough Council - Has no landfill data to supply		0	4	449944 334946
	Local Authority Landfill Coverage Name: Nottinghamshire County Council - Has no landfill data to supply		0	5	449944 334946
	Local Authority Landfill Coverage Name: Erewash Borough Council - Has supplied landfill data		575	6	449642 334370
	Local Authority Landfill Coverage Name: Derbyshire County Council - Had landfill data but passed it to the relevant environment agency		576	7	449642 334370
27	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A16SE (NE)	0	-	450671 335554
28	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12NW (E)	0	-	450357 334989
29	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12NW (E)	0	-	450466 334977
30	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A12SW (SE)	0	-	450403 334697
31	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A11NE (N)	0	-	449899 335152
32	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A11SE (SE)	4	-	449993 334849
33	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A11SE (SE)	106	-	450021 334899
34	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A11SE (S)	166	-	449899 334801
35	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A8NE (SE)	515	-	450603 334264
36	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NW (SE)	528	-	450325 334300
37	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A8NE (SE)	544	-	450771 334257
38	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (S)	565	-	449899 334402

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NW (S)	583	-	449825 334389
40	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (S)	600	-	450128 334341
41	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A7NE (S)	610	-	450142 334315
42	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A7NW (S)	628	-	449802 334347
43	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A10SW (SW)	899	-	449095 334586
44	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	A6NW (SW)	971	-	449154 334356
45	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A6NW (SW)	984	-	449074 334447
46	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	A6NW (SW)	994	-	449038 334488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A11NE (E)	0	2	450006 334946
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A11NE (E)	0	2	449944 334946
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (N)	0	2	449944 335500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	A12SE (E)	0	2	450736 334741
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	A11NE (NE)	0	2	450000 335000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	A11NE (NE)	0	2	450000 335000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A12SW (E)	0	2	450355 334827

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (N)	0	2	449947 335122
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15SE (N)	0	2	450000 335461
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (NE)	0	2	450000 335000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12NW (E)	0	2	450460 334950
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11NE (E)	0	2	449944 334946
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11NE (NE)	0	2	450176 335084

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11NE (E)	4	2	450000 334946
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (S)	15	2	449918 334738
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A15SE (N)	30	2	449927 335500
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11NE (E)	64	2	450102 334911
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (S)	143	2	449938 334825
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A11SE (S)	151	2	450000 334797

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A10NE (W)	261	2	449500 334982
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10NE (W)	364	2	449500 334946
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7SE (S)	495	2	450000 334204
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10SE (SW)	524	2	449500 334639
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	A14SE (NW)	525	2	449331 335447
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7NW (SW)	580	2	449644 334451

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A6NE (SW)	617	2	449500 334505
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A7SE (S)	646	2	449958 334141
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A4NE (SE)	750	2	450824 333676
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A10NW (W)	824	2	449000 335029
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (NW)	867	2	449000 335505
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A6SE (SW)	946	2	449500 334113

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	**BGS Recorded Mineral Sites** Site Name: Hill Farm Quarries Location: , Chilwell, Beeston, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 168478 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Tarporley Siltstone Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A15SE (N)	0	2	450030 335330
47	**BGS Recorded Mineral Sites** Site Name: Hill Farm Quarries Location: , Chilwell, Beeston, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 168479 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Tarporley Siltstone Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A15SE (N)	0	2	450010 335345
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450251, 335248 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 8.00 mg/kg Cadmium Measured Concentration: 0.20 mg/kg Chromium Measured Concentration: 59.90 mg/kg Lead Measured Concentration: 32.00 mg/kg Nickel Measured Concentration: 25.10 mg/kg	A16SW (NE)	0	2	450251 335248
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450750, 335250 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 9.30 mg/kg Cadmium Measured Concentration: 0.50 mg/kg Chromium Measured Concentration: 67.60 mg/kg Lead Measured Concentration: 51.80 mg/kg Nickel Measured Concentration: 25.80 mg/kg	A16SE (E)	0	2	450750 335250
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450780, 334829 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 15.30 mg/kg Cadmium Measured Concentration: 2.00 mg/kg Chromium Measured Concentration: 84.70 mg/kg Lead Measured Concentration: 257.50 mg/kg Nickel Measured Concentration: 48.60 mg/kg	A12SE (E)	8	2	450780 334829

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449830, 335270 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 11.30 mg/kg Cadmium Measured Concentration: 0.50 mg/kg Chromium Measured Concentration: 67.20 mg/kg Lead Measured Concentration: 89.80 mg/kg Nickel Measured Concentration: 32.50 mg/kg	A15SW (N)	23	2	449830 335270
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450750, 335750 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 12.00 mg/kg Cadmium Measured Concentration: 0.90 mg/kg Chromium Measured Concentration: 66.60 mg/kg Lead Measured Concentration: 88.10 mg/kg Nickel Measured Concentration: 50.60 mg/kg	A16NE (NE)	97	2	450750 335750
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450210, 334818 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 17.40 mg/kg Cadmium Measured Concentration: 10.40 mg/kg Chromium Measured Concentration: 115.70 mg/kg Lead Measured Concentration: 132.80 mg/kg Nickel Measured Concentration: 114.60 mg/kg	A12SW (SE)	134	2	450210 334818
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450215, 335825 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 10.40 mg/kg Cadmium Measured Concentration: 0.20 mg/kg Chromium Measured Concentration: 73.50 mg/kg Lead Measured Concentration: 42.10 mg/kg Nickel Measured Concentration: 31.90 mg/kg	A16NW (N)	140	2	450215 335825
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449730, 334750 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 12.20 mg/kg Cadmium Measured Concentration: 0.40 mg/kg Chromium Measured Concentration: 59.00 mg/kg Lead Measured Concentration: 122.00 mg/kg Nickel Measured Concentration: 25.50 mg/kg	A11SW (SW)	281	2	449730 334750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449770, 335870 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 19.00 mg/kg Cadmium Measured Concentration: 0.40 mg/kg Chromium Measured Concentration: 56.50 mg/kg Lead Measured Concentration: 126.90 mg/kg Nickel Measured Concentration: 26.50 mg/kg	A15NW (N)	350	2	449770 335870
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449310, 335245 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 11.90 mg/kg Cadmium Measured Concentration: 0.20 mg/kg Chromium Measured Concentration: 52.10 mg/kg Lead Measured Concentration: 57.60 mg/kg Nickel Measured Concentration: 21.80 mg/kg	A14SE (NW)	523	2	449310 335245
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450750, 334248 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 18.60 mg/kg Cadmium Measured Concentration: 2.80 mg/kg Chromium Measured Concentration: 88.40 mg/kg Lead Measured Concentration: 155.20 mg/kg Nickel Measured Concentration: 55.60 mg/kg	A8NE (SE)	577	2	450750 334248
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450250, 334248 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 18.00 mg/kg Cadmium Measured Concentration: 14.20 mg/kg Chromium Measured Concentration: 140.60 mg/kg Lead Measured Concentration: 151.30 mg/kg Nickel Measured Concentration: 157.90 mg/kg	A8NW (SE)	606	2	450250 334248
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449310, 335780 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 11.10 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 63.50 mg/kg Lead Measured Concentration: 85.60 mg/kg Nickel Measured Concentration: 24.00 mg/kg	A14NE (NW)	697	2	449310 335780

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449245, 334748 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 12.90 mg/kg Cadmium Measured Concentration: 0.80 mg/kg Chromium Measured Concentration: 61.40 mg/kg Lead Measured Concentration: 65.00 mg/kg Nickel Measured Concentration: 31.60 mg/kg	A10SE (W)	700	2	449245 334748
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449740, 334277 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 16.00 mg/kg Cadmium Measured Concentration: 0.90 mg/kg Chromium Measured Concentration: 88.30 mg/kg Lead Measured Concentration: 121.20 mg/kg Nickel Measured Concentration: 45.60 mg/kg	A7NW (S)	710	2	449740 334277
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 448950, 335314 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 12.70 mg/kg Cadmium Measured Concentration: 0.20 mg/kg Chromium Measured Concentration: 93.60 mg/kg Lead Measured Concentration: 108.90 mg/kg Nickel Measured Concentration: 49.40 mg/kg	A14SW (W)	889	2	448950 335314
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449315, 334255 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 13.80 mg/kg Cadmium Measured Concentration: 0.40 mg/kg Chromium Measured Concentration: 73.30 mg/kg Lead Measured Concentration: 75.20 mg/kg Nickel Measured Concentration: 45.60 mg/kg	A6NE (SW)	927	2	449315 334255

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Nottingham Count Id: 635 Arsenic Minimum Concentration: 4.00 mg/kg Arsenic Average Concentration: 13.00 mg/kg Arsenic Maximum Concentration: 86.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 0.80 mg/kg Cadmium Maximum Concentration: 14.20 mg/kg Chromium Minimum Concentration: 22.00 mg/kg Chromium Average Concentration: 61.00 mg/kg Chromium Maximum Concentration: 182.00 mg/kg Lead Minimum Concentration: 13.00 mg/kg Lead Average Concentration: 155.00 mg/kg Lead Maximum Concentration: 1810.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 30.00 mg/kg Nickel Maximum Concentration: 158.00 mg/kg	A11NE (E)	0	2	449944 334946
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A11NE (E)	0	-	449944 334946
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335000
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16NE (NE)	0	2	450709 335582
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A16SW (NE)	0	2	450483 335371
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A16SE (NE)	0	2	450567 335479
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	0	2	450505 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	0	2	450000 334690
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449969 335119
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	450000 335114
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	0	2	450210 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450101 334925
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	143	2	449938 334825

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SE (S)	228	2	449918 334738
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	2	450000 335461
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SE (N)	0	2	450032 335455
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	4	2	450000 334946
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A15NE (N)	64	2	450000 335720
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335001
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335001
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11NE (N)	0	2	449944 335001
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	2	450000 335001
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	449944 334946
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11NE (E)	0	2	450000 334946

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**Contemporary Trade Directory Entries** Name: Aerocom Ltd Location: 12, Vickery Way, Beeston, Nottingham, NG9 6RY Classification: Conveyors & Conveyor Belts **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (E)	21	-	450760 334822
48	**Contemporary Trade Directory Entries** Name: Aerocom Uk Ltd Location: 12, Vickery Way, Beeston, Nottingham, NG9 6RY Classification: Pneumatic Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (E)	21	-	450760 334822
48	**Contemporary Trade Directory Entries** Name: Dean & Wood Ltd Location: Unit D 10 Vickery Way,Chetwynd Business Park, Beeston, Nottingham, Nottinghamshire, NG9 6RY Classification: Refrigeration Equipment - Commercial **Status: Active** Positional Accuracy: Manually positioned to the address or location	A12SE (E)	52	-	450755 334792
49	**Contemporary Trade Directory Entries** Name: Dean Laundry Systems Location: 230, Stapleford Lane, Beeston, Nottingham, NG9 6JE Classification: Laundry Equipment - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (N)	55	-	449800 335353
50	**Contemporary Trade Directory Entries** Name: Henry Groves & Son Ltd Location: 9, Grayson Mews, Beeston, Nottingham, NG9 6RU Classification: Musical Instrument - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (E)	79	-	450839 334770
51	**Contemporary Trade Directory Entries** Name: Waste Water System Location: 14, Woodstock Road, Beeston, Nottingham, NG9 6JR Classification: Pumps - Sales, Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NW (NW)	100	-	449726 335170
52	**Contemporary Trade Directory Entries** Name: Just Like Nu Location: 75, Mountbatten Way, Beeston, Nottingham, NG9 6RX Classification: Oven cleaning **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (E)	132	-	450803 334704
53	**Contemporary Trade Directory Entries** Name: Tesco Petrol Filling Station Location: Swiney Way, Nottingham, Nottinghamshire, NG9 6GZ Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A11SE (S)	158	-	449990 334829
54	**Contemporary Trade Directory Entries** Name: Chem-Dry Simply The Best Location: 14, Beaumaris Drive, Beeston, Nottingham, NG9 5PB Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16NE (NE)	168	-	450855 335823
54	**Contemporary Trade Directory Entries** Name: Simply The Best Location: 14, Beaumaris Drive, Beeston, Nottingham, NG9 5PB Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A16NE (NE)	168	-	450855 335823
55	**Contemporary Trade Directory Entries** Name: M P Gethen Location: 5, Bispham Drive, Toton, Nottingham, NG9 6GH Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NW (W)	228	-	449689 334908

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	**Contemporary Trade Directory Entries** Name: Toton Autos Location: 31-33, Woodstock Road, Beeston, Nottingham, NG9 6HW Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11NW (NW)	228	-	449598 335121
56	**Contemporary Trade Directory Entries** Name: Erewash Silver Plating Location: Woodstock Rd, Beeston, Nottingham, Nottinghamshire, NG9 6JQ Classification: Metal Finishing Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A11NW (NW)	249	-	449575 335142
57	**Contemporary Trade Directory Entries** Name: Weld-A-Rail Location: A, 16, Carrfield Avenue, Beeston, Nottingham, NG9 6FF Classification: Railways **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A11SW (SW)	237	-	449844 334738
58	**Contemporary Trade Directory Entries** Name: Posture & Office Seating Ltd Location: 269, Stapleford Lane, Toton, Nottingham, NG9 6JG Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (NW)	242	-	449682 335503
59	**Contemporary Trade Directory Entries** Name: I M Print Nottingham Ltd Location: 10, Cleve Avenue, Toton, Nottingham, NG9 6JH Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (NW)	259	-	449638 335478
60	**Contemporary Trade Directory Entries** Name: Hemco & Co Location: 27, Cleve Avenue, Beeston, Nottingham, NG9 6JH Classification: Engineering Machine Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (NW)	349	-	449506 335394
61	**Contemporary Trade Directory Entries** Name: J D Car Sales Location: Norfolk Av, Toton, Nottingham, Nottinghamshire, NG9 6GP Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SE)	357	-	450458 334435
62	**Contemporary Trade Directory Entries** Name: Weston Air Conditioning Location: 11, Edale Rise, Toton, Nottingham, NG9 6JJ Classification: Air Conditioning & Refrigeration Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (NW)	387	-	449486 335464
62	**Contemporary Trade Directory Entries** Name: Enviroair Services Ltd Location: 11, Edale Rise, Toton, Nottingham, NG9 6JJ Classification: Air Conditioning & Refrigeration Contractors **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (NW)	391	-	449482 335463
63	**Contemporary Trade Directory Entries** Name: Peak Packaging Location: 26, Spinney Rise, Beeston, Nottingham, NG9 6JN Classification: Packaging Materials Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (NW)	423	-	449422 335310
63	**Contemporary Trade Directory Entries** Name: Peak Packaging Location: 26, Spinney Rise, Beeston, Nottingham, NG9 6JN Classification: Packaging & Wrapping Equipment & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (NW)	423	-	449422 335310
64	**Contemporary Trade Directory Entries** Name: A & C R Patchitt Location: 32 High Rd,Toton, Beeston, Nottingham, NG9 6EH Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NW (SE)	433	-	450394 334374

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	**Contemporary Trade Directory Entries** Name: Erewash Blinds Location: Unit 1, 32a, High Road, Toton, Nottingham, NG9 6EH Classification: Blinds, Awnings & Canopies **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SE)	433	-	450394 334374
65	**Contemporary Trade Directory Entries** Name: John Clifford Location: 21, Whitburn Road, Beeston, Nottingham, NG9 6HP Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10NE (W)	546	-	449290 335036
65	**Contemporary Trade Directory Entries** Name: John Clifford Location: 21, Whitburn Road, Beeston, Nottingham, NG9 6HP Classification: Domestic Appliances - Servicing, Repairs & Parts **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NE (W)	546	-	449290 335036
66	**Contemporary Trade Directory Entries** Name: Scottish Power Location: Unit 1 Chilwell Retail Pk, Beeston, Nottingham, NG9 6DS Classification: Electricity Companies **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8NE (SE)	568	-	450808 334268
67	**Contemporary Trade Directory Entries** Name: By Glasslight Location: 343, Nottingham Road, Toton Beeston, Nottingham, Nottinghamshire, NG9 6EG Classification: Stained Glass Designers & Producers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	581	-	450464 334208
68	**Contemporary Trade Directory Entries** Name: Roworth Cleaning Specialists Location: 10, Hadleigh Close, Toton, Nottingham, NG9 6LU Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A10SE (W)	590	-	449354 334769
69	**Contemporary Trade Directory Entries** Name: Daintys Location: 29, Epsom Road, Toton, Nottingham, NG9 6HQ Classification: Washing Machines - Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (W)	699	-	449125 335148
70	**Contemporary Trade Directory Entries** Name: Susan Paul Services Ltd Location: 44, Lonsdale Drive, Beeston, Nottingham, NG9 6LS Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A10SE (W)	711	-	449190 334826
71	**Contemporary Trade Directory Entries** Name: Long Eaton Motor Co Ltd Location: 111, Nottingham Road, Long Eaton, Nottingham, NG10 2EQ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (S)	913	-	450124 333968
72	**Contemporary Trade Directory Entries** Name: Mark Lewis Video Productions Location: 6, Cleveland Avenue, Long Eaton, Nottingham, NG10 2BT Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SW (S)	954	-	449784 334020
73	**Contemporary Trade Directory Entries** Name: Fibrecomm Solutions Location: 12, Devonshire Avenue, Long Eaton, NOTTINGHAM, NG10 2EP Classification: Fibre Optics **Status: Active** Positional Accuracy: Automatically positioned to the address	A3NE (S)	991	-	450182 333858

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	**Fuel Station Entries** Name: Banks Road Service Station Location: 7 Banks Road, Beeston, NOTTINGHAM, Nottinghamshire, NG9 6HE Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	A11SW (SW)	152	-	449852 334825
75	**Fuel Station Entries** Name: Tesco Toton Extra Location: Swiney Way, Beeston, Nottingham, NG9 6GX Brand: Tesco Extra Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A11SE (S)	158	-	449992 334829
76	**Fuel Station Entries** Name: Toton Autos Location: 31-33 Woodstock Road, Bisham Drive, Toton, Nottingham, Nottinghamshire, NG9 6HW Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A11NW (NW)	228	-	449598 335121
77	**Fuel Station Entries** Name: Manor Garage Location: Manor Garage, Nottingham Road, Beeston, Nottingham, NG9 6EG Brand: Unbranded Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A8SW (SE)	630	-	450364 334177
78	**Points of Interest - Commercial Services** Name: V I P Valeting Location: 11 Calverton Close, Toton, Nottingham, NG9 6GW Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A12NW (E)	76	8	450352 334923
79	**Points of Interest - Commercial Services** Name: Hand Car Wash Location: Swiney Way, Beeston, Nottingham, NG9 6GX Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A11SE (SE)	91	8	450156 334854
80	**Points of Interest - Commercial Services** Name: Manor Garage Location: Manor Garage, Nottingham Road, Beeston, Nottingham, NG9 6EG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A8SW (SE)	630	8	450364 334177
80	**Points of Interest - Commercial Services** Name: Car Wash Location: Manor Garage, Nottingham Road, Beeston, Nottingham, NG9 6EG Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A8SW (SE)	630	8	450364 334177
81	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NE (NE)	0	8	450726 335580
81	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NE (NE)	0	8	450707 335576
81	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NE (NE)	0	8	450713 335578

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A16NE (NE)	0	8	450719 335579
81	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A16SE (NE)	0	8	450721 335573
82	**Points of Interest - Manufacturing and Production** Name: Quarries (Disused) Location: NG9 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to an adjacent address or location	A15SE (N)	0	8	450027 335346
83	**Points of Interest - Manufacturing and Production** Name: Cottage Cattery Location: 8 High Road, Beeston, Nottingham, NG9 6EH Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A8NW (SE)	516	8	450421 334281
84	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	913	8	449044 334672
84	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	916	8	449040 334672
84	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10SW (W)	931	8	449051 334607
85	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (W)	979	8	448853 335273
86	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: Swiney Way, Nottingham, Nottinghamshire, NG9 6GZ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A11SE (S)	158	8	449990 334829
86	**Points of Interest - Public Infrastructure** Name: Tesco Toton Extra Location: Swiney Way, Beeston, Nottingham, NG9 6GX Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A11SE (S)	158	8	449992 334829
87	**Points of Interest - Public Infrastructure** Name: Manor Garage Location: Manor Garage, Nottingham Road, Beeston, Nottingham, NG9 6EG Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A8SW (SE)	630	8	450364 334177
87	**Points of Interest - Public Infrastructure** Name: Outfall Location: NG9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8SW (SE)	662	8	450417 334133

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
88	**Points of Interest - Public Infrastructure** Name: Weir Location: NG10 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	835	8	449263 334438
89	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	0	8	450337 335273
89	**Points of Interest - Recreational and Environmental** Name: Playground Location: Readman Road, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A16SW (NE)	0	8	450330 335272
90	**Points of Interest - Recreational and Environmental** Name: Playground Location: Grisedale Court, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A16NW (NE)	187	8	450462 335853
90	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A16NW (NE)	190	8	450453 335859
91	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A16NE (NE)	262	8	450660 335890
91	**Points of Interest - Recreational and Environmental** Name: Playground Location: Kirkbride Court, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A16NE (NE)	262	8	450658 335890
92	**Points of Interest - Recreational and Environmental** Name: Playground Location: Swiney Way, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A8NE (SE)	388	8	450700 334431
92	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	390	8	450702 334429
93	**Points of Interest - Recreational and Environmental** Name: Playground Location: Portland Road, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A7NE (S)	556	8	450128 334389
93	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NE (S)	557	8	450129 334388
94	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	768	8	449530 334298

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Norfolk Road, NG10 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A6NE (SW)	772	8	449524 334297
95	**Points of Interest - Recreational and Environmental** Name: Playground Location: Hampton Close, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A10NW (W)	768	8	449059 335218
95	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A10NW (W)	771	8	449056 335216

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
96	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	A7NE (S)	83	9	450036 334427
97	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	A8NE (SE)	508	9	450575 334265
98	**Areas of Adopted Green Belt** Authority: Erewash Borough Council Plan Name: Proposal Map **Status: Adopted** Plan Date: 6th March 2014	A7NW (S)	574	10	449716 334334
99	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	A8SE (SE)	673	9	450860 334105
100	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A11NE (E)	0	12	449944 334946
101	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	A15SE (N)	0	12	450100 335550
102	**Sites of Special Scientific Interest** Name: Attenborough Gravel Pits Multiple Areas: N Total Area (m2): 2265735.06 Source: Natural England Reference: 1003408 Designation Details: Site Of Special Scientific Interest Designation Date: 1st November 1982 Date Type: Notified Designation Details: Local Wildlife Site Designation Date: 1st November 1982 Date Type: Notified Designation Details: Water Framework Directive (WFD) Designation Date: 1st November 1982 Date Type: Notified	(SE)	759	13	451074 333842

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Erewash Borough Council - Environmental Health Department	August 2014	Annual Rolling Update
Broxtowe Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
North West Leicestershire District Council - Environmental Protection Department	September 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - Midlands Region	October 2016	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Midlands Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Midlands Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Midlands Region	January 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
North West Leicestershire District Council - Environmental Health Department	July 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
North West Leicestershire District Council - Environmental Health Department	July 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
North West Leicestershire District Council - Environmental Health Department	July 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Midlands Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Midlands Region	July 2015	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Midlands Region	March 2013	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Midlands Region - East Area	January 2017	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	January 2017	Quarterly
Water Abstractions		
Environment Agency - Midlands Region	October 2016	Quarterly
Water Industry Act Referrals		
Environment Agency - Midlands Region	January 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable

Agency & Hydrological	Version	Update Cycle
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	October 2016	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2016	Quarterly
Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	September 2014	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	January 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Midlands Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Midlands Region - East Area	August 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	August 2016	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Midlands Region - East Area	October 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	October 2016	Quarterly
Local Authority Landfill Coverage		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Derbyshire County Council	May 2000	Not Applicable
Erewash Borough Council - Environmental Health Department	May 2000	Not Applicable
Leicestershire County Council	May 2000	Not Applicable
North West Leicestershire District Council - Environmental Health Department	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Rushcliffe Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Derbyshire County Council	May 2000	Not Applicable
Erewash Borough Council - Environmental Health Department	May 2000	Not Applicable
Leicestershire County Council	May 2000	Not Applicable
North West Leicestershire District Council - Environmental Health Department	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Rushcliffe Borough Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites		
Health and Safety Executive	September 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Erewash Borough Council	April 2015	Annual Rolling Update
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Derbyshire County Council	February 2016	Annual Rolling Update
Leicestershire County Council	February 2016	Annual Rolling Update
North West Leicestershire District Council	February 2016	Annual Rolling Update
Rushcliffe Borough Council - Development Service	February 2016	Annual Rolling Update
Planning Hazardous Substance Consents		
Erewash Borough Council	April 2015	Annual Rolling Update
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Derbyshire County Council	February 2016	Annual Rolling Update
Leicestershire County Council	February 2016	Annual Rolling Update
North West Leicestershire District Council	February 2016	Annual Rolling Update
Rushcliffe Borough Council - Development Service	February 2016	Annual Rolling Update

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2016	Quarterly
Points of Interest - Education and Health PointX	December 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2016	Quarterly
Points of Interest - Public Infrastructure PointX	December 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2016	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	August 2016	Bi-Annually
Areas of Adopted Green Belt		
Broxtowe Borough Council	November 2016	As notified
Erewash Borough Council	November 2016	As notified
Rushcliffe Borough Council - Development Service	November 2016	As notified
Areas of Unadopted Green Belt		
Broxtowe Borough Council	November 2016	As notified
Erewash Borough Council	November 2016	As notified
Rushcliffe Borough Council - Development Service	November 2016	As notified
Areas of Outstanding Natural Beauty		
Natural England	January 2017	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	January 2017	Bi-Annually
Marine Nature Reserves		
Natural England	January 2017	Bi-Annually
National Nature Reserves		
Natural England	January 2017	Bi-Annually
National Parks		
Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites		
Natural England	January 2017	Bi-Annually
Sites of Special Scientific Interest		
Natural England	April 2016	Bi-Annually
Special Areas of Conservation		
Natural England	January 2017	Bi-Annually
Special Protection Areas		
Natural England	January 2017	Bi-Annually
World Heritage Sites		
English Heritage - National Monument Record Centre	September 2015	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

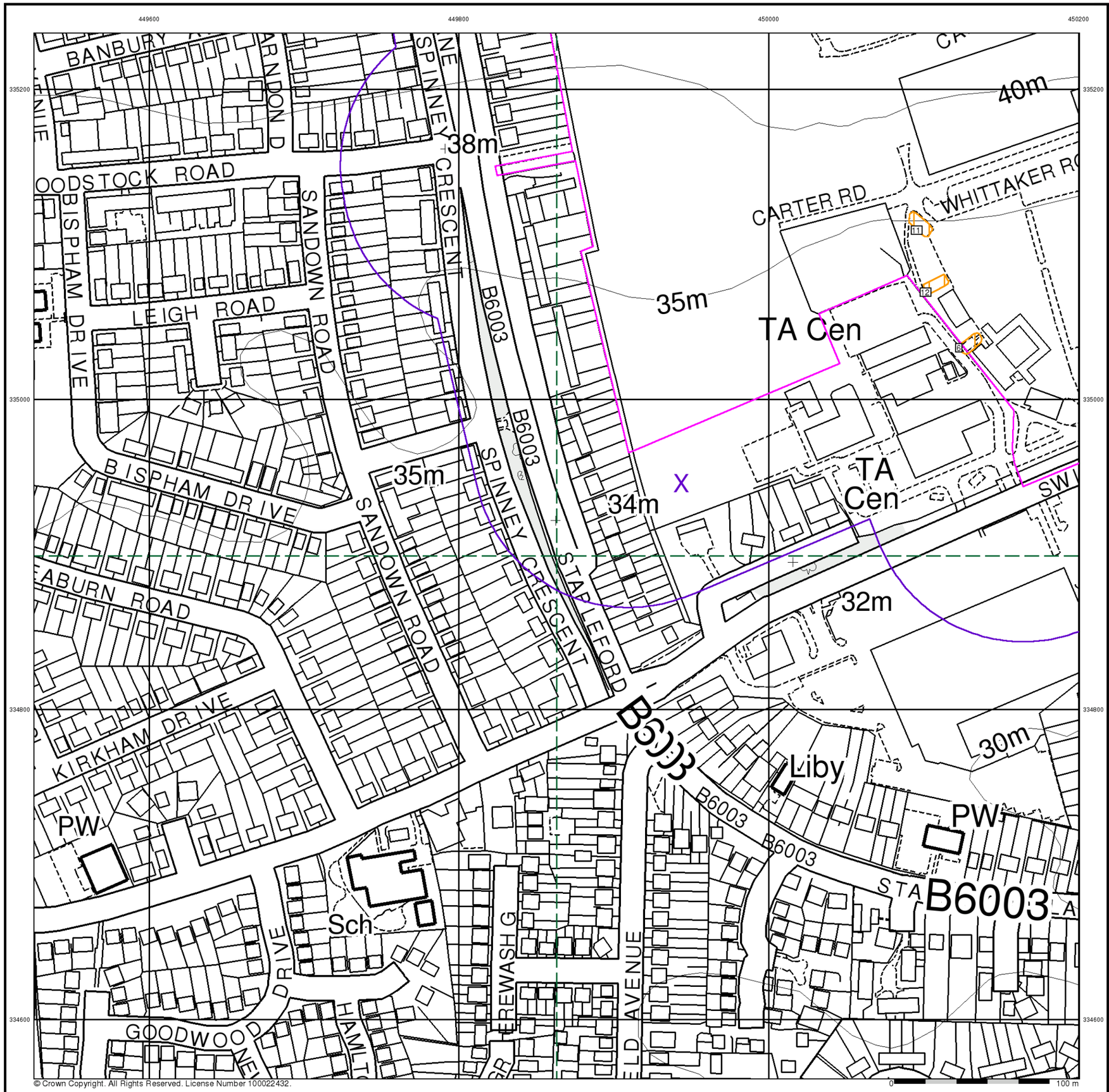
Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	[redacted]
4	**Broxtowe Borough Council - Environmental Health Department** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted]
5	**Nottinghamshire County Council - Environment Department** 5th Floor, Trentbridge House, Fox Road, Nottingham, Nottinghamshire, NG2 6BJ	[redacted] Website: www.nottinghamshire.gov.uk
6	**Erewash Borough Council - Environmental Health Department** Merlin House, Merlin Way, Ikeston, Derbyshire, DE7 4RA	[redacted] Website: www.erewash.gov.uk
7	**Derbyshire County Council** County Offices, Matlock, Derbyshire, DE4 3AG	[redacted] Website: www.derbyshire.gov.uk
8	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
9	**Broxtowe Borough Council** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted] Website: www.broxtowe.gov.uk
10	**Erewash Borough Council** Town Hall, Long Eaton, Nottingham, Nottinghamshire, NG10 1HU	[redacted] Website: www.erewash.gov.uk
11	**Rushcliffe Borough Council - Development Service** Civic Centre, Pavilion Road, West Bridgford, Nottingham, Nottinghamshire, NG2 5FE	[redacted] Website: www.rushcliffe.gov.uk
12	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	[redacted]
13	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	[redacted] Website: www.naturalengland.org.uk
14	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	[redacted]
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	[redacted] Website: www.ukradon.org

Useful Contacts

Contact	Name and Address	Contact Details
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point | Map ID | Several of Type at Location

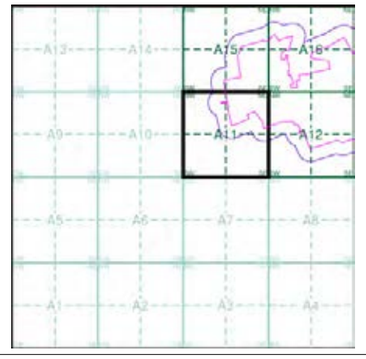
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▦
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A11



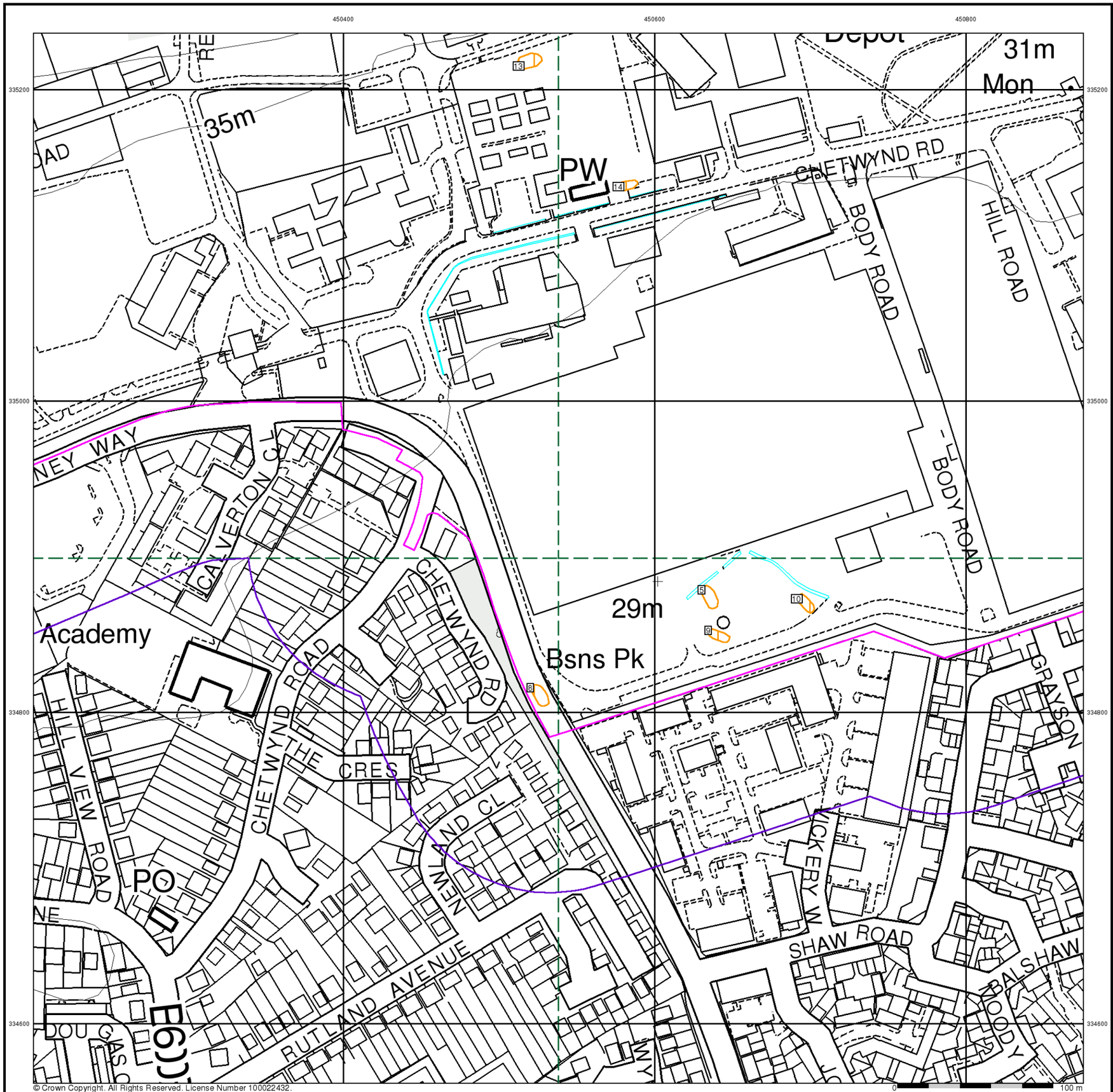
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID | Several of Type at Location

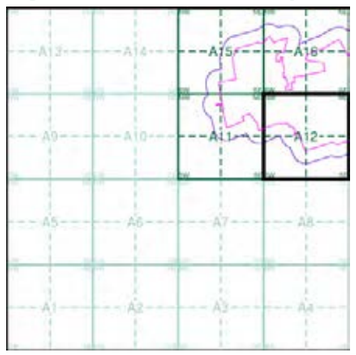
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▦
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A12



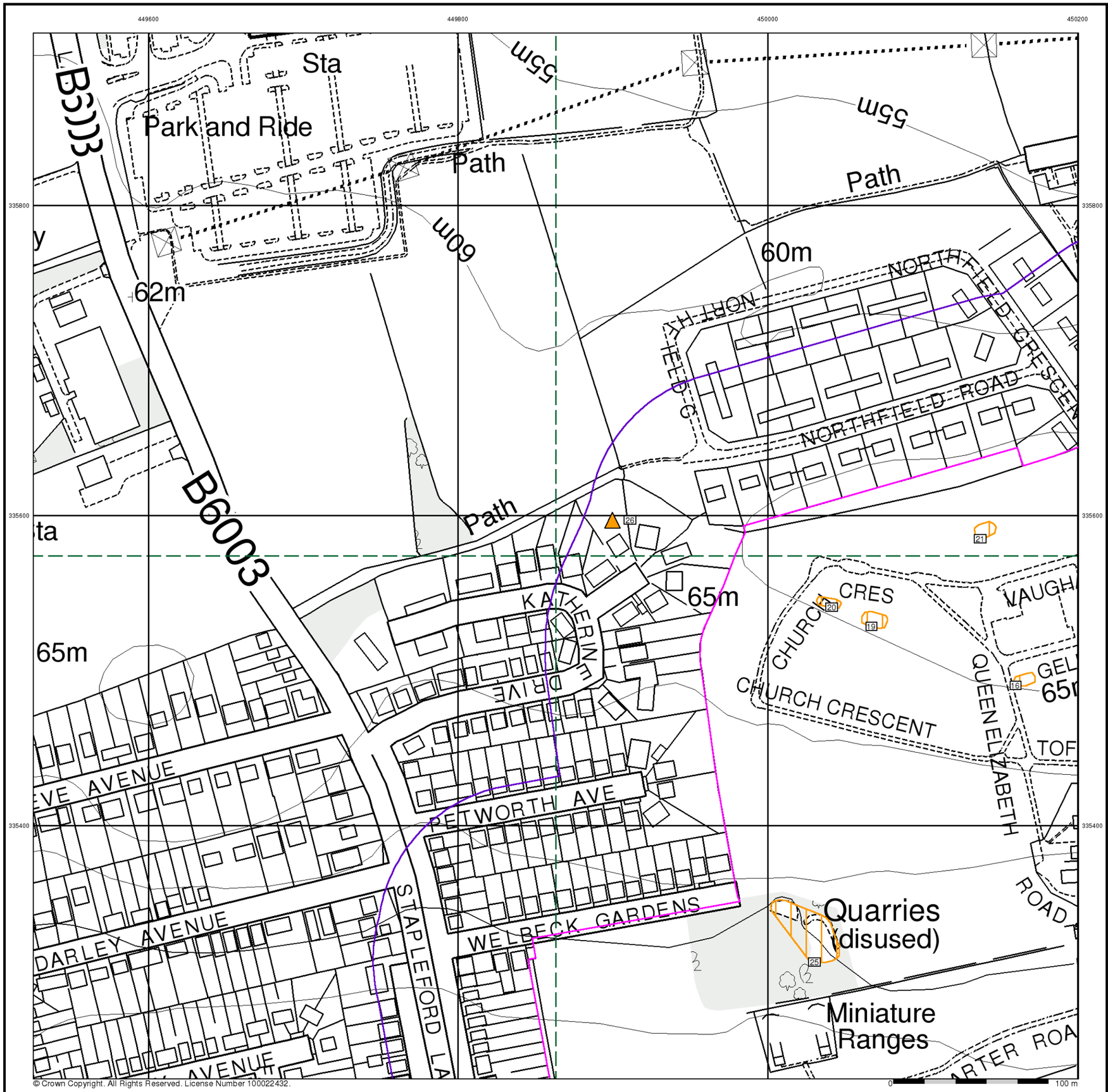
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID | Several of Type at Location

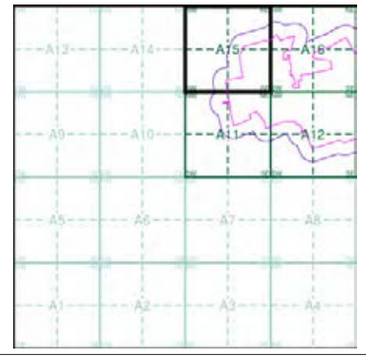
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▭
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▭

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A15



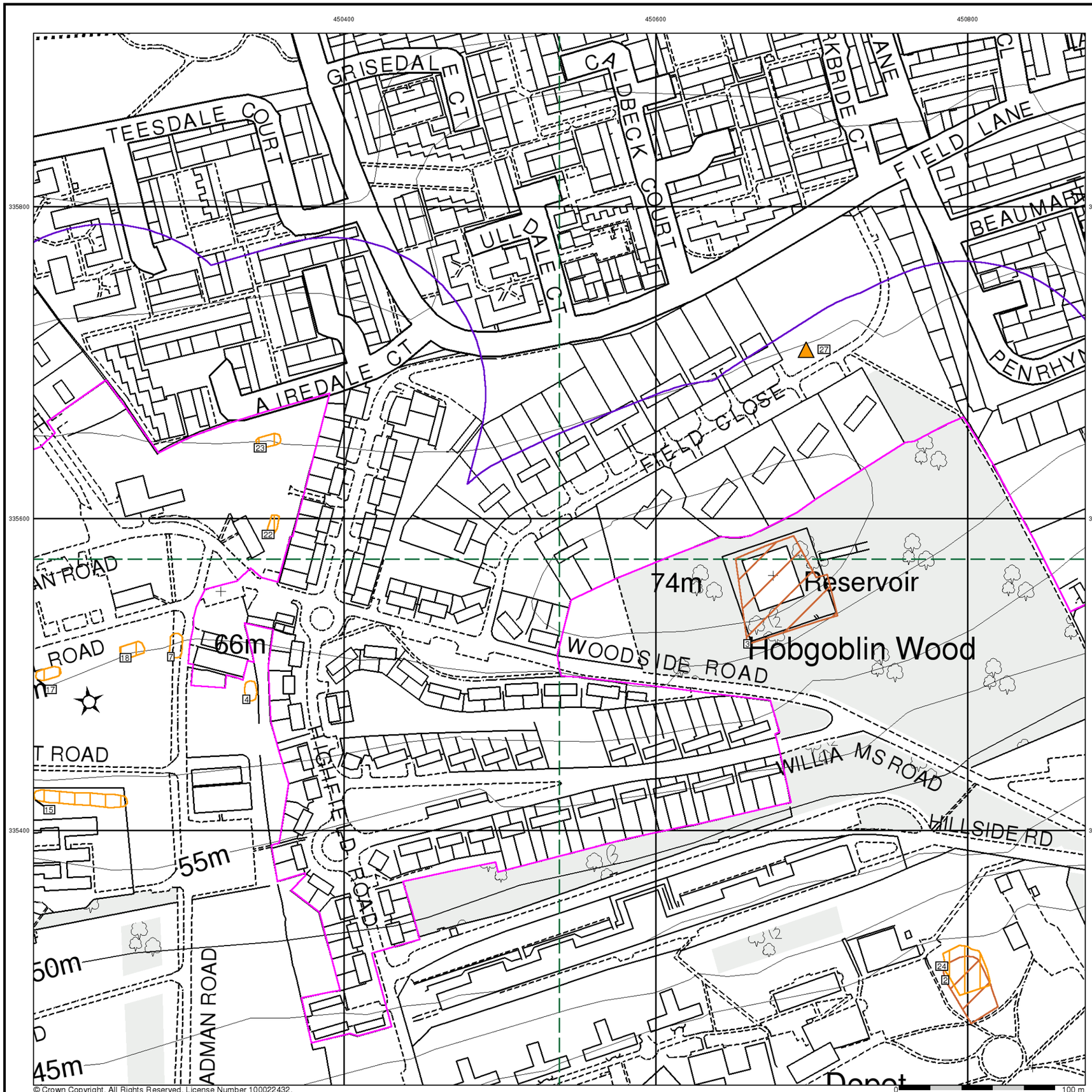
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

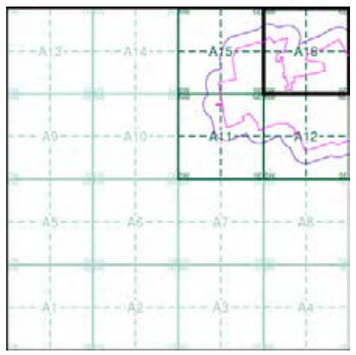
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▦
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A16



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Motion Map Data (1:2,500)

General

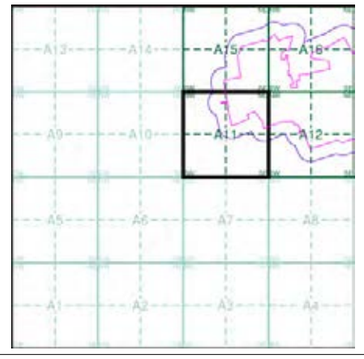
Specified Site | Specified Buffer(s) | X Bearing Reference Point | Map ID

Several of Type at Location

Average Velocity Gradient

- Upward Movement > 3.5mm per year
- Upward Movement 1.5mm to 3.5mm per year
- Stable 1.5mm to -1.5mm per year
- Downward Movement -1.5mm to -3.5mm per year
- Downward Movement > -3.5mm per year

Mining and Ground Stability - Segment A11



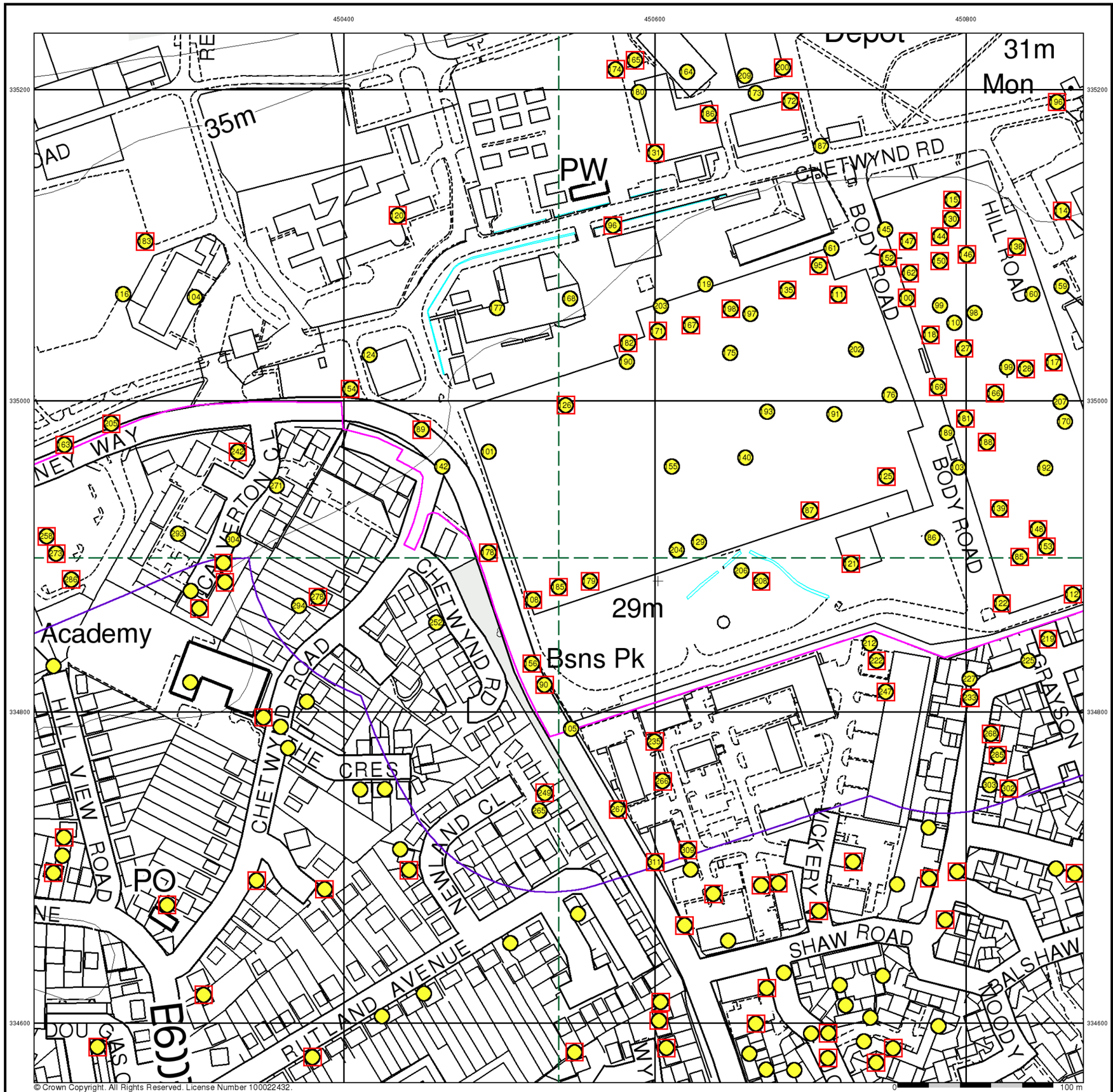
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

Motion Map Data (1:2,500)

General

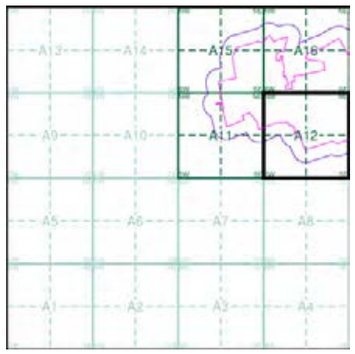
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Average Velocity Gradient

- Upward Movement > 3.5mm per year
- Upward Movement 1.5mm to 3.5mm per year
- Stable 1.5mm to -1.5mm per year
- Downward Movement -1.5mm to -3.5mm per year
- Downward Movement > -3.5mm per year

Mining and Ground Stability - Segment A12



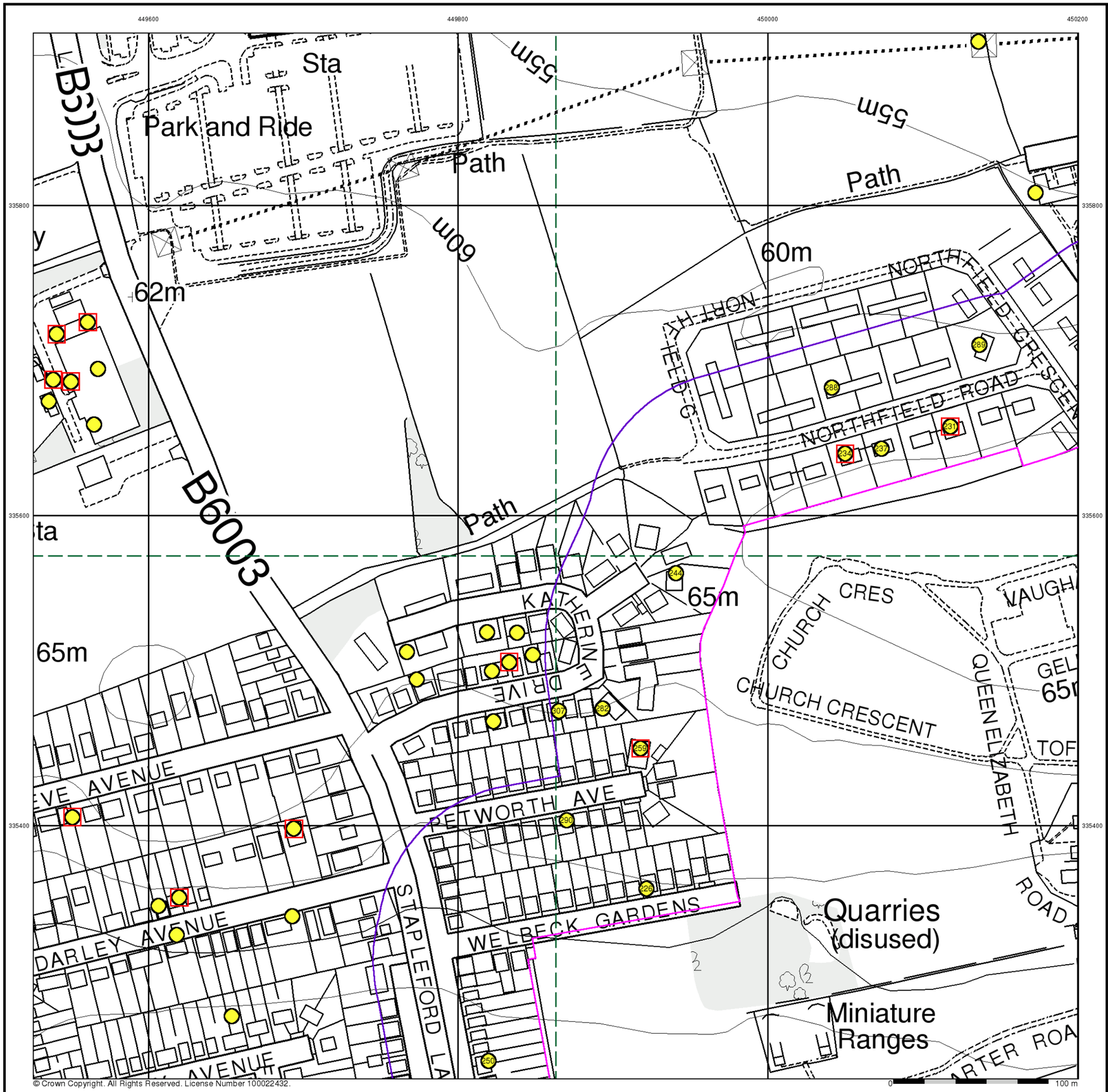
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Motion Map Data (1:2,500)

General

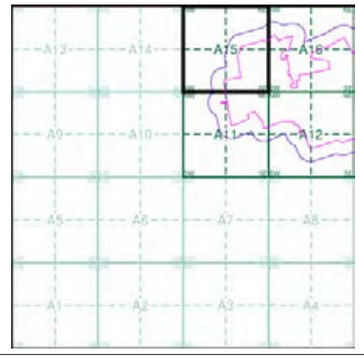
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Average Velocity Gradient

- Upward Movement > 3.5mm per year
- Upward Movement 1.5mm to 3.5mm per year
- Stable 1.5mm to -1.5mm per year
- Downward Movement -1.5mm to -3.5mm per year
- Downward Movement > -3.5mm per year

Mining and Ground Stability - Segment A15



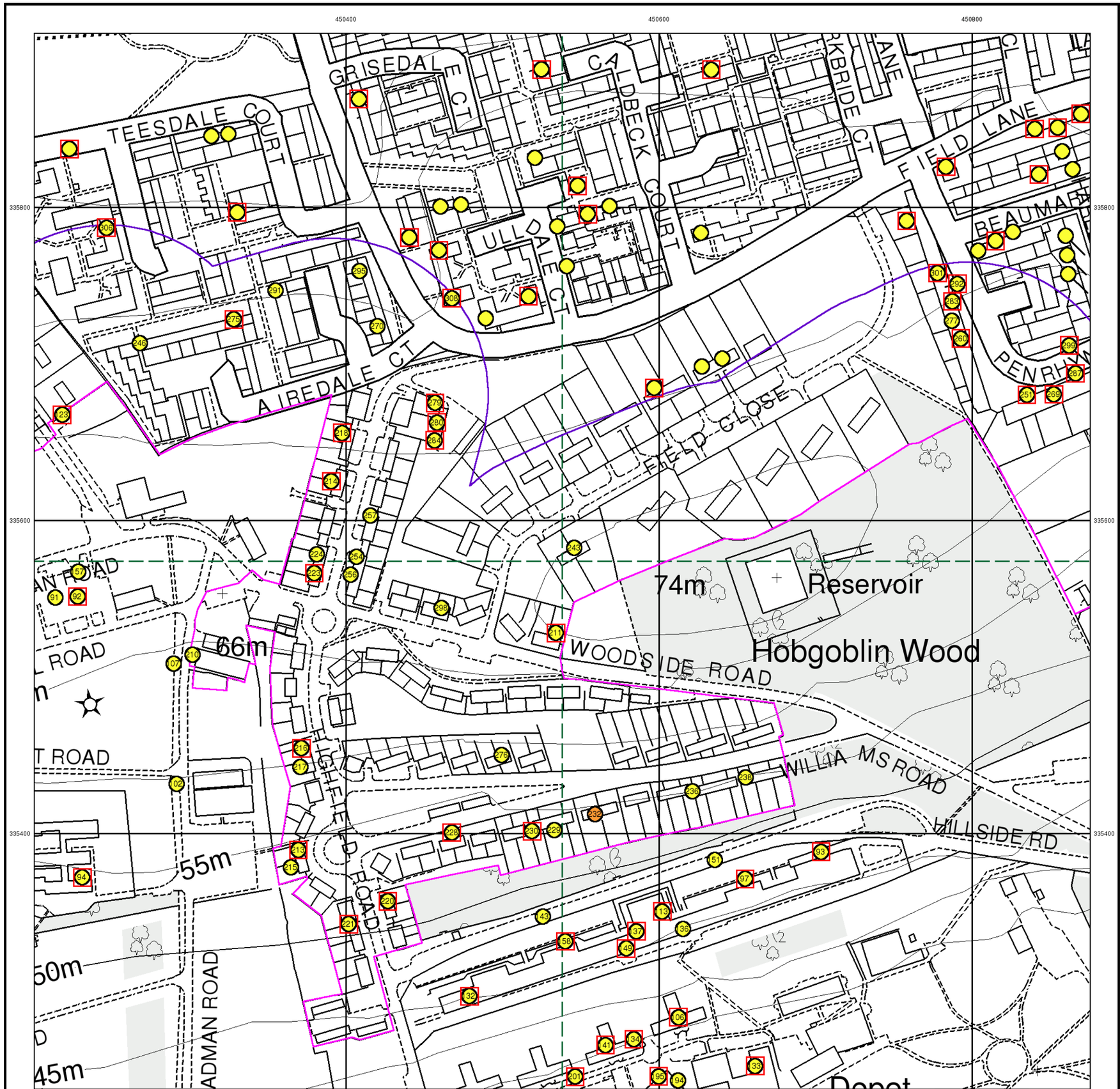
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Motion Map Data (1:2,500)

General

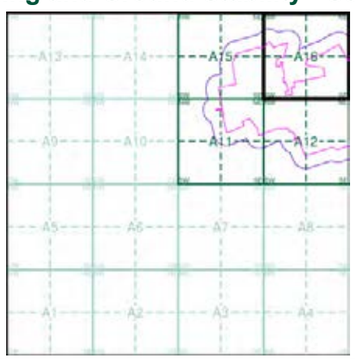
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Average Velocity Gradient

- Upward Movement > 3.5mm per year
- Upward Movement 1.5mm to 3.5mm per year
- Stable 1.5mm to -1.5mm per year
- Downward Movement -1.5mm to -3.5mm per year
- Downward Movement > -3.5mm per year

Mining and Ground Stability - Segment A16



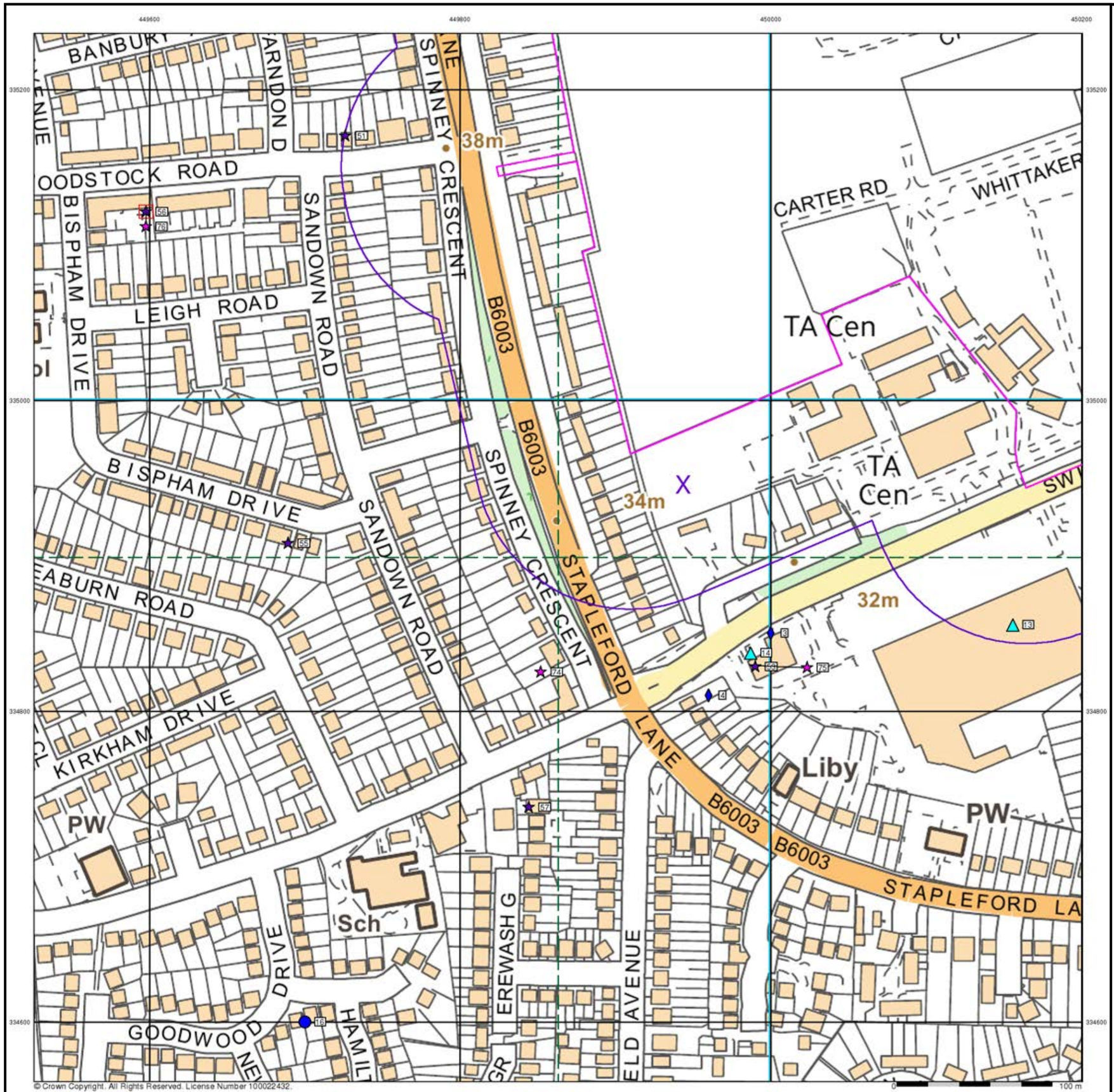
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

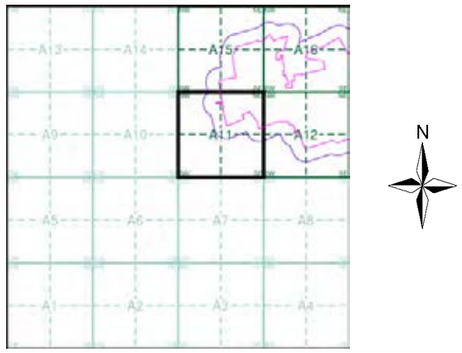
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A11



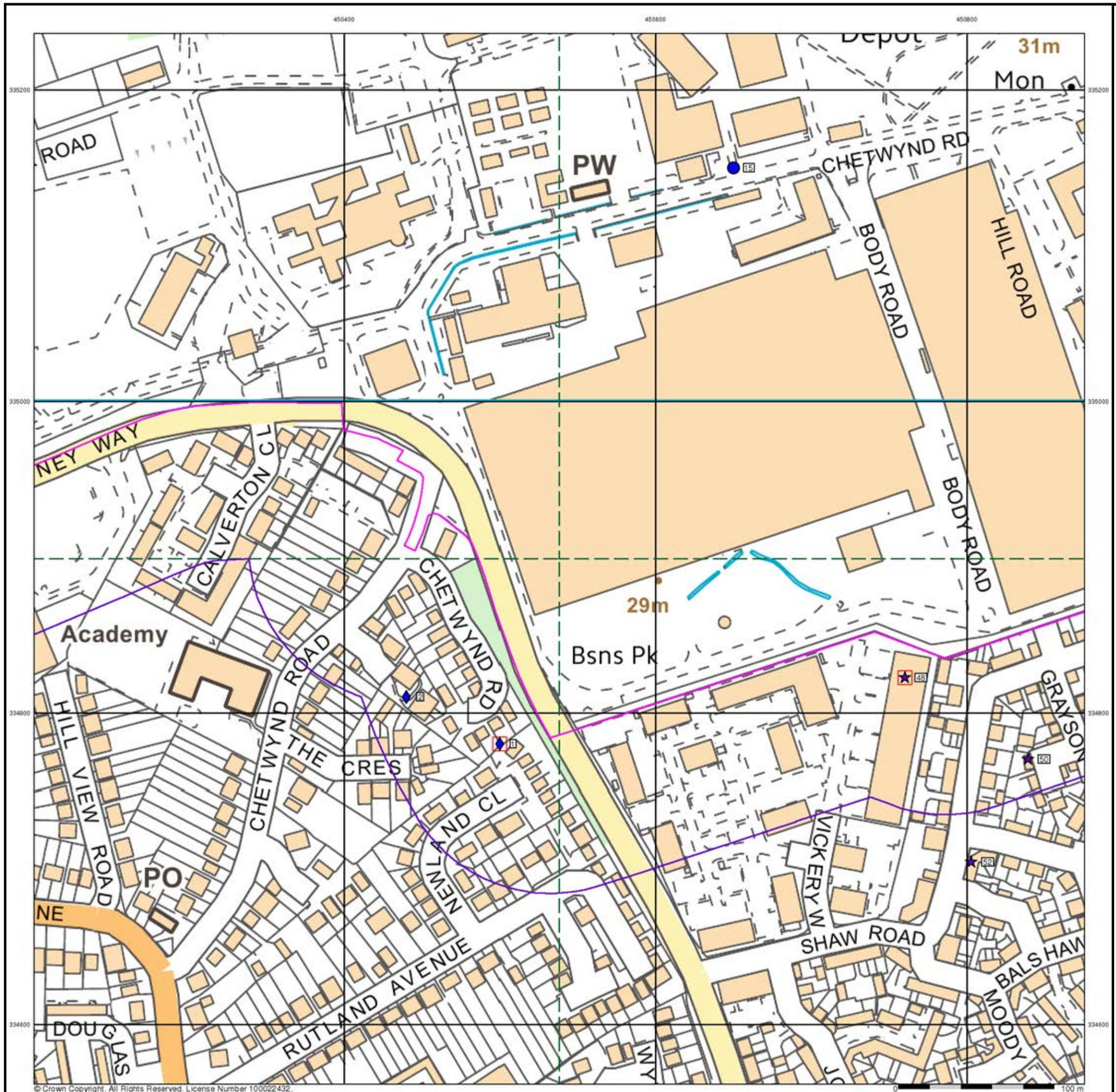
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

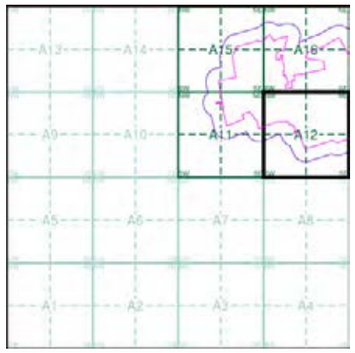
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A12



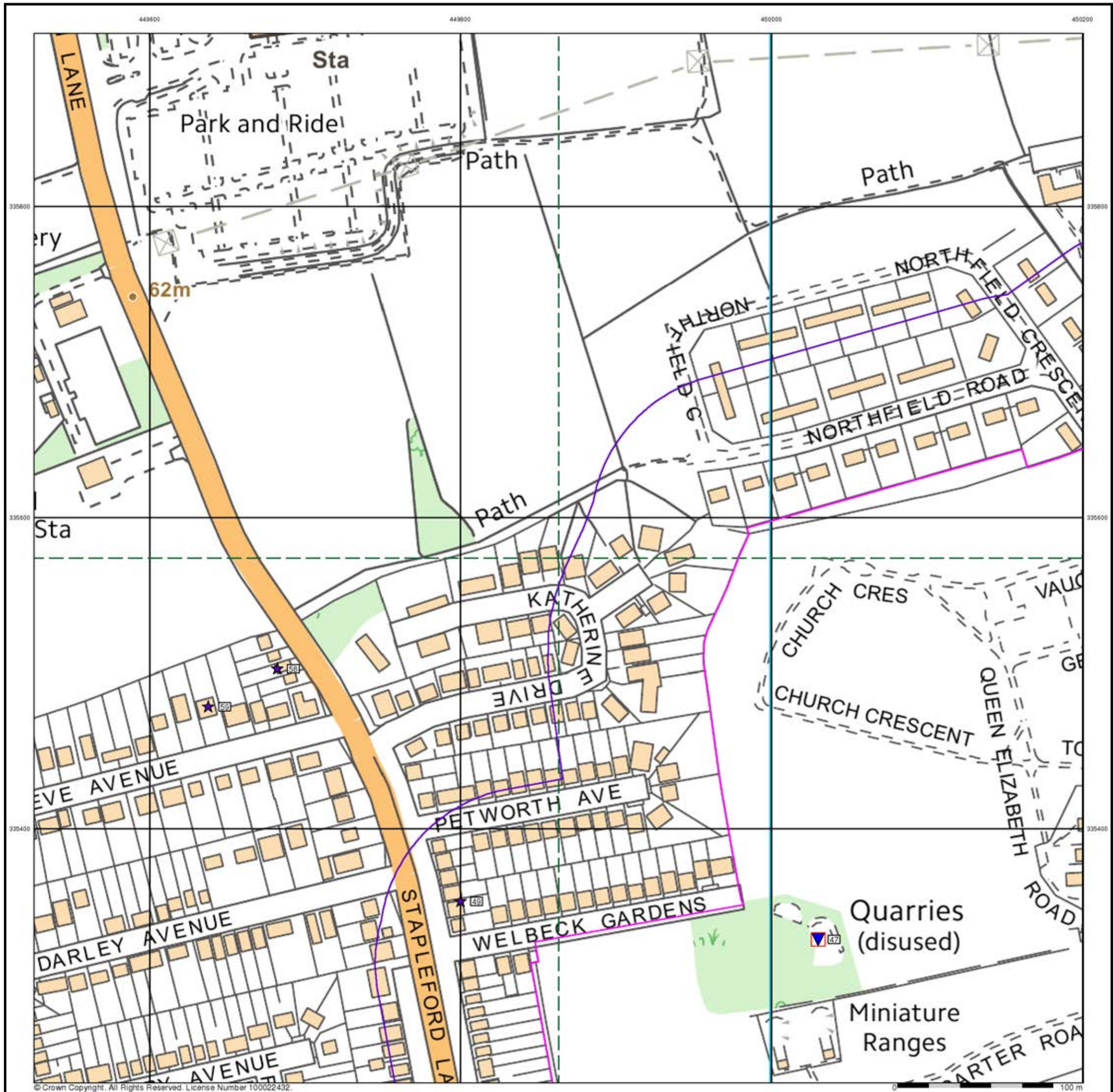
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

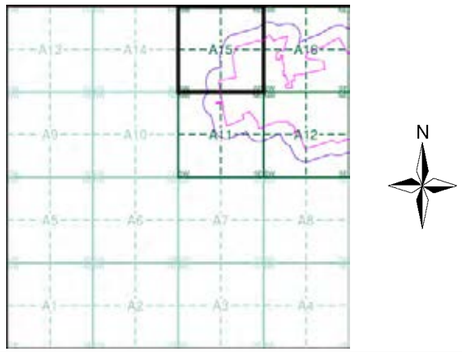
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A15



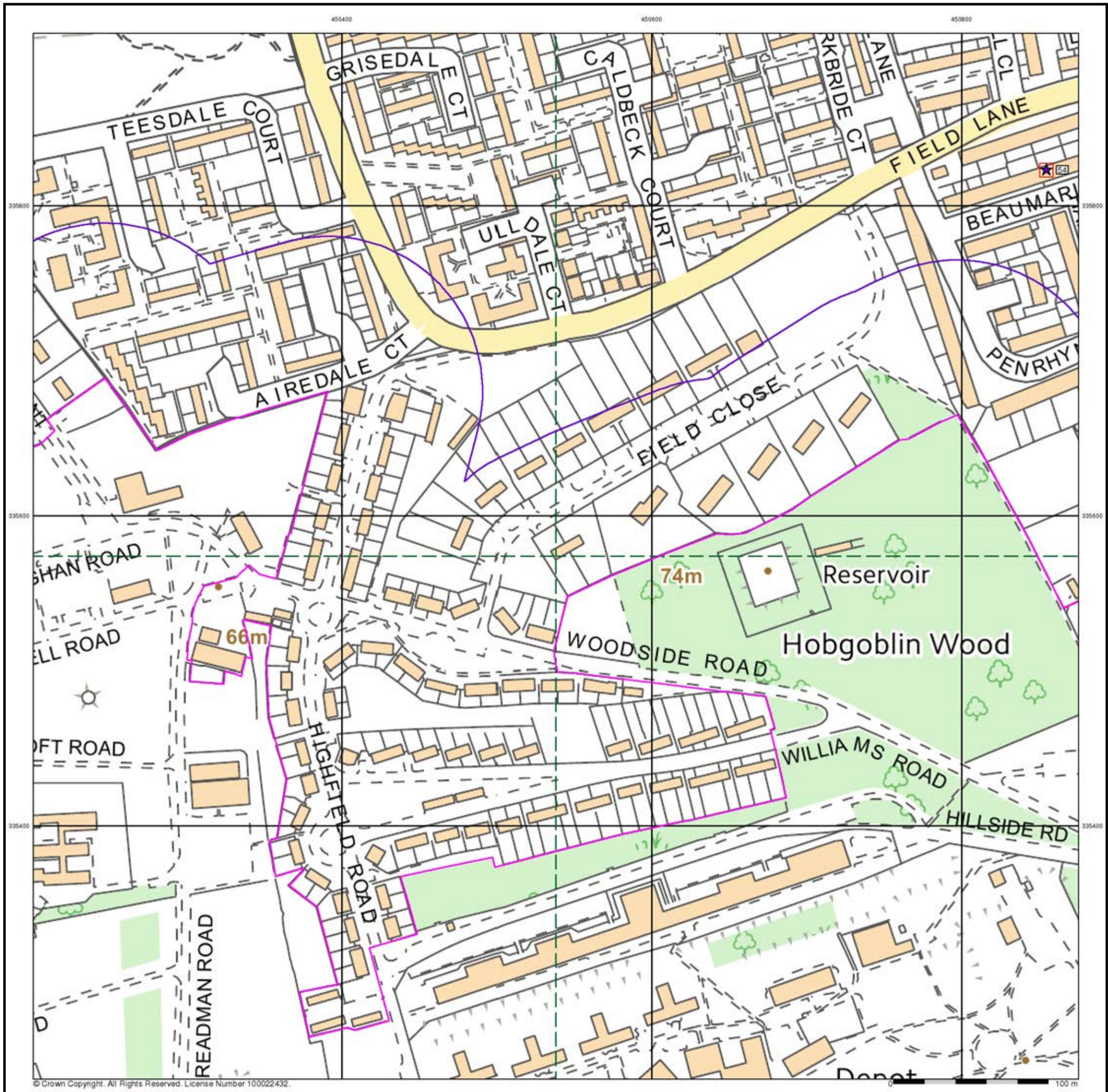
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

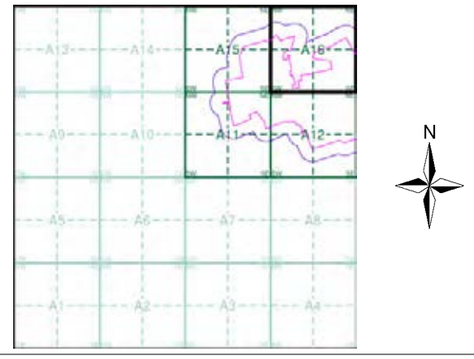
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment A16



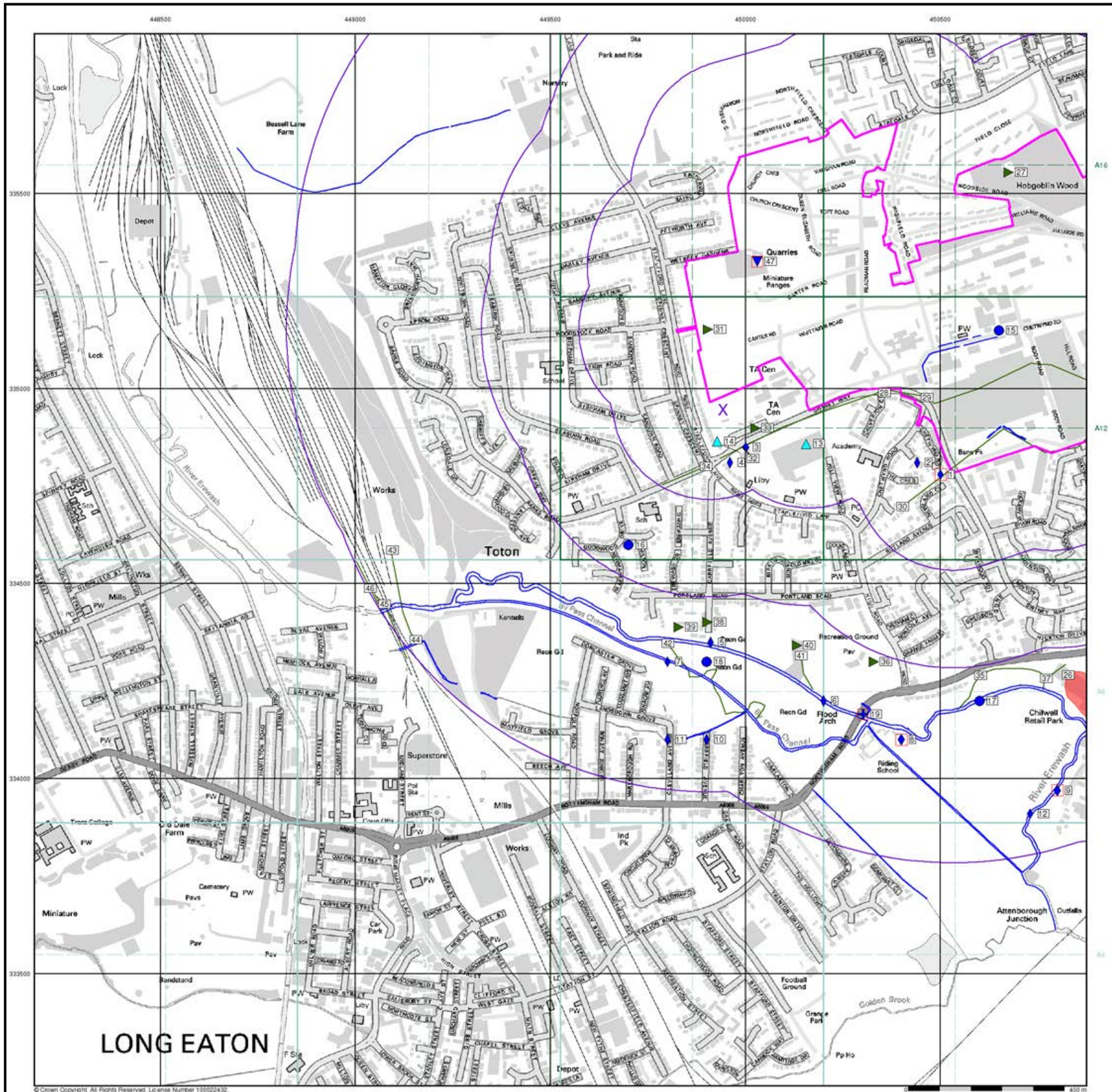
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

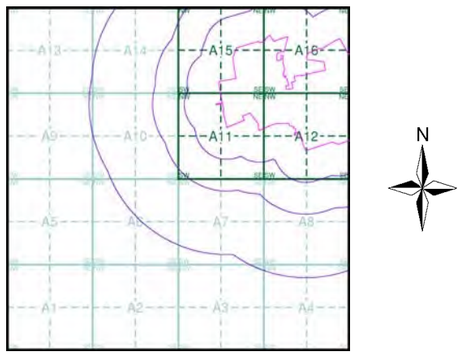
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



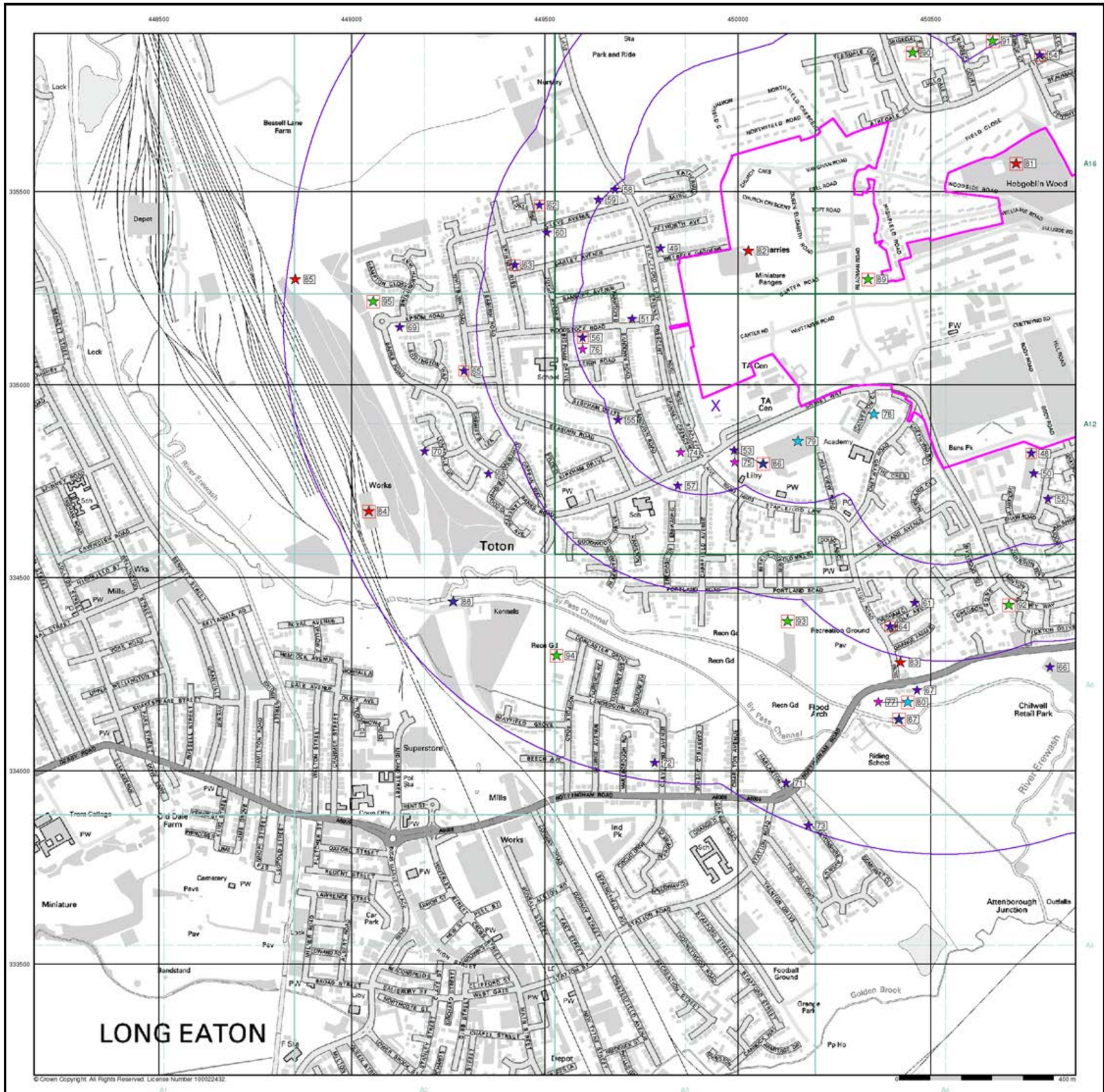
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Industrial Land Use Map

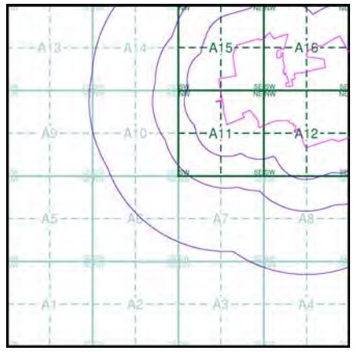
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



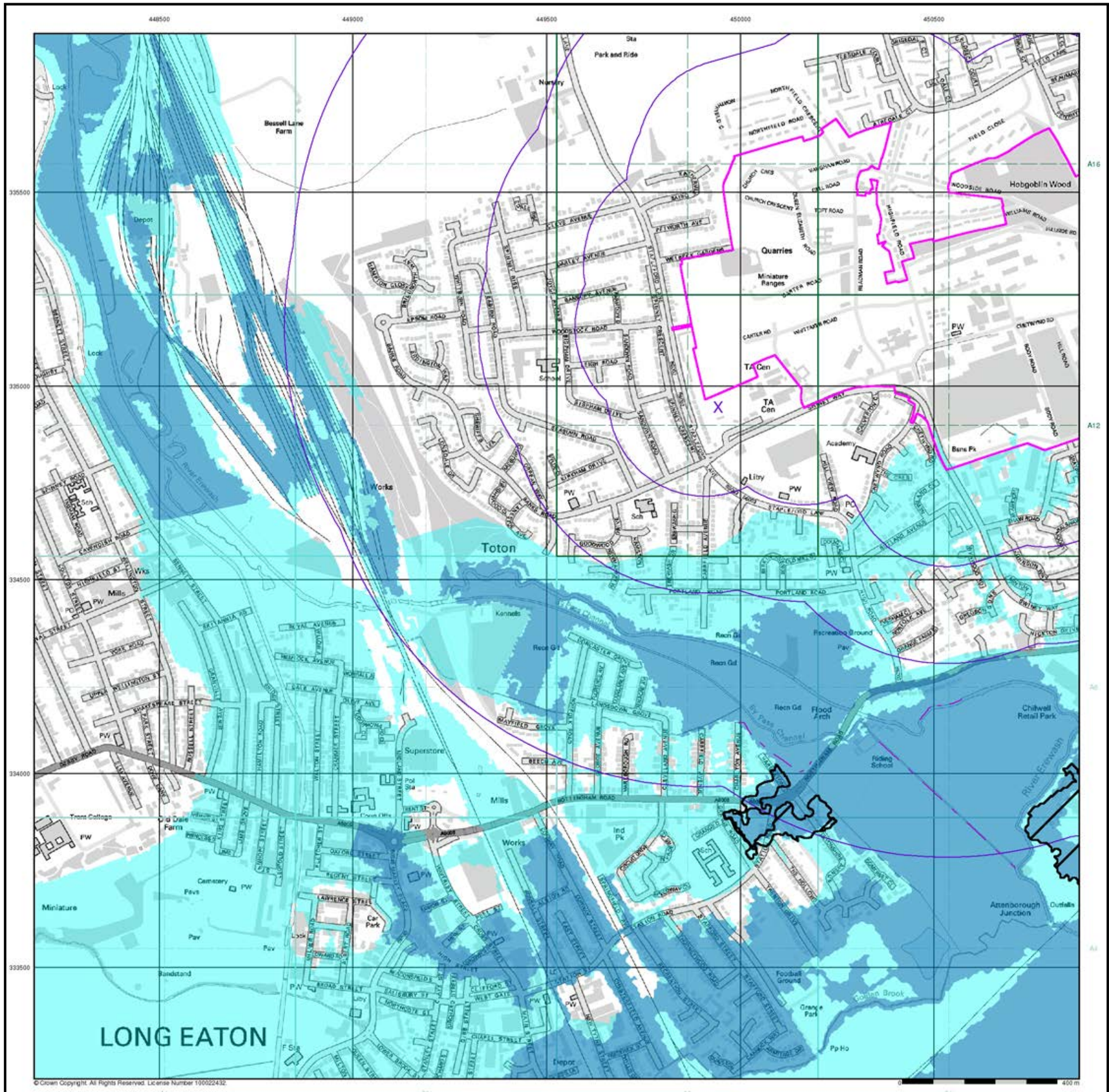
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



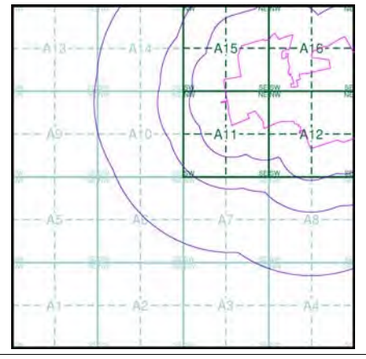
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A

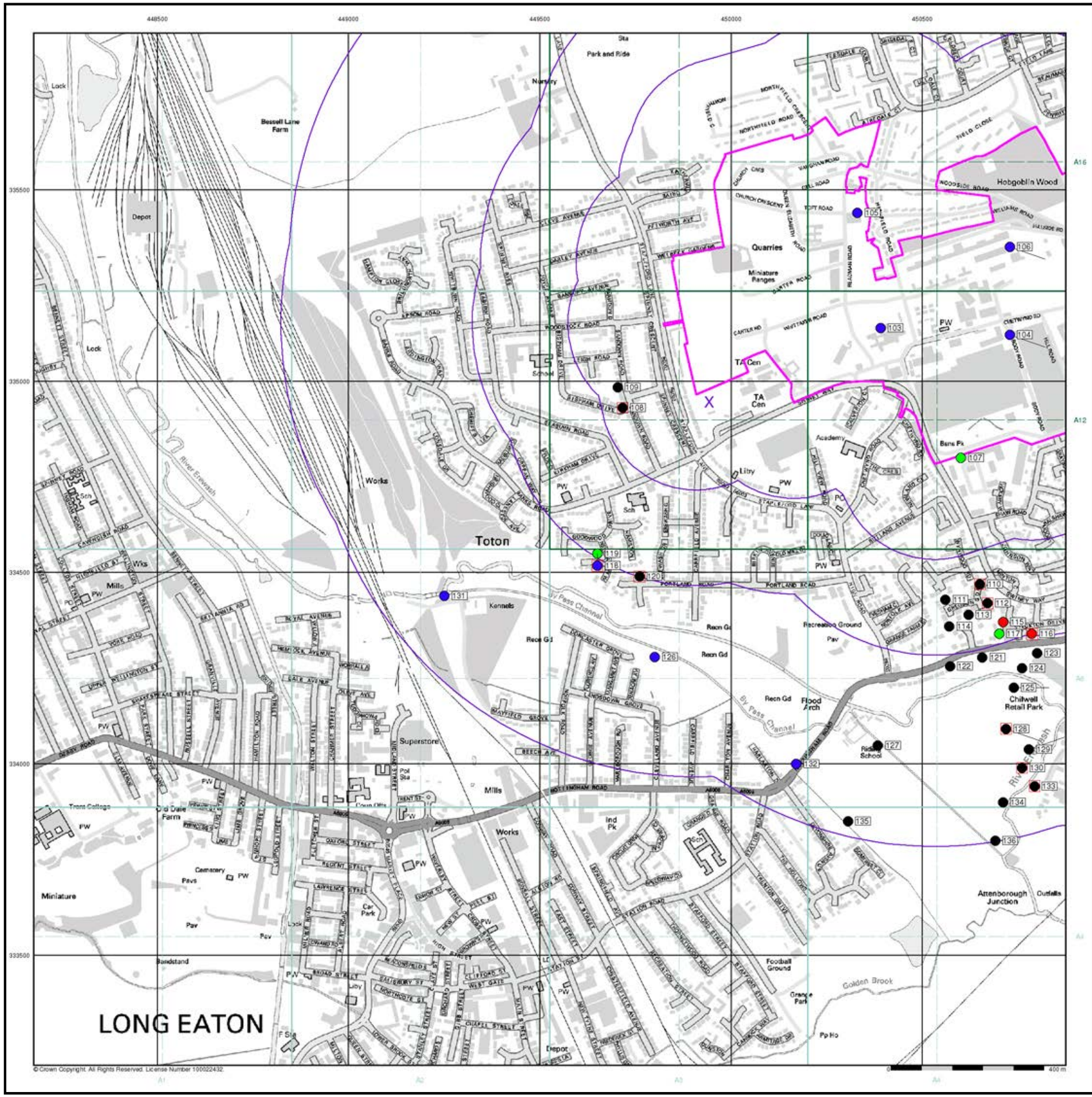


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

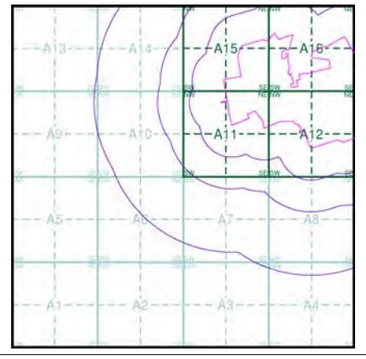
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



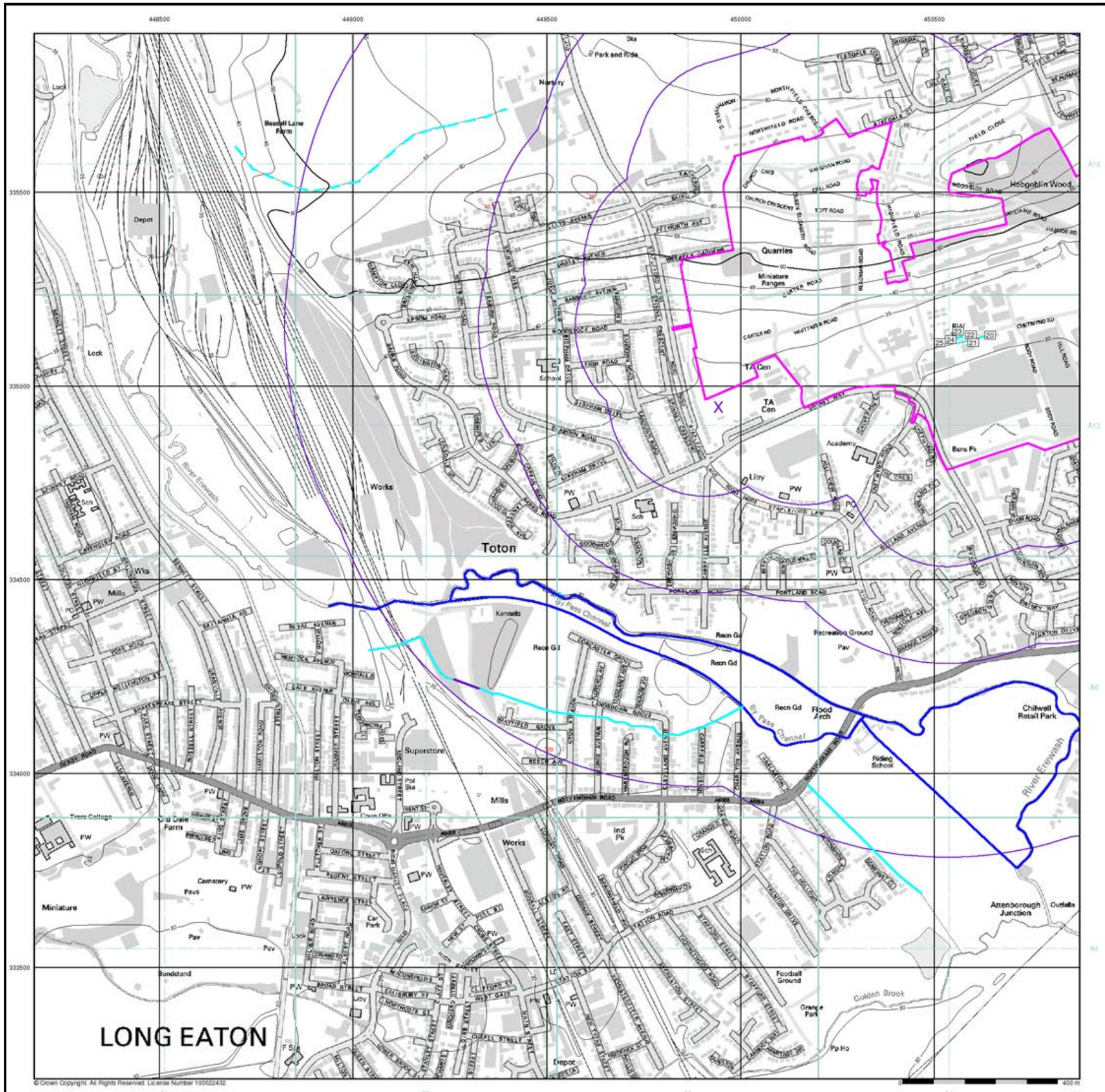
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

Standard Contour 105 100 95

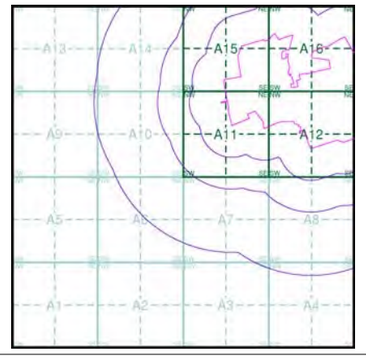
Master Contour

Spot Height *167.3

MLWV Mean Low Water

MHWV Mean High Water

EA/NRW Detailed River Network Map - Slice A



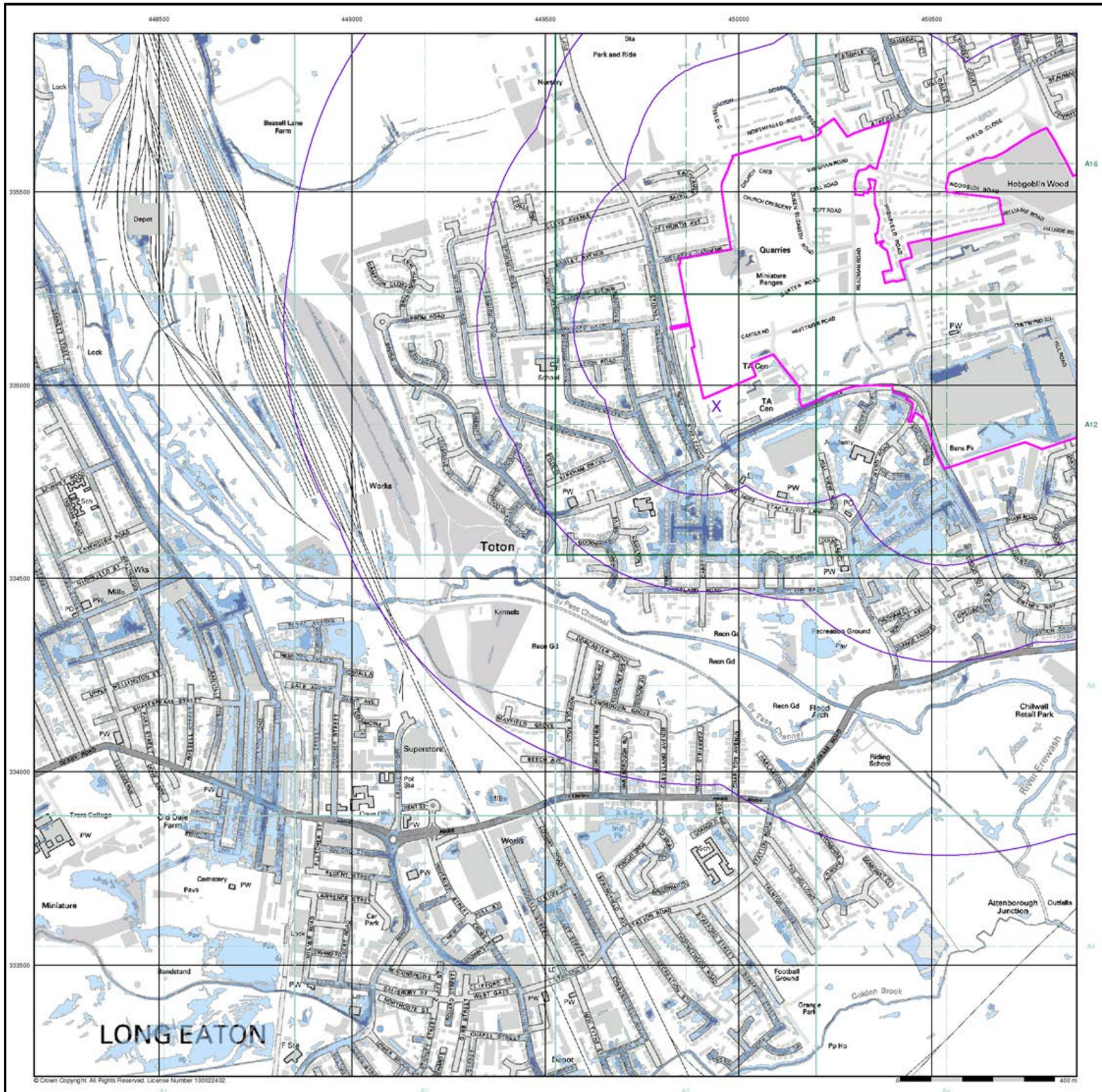
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

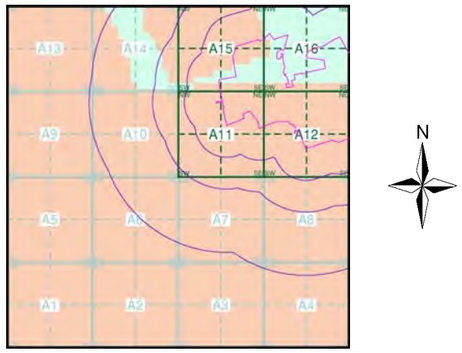
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

General

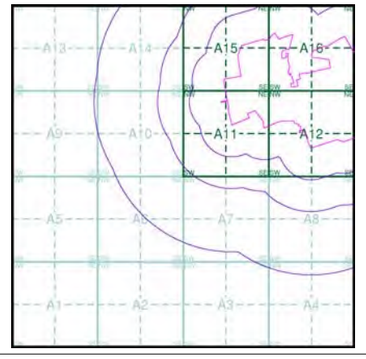
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

< 20
20 - 40
40 - 60
60 - 90
90 - 120
120 - 180
> 180

Estimated Soil Chemistry Chromium - Slice A



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

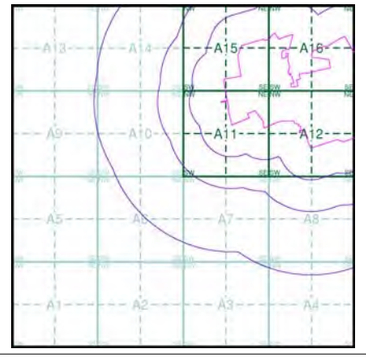
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

< 150
150 - 300
300 - 600
600 - 900
> 900

Urban Soil Chemistry Lead - Slice A



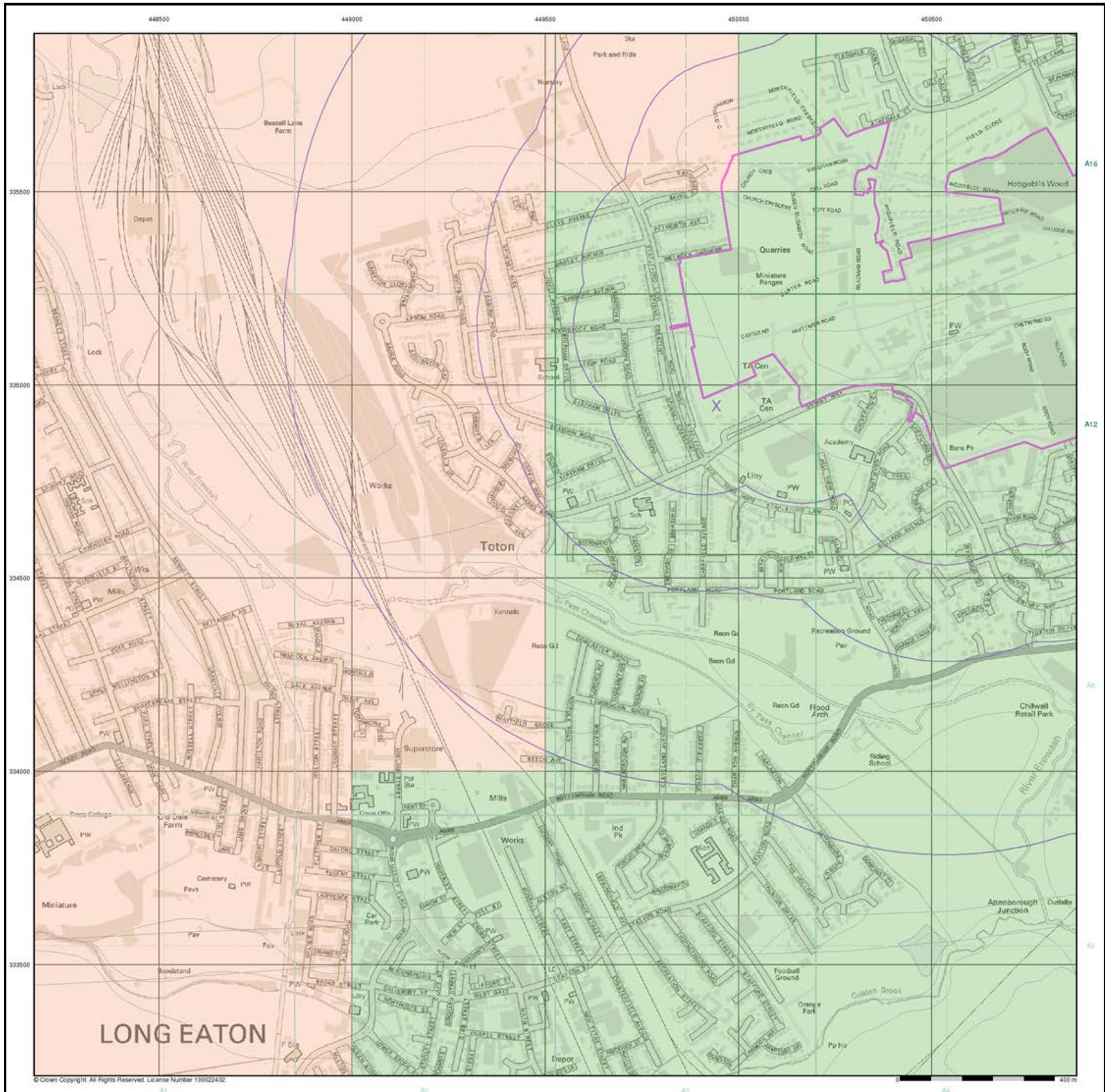
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

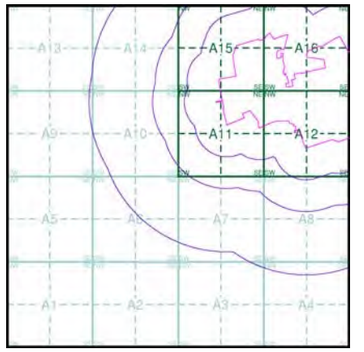
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A

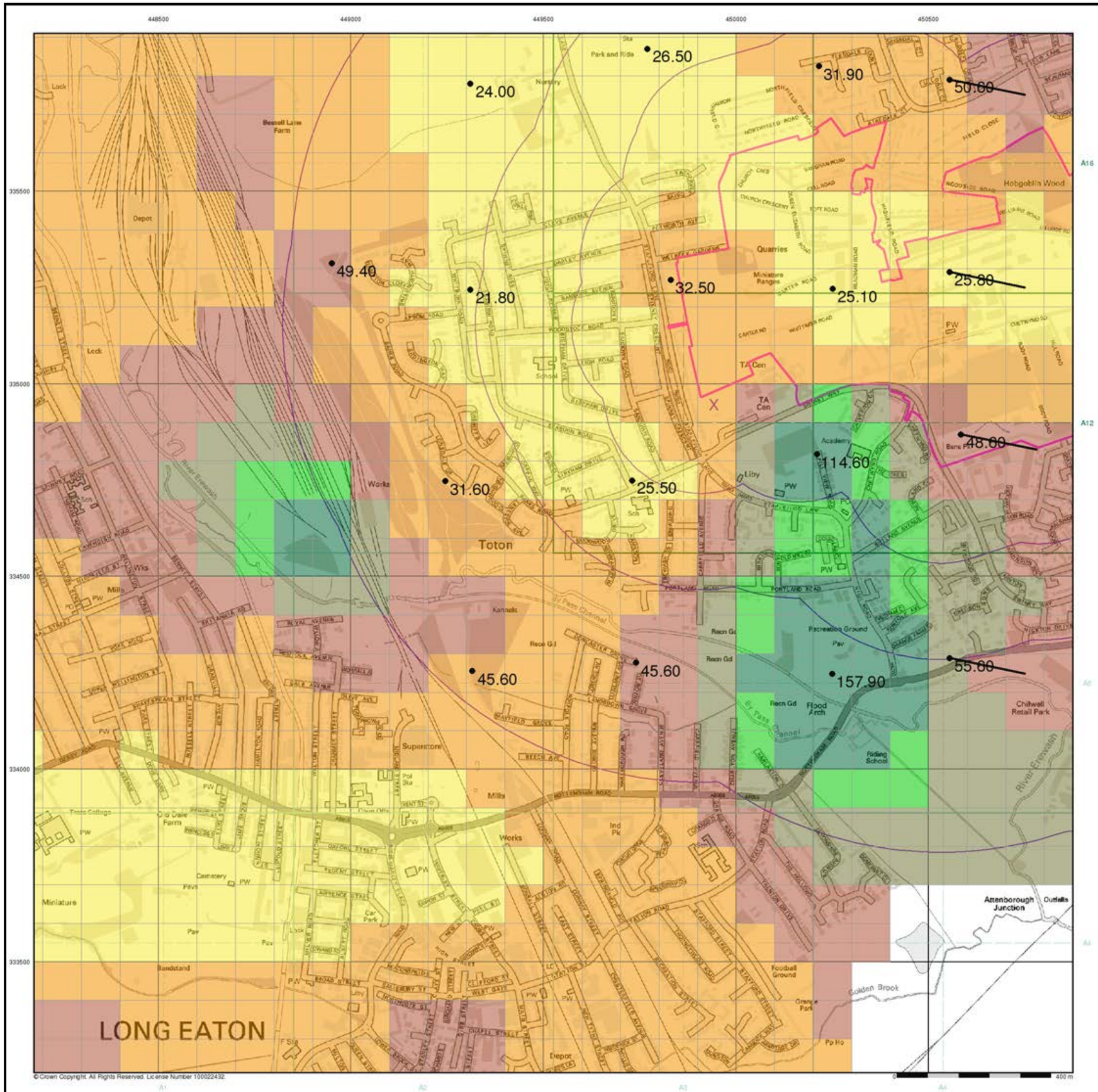


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

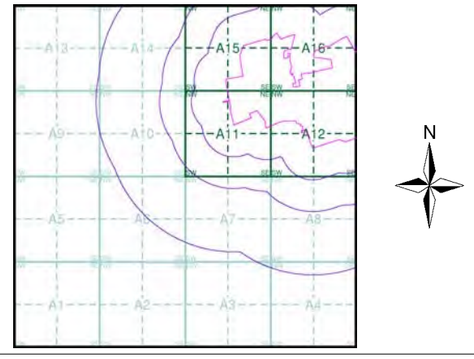
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Urban Soil Chemistry Nickel - Slice A



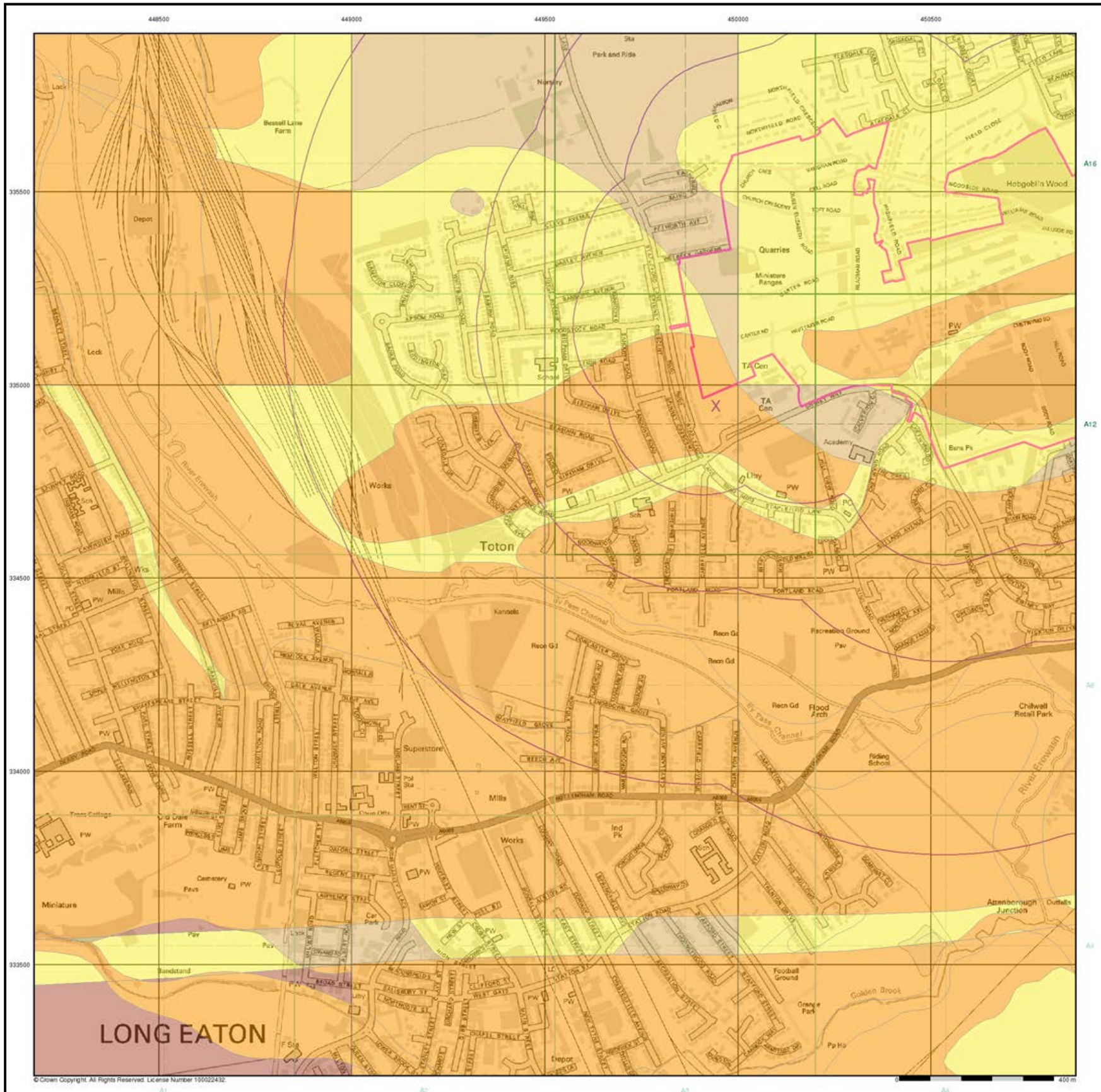
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

General

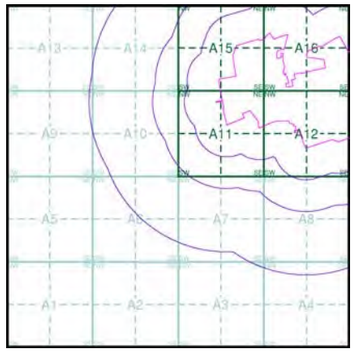
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



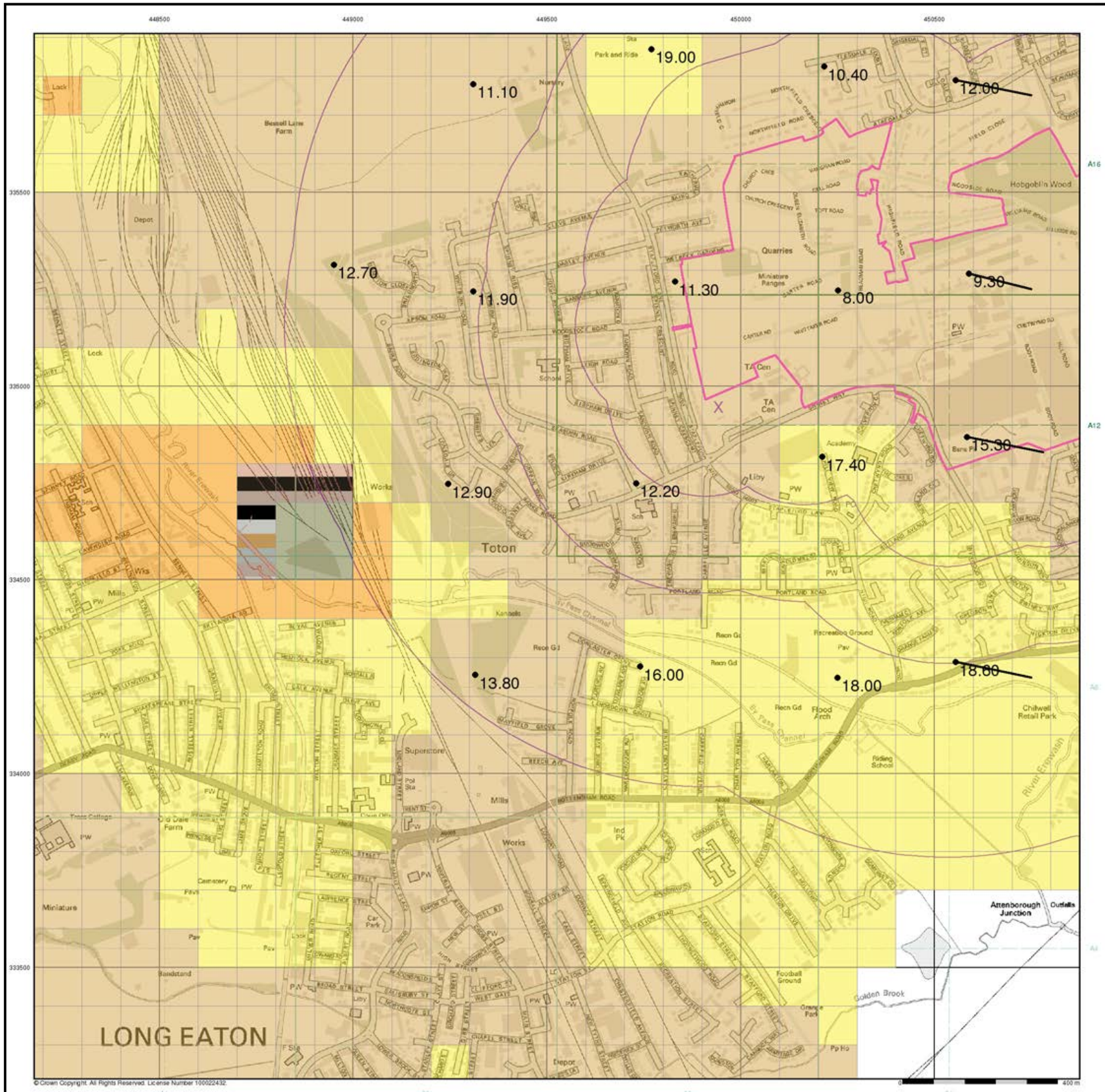
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

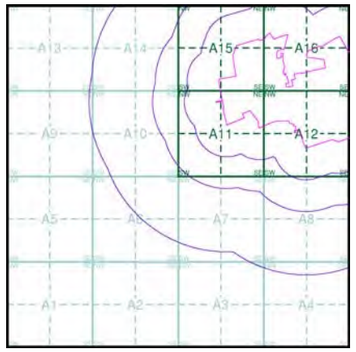
Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

< 15
15 - 25
25 - 35
35 - 45
45 - 60
60 - 120
> 120

Urban Soil Chemistry Arsenic - Slice A



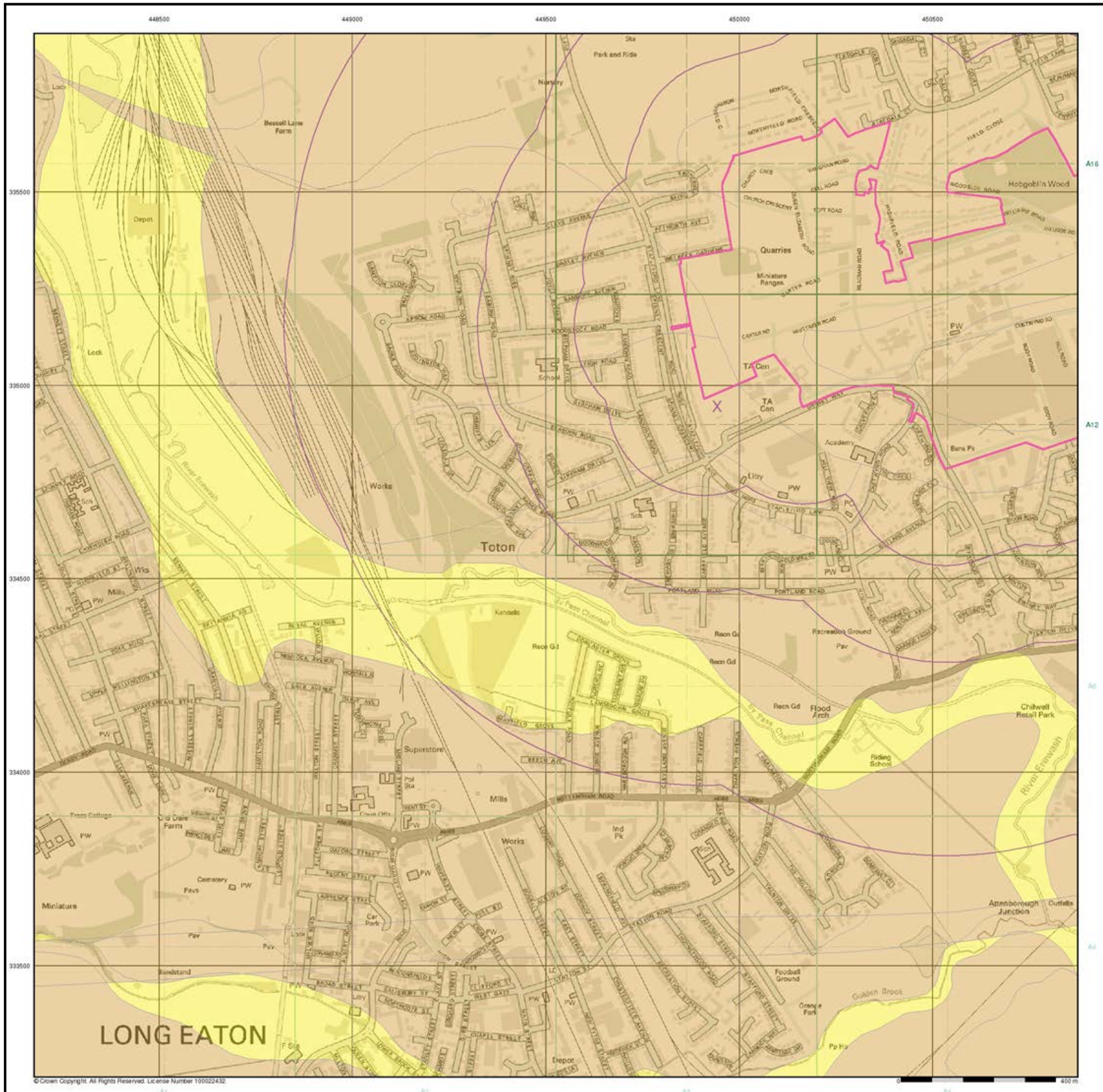
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

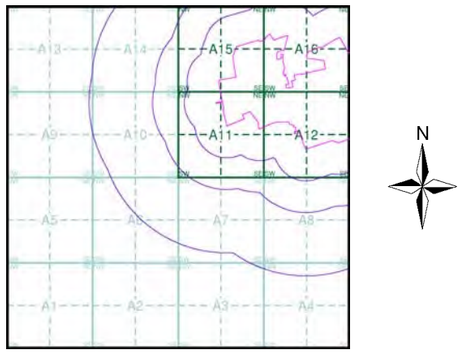
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A

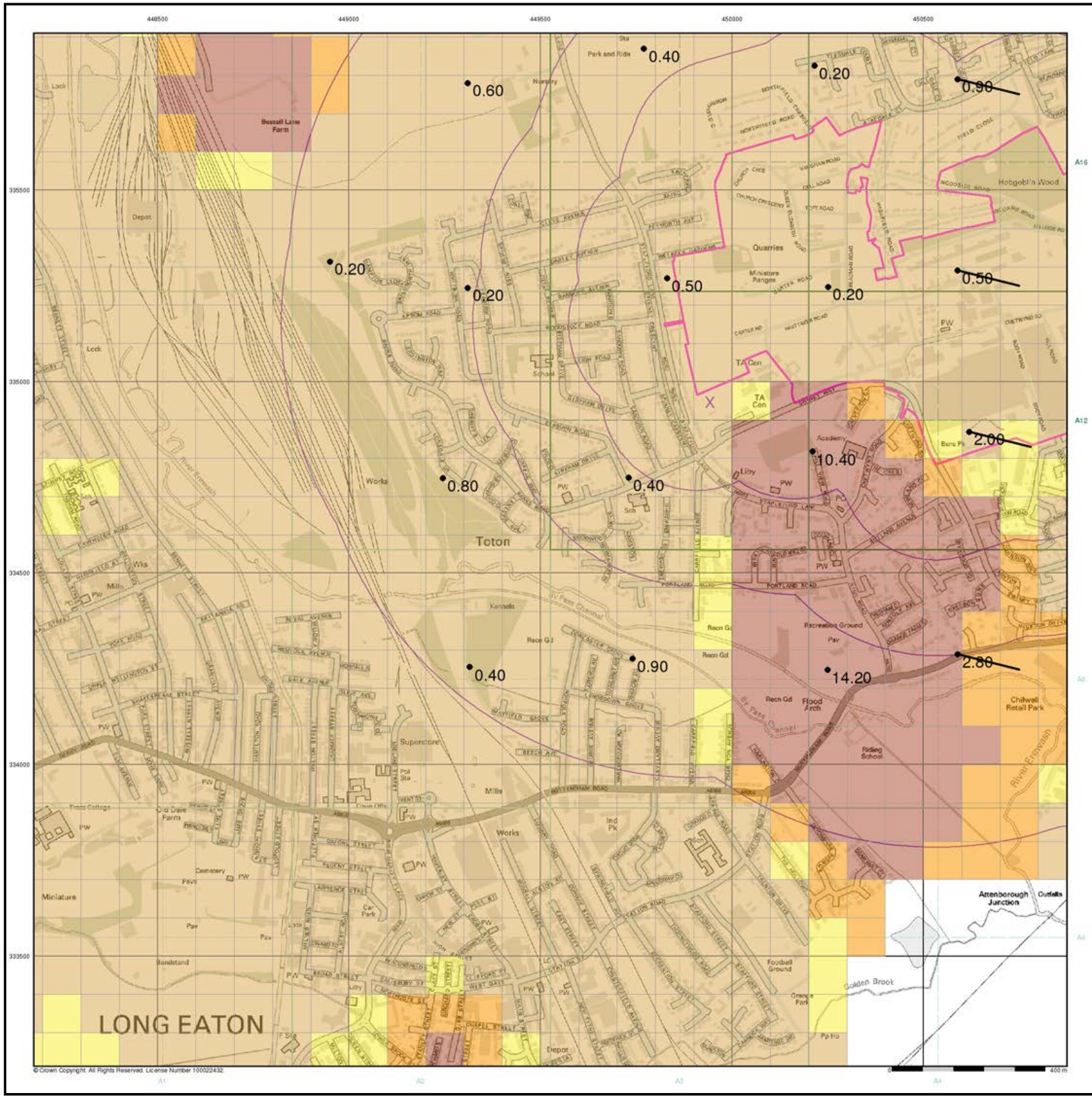


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

Specified Site | Specified Buffer(s) | Bearing Reference Point

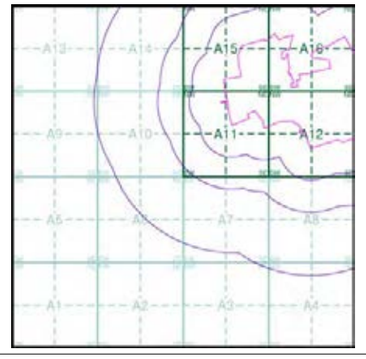
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Urban Soil Chemistry Cadmium - Slice A

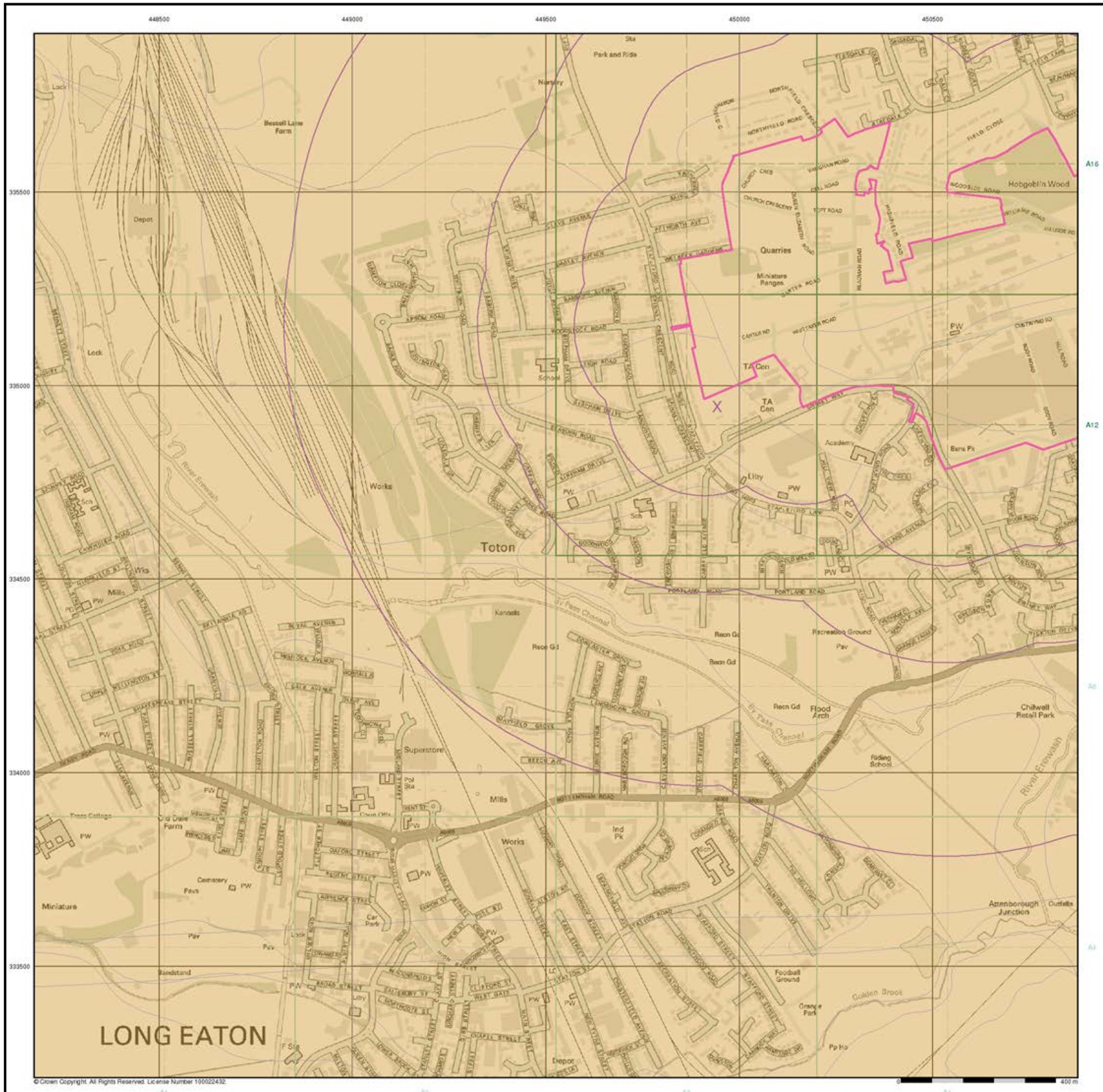


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

General

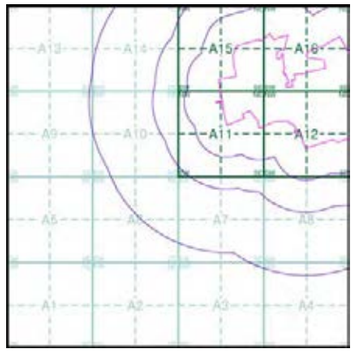
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A

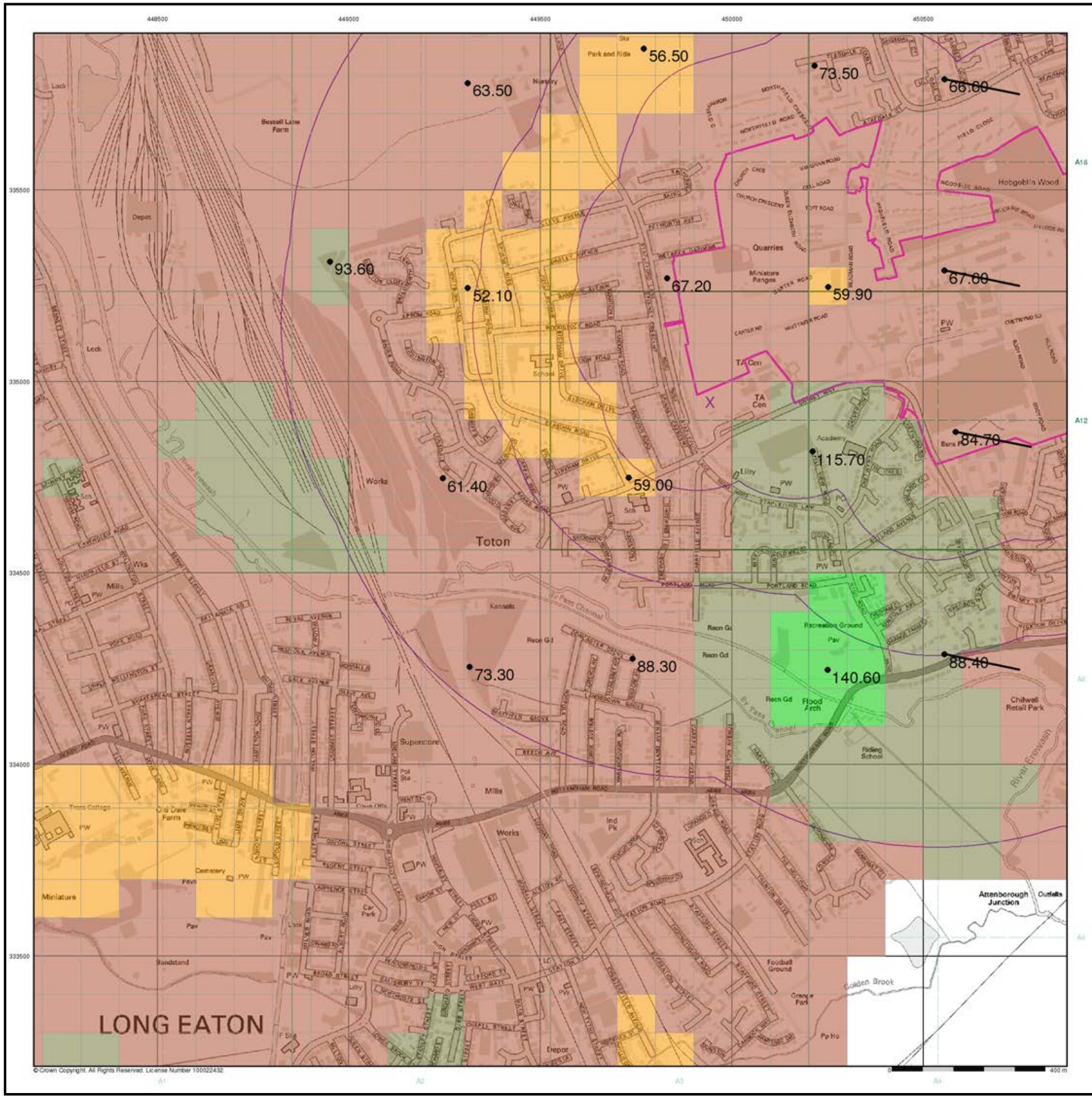


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

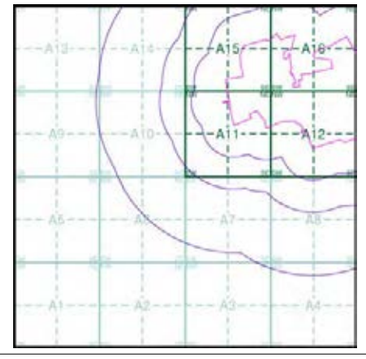
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Urban Soil Chemistry Chromium - Slice A



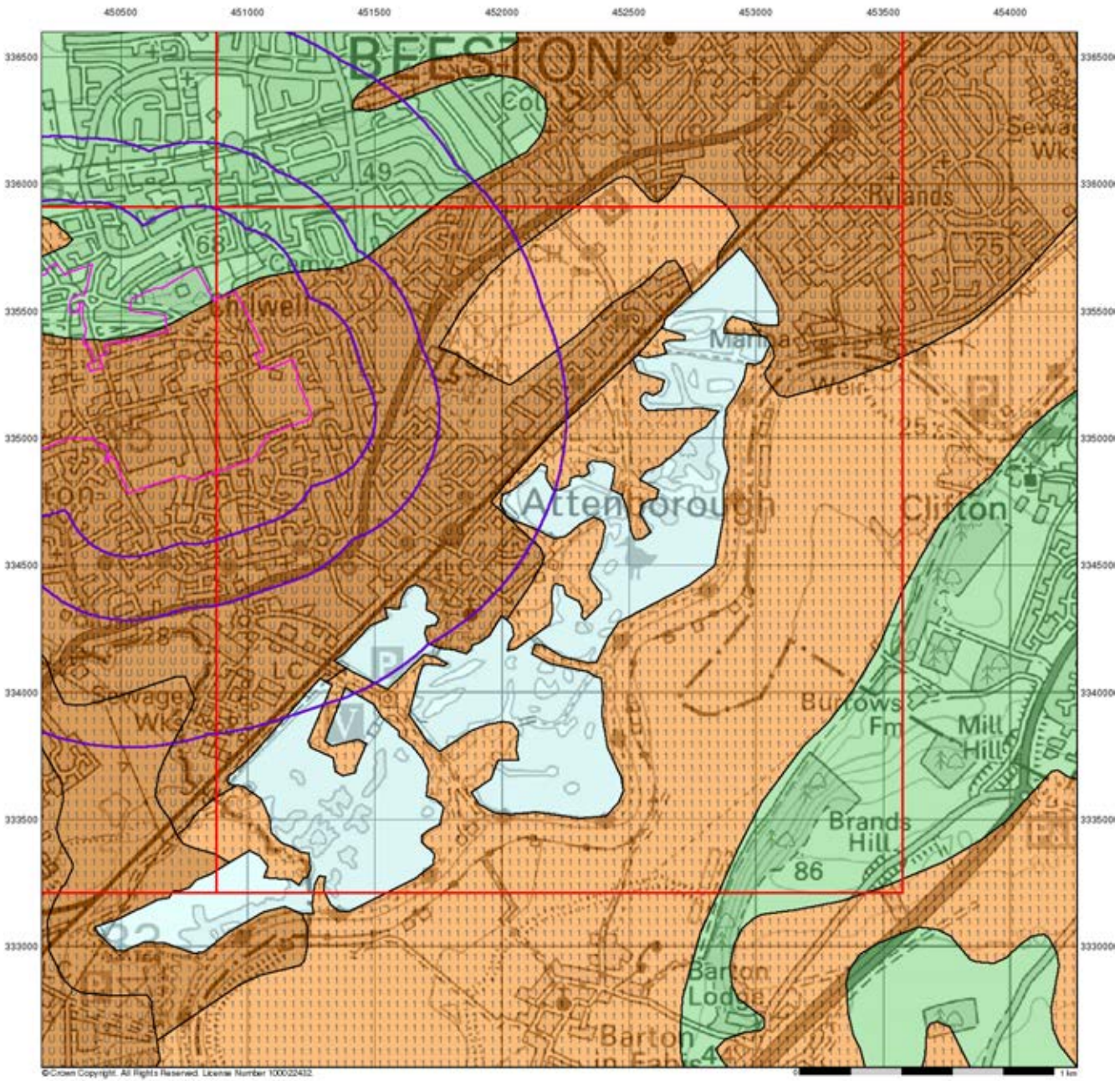
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	449940, 334950
Slice:	A
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Groundwater Vulnerability

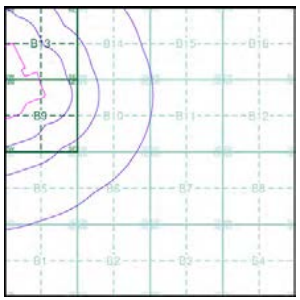
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice B



Order Details

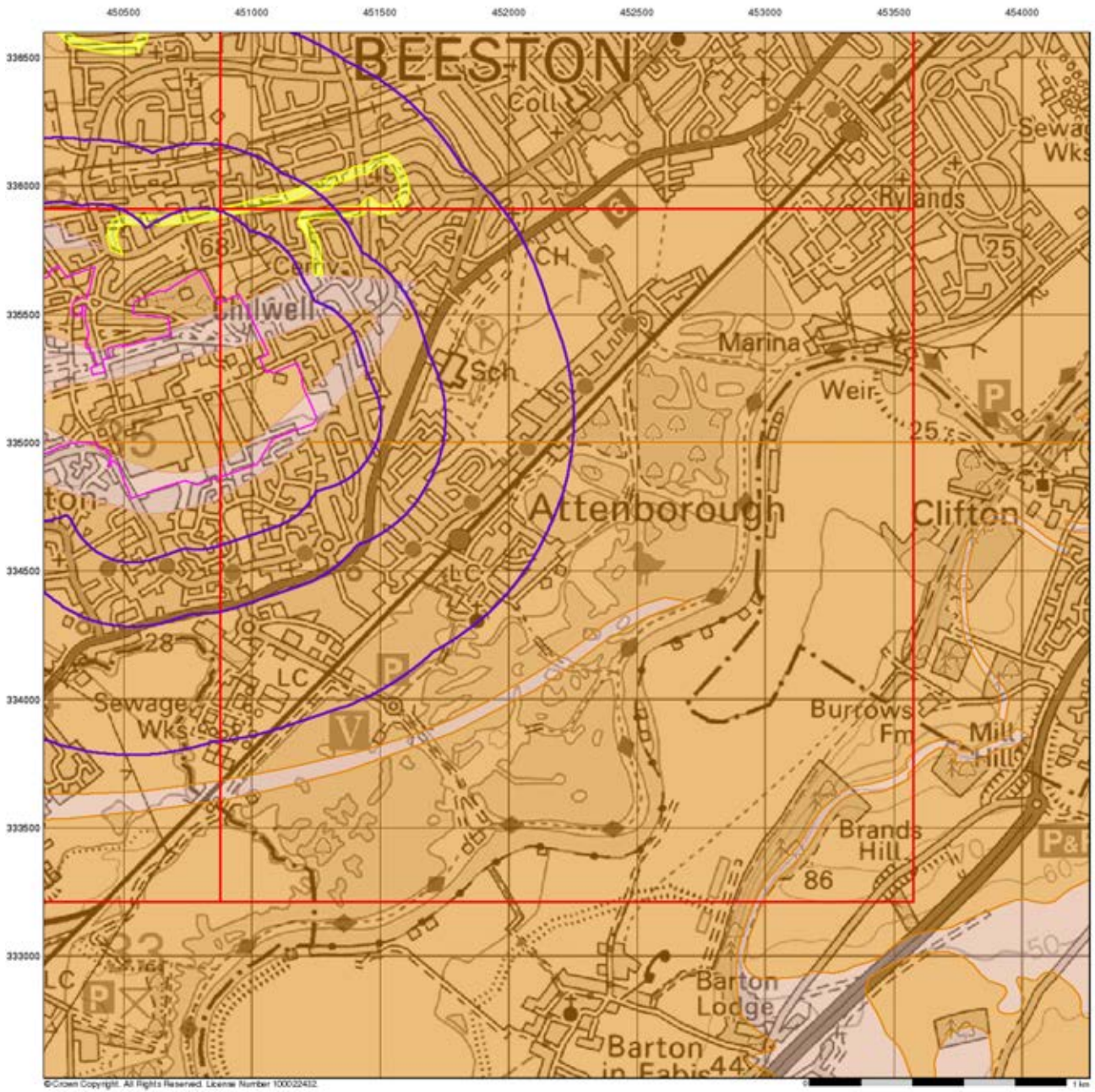
Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel: [redacted]



Bedrock Aquifer Designation

General

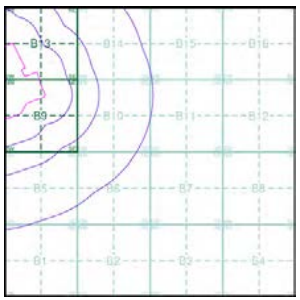
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice B

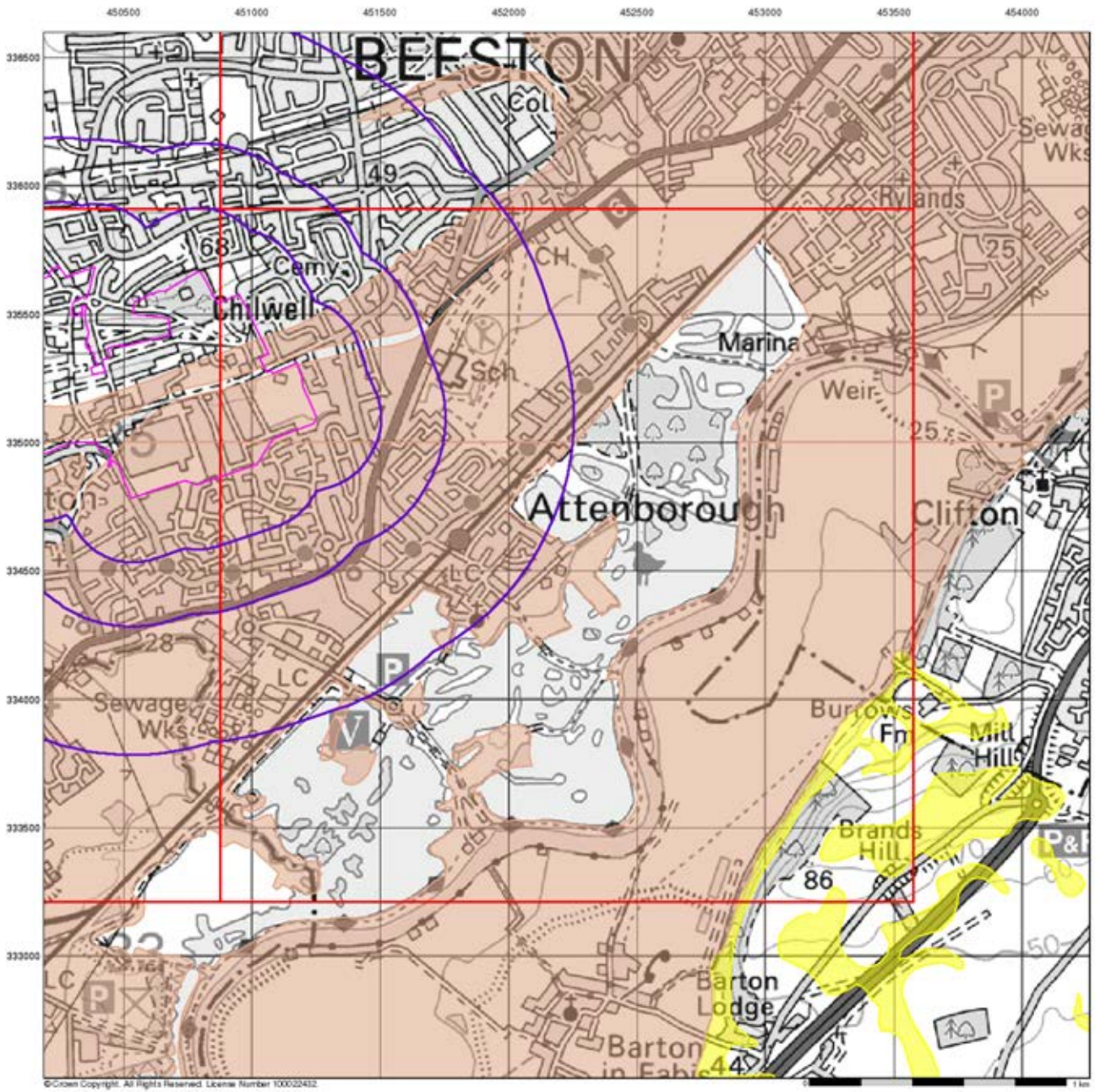


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Superficial Aquifer Designation

General

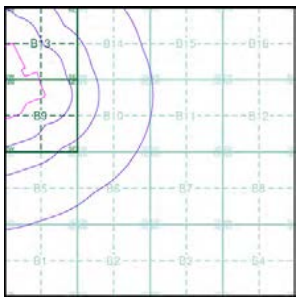
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice B



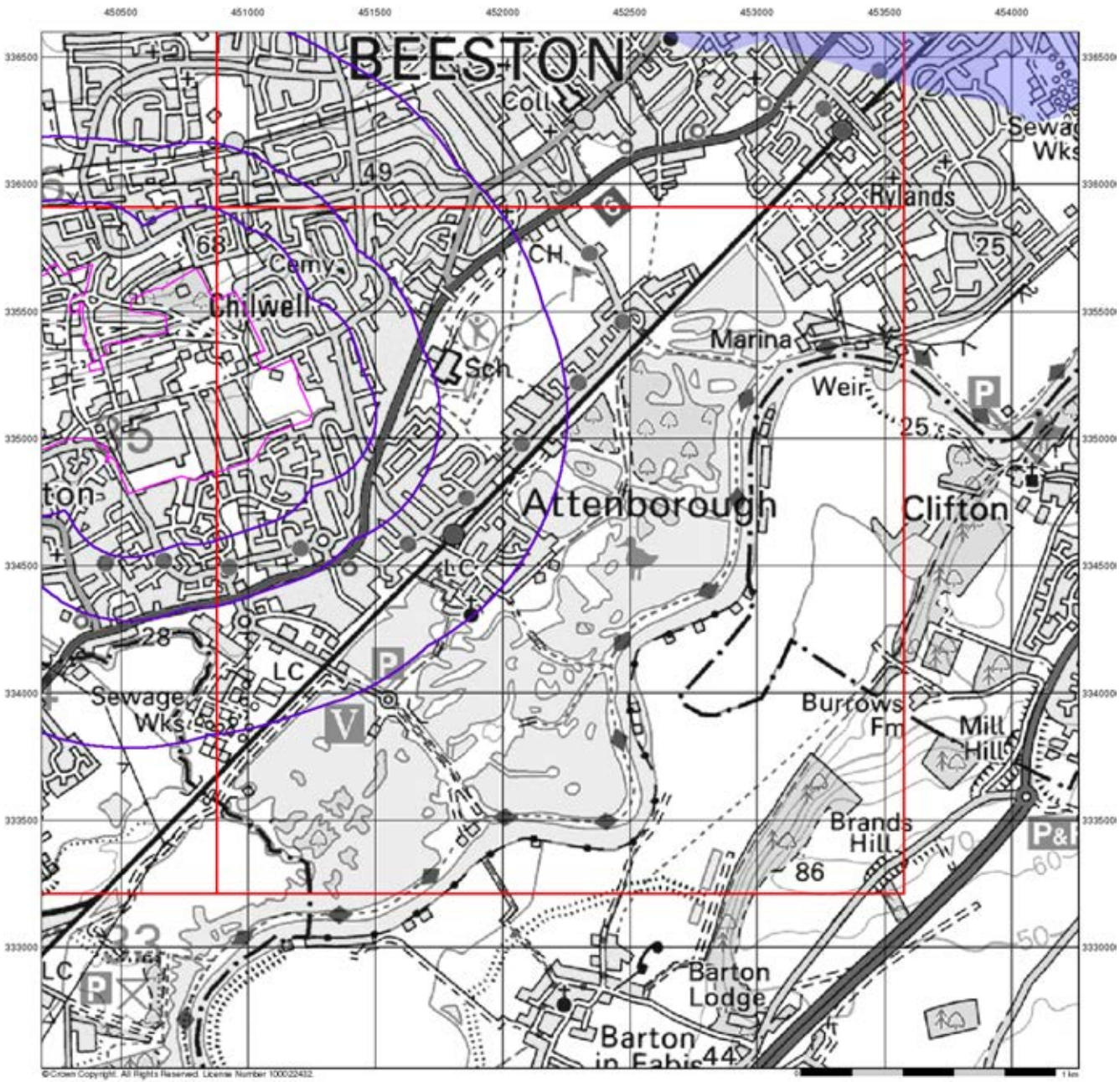
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

Source Protection Zones

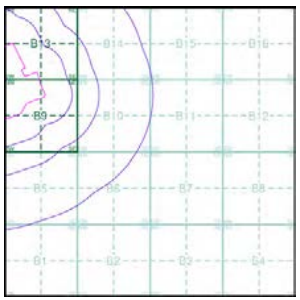
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice B



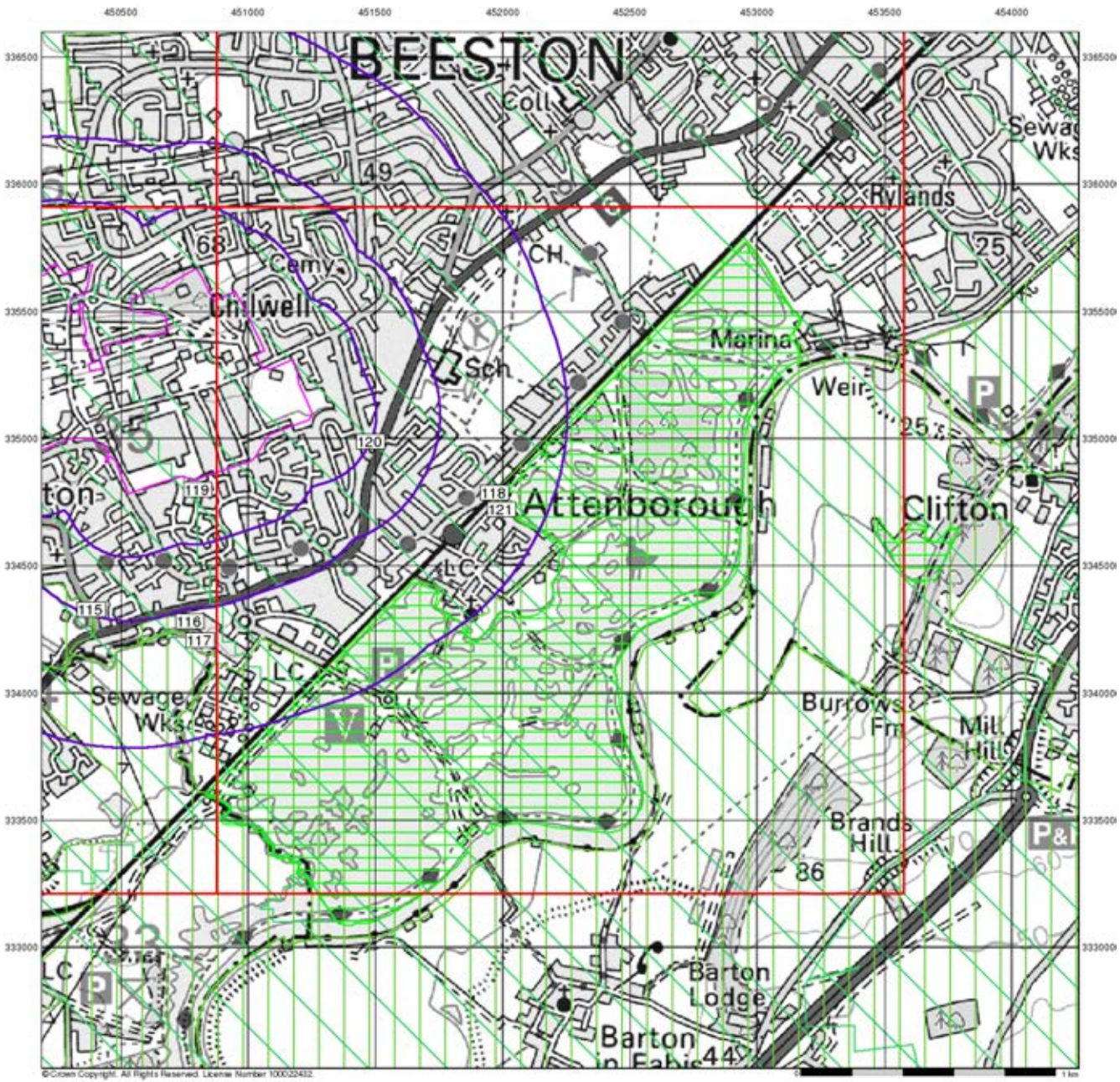
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

Sensitive Land Uses

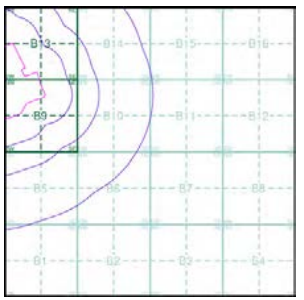
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice B



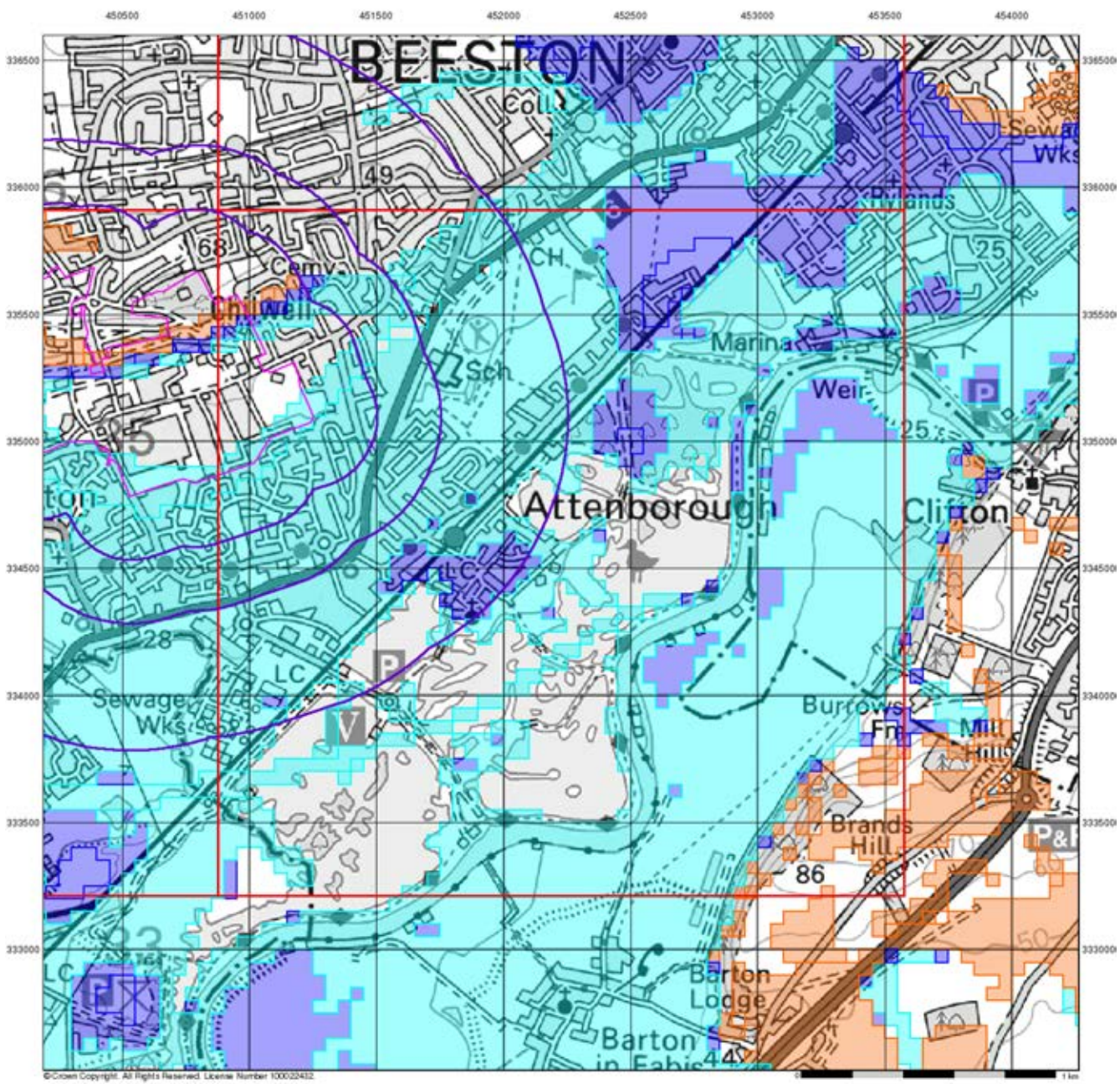
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



BGS Flood GFS Data

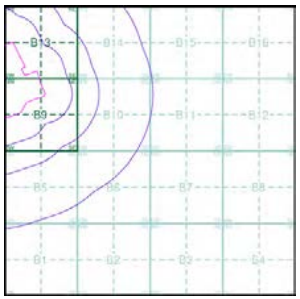
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice B



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
451480, 334990

Slice:
B

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Contents

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1			1	3
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 1	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)	pg 2	1		n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)	pg 2	1		n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)	pg 2	1		n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)	pg 2	1	1	n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 2	1	4	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents	pg 3				1
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits	pg 3				2
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 3			1	
Potentially Infilled Land (Water)	pg 3	2		2	8

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 4	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 5	Yes	Yes	n/a	n/a
Salt Mining Related Features					
Subsidence Insurance Claims	pg 6		1	n/a	n/a
Subsidence Investigations	pg 5		5	n/a	n/a
Motion Map Data (1:2,500)					
Motion Map (100m)	pg 7	86	79	n/a	n/a

Report Version v50.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Chilwell Brickworks Location: , Chilwell, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 12052 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	B13NE (N)	411	1	451325 335745
2	**BGS Recorded Mineral Sites** Site Name: Chilwell Brick Yard Location: , Chilwell, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 120416 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	B13NE (N)	589	1	451498 335802
3	**BGS Recorded Mineral Sites** Site Name: Attenborough Quarry Location: , Attenborough, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 222232 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Pleistocene Geology: Holme Pierrepont Sand And Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B10SE (SE)	803	1	451920 334645
4	**BGS Recorded Mineral Sites** Site Name: Attenborough Quarry Location: , Attenborough, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 120422 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Pleistocene Geology: Holme Pierrepont Sand And Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B6SW (S)	922	1	451570 334174
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	B9NE (E)	0	2	451481 334989
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Extractive Industries or Potential Excavations from 1855-1909** Use: W First Map Published Date: 1885 Last Map Published Date: Not Applicable	B13SW (NW)	0	-	450998 335243
6	**Extractive Industries or Potential Excavations from 1893-1915** Use: W First Map Published Date: 1900 Last Map Published Date: Not Applicable	B13SW (NW)	0	-	450928 335374
7	**Extractive Industries or Potential Excavations from 1906-1937** Use: Well First Map Published Date: 1914 Last Map Published Date: Not Applicable	B13SW (NW)	0	-	450929 335376
8	**Extractive Industries or Potential Excavations from 1924-1949** Use: Unspecified Pit First Map Published Date: 1939 Last Map Published Date: Not Applicable	B13SW (NW)	0	-	450921 335474
9	**Extractive Industries or Potential Excavations from 1924-1949** Use: Chilwell & Toton Cemetery First Map Published Date: 1939 Last Map Published Date: Not Applicable	B13NW (NW)	29	-	451061 335626
10	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	B13SW (NW)	0	-	450992 335296
11	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	B9SW (W)	24	-	450921 334847
12	**Extractive Industries or Potential Excavations from 1950-1980** Use: Chilwell and Toton Cemetery First Map Published Date: 1956 Last Map Published Date: 1956	B13NW (NW)	30	-	451062 335629
13	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	B9SW (W)	46	-	450922 334829
14	**Extractive Industries or Potential Excavations from 1950-1980** Use: Unspecified Deposited Material First Map Published Date: 1962 Last Map Published Date: N/A	B9SW (W)	97	-	450936 334781

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Heap, unknown constituents** Use: Not Supplied Date of Mapping: 1983	B5SW (SW)	565	-	451012 334204
16	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1955 - 1983	B10SW (SE)	757	-	451861 334630
17	**Quarrying of sand & clay, operation of sand & gravel pits** Use: Not Supplied Date of Mapping: 1983	B5SE (S)	905	-	451317 334059
18	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1984	B13NE (N)	302	-	451402 335614
19	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	B9NW (W)	0	-	451083 335020
20	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	B9NW (W)	0	-	451079 335015
21	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	B10NW (NE)	343	-	451591 335145
22	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B14SW (NE)	499	-	451727 335250
23	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NW (SW)	520	-	451145 334408
24	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NE (S)	522	-	451301 334411
25	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NW (SW)	543	-	451012 334339
26	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NW (SW)	561	-	450983 334310
27	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NE (S)	616	-	451400 334426
28	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1939	B5NE (S)	674	-	451443 334390
29	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NE (S)	790	-	451546 334324
30	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B6NW (S)	844	-	451603 334303

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
31	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451451 335144
32	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451481 335000
33	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	1	451481 334989
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451457 335095
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	1	451050 335000
34	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	1	451050 335000
35	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451457 335095
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451451 335144
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451481 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	1	451481 334989
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	1	451481 334989
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451481 335000
36	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	1	451481 334989
37	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451481 335000
38	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(NW)	0	1	450740 335582
39	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13NW (NW)	0	1	451073 335592
40	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(NW)	0	1	450749 335464
41	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	0	1	450966 335546
42	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451457 335095

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	1	451050 335000
44	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451451 335144
45	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451481 335000
46	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	1	451481 334989
47	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	1	451408 335395
48	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	450353 334925
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (NW)	0	1	451228 335480
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	1	451404 335352
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	450505 335000
49	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	1	451050 335000
50	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451457 335095
51	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B10SW (E)	4	1	451838 334873
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451451 335144
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	1	451481 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	1	451481 334989
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(NW)	64	1	450441 335755
	Subsidence Investigations Site Investigation Date: 19th April 2001 Root Survey: Yes CCTV Drain Survey: No Depth of Foundation Footing: Not Supplied Soil Classification: Not Supplied			-	
	Subsidence Investigations Site Investigation Date: 11th December 2006 Root Survey: No CCTV Drain Survey: Yes Depth of Foundation Footing: Not Supplied Soil Classification: Not Supplied			-	

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Subsidence Investigations Site Investigation Date: 18th June 2004 Root Survey: No CCTV Drain Survey: Yes Depth of Foundation Footing: Not Supplied Soil Classification: Not Supplied			-	
	Subsidence Investigations Site Investigation Date: 28th September 2016 Root Survey: Yes CCTV Drain Survey: No Depth of Foundation Footing: 0.60 Soil Classification: Clay of Intermediate Plasticity			-	
	Subsidence Investigations Site Investigation Date: 26th January 2007 Root Survey: Yes CCTV Drain Survey: No Depth of Foundation Footing: 0.50 Soil Classification: Clay of Intermediate Plasticity			-	
	Subsidence Insurance Claims Case Date: 21st September 2016 Movement Trend Indication: Not Supplied Damage Classification: Not Supplied			-	

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B13SW (NW)	0	-	450940 335438
52	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B13SW (NW)	0	-	450937 335434
52	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B13SW (NW)	0	-	450934 335435
52	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B13SW (NW)	0	-	450935 335431
53	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450974 335019
54	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9NW (W)	0	-	450941 335027
54	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	450938 335027
54	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9NW (W)	0	-	450938 335023
54	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450937 335023
55	**Motion Map** Average Velocity Gradient (mmyear): -1.3	B13SW (NW)	0	-	451039 335273
56	**Motion Map** Average Velocity Gradient (mmyear): 0.6	B13SW (NW)	0	-	450964 335286
56	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B13SW (NW)	0	-	450962 335286
56	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B13SW (NW)	0	-	450969 335281
56	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B13SW (NW)	0	-	450964 335282
56	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B13SW (NW)	0	-	450965 335277
57	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B13SW (NW)	0	-	451134 335239
58	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9NW (W)	0	-	450925 334932
58	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9NW (W)	0	-	450919 334937
59	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	451015 335002
60	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B13SW (NW)	0	-	450969 335268

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
60	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B13SW (NW)	0	-	450973 335264
60	**Motion Map** Average Velocity Gradient (mmyear): 0.6	B13SW (NW)	0	-	450967 335273
60	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B13SW (NW)	0	-	450972 335260
61	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9NW (W)	0	-	451028 335076
61	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	451030 335067
62	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	450948 335005
62	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	450946 335005
62	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450949 335000
62	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	450944 335001
62	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	450951 335008
63	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9NW (NW)	0	-	451131 335236
64	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450982 334904
64	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9SW (W)	4	-	450986 334898
65	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	450930 334915
65	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450927 334915
65	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450929 334911
65	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9NW (W)	0	-	450926 334912
65	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450931 334907
65	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9NW (W)	0	-	450927 334907
66	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	450989 334991

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
66	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9NW (W)	0	-	450986 334988
67	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B9NW (W)	0	-	451094 335045
67	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9NW (W)	0	-	451096 335040
68	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	451035 335054
69	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B9NW (W)	0	-	450929 334903
69	**Motion Map** Average Velocity Gradient (mmyear): -0.6	B9NW (W)	0	-	450927 334903
70	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9NW (W)	0	-	450935 335182
70	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9NW (W)	0	-	450937 335178
71	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B13SW (NW)	0	-	450975 335243
71	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B13SW (NW)	0	-	450972 335239
72	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9NW (W)	0	-	451043 335044
72	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	451042 335040
73	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	450931 335045
73	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450928 335046
73	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	450933 335040
74	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	451030 335019
75	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	450881 335153
75	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9NW (W)	0	-	450880 335150
76	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B9NW (W)	0	-	450930 334980
76	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450926 334981

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
76	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	450931 334988
76	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	450930 334984
76	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450925 334985
77	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	450900 334987
77	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9NW (W)	0	-	450904 334982
77	**Motion Map** Average Velocity Gradient (mmyear): 0.6	B9NW (W)	0	-	450902 334982
78	**Motion Map** Average Velocity Gradient (mmyear): 0.6	B9NW (W)	0	-	450888 335144
78	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	450886 335140
78	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450884 335141
78	**Motion Map** Average Velocity Gradient (mmyear): 0.8	B9NW (W)	0	-	450889 335135
78	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9NW (W)	0	-	450881 335137
79	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NW (W)	0	-	451024 334943
80	**Motion Map** Average Velocity Gradient (mmyear): 1.2	B9NW (W)	0	-	450916 334967
80	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9NW (W)	0	-	450911 334964
81	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	450931 334959
81	**Motion Map** Average Velocity Gradient (mmyear): -0.6	B9NW (W)	0	-	450933 334955
81	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	450935 334951
82	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	451010 335109
83	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450893 335135
83	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	0	-	450893 335127

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
83	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9NW (W)	0	-	450892 335127
84	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NW (W)	0	-	450938 334946
84	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450931 334947
84	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450937 334942
85	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9NW (W)	0	-	450876 335114
86	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B9NW (W)	0	-	450947 334993
87	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	0	-	450903 335181
88	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9SW (W)	1	-	450965 334895
88	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9SW (W)	3	-	450962 334891
88	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9SW (W)	5	-	450959 334888
89	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9NE (NW)	9	-	451219 335192
89	**Motion Map** Average Velocity Gradient (mmyear): 0.5	B9NE (NW)	15	-	451225 335195
90	**Motion Map** Average Velocity Gradient (mmyear): 0.5	B9NE (NW)	11	-	451220 335196
90	**Motion Map** Average Velocity Gradient (mmyear): -0.7	B9NE (NW)	13	-	451218 335205
91	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B13SW (NW)	23	-	451096 335301
91	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B13SW (NW)	26	-	451098 335304
91	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B13SW (NW)	28	-	451101 335308
91	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B13SW (NW)	28	-	451094 335305
92	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9NW (W)	24	-	451043 334906
92	**Motion Map** Average Velocity Gradient (mmyear): -0.9	B9NW (W)	26	-	451043 334902

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NW (W)	28	-	451047 334905
93	**Motion Map** Average Velocity Gradient (mmyear): -0.8	B13SW (NW)	26	-	451123 335315
94	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B13SW (NW)	27	-	451051 335437
94	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B13SW (NW)	32	-	451055 335440
94	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B13SW (NW)	33	-	451058 335435
94	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B13SW (NW)	34	-	451058 335440
94	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B13SW (NW)	36	-	451057 335444
95	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B13SW (NW)	31	-	451087 335323
96	**Motion Map** Average Velocity Gradient (mmyear): -1.2	B9SW (W)	36	-	451046 334889
96	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9SW (W)	42	-	451052 334888
96	**Motion Map** Average Velocity Gradient (mmyear): 0.8	B9SW (W)	44	-	451051 334884
96	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9SW (W)	49	-	451054 334879
97	**Motion Map** Average Velocity Gradient (mmyear): 0.0	B9NE (NW)	36	-	451250 335189
98	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B13SW (NW)	40	-	451105 335348
99	**Motion Map** Average Velocity Gradient (mmyear): -2.0	B9NE (NW)	44	-	451241 335236
100	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	45	-	451107 334969
101	**Motion Map** Average Velocity Gradient (mmyear): -0.7	B9NE (NW)	46	-	451256 335200
102	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B13SE (NW)	46	-	451214 335336
103	**Motion Map** Average Velocity Gradient (mmyear): 1.5	B13SE (NW)	47	-	451243 335240
103	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B13SE (NW)	48	-	451243 335244

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
103	**Motion Map** Average Velocity Gradient (mmyear): -0.7	B13SE (NW)	49	-	451246 335239
104	**Motion Map** Average Velocity Gradient (mmyear): -0.7	B9SW (W)	47	-	450980 334851
105	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9SW (W)	47	-	451023 334865
105	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9SW (W)	50	-	451022 334862
106	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B9SW (W)	52	-	450930 334829
107	**Motion Map** Average Velocity Gradient (mmyear): 0.3	B9SW (W)	54	-	451029 334860
107	**Motion Map** Average Velocity Gradient (mmyear): -1.4	B9SW (W)	60	-	451026 334852
107	**Motion Map** Average Velocity Gradient (mmyear): -1.3	B9SW (W)	61	-	451029 334852
107	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9SW (W)	68	-	451028 334844
108	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B13SE (NW)	63	-	451259 335244
109	**Motion Map** Average Velocity Gradient (mmyear): -1.0	B13SW (NW)	64	-	451124 335368
110	**Motion Map** Average Velocity Gradient (mmyear): -1.5	B9SW (W)	65	-	451029 334848
111	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B9SW (W)	69	-	450884 334795
111	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9SW (W)	71	-	450887 334794
111	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B9SW (W)	72	-	450882 334791
111	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9SW (W)	75	-	450886 334790
112	**Motion Map** Average Velocity Gradient (mmyear): -2.2	B9SW (W)	72	-	451067 334860
113	**Motion Map** Average Velocity Gradient (mmyear): -1.2	B9SW (W)	72	-	451093 334895
113	**Motion Map** Average Velocity Gradient (mmyear): 0.8	B9SW (W)	73	-	451096 334898
113	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9SW (W)	74	-	451097 334898

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
113	**Motion Map** Average Velocity Gradient (mmyear): -1.3	B9SW (W)	75	-	451096 334894
114	**Motion Map** Average Velocity Gradient (mmyear): -1.1	B9SW (W)	76	-	451034 334839
115	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B13NW (NW)	79	-	450876 335687
115	**Motion Map** Average Velocity Gradient (mmyear): 0.4	B13NW (NW)	84	-	450877 335695
116	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B13SE (NW)	81	-	451272 335278
117	**Motion Map** Average Velocity Gradient (mmyear): 0.2	B13SW (NW)	82	-	451055 335550
117	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B13SW (NW)	83	-	451057 335550
117	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B13SW (NW)	85	-	451057 335554
117	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B13SW (NW)	87	-	451060 335553
118	**Motion Map** Average Velocity Gradient (mmyear): 0.1	B9NE (NW)	87	-	451292 335221
119	**Motion Map** Average Velocity Gradient (mmyear): -0.9	B9SW (W)	87	-	451033 334827
119	**Motion Map** Average Velocity Gradient (mmyear): -0.9	B9SW (W)	89	-	451031 334823
120	**Motion Map** Average Velocity Gradient (mmyear): 0.9	B9NE (NW)	87	-	451336 335073
121	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B9NW (W)	88	-	451186 334960
122	**Motion Map** Average Velocity Gradient (mmyear): -0.5	B9NE (W)	88	-	451257 334984
122	**Motion Map** Average Velocity Gradient (mmyear): -0.1	B9NE (W)	89	-	451258 334984
123	**Motion Map** Average Velocity Gradient (mmyear): -0.6	B9NW (W)	89	-	451179 334957
123	**Motion Map** Average Velocity Gradient (mmyear): 0.5	B9NW (W)	92	-	451184 334956
123	**Motion Map** Average Velocity Gradient (mmyear): -1.2	B9NW (W)	92	-	451178 334953
123	**Motion Map** Average Velocity Gradient (mmyear): 0.5	B9NW (W)	95	-	451183 334952

Motion Map Data (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
123	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B9NW (W)	96	-	451179 334949
123	**Motion Map** Average Velocity Gradient (mmyear): 0.9	B9NW (W)	98	-	451182 334948
124	**Motion Map** Average Velocity Gradient (mmyear): -0.2	B13SW (NW)	95	-	451210 335398
124	**Motion Map** Average Velocity Gradient (mmyear): -0.4	B13SW (NW)	98	-	451209 335402
124	**Motion Map** Average Velocity Gradient (mmyear): -0.3	B13SW (NW)	99	-	451212 335401

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

1:2,500	Mapsheet	Published Date
Nottinghamshire	041_15	1885
Nottinghamshire	041_15	1885
Derbyshire	056_03	1885
Nottinghamshire	041_15	1900
Nottinghamshire	041_15	1900
Nottinghamshire	045_03	1901
Derbyshire	056_03	1901
Nottinghamshire	041_15	1914
Nottinghamshire	041_15	1914
Derbyshire	056_03	1914
Derbyshire	056_03	1938
Nottinghamshire	041_15	1939
Nottinghamshire	041_15	1939
Ordnance Survey Plan	SK5135	1956
Ordnance Survey Plan	SK5135	1956

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Nottinghamshire	041_SE	1884
Nottinghamshire	045_NE	1884
Nottinghamshire	041_SE	1901
Nottinghamshire	045_NE	1901
Derbyshire	056_NE	1901
Nottinghamshire	041_SE	1921
Nottinghamshire	045_NE	1921
Derbyshire	056_NE	1921
Nottinghamshire	041_SE	1939
Derbyshire	056_NE	1939
Ordnance Survey Plan	SK53NW	1955
Ordnance Survey Plan	SK53SW	1955
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SK53SW	1983
Ordnance Survey Plan	SK53NW	1984

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Man Made Mining Cavities Peter Brett Associates	November 2016	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2016	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	September 2016	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Subsidence Insurance Claims SP Property Services	November 2016	Quarterly
Subsidence Investigations CET Structures Ltd	November 2016	Quarterly

Motion Map Data (1:2,500)	Version	Update Cycle
Motion Map		
Nigel Press Associates - Hampshire	February 2011	As notified
Nigel Press Associates - Cambridge	January 2011	As notified
Nigel Press Associates - Ipswich	January 2011	As notified
Nigel Press Associates - Norwich	January 2011	As notified
Nigel Press Associates - Peterborough	January 2011	As notified
Nigel Press Associates - Barnstaple	July 2010	As notified
Nigel Press Associates - Derbyshire	July 2010	As notified
Nigel Press Associates - Humberside	July 2010	As notified
Nigel Press Associates - Kent	July 2010	As notified
Nigel Press Associates - Lincolnshire	July 2010	As notified
Nigel Press Associates - Nottinghamshire	July 2010	As notified
Nigel Press Associates - Birmingham	May 2009	As notified
Nigel Press Associates - Bournemouth	May 2009	As notified
Nigel Press Associates - Brighton	May 2009	As notified
Nigel Press Associates - Bristol	May 2009	As notified
Nigel Press Associates - Cardiff	May 2009	As notified
Nigel Press Associates - Central London	May 2009	As notified
Nigel Press Associates - Cheltenahm	May 2009	As notified
Nigel Press Associates - Coventry	May 2009	As notified
Nigel Press Associates - Crawley	May 2009	As notified
Nigel Press Associates - Edinburgh	May 2009	As notified
Nigel Press Associates - Exeter	May 2009	As notified
Nigel Press Associates - Glasgow	May 2009	As notified
Nigel Press Associates - Isle of Wight	May 2009	As notified
Nigel Press Associates - Leeds	May 2009	As notified
Nigel Press Associates - Leicester	May 2009	As notified
Nigel Press Associates - Liverpool	May 2009	As notified
Nigel Press Associates - Manchester	May 2009	As notified
Nigel Press Associates - Milton Keynes	May 2009	As notified
Nigel Press Associates - Newcastle	May 2009	As notified
Nigel Press Associates - Northwich	May 2009	As notified
Nigel Press Associates - Nottingham	May 2009	As notified
Nigel Press Associates - Oxford	May 2009	As notified
Nigel Press Associates - Plymouth	May 2009	As notified
Nigel Press Associates - Portsmouth	May 2009	As notified
Nigel Press Associates - Preston	May 2009	As notified
Nigel Press Associates - Reading	May 2009	As notified
Nigel Press Associates - Sheffield	May 2009	As notified
Nigel Press Associates - Stoke	May 2009	As notified
Nigel Press Associates - Swindon	May 2009	As notified
Nigel Press Associates - Tonbridge	May 2009	As notified
Nigel Press Associates - North London	November 2008	As notified
Nigel Press Associates - Head Office	September 2008	As notified

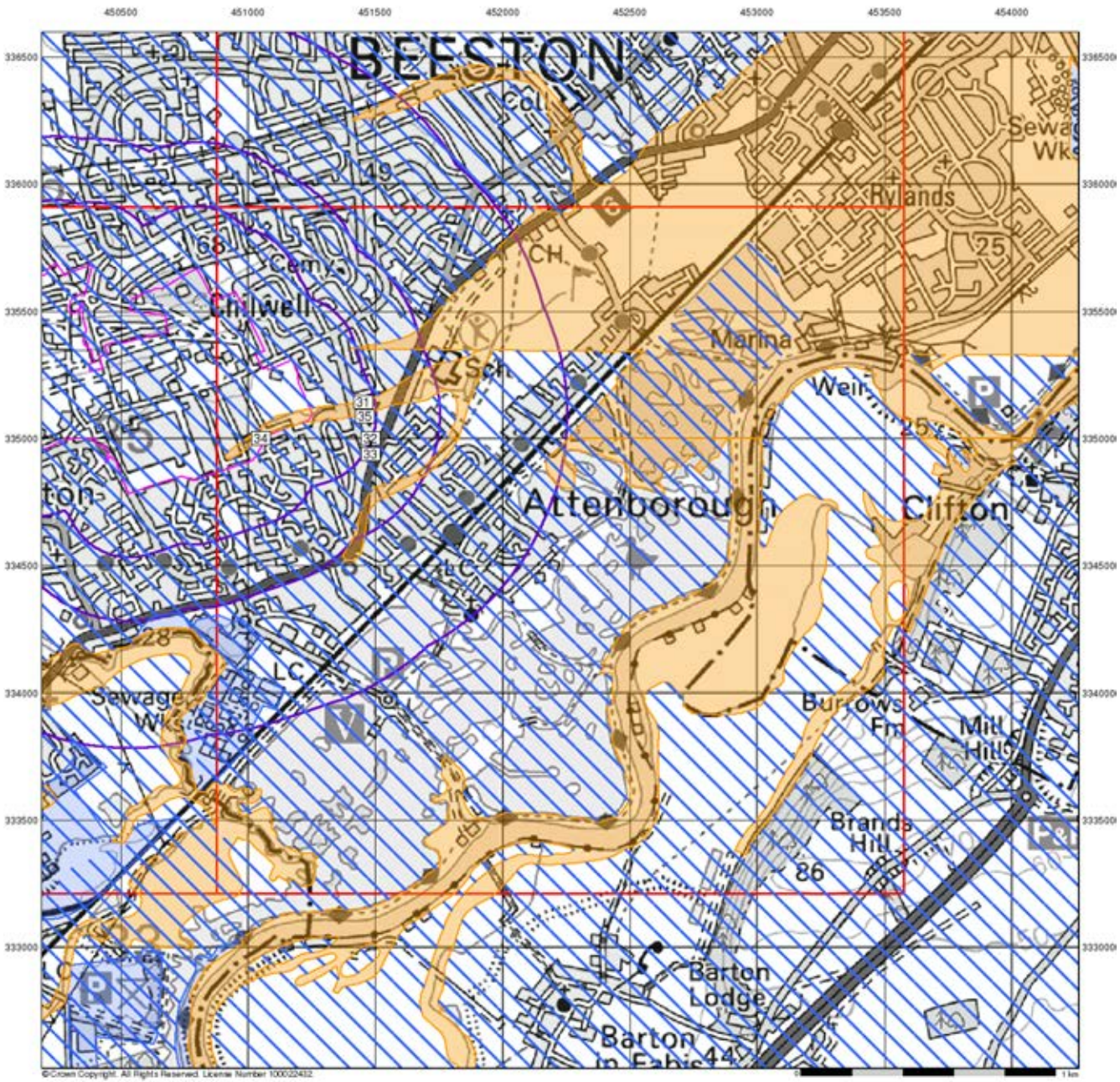
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
2	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	[redacted]
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

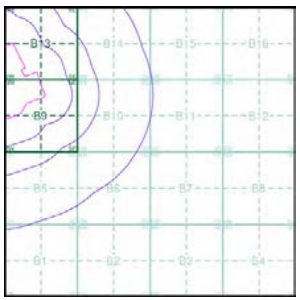
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature		
Salt Mining Related Feature		

Mining and Ground Stability - Slice B



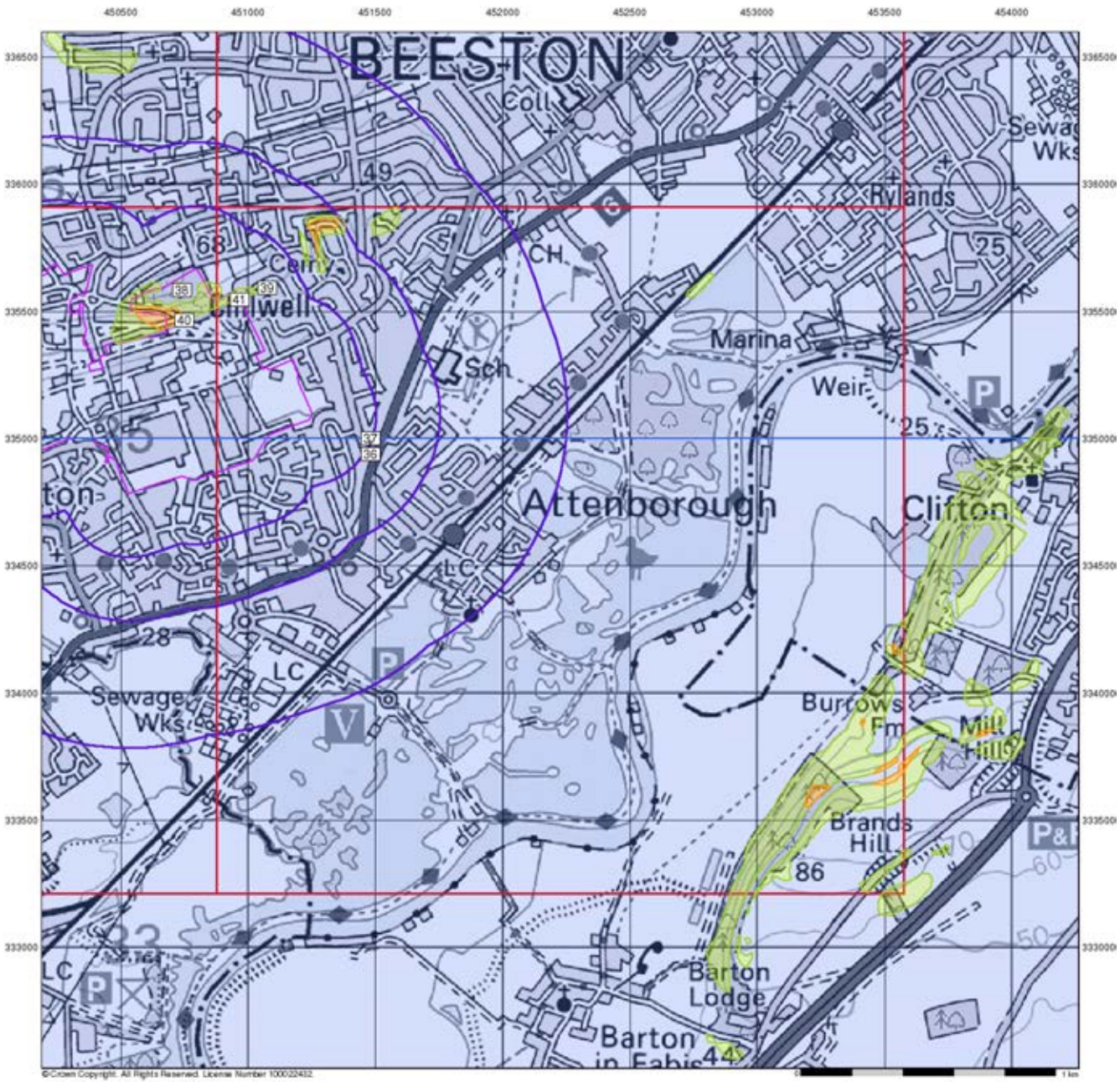
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

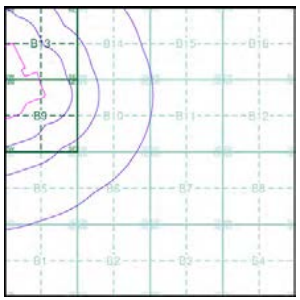
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice B



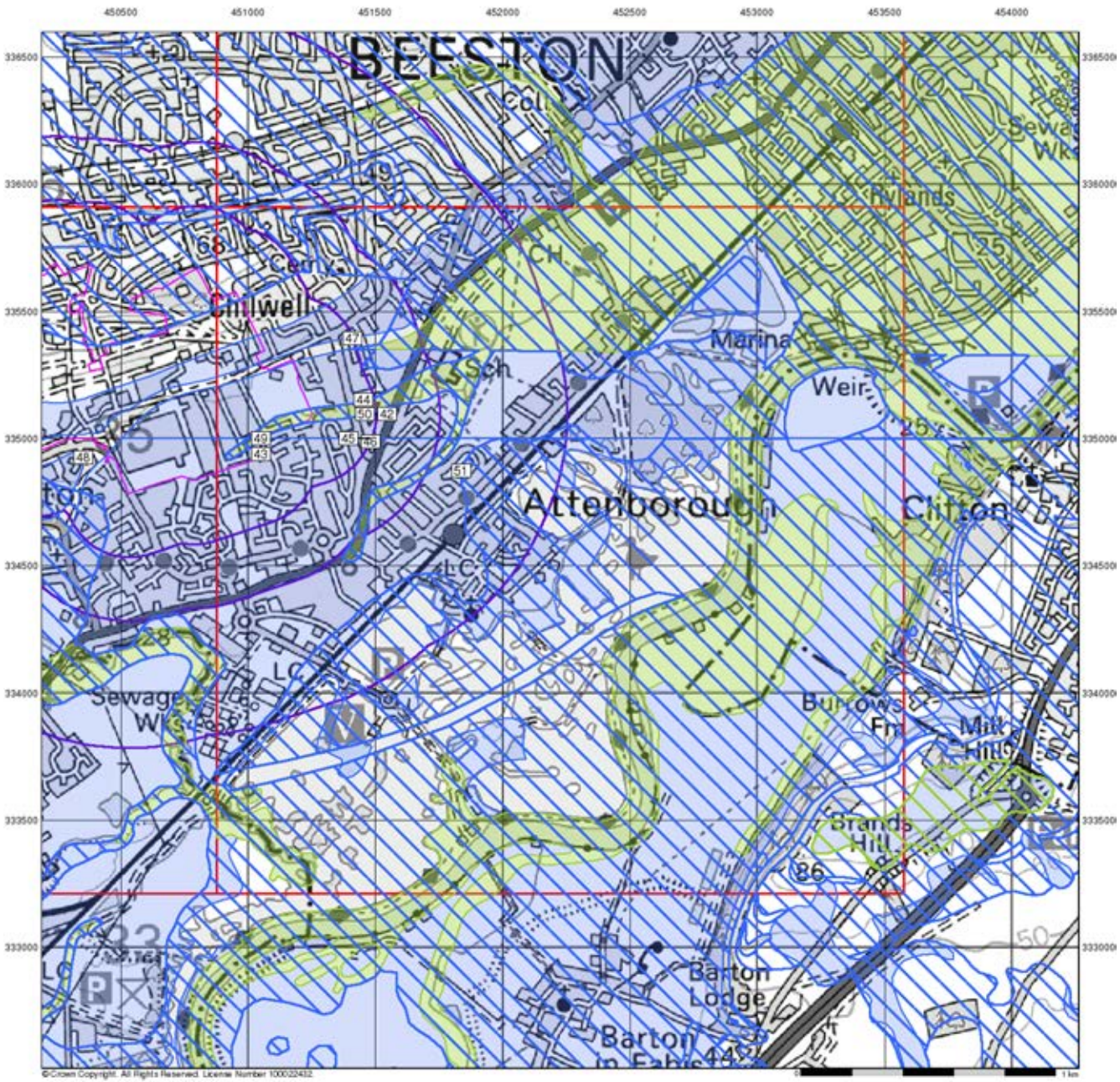
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



pba peterbrett

Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

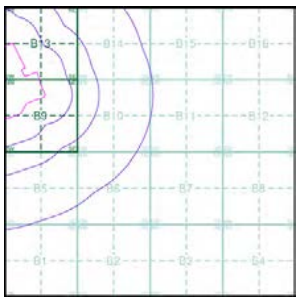
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice B



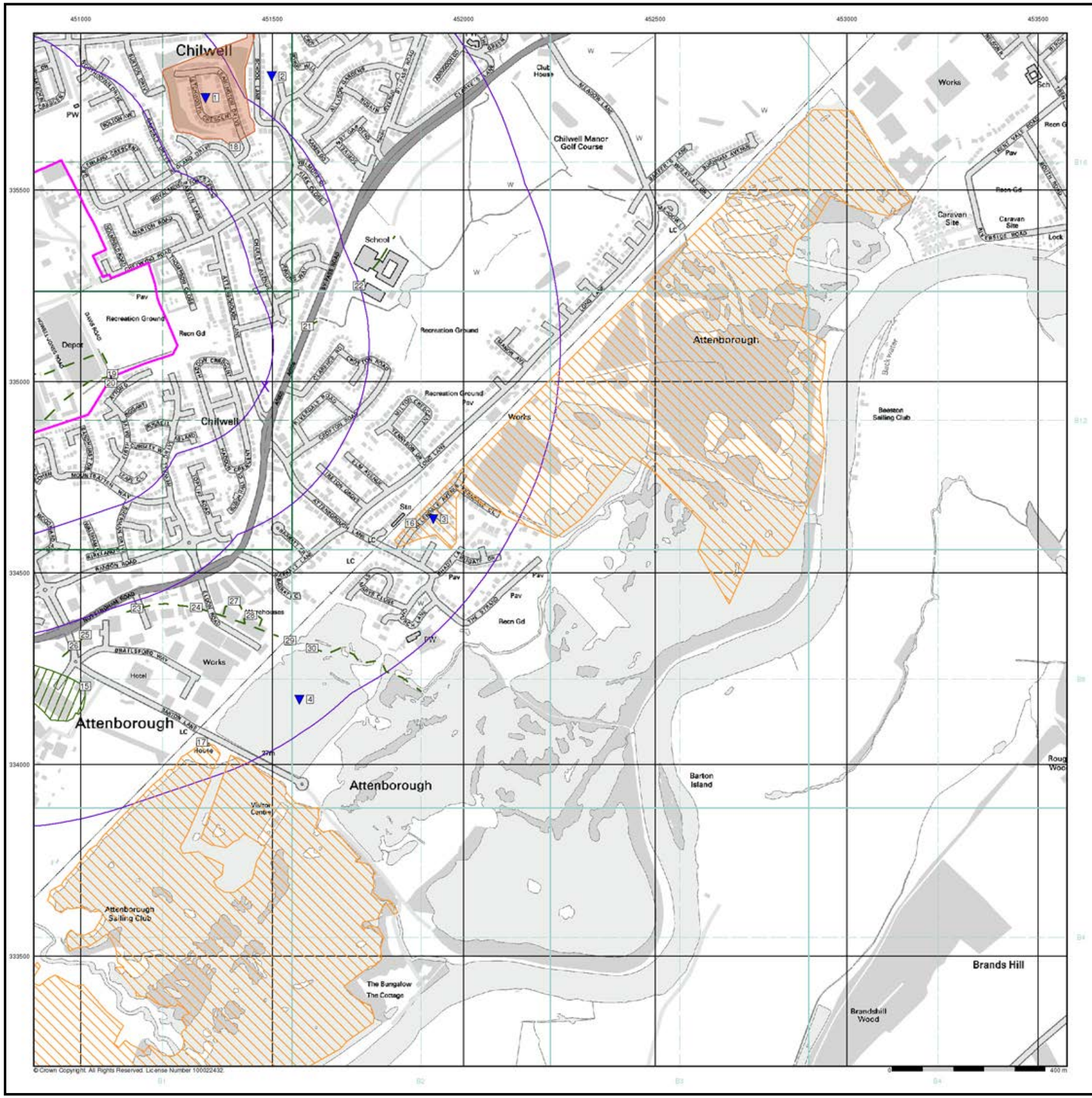
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:



pba peterbrett

Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts	◆		
Disturbed Ground	◆		
General Quarrying	◆		
Heap, unknown constituents	◆		
Mineral Railway	◆		
Mining and Quarrying General	◆		
Mining of Coal & Lignite	◆		
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits	◆		

Historical Land Use

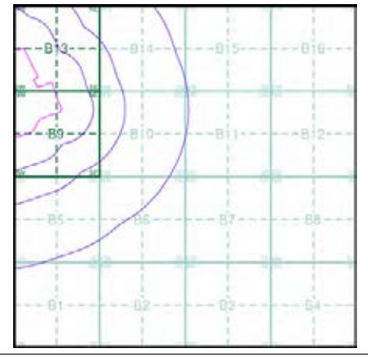
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●		
Potentially Infilled Land (Water)	●		
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice B



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel:
Fax:
Web:

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
451480, 334990

Slice:
B

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2	1	1	1	2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 4			1	
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 4			4	3
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5	Yes			
Pollution Incidents to Controlled Waters	pg 5			4	3
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
Substantiated Pollution Incident Register	pg 6				2
River Quality Chemistry Sampling Points					
Water Abstractions	pg 6			3	4 (*9)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 10	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 10	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 11	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 11		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines	pg 11	Yes		Yes	n/a
Detailed River Network Offline Drainage	pg 11	Yes			n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 12				1
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage		2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 12			1	
Potentially Infilled Land (Water)	pg 12	2		2	8
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents	pg 14				1
Planning Hazardous Substance Enforcements					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 15	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 15	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 19			1	3
BGS Urban Soil Chemistry	pg 20		Yes	Yes	Yes
BGS Urban Soil Chemistry Averages	pg 22	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability	pg 22	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 22	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 23	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 23	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 25		10	22	45
Fuel Station Entries	pg 31			2	1
Points of Interest - Commercial Services	pg 32		4	9	5
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 33			10	24
Points of Interest - Public Infrastructure	pg 36	1	3	3	6
Points of Interest - Recreational and Environmental	pg 37			2	
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 38		1		3
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 38	2			
Ramsar Sites					
Sites of Special Scientific Interest	pg 38				1
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	0	2	450950 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	2	451000 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	2	451050 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	0	2	450900 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	2	450900 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	0	2	450950 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9NE (NW)	0	2	451350 335150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	0	2	450300 335200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9NW (W)	0	2	451150 334989
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	2	450550 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	2	450650 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NW)	0	2	450750 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	2	450600 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	2	450700 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	2	450800 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	2	450850 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B13SW (NW)	0	2	450950 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	2	450300 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	2	450500 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	0	2	450600 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	0	2	451000 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	2	450500 335300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9NE (N)	0	2	451481 335000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	2	450350 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	4	2	450300 334800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	10	2	451050 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	B9NE (E)	33	2	451481 334989
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	55	2	451100 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	62	2	450400 335750
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	77	2	451100 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	100	2	451150 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13SW (NW)	121	2	451150 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SW (NW)	166	2	451200 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13NW (NW)	189	2	451200 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13SE (N)	212	2	451250 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13NE (N)	233	2	451250 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B13NE (N)	278	2	451300 335600
1	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: Undefined Or Other Location: Chilwell, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/62/01115/O Permit Version: 1 Effective Date: 26th September 1963 Issued Date: 26th September 1963 Revocation Date: 2nd April 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Trent (Non-Tidal) (Trib) **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Approximate location provided by supplier	B9NW (W)	0	3	451000 335000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Roads/Avenues/Lanes-Broxtowe Sws Attenborough Lane/Charles Avenue, High Road/ Heathfield Road/, By Pass Road, Broxtowe Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/62/00865/O Permit Version: 1 Effective Date: 22nd September 1961 Issued Date: 22nd September 1961 Revocation Date: 30th March 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Trent (Non Tidal) Trib **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	B9NE (N)	248	3	451500 335100
3	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Attenborough Lane Area - Sws, Chilwell, Nottingham Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/62/01302/O Permit Version: 1 Effective Date: 9th November 1964 Issued Date: 9th November 1964 Revocation Date: 30th March 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Trent (Non Tidal) Trib **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	B10NW (NE)	348	3	451600 335100
4	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Severn Trent Water Ltd, High Road/Heathfield Green Chilw, High Road / Heathfield Green, Chilwell Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/62/07974/O Permit Version: 1 Effective Date: 4th June 1980 Issued Date: 4th June 1980 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Trib Of River Trent **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 10m	B14SW (NE)	539	3	451700 335440
5	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: St Marys Close Area - Sws, Attenborough, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/61/01295/O Permit Version: 1 Effective Date: 29th October 1964 Issued Date: 29th October 1964 Revocation Date: 2nd April 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Trent (Non Tidal) **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	B6SW (S)	920	3	451600 334200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Integrated Pollution Prevention And Control** Name: Long Eaton Textile Services Ltd Location: Chilwell Dye Works, Bye Pass Road, Chilwell, Beeston, Nottingham, NG9 5HP Authority: Environment Agency, Midlands Region Permit Reference: Bs1970ir Original Permit Ref: Bs1970ir Effective Date: 1st March 2005 **Status: Revoked** Application Type: Application App. Sub Type: New Positional Accuracy: Automatically positioned to the address Activity Code: 6.4 A(1) (B) Activity Description: Coating, Printing And Textiles; Pre-Treating By Washing Etc. Greater Than 10T/Day Primary Activity: Y	B14SW (N)	400	3	451587 335331
7	**Local Authority Pollution Prevention and Controls** Name: Save Services Location: Nottingham Road, Attemborough, NOTTINGHAM, Nottinghamshire, NG9 6DN Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 1/98 Dated: 31st December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	B9SE (S)	388	4	451497 334781
8	**Local Authority Pollution Prevention and Controls** Name: Nationwide Crash Repairs Location: 1 Tissington Close, Chilwell Meadows Business Park, NOTTINGHAM, NG9 6QG Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 02/00 Dated: 28th November 2000 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	B10NW (NE)	396	4	451638 335181
8	**Local Authority Pollution Prevention and Controls** Name: N & K Motors Location: 205A By Pass Road, Chilwell, NOTTINGHAM, NG9 5HR Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 01/00 Dated: 1st September 2000 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	B10NW (NE)	396	4	451638 335182
9	**Local Authority Pollution Prevention and Controls** Name: Penine Dry Cleaners Location: Unit 8 West Point Shopping Centre, Ranson Road, Chilwell, Ng9 6dx Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: EP/0115/07 Dated: 1st October 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	B5NW (SW)	435	4	451086 334477
10	**Local Authority Pollution Prevention and Controls** Name: W Moore & Sons Location: 389 High Road, NOTTINGHAM, NG9 5EA Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 08/91 Dated: 24th December 1991 Process Type: Local Authority Air Pollution Control Description: PG1/1Waste oil burners, less than 0.4MW net rated thermal input **Status: Application Refused Or Cancelled** Positional Accuracy: Manually positioned to the address or location	B14SW (N)	507	4	451627 335540
11	**Local Authority Pollution Prevention and Controls** Name: Chilwell Meadows Location: Nottingham Road, Attenborough, NOTTINGHAM, Nottinghamshire, NG9 6DP Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 14/98 Dated: 13th September 1993 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	B5NE (SW)	508	4	451223 334448

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Local Authority Pollution Prevention and Controls** Name: Cemex Location: Long Lane, ATTENBOROUGH, Nottinghamshire, NG9 6BN Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 09/91 Dated: 1st July 1992 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Application Refused Or Cancelled** Positional Accuracy: Manually positioned to the address or location	B10NE (E)	892	4	452138 334986
	Nearest Surface Water Feature	B9NW (W)	0	-	451074 335023
13	**Pollution Incidents to Controlled Waters** Property Type: Road (Road Traffic Accident) Location: Queens Road, CHILWELL Authority: Environment Agency, Midlands Region Pollutant: Organic Wastes: Milk Note: Road Traffic Accident; Milk Float; Fish Killed Incident Date: 6th November 1995 Incident Reference: 1800477 Catchment Area: Trent Catchment : Trent To Confluence With Lean Receiving Water: Watercourse Cause of Incident: Collision Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B10NW (NE)	348	3	451600 335095
14	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Unknown Location: Adjacent To 207 By Pass Road, Chilwell, NOTTINGHAM Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Unknown Note: Fish Affected; Dead Fish In Watercourse At Boundry Of Plot Incident Date: 21st June 1998 Incident Reference: 2804667 Catchment Area: Trent Catchment : River Erewash Receiving Water: Watercourse Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B10NW (NE)	352	3	451600 335150
15	**Pollution Incidents to Controlled Waters** Property Type: Textile industry Location: Long Eaton Textiles, Bypass Road, CHILWELL Authority: Environment Agency, Midlands Region Pollutant: Chemicals - Paints / Dyes Note: Amenity Affected; Blue Dye In Dyke Incident Date: 5th November 1998 Incident Reference: 2805234 Catchment Area: Trent Catchment : River Erewash Receiving Water: Watercourse Cause of Incident: Leaking Underground Pipe Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B14SW (N)	399	3	451600 335295
15	**Pollution Incidents to Controlled Waters** Property Type: Textile industry Location: Chilwell Comp Lake Authority: Environment Agency, Midlands Region Pollutant: Chemicals - Paints / Dyes Note: Amenity Affected; Pink Dye In Lake Incident Date: 22nd October 1998 Incident Reference: 2805263 Catchment Area: Trent Catchment : River Erewash Receiving Water: Watercourse Cause of Incident: Leaking Underground Pipe Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B14SW (N)	401	3	451600 335300
16	**Pollution Incidents to Controlled Waters** Property Type: Engineering Location: Attenborough Nature Reserve , Church Pond Authority: Environment Agency, Midlands Region Pollutant: Oils - Gas Oil Note: SSSI Affected; Strong Smell Of Diesel Incident Date: 11th November 1998 Incident Reference: 2805309 Catchment Area: Trent Catchment : River Erewash Receiving Water: Pond/Lake Cause of Incident: Leaking Underground Pipe Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B5NE (S)	780	3	451500 334300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Pollution Incidents to Controlled Waters** Property Type: Miscellaneous Premises: Other Location: By Bridge To Strand Car Park, ATTENBOROUGH Authority: Environment Agency, Midlands Region Pollutant: Miscellaneous - Natural Note: Pipe Disch Sewage; Amenity Affected Incident Date: 3rd November 1995 Incident Reference: 1800470 Catchment Area: Trent Catchment : River Erewash Receiving Water: Watercourse Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B10SE (SE)	881	3	452050 334720
18	**Pollution Incidents to Controlled Waters** Property Type: Aggregate (Sand/Gravel) Location: Nature Reserve Pond, ATTENBOROUGH Authority: Environment Agency, Midlands Region Pollutant: Oils - Other Oil Note: SSSI Affected; Ruptured Pipe From Hydraulic Excavator - Pond Incident Date: 18th December 1996 Incident Reference: 2801738 Catchment Area: Trent Catchment : River Erewash Receiving Water: Pond/Lake Cause of Incident: Mechanical Failure Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B10NE (E)	968	3	452200 334900
19	**Substantiated Pollution Incident Register** Authority: Environment Agency - Midlands Region, Lower Trent Area Incident Date: 21st May 2004 Incident Reference: 238671 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Inorganic Chemicals : Other Pollutant: Organic Chemicals/Products: Dyes And Inks	B14SW (NE)	625	3	451859 335244
20	**Substantiated Pollution Incident Register** Authority: Environment Agency - Midlands Region, East Area Incident Date: 20th July 2011 Incident Reference: 904851 Water Impact: Category 2 - Significant Incident Air Impact: Category 4 - No Impact Land Impact: Category 4 - No Impact Positional Accuracy: Located by supplier to within 10m Pollutant: Crude Sewage	B5SE (S)	981	3	451459 334037
21	**Water Abstractions** Operator: Long Eaton Textile Services Ltd Licence Number: 03/28/62/0069 Permit Version: 102 Location: Land At Chilwell - Borehole Authority: Environment Agency, Midlands Region Abstraction: Textiles And Leather: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Long Eaton Fabrics,Chilwell - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 8th August 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B14SW (N)	375	3	451580 335280
21	**Water Abstractions** Operator: Long Eaton Textile Services Ltd Licence Number: 03/28/62/0069 Permit Version: 101 Location: Land At Chilwell - Borehole Authority: Environment Agency, Midlands Region Abstraction: Textiles And Leather: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Long Eaton Fabrics,Chilwell - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B14SW (N)	375	3	451580 335280

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
21	**Water Abstractions** Operator: Long Eaton Textiles Ltd Licence Number: 03/28/62/0069 Permit Version: 100 Location: Land At Chilwell - Borehole Authority: Environment Agency, Midlands Region Abstraction: Textiles And Leather: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Long Eaton Fabrics,Chilwell - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 19th January 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B14SW (N)	375	3	451580 335280
22	**Water Abstractions** Operator: Jackson Frameworks Limited Licence Number: Md/028/0061/003 Permit Version: 1 Location: Conneries Lake And Church Pond Authority: Environment Agency, Midlands Region Abstraction: Construction: General Use (Medium Loss) Abstraction Type: Water may be abstracted from any point within an area Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 20th May 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B5SE (S)	880	3	451338 334093
23	**Water Abstractions** Operator: Cemex Uk Materials Limited Licence Number: 03/28/62/0017 Permit Version: 102 Location: Long Lane Authority: Environment Agency, Midlands Region Abstraction: Extractive: Mineral Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Long Lane - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 22nd July 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B10NE (E)	968	3	452200 334900
23	**Water Abstractions** Operator: Rmc Aggregates (Eastern) Limited Licence Number: 03/28/62/0017 Permit Version: 101 Location: Long Lane Authority: Environment Agency, Midlands Region Abstraction: Extractive: Mineral Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Long Lane - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 11th May 2001 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B10NE (E)	968	3	452200 334900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Water Abstractions** Operator: Butterley Aggregates Ltd Licence Number: 03/28/62/0017 Permit Version: 100 Location: Long Lane Authority: Environment Agency, Midlands Region Abstraction: Extractive: Mineral Washing Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Long Lane - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 20th May 1969 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B10NE (E)	968	3	452200 334900
	Water Abstractions Operator: Jackson Frameworks Limited Licence Number: Md/028/0062/004 Permit Version: 1 Location: Tweens Pond At Attenborough Authority: Environment Agency, Midlands Region Abstraction: Construction: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 14th April 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B6NW (SE)	1026	3	451840 334240
	Water Abstractions Operator: Attenborough Village Green Assoc Licence Number: 03/28/62/0047 Permit Version: 100 Location: Attenborough - Borehole Authority: Environment Agency, Midlands Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Attenborough - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B6NE (SE)	1092	3	452100 334400
	Water Abstractions Operator: Attenborough Village Bowls Club Licence Number: 03/28/62/0076 Permit Version: 100 Location: Attenborough - Borehole Authority: Environment Agency, Midlands Region Abstraction: Sports Grounds/Facilities: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Attenborough - Borehole Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B6NE (SE)	1108	3	452200 334520

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Chilwell Manor Golf Club Licence Number: 03/28/62/0039 Permit Version: 100 Location: Chilwell Manor Golf Course - Well (A) Authority: Environment Agency, Midlands Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Chilwell Manor Golf Course - 2 Wells Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B15SW (NE)	1124	3	452300 335500
	Water Abstractions Operator: Jackson Frameworks Limited Licence Number: Md/028/0061/003 Permit Version: 1 Location: Beeston Pond Authority: Environment Agency, Midlands Region Abstraction: Construction: General Use (Medium Loss) Abstraction Type: Water may be abstracted from any point within an area Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 20th May 2010 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B15SW (E)	1262	3	452503 335263
	Water Abstractions Operator: Chilwell Manor Golf Club Licence Number: 03/28/62/0039 Permit Version: 100 Location: Chilwell Manor Golf Course - Well (B) Authority: Environment Agency, Midlands Region Abstraction: Golf Courses: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Chilwell Manor Golf Course - 2 Wells Authorised Start: 01 April Authorised End: 30 September Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B15NW (NE)	1347	3	452500 335600
	Water Abstractions Operator: Messrs Codd & Son Licence Number: 03/28/62/0079/1 Permit Version: 100 Location: Land At Clifton,Notts - River Trent (Reach A-B) Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Clifton,Notts - River Trent Authorised Start: 01 March Authorised End: 30 September Permit Start Date: 13th August 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B12SW (E)	1802	3	453010 334700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Codd & Son Licence Number: 03/28/62/0079 Permit Version: 100 Location: Land At Clifton,Notts - River Trent (Reach A-B) Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Clifton,Notts - River Trent Authorised Start: 01 March Authorised End: 30 September Permit Start Date: 26th January 1998 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	B12SW (E)	1802	3	453010 334700
	Water Abstractions Operator: Mr Sc Plowright Licence Number: 03/28/60/0005 Permit Version: 102 Location: Land At Barton In Fabis And Thrumpton - River Trent Authority: Environment Agency, Midlands Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a river or stream reach, or a row of wellpoints Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Barton In Fabis & Thrumpton - River Trent Authorised Start: 01 March Authorised End: 31 October Permit Start Date: 30th July 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1924	3	451690 333110
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	B9NE (E)	0	3	451481 334989
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	B13NE (N)	0	3	451364 335670
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9NW (W)	0	2	451194 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9NE (NW)	0	2	451319 335136
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	B9NE (N)	0	2	451481 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	B9NW (W)	0	2	450996 335000
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	B9NE (NW)	0	2	451252 335219
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(W)	0	2	450353 334925
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9NE (E)	0	2	451481 334989
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	B9NE (N)	0	2	451481 335000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B9SW (W)	0	3	451114 334879
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B9NE (E)	175	3	451483 334989
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	B9NE (N)	191	3	451484 335014
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
24	**Detailed River Network Lines** River Type: Extended Culvert (greater than 50m) River Name: Not Supplied Hydrographic Area: B04 River Flow Type: Primary Flow Path River Surface Level: Below Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9NE (N)	0	3	451450 335125
25	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: B04 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B9NE (W)	0	3	451237 335077
26	**Detailed River Network Lines** River Type: Secondary River River Name: Not Supplied Hydrographic Area: B04 River Flow Type: Primary Flow Path River Surface Level: Surface Drain Feature: Not a Drain Flood Risk Management Status: Other Rivers Water Course Name: Not Supplied Water Course Reference: Not Supplied	B10NW (NE)	366	3	451612 335161
27	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	B13SW (NW)	0	3	451047 335256
28	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	B13SW (NW)	0	3	451030 335249

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	**Historical Landfill Sites** Licence Holder: Ministry of Defence Location: Barton Lane, Chilwell, Nottingham, Nottinghamshire Name: MOD Barton Lane, Chilwell Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD22282 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Special Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 3000/0174 BGS Ref: Not Supplied Other Ref: 5/U/23/53SW	B5NW (SW)	564	3	450971 334230
	Local Authority Landfill Coverage Name: Broxtowe Borough Council - Has no landfill data to supply		0	4	451481 334989
	Local Authority Landfill Coverage Name: Nottinghamshire County Council - Has no landfill data to supply		0	5	451481 334989
	Local Authority Landfill Coverage Name: Erewash Borough Council - Has supplied landfill data		575	6	450810 334206
	Local Authority Landfill Coverage Name: Derbyshire County Council - Had landfill data but passed it to the relevant environment agency		576	7	450800 334213
30	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1984	B13NE (N)	302	-	451402 335614
31	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	B9NW (W)	0	-	451083 335020
32	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	B9NW (W)	0	-	451079 335015
33	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	B10NW (NE)	343	-	451591 335145
34	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B14SW (NE)	499	-	451727 335250
35	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NW (SW)	520	-	451145 334408
36	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NE (S)	522	-	451301 334411
37	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NW (SW)	543	-	451012 334339
38	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NW (SW)	561	-	450983 334310
39	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NE (S)	616	-	451400 334426
40	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1939	B5NE (S)	674	-	451443 334390
41	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B5NE (S)	790	-	451546 334324

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
42	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	B6NW (S)	844	-	451603 334303

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Planning Hazardous Substance Consents** Name: C & J Transport Ltd Location: Nottingham Road, Attenborough, NOTTINGHAM, Nottinghamshire, NG9 6DP Authority: Broxtowe Borough Council Application Ref: 92/6000/Haz Hazardous Substance: Part C, Flammable Substance (Not in Parts A&B), Gas or gases flammable in air, when held as a gas, where amount held is >= 15tonnes Maximum Quantity: 0 Application date: 14th October 1992 **Decision: Application revoked or cancelledCancelled** Positional Accuracy: Automatically positioned to the address	B5NE (S)	571	8	451382 334472

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	B9NE (NW)	0	2	451353 335081
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	B9NE (E)	0	2	451481 334989
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	B9NW (W)	0	2	451000 334962
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	B13SE (NW)	0	2	451228 335480
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B9NE (N)	0	2	451550 335189
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B9NE (W)	0	2	451254 335065
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B9NE (NW)	0	2	451319 335136

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B13SE (N)	0	2	451363 335343
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NW (W)	0	2	451000 335003
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NE (NW)	0	2	451252 335219
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B13SE (N)	0	2	451408 335395
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NE (E)	15	2	451481 334989
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NE (N)	16	2	451457 335095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9NE (N)	68	2	451451 335144
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	B13SE (N)	188	2	451404 335352
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B13SE (N)	340	2	451513 335371
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B13SE (N)	385	2	451545 335419
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B10SW (SE)	419	2	451575 334786
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	(SW)	495	2	450749 334297

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B10SW (E)	683	2	451881 334827
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B10NE (E)	750	2	452000 334989
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B6NW (SE)	776	2	451769 334497
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B14SE (NE)	789	2	452000 335346
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	B10SE (SE)	810	2	451906 334612
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B14SE (NE)	843	2	452000 335500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B10SE (SE)	889	2	452000 334612
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B10NE (E)	914	2	452150 334923
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B6NW (SE)	927	2	451781 334308
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B14NE (NE)	944	2	452000 335769
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	B6NE (SE)	991	2	452000 334436
44	**BGS Recorded Mineral Sites** Site Name: Chilwell Brickworks Location: , Chilwell, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 12052 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	B13NE (N)	411	2	451325 335745

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
45	**BGS Recorded Mineral Sites** Site Name: Chilwell Brick Yard Location: , Chilwell, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 120416 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Triassic Geology: Mercia Mudstone Group Commodity: Common Clay and Shale Positional Accuracy: Located by supplier to within 10m	B13NE (N)	589	2	451498 335802
46	**BGS Recorded Mineral Sites** Site Name: Attenborough Quarry Location: , Attenborough, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 222232 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Pleistocene Geology: Holme Pierrepont Sand And Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B10SE (SE)	803	2	451920 334645
47	**BGS Recorded Mineral Sites** Site Name: Attenborough Quarry Location: , Attenborough, Nottingham, Nottinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 120422 Type: Opencast **Status: Ceased** Operator: Not Supplied Operator Location: Not Supplied Periodic Type: Pleistocene Geology: Holme Pierrepont Sand And Gravel Member Commodity: Sand and Gravel Positional Accuracy: Located by supplier to within 10m	B6SW (S)	922	2	451570 334174
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451220, 335230 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 9.70 mg/kg Cadmium Measured Concentration: 0.40 mg/kg Chromium Measured Concentration: 43.70 mg/kg Lead Measured Concentration: 78.80 mg/kg Nickel Measured Concentration: 19.20 mg/kg	B9NE (NW)	22	2	451220 335230
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451265, 335755 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 13.40 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 67.50 mg/kg Lead Measured Concentration: 62.10 mg/kg Nickel Measured Concentration: 47.20 mg/kg	B13NE (N)	362	2	451265 335755

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451357, 334709 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 8.30 mg/kg Cadmium Measured Concentration: 0.80 mg/kg Chromium Measured Concentration: 46.80 mg/kg Lead Measured Concentration: 48.50 mg/kg Nickel Measured Concentration: 17.10 mg/kg	B9SE (SW)	381	2	451357 334709
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451749, 335248 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 12.80 mg/kg Cadmium Measured Concentration: 1.00 mg/kg Chromium Measured Concentration: 68.20 mg/kg Lead Measured Concentration: 78.60 mg/kg Nickel Measured Concentration: 38.20 mg/kg	B14SW (NE)	520	2	451749 335248
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451787, 334734 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 13.50 mg/kg Cadmium Measured Concentration: 0.80 mg/kg Chromium Measured Concentration: 57.10 mg/kg Lead Measured Concentration: 133.00 mg/kg Nickel Measured Concentration: 35.80 mg/kg	B10SW (SE)	643	2	451787 334734
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451248, 334247 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 16.40 mg/kg Cadmium Measured Concentration: 0.40 mg/kg Chromium Measured Concentration: 70.50 mg/kg Lead Measured Concentration: 63.80 mg/kg Nickel Measured Concentration: 80.60 mg/kg	B5NE (S)	705	2	451248 334247
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451750, 335745 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 11.30 mg/kg Cadmium Measured Concentration: 2.30 mg/kg Chromium Measured Concentration: 60.20 mg/kg Lead Measured Concentration: 131.90 mg/kg Nickel Measured Concentration: 24.50 mg/kg	B14NW (N)	721	2	451750 335745

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451735, 334240 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 11.50 mg/kg Cadmium Measured Concentration: 0.40 mg/kg Chromium Measured Concentration: 60.70 mg/kg Lead Measured Concentration: 46.30 mg/kg Nickel Measured Concentration: 39.80 mg/kg	B6NW (S)	968	2	451735 334240
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Nottingham Count Id: 635 Arsenic Minimum Concentration: 4.00 mg/kg Arsenic Average Concentration: 13.00 mg/kg Arsenic Maximum Concentration: 86.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 0.80 mg/kg Cadmium Maximum Concentration: 14.20 mg/kg Chromium Minimum Concentration: 22.00 mg/kg Chromium Average Concentration: 61.00 mg/kg Chromium Maximum Concentration: 182.00 mg/kg Lead Minimum Concentration: 13.00 mg/kg Lead Average Concentration: 155.00 mg/kg Lead Maximum Concentration: 1810.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 30.00 mg/kg Nickel Maximum Concentration: 158.00 mg/kg	B9NE (E)	0	2	451481 334989
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	B9NE (E)	0	-	451481 334989
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451451 335144
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335000
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451457 335095
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	2	451050 335000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	2	451050 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451457 335095
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451451 335144
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335000
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335000
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B13NW (NW)	0	2	451073 335592
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	B13SW (NW)	0	2	450966 335546
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451457 335095
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	2	451050 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451451 335144
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335000
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (NW)	0	2	451228 335480
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	2	451404 335352
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B13SE (N)	0	2	451408 335395
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (W)	0	2	451050 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451457 335095

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451451 335144
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335000
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B10SW (E)	4	2	451838 334873
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335001
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9NE (N)	0	2	451481 335001
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9NE (E)	0	2	451481 334989

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
48	**Contemporary Trade Directory Entries** Name: N K Motors Ltd Location: 42, Attenborough Lane, Beeston, Nottingham, NG9 5JW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9NE (NW)	141	-	451374 335168
49	**Contemporary Trade Directory Entries** Name: Automatic Transmission Services Location: Chetwynd Road, Beeston, Nottingham, NG9 5GE Classification: Gearboxes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (NW)	143	-	451316 335342
49	**Contemporary Trade Directory Entries** Name: N K Accident & Repair Centre Location: 10, Attenborough Lane, Beeston, Nottingham, NG9 5JW Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (NW)	143	-	451317 335337
49	**Contemporary Trade Directory Entries** Name: Chillwell M O T Centre Location: Chilwell Mot and Service Centre, Chetwynd Road, Chilwell, NG9 5GE Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SE (NW)	149	-	451319 335349
49	**Contemporary Trade Directory Entries** Name: Chillwell M O T Centre Location: Chetwynd Road, Beeston, Nottingham, Nottinghamshire, NG9 5GE Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (NW)	149	-	451319 335349
49	**Contemporary Trade Directory Entries** Name: J D Motor Company Location: 8, Attenborough Lane, Beeston, Nottingham, NG9 5JW Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SE (N)	168	-	451339 335350
50	**Contemporary Trade Directory Entries** Name: Pro Con Supplies Location: 61, Greenland Crescent, Beeston, NOTTINGHAM, NG9 5LD Classification: Spring Manufacturers & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NW (NW)	159	-	451105 335622
51	**Contemporary Trade Directory Entries** Name: Chilwell Car Centre Location: Attenborough La, Beeston, Nottingham, Nottinghamshire, NG9 5JW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B13SE (N)	181	-	451383 335247
52	**Contemporary Trade Directory Entries** Name: Sparkles (East Midlands) Ltd Location: 71, Greenland Crescent, Beeston, Nottingham, NG9 5LD Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13NW (NW)	204	-	451157 335620
53	**Contemporary Trade Directory Entries** Name: Kennelgate Pet Food Superstore Location: 404, High Road, Beeston, Nottingham, NG9 5EG Classification: Pet Foods & Animal Feeds **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B13SE (N)	207	-	451354 335415
54	**Contemporary Trade Directory Entries** Name: Double O Engineering Ltd Location: 41a, Charles Avenue, Beeston, Nottingham, NG9 5ED Classification: Railway Equipment Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	B13SE (N)	262	-	451460 335273
55	**Contemporary Trade Directory Entries** Name: Core Print Solutions Location: Oakdale Dr, Chilwell/Beeston, Nottingham, Nottinghamshire, NG9 5LF Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	B13NE (N)	263	-	451214 335638

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	**Contemporary Trade Directory Entries** Name: Ampel Location: 30, Newall Drive, Beeston, Nottingham, NG9 6NX Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (SW)	291	-	451254 334741
57	**Contemporary Trade Directory Entries** Name: Nottingham Vacuum Cleaner Services Location: 137, Attenborough Lane, Beeston, Nottingham, NG9 6AA Classification: Vacuum Cleaners - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (S)	350	-	451512 334852
57	**Contemporary Trade Directory Entries** Name: Damage Inc Ltd Location: Unit 11,149 Attenborough La, Attenborough/Beeston, Nottingham, Nottinghamshire, NG9 6AA Classification: Motor Cycle Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B9SE (S)	364	-	451526 334847
57	**Contemporary Trade Directory Entries** Name: Exec Spec Ltd Location: 1, Nottingham Road, Beeston, Nottingham, Nottinghamshire, NG9 6DN Classification: Window Tinting **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (S)	368	-	451499 334811
57	**Contemporary Trade Directory Entries** Name: Porterprint Location: 153, Attenborough Lane, Beeston, Nottingham, NG9 6AA Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (S)	379	-	451537 334837
57	**Contemporary Trade Directory Entries** Name: The Print Shop Location: 153, Attenborough Lane, Beeston, NOTTINGHAM, NG9 6AA Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (S)	379	-	451537 334837
58	**Contemporary Trade Directory Entries** Name: Car Doctors Location: 200-204, Bye Pass Road, Beeston, Nottingham, NG9 5HL Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B10NW (NE)	373	-	451601 335226
59	**Contemporary Trade Directory Entries** Name: Plastic Card Printing Location: Robinson ct, Chilwell/Beeston, Nottingham, Nottinghamshire, NG9 6RF Classification: Printers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	B5NW (SW)	374	-	450929 334489
60	**Contemporary Trade Directory Entries** Name: Long Eaton Textiles Services Ltd Location: Bye Pass Road, Beeston, Nottingham, NG9 5HP Classification: Dyers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B14SW (N)	400	-	451587 335331
60	**Contemporary Trade Directory Entries** Name: 13 Amp Ltd Location: Bye Pass Road, Beeston, Nottingham, NG9 5HP Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B14SW (N)	400	-	451587 335331
61	**Contemporary Trade Directory Entries** Name: Autocare Location: 122, Attenborough Lane, Beeston, Nottingham, NG9 5HZ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B9SE (S)	400	-	451502 334770

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**Contemporary Trade Directory Entries** Name: Attenborough Autos Location: 122, Attenborough Lane, Attenborough, Nottingham, NG9 6AB Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	B9SE (S)	419	-	451526 334766
62	**Contemporary Trade Directory Entries** Name: Kennelgate Pet Food Superstore Location: Unit 6-7, West Point Shopping Centre, Ranson Road, Beeston, Nottingham, NG9 6DX Classification: Pet Foods & Animal Feeds **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NW (SW)	431	-	451084 334481
62	**Contemporary Trade Directory Entries** Name: Pennine Dry Cleaners Location: Unit 8 West Point Shopping Centre,Swiney Way, Beeston, Nottingham, Nottinghamshire, NG9 6GX Classification: Dry Cleaners **Status: Active** Positional Accuracy: Manually positioned to the address or location	B5NW (SW)	435	-	451086 334477
63	**Contemporary Trade Directory Entries** Name: Gerard Tool & Die Ltd Location: Ranson Road, Beeston, NOTTINGHAM, NG9 6DX Classification: Tool Design, Manufacturers & Makers **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NW (SW)	438	-	451150 334495
64	**Contemporary Trade Directory Entries** Name: Evans Halshaw Vauxhall Location: Nottingham Road, Beeston, Nottingham, NG9 6DQ Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	462	-	451262 334520
64	**Contemporary Trade Directory Entries** Name: Evans Howlshaw Location: Nottingham Road, Beeston, Nottingham, Nottinghamshire, NG9 6DQ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	481	-	451263 334499
64	**Contemporary Trade Directory Entries** Name: Master Fit Location: Nottingham Road, Beeston, Nottingham, NG9 6DQ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	481	-	451263 334499
65	**Contemporary Trade Directory Entries** Name: J A G-Design Location: 383a, High Road, Beeston, Nottingham, NG9 5EA Classification: Furniture - Repairing & Restoring **Status: Active** Positional Accuracy: Automatically positioned to the address	B14NW (N)	488	-	451571 335596
66	**Contemporary Trade Directory Entries** Name: N K Motor Group Location: Nottingham Rd, Beeston, Nottingham, Nottinghamshire, NG9 6DR Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B9SE (S)	490	-	451442 334625
67	**Contemporary Trade Directory Entries** Name: Pro Air Solutions Location: 16, School Lane, Beeston, Nottingham, NG9 5EH Classification: Pneumatic Systems & Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NE (N)	504	-	451473 335716
68	**Contemporary Trade Directory Entries** Name: Metco Walkabouts Location: 17, Ireton Grove, Beeston, Nottingham, NG9 6BJ Classification: Disability Equipment - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10SW (SE)	505	-	451631 334752

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
69	**Contemporary Trade Directory Entries** Name: Nk Motors Location: The Garage, 389, High Road, Beeston, Nottingham, NG9 5EA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B14SW (N)	507	-	451627 335540
69	**Contemporary Trade Directory Entries** Name: Nk Motors Location: The Garage, 389, High Road, Beeston, Nottingham, NG9 5EA Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B14SW (N)	507	-	451627 335540
70	**Contemporary Trade Directory Entries** Name: Trows Cars Ltd Location: Nottingham Road, Beeston, NOTTINGHAM, NG9 6DP Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NW (SW)	509	-	451175 334429
71	**Contemporary Trade Directory Entries** Name: Porcelanosa Location: Nottingham Road, Beeston, NOTTINGHAM, NG9 6DP Classification: Bathroom Fixtures - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NW (SW)	531	-	450998 334346
72	**Contemporary Trade Directory Entries** Name: Stadium Electrical Components Ltd Location: Nottingham Rd, Beeston, Nottingham, NG9 6DP Classification: Electronic Component Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B5NE (S)	532	-	451411 334554
73	**Contemporary Trade Directory Entries** Name: Repairmydyson.Com Location: 35, School Lane, Beeston, NOTTINGHAM, NG9 5EH Classification: Washing Machines - Servicing & Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	B13NE (N)	533	-	451442 335786
74	**Contemporary Trade Directory Entries** Name: Pressing Solutions Total Engineering Services Location: Units 25 & 26 Eldon Rd,Attenborough, Beeston, Nottingham, NG9 6DZ Classification: Engineers - General **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B5NE (S)	545	-	451292 334442
75	**Contemporary Trade Directory Entries** Name: Davis Vehicle Services Location: Davis Vehicle Services, Nottingham Road, Attenborough, NG9 6DP Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	549	-	451226 334405
75	**Contemporary Trade Directory Entries** Name: Stonehouse Tablet Location: Nottingham Road, Beeston, Nottingham, NG9 6DT Classification: Industrial Services **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NW (SW)	554	-	451185 334385
75	**Contemporary Trade Directory Entries** Name: Connect For Location: Technology House, Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Photocopiers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	555	-	451214 334394
75	**Contemporary Trade Directory Entries** Name: Connect For Ltd Location: Technology House, Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Photocopiers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	555	-	451214 334394
75	**Contemporary Trade Directory Entries** Name: T S Autos Location: Unit 1-2, The Hangar, Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	558	-	451227 334396

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	**Contemporary Trade Directory Entries** Name: G P Commercials Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Commercial Vehicle Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	558	-	451227 334396
75	**Contemporary Trade Directory Entries** Name: D & T Services Location: Unit 1, The Hangar, Nottingham Road, Beeston, Nottingham, Nottinghamshire, NG9 6DP Classification: Commercial Vehicle Bodybuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	558	-	451227 334396
75	**Contemporary Trade Directory Entries** Name: D & T Services Location: Unit 1-2, The Hangar, Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (SW)	565	-	451230 334389
75	**Contemporary Trade Directory Entries** Name: Support Systems (Nottingham) Ltd Location: Technology House, Nottingham Road, Beeston, Nottingham, Nottinghamshire, NG9 6DP Classification: Metal Products - Fabricated **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	601	-	451242 334356
76	**Contemporary Trade Directory Entries** Name: Floors 4 U Location: Unit 1, Eldon Road, Attenborough Beeston, Nottingham, Nottinghamshire, NG9 6DZ Classification: Floorcoverings - Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	B5NE (S)	552	-	451347 334469
76	**Contemporary Trade Directory Entries** Name: Sluk Location: Unit 2/3, Eldon Road, Beeston, Nottingham, Nottinghamshire, NG9 6RB Classification: Fork Lift Trucks **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	590	-	451361 334433
77	**Contemporary Trade Directory Entries** Name: Highway Garage Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Mot Testing Centres **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	568	-	451377 334472
77	**Contemporary Trade Directory Entries** Name: Total Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	568	-	451377 334472
77	**Contemporary Trade Directory Entries** Name: Berridge Painting Systems Ltd Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Paint Spraying Equipment & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	585	-	451419 334487
77	**Contemporary Trade Directory Entries** Name: Berridge Painting Systems Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Classification: Paint Spraying Equipment & Accessories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	585	-	451419 334487
77	**Contemporary Trade Directory Entries** Name: Sheetfabs Nottingham Ltd Location: Nottingham Road, Beeston, Nottingham, NG9 6DR Classification: Metal Products - Fabricated **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	585	-	451419 334486

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	**Contemporary Trade Directory Entries** Name: N K Motors Location: 71-73, Nottingham Road, Beeston, Nottingham, NG9 6DR Classification: Car Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	596	-	451395 334451
77	**Contemporary Trade Directory Entries** Name: N K Motors Group Location: 71-73, Nottingham Road, Beeston, Nottingham, NG9 6DN Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	596	-	451395 334451
77	**Contemporary Trade Directory Entries** Name: Berridge Painting Systems Ltd Location: Nottingham Road, Beeston, Nottingham, Nottinghamshire, NG9 6DR Classification: Paint Spraying Equipment & Accessories **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	B5NE (S)	607	-	451402 334442
78	**Contemporary Trade Directory Entries** Name: Nexus Print Management Location: Lake View,Brailsford Way, Chilwell Meadows Business Pk/B, Nottingham, NG9 6DH Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B5NW (SW)	621	-	451126 334295
79	**Contemporary Trade Directory Entries** Name: Chilwell Toolmakers Location: Unit 4, Eldon Road, Attenborough, Beeston, Nottingham, Nottinghamshire, NG9 6DZ Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	622	-	451379 334406
79	**Contemporary Trade Directory Entries** Name: Colsalake Ltd Location: Unit 6, Eldon Road, Beeston, Nottingham, NG9 6DZ Classification: Gear Cutters **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	654	-	451401 334382
80	**Contemporary Trade Directory Entries** Name: Lockgate Stoves Location: Barratt La,Attenborough, Beeston, Nottingham, Nottinghamshire, NG9 6AF Classification: Marine Equipment & Supplies **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B6NW (S)	638	-	451576 334530
81	**Contemporary Trade Directory Entries** Name: Smiths Metal Centres Location: Unit 17, Eldon Road, Beeston, Nottingham, NG9 6DZ Classification: Non-Ferrous Metals **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	650	-	451334 334345
82	**Contemporary Trade Directory Entries** Name: Aa Service Centre Location: Unit 7a, Chilwell Retail Park, Beeston, Nottingham, NG9 6DS Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5SW (SW)	674	-	451007 334198
83	**Contemporary Trade Directory Entries** Name: Stag Blue Macks Ltd Location: Brailsford Way, Chilwell Meadows Business Pk/B, Nottingham, Nottinghamshire, NG9 6DH Classification: Leisure & Sportswear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B5NE (S)	685	-	451236 334264
84	**Contemporary Trade Directory Entries** Name: Lasershape Location: Brailsford Way, Beeston, Nottingham, NG9 6DH Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	B5NE (S)	703	-	451307 334272

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
84	**Contemporary Trade Directory Entries** Name: Dolphin International Freight Services Ltd Location: Brailsford Way, Beeston, Nottingham, NG9 6QQ Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	703	-	451307 334272
84	**Contemporary Trade Directory Entries** Name: Premier Print Location: Lake View, Brailsford Way, Beeston, Nottingham, NG9 6DH Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B5NE (S)	725	-	451347 334267
85	**Contemporary Trade Directory Entries** Name: Mobile Medic Location: 275 High Rd, Chilwell/Beeston, Nottingham, Nottinghamshire, NG9 5DN Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B14NW (N)	785	-	451712 335882
86	**Contemporary Trade Directory Entries** Name: Nationwide Crash Repair Centres Ltd Location: 1, Tissington Close, Beeston, Nottingham, NG9 6QG Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	B5SE (S)	791	-	451316 334181
87	**Contemporary Trade Directory Entries** Name: Cemex (Uk) Ltd Location: Long La, Attenborough/Beeston, Nottingham, Nottinghamshire, NG9 6BL Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	B10NE (E)	850	-	452092 334965
87	**Contemporary Trade Directory Entries** Name: Cemex Attenborough Quarry & Plant Location: Long Lane, Beeston, Nottingham, Nottinghamshire, NG9 6BL Classification: Sand, Gravel & Other Aggregates **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	B10NE (E)	876	-	452119 334966
87	**Contemporary Trade Directory Entries** Name: R M C Readymix (East Midlands) Location: Long Lane, Beeston, Nottingham, Nottinghamshire, NG9 6BL Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NE (E)	876	-	452119 334966
87	**Contemporary Trade Directory Entries** Name: Cemex Location: Long Lane, Beeston, Nottingham, Nottinghamshire, NG9 6BL Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B10NE (E)	876	-	452119 334966
88	**Contemporary Trade Directory Entries** Name: Tracy Wint Location: 9, The Strand, Beeston, Nottingham, NG9 6AU Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	B6NE (SE)	987	-	451975 334413
89	**Fuel Station Entries** Name: N K Motors Location: 205a By Pass Road, Chilwell, NOTTINGHAM, Nottinghamshire, NG9 5HR Brand: Shell Premises Type: Petrol Station **Status: Closed** Positional Accuracy: Manually positioned to the address or location	B10NW (NE)	396	-	451638 335182
90	**Fuel Station Entries** Name: Attenborough Service Station Location: 5-11, Nottingham Road, Beeston, Nottingham, NG9 6DN Brand: Gulf Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	B9SE (S)	398	-	451501 334771

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	**Fuel Station Entries** Name: Chilwell Meadows Service Station Location: Nottingham Road, Chilwell, NOTTINGHAM, Nottinghamshire, NG9 6DP Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	B5NE (S)	568	-	451377 334472
92	**Points of Interest - Commercial Services** Name: Chilwell M O T Centre Location: Chetwynd Road, Beeston, Nottingham, NG9 5GE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (NW)	143	9	451315 335342
92	**Points of Interest - Commercial Services** Name: N K Accident & Repair Centre Location: 10 Attenborough Lane, Beeston, Nottingham, NG9 5JW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (NW)	143	9	451317 335337
92	**Points of Interest - Commercial Services** Name: N K Accident & Repair Centre Location: 10 Attenborough Lane, Beeston, Nottingham, NG9 5JW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (NW)	143	9	451317 335337
92	**Points of Interest - Commercial Services** Name: Chillwell M O T Centre Location: Chetwynd Road, Beeston, Nottingham, NG9 5GE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B13SE (NW)	149	9	451319 335349
93	**Points of Interest - Commercial Services** Name: Damage Inc Location: 149 Attenborough Lane, Beeston, Nottingham, NG9 6AA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9SE (S)	359	9	451514 334841
93	**Points of Interest - Commercial Services** Name: Attenborough Service Station Location: 5-11, Nottingham Road, Beeston, Nottingham, NG9 6DN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SE (S)	398	9	451501 334771
93	**Points of Interest - Commercial Services** Name: Car Wash Location: 5-11 Nottingham Road, Beeston, Nottingham, NG9 6DN Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	B9SE (S)	398	9	451501 334771
93	**Points of Interest - Commercial Services** Name: Autocare Beeston Ltd Location: 122 Attenborough Lane, Beeston, Nottingham, NG9 5HZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B9SE (S)	400	9	451502 334770
94	**Points of Interest - Commercial Services** Name: Car Doctors Location: 200-204 Bye Pass Road, Beeston, Nottingham, NG9 5HL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B10NW (NE)	374	9	451601 335229
94	**Points of Interest - Commercial Services** Name: Car Doctors Location: 200-204 Bye Pass Road, Beeston, Nottingham, NG9 5HL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B10NW (NE)	375	9	451602 335230
94	**Points of Interest - Commercial Services** Name: Tune My Car Location: 200-204 Bye Pass Road, Beeston, Nottingham, NG9 5HL Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B10NW (NE)	375	9	451602 335230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
94	**Points of Interest - Commercial Services** Name: N K Motor Group Location: 205a Bye Pass Road, Beeston, Nottingham, NG9 5HR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B10NW (NE)	396	9	451638 335181
94	**Points of Interest - Commercial Services** Name: N K Motor Group Location: 205a Bye Pass Road, Beeston, Nottingham, NG9 5HR Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B10NW (NE)	396	9	451638 335181
95	**Points of Interest - Commercial Services** Name: Highway Garage Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B5NE (SW)	518	9	451226 334439
95	**Points of Interest - Commercial Services** Name: D T Services Nottingham Ltd Location: Unit 1-2 The Hangar, Nottingham Road, Beeston, Nottingham, NG9 6DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B5NE (SW)	558	9	451227 334396
96	**Points of Interest - Commercial Services** Name: Highway Garage Location: Nottingham Road, Beeston, Nottingham, NG9 6DP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B5NE (S)	568	9	451377 334472
96	**Points of Interest - Commercial Services** Name: N K Motors Location: 71-73 Nottingham Road, Beeston, Nottingham, NG9 6DN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B5NE (S)	568	9	451377 334472
97	**Points of Interest - Commercial Services** Name: Nationwide Crash Repair Centres Ltd Location: 1 Tissington Close, Beeston, Nottingham, NG9 6QG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B5SE (S)	791	9	451316 334180
98	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B10NW (N)	328	9	451557 335214
98	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B14SW (N)	364	9	451573 335268
98	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B14SW (N)	370	9	451583 335260
98	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B14SW (N)	383	9	451571 335323
98	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B14SW (NE)	394	9	451611 335256

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B14SW (N)	462	9	451633 335397
99	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	B14SW (N)	468	9	451641 335394
99	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	B14SW (N)	472	9	451644 335398
99	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B14SW (N)	479	9	451642 335424
99	**Points of Interest - Manufacturing and Production** Name: Factory Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B14SW (N)	483	9	451645 335430
100	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NW (SW)	545	9	451082 334360
101	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	552	9	451388 334503
101	**Points of Interest - Manufacturing and Production** Name: Factory Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B5NE (S)	556	9	451346 334464
101	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	570	9	451374 334468
101	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	571	9	451377 334468
101	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	574	9	451352 334446
101	**Points of Interest - Manufacturing and Production** Name: Factory Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B5NE (S)	574	9	451352 334446

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	591	9	451415 334475
101	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	593	9	451419 334476
102	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (SW)	561	9	451222 334390
102	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B5NW (SW)	582	9	451177 334353
102	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NW (SW)	599	9	451143 334324
102	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	606	9	451236 334348
103	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	570	9	451259 334396
104	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	574	9	451428 334510
104	**Points of Interest - Manufacturing and Production** Name: Factory Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	B5NE (S)	579	9	451431 334507
105	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	679	9	451360 334326
105	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	681	9	451364 334326
105	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B5NE (S)	733	9	451342 334256

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
106	**Points of Interest - Manufacturing and Production** Name: Tank Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B5SW (S)	732	9	451158 334188
107	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NG9 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	B10SE (E)	824	9	452047 334877
107	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B10NE (E)	874	9	452112 334936
108	**Points of Interest - Manufacturing and Production** Name: Works Location: NG9 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B10NE (E)	910	9	452158 335004
108	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B10NE (E)	913	9	452161 335005
109	**Points of Interest - Public Infrastructure** Name: Tesco Petrol Filling Station Location: Chilwell Station, Chilwell, Beeston, Nottingham, NG9 5HA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B13SW (NW)	0	9	450968 335266
110	**Points of Interest - Public Infrastructure** Name: Cemetery Location: NG9 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	B13NW (NW)	85	9	450968 335660
110	**Points of Interest - Public Infrastructure** Name: Cemetery Location: NG9 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	B13NW (NW)	101	9	451028 335640
110	**Points of Interest - Public Infrastructure** Name: Chilwell and Toton Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	B13NW (NW)	109	9	451036 335644
111	**Points of Interest - Public Infrastructure** Name: Texaco Location: 5-11 Nottingham Road, Beeston, Nottingham, NG9 6DN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B9SE (S)	398	9	451501 334771
111	**Points of Interest - Public Infrastructure** Name: Attenborough Ser Stn Nottm Location: 5-11 Nottingham Road, Beeston, Nottingham, NG9 6DN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B9SE (S)	398	9	451498 334769
111	**Points of Interest - Public Infrastructure** Name: Attenborough Service Station Location: 5-11 Nottingham Road, Beeston, Nottingham, NG9 6DN Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	B9SE (S)	398	9	451501 334771

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
112	**Points of Interest - Public Infrastructure** Name: Attenborough Rail Station Location: Bramble Close, NG9 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	B10SW (SE)	729	9	451820 334631
112	**Points of Interest - Public Infrastructure** Name: Attenborough Station Location: Bramble Close, NG9 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	B10SW (SE)	729	9	451820 334631
113	**Points of Interest - Public Infrastructure** Name: Sewage Works Location: NG9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	B5SW (SW)	810	9	450946 334041
113	**Points of Interest - Public Infrastructure** Name: Sewage Works Location: NG9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	B5SW (SW)	811	9	450956 334042
113	**Points of Interest - Public Infrastructure** Name: Sewage Works Location: NG9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	B5SW (SW)	812	9	450947 334039
113	**Points of Interest - Public Infrastructure** Name: Sewage Works Location: NG9 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	B5SW (SW)	813	9	450949 334039
114	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Sherman Drive, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	B9SW (SW)	274	9	451077 334644
114	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B9SW (SW)	276	9	451077 334642

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
115	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	(SW)	83	8	450382 334328
116	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	(SW)	508	8	450769 334280
117	**Areas of Adopted Green Belt** Authority: Erewash Borough Council Plan Name: Proposal Map **Status: Adopted** Plan Date: 6th March 2014	(SW)	574	10	450810 334207
118	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	B10SE (SE)	673	8	451966 334786
119	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	(W)	0	13	450800 334800
120	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	B9NE (E)	0	13	451481 334989
121	**Sites of Special Scientific Interest** Name: Attenborough Gravel Pits Multiple Areas: N Total Area (m2): 2265735.06 Source: Natural England Reference: 1003408 Designation Details: Site Of Special Scientific Interest Designation Date: 1st November 1982 Date Type: Notified Designation Details: Local Wildlife Site Designation Date: 1st November 1982 Date Type: Notified Designation Details: Water Framework Directive (WFD) Designation Date: 1st November 1982 Date Type: Notified	B10SE (SE)	759	14	451996 334734

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Erewash Borough Council - Environmental Health Department	August 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	January 2015	Annual Rolling Update
Broxtowe Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - Midlands Region	October 2016	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Midlands Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Midlands Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Midlands Region	January 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Rushcliffe Borough Council - Environmental Health Department	September 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Midlands Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Midlands Region	July 2015	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Midlands Region	March 2013	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Midlands Region - East Area	January 2017	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	January 2017	Quarterly
Water Abstractions		
Environment Agency - Midlands Region	October 2016	Quarterly
Water Industry Act Referrals		
Environment Agency - Midlands Region	January 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable

Data Currency

Agency & Hydrological	Version	Update Cycle
Drift Deposits Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	October 2016	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2016	Quarterly
Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	September 2014	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	January 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Midlands Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Midlands Region - East Area	August 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	August 2016	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Midlands Region - East Area	October 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	October 2016	Quarterly
Local Authority Landfill Coverage		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Derbyshire County Council	May 2000	Not Applicable
Erewash Borough Council - Environmental Health Department	May 2000	Not Applicable
Nottingham City Council	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Rushcliffe Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Derbyshire County Council	May 2000	Not Applicable
Erewash Borough Council - Environmental Health Department	May 2000	Not Applicable
Nottingham City Council	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Rushcliffe Borough Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites		
Health and Safety Executive	September 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Erewash Borough Council	April 2015	Annual Rolling Update
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Derbyshire County Council	February 2016	Annual Rolling Update
Nottingham City Council - Planning Information Department	February 2016	Annual Rolling Update
Rushcliffe Borough Council - Development Service	February 2016	Annual Rolling Update
Planning Hazardous Substance Consents		
Erewash Borough Council	April 2015	Annual Rolling Update
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Derbyshire County Council	February 2016	Annual Rolling Update
Nottingham City Council - Planning Information Department	February 2016	Annual Rolling Update
Rushcliffe Borough Council - Development Service	February 2016	Annual Rolling Update

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2016	Quarterly
Points of Interest - Education and Health PointX	December 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2016	Quarterly
Points of Interest - Public Infrastructure PointX	December 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2016	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	August 2016	Bi-Annually
Areas of Adopted Green Belt		
Broxtowe Borough Council	November 2016	As notified
Erewash Borough Council	November 2016	As notified
Nottingham City Council	November 2016	As notified
Rushcliffe Borough Council - Development Service	November 2016	As notified
Areas of Unadopted Green Belt		
Broxtowe Borough Council	November 2016	As notified
Erewash Borough Council	November 2016	As notified
Nottingham City Council	November 2016	As notified
Rushcliffe Borough Council - Development Service	November 2016	As notified
Areas of Outstanding Natural Beauty		
Natural England	January 2017	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	January 2017	Bi-Annually
Marine Nature Reserves		
Natural England	January 2017	Bi-Annually
National Nature Reserves		
Natural England	January 2017	Bi-Annually
National Parks		
Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites		
Natural England	January 2017	Bi-Annually
Sites of Special Scientific Interest		
Natural England	April 2016	Bi-Annually
Special Areas of Conservation		
Natural England	January 2017	Bi-Annually
Special Protection Areas		
Natural England	January 2017	Bi-Annually
World Heritage Sites		
English Heritage - National Monument Record Centre	September 2015	Bi-Annually

Data Suppliers

A selection of organisations who provide data within this report

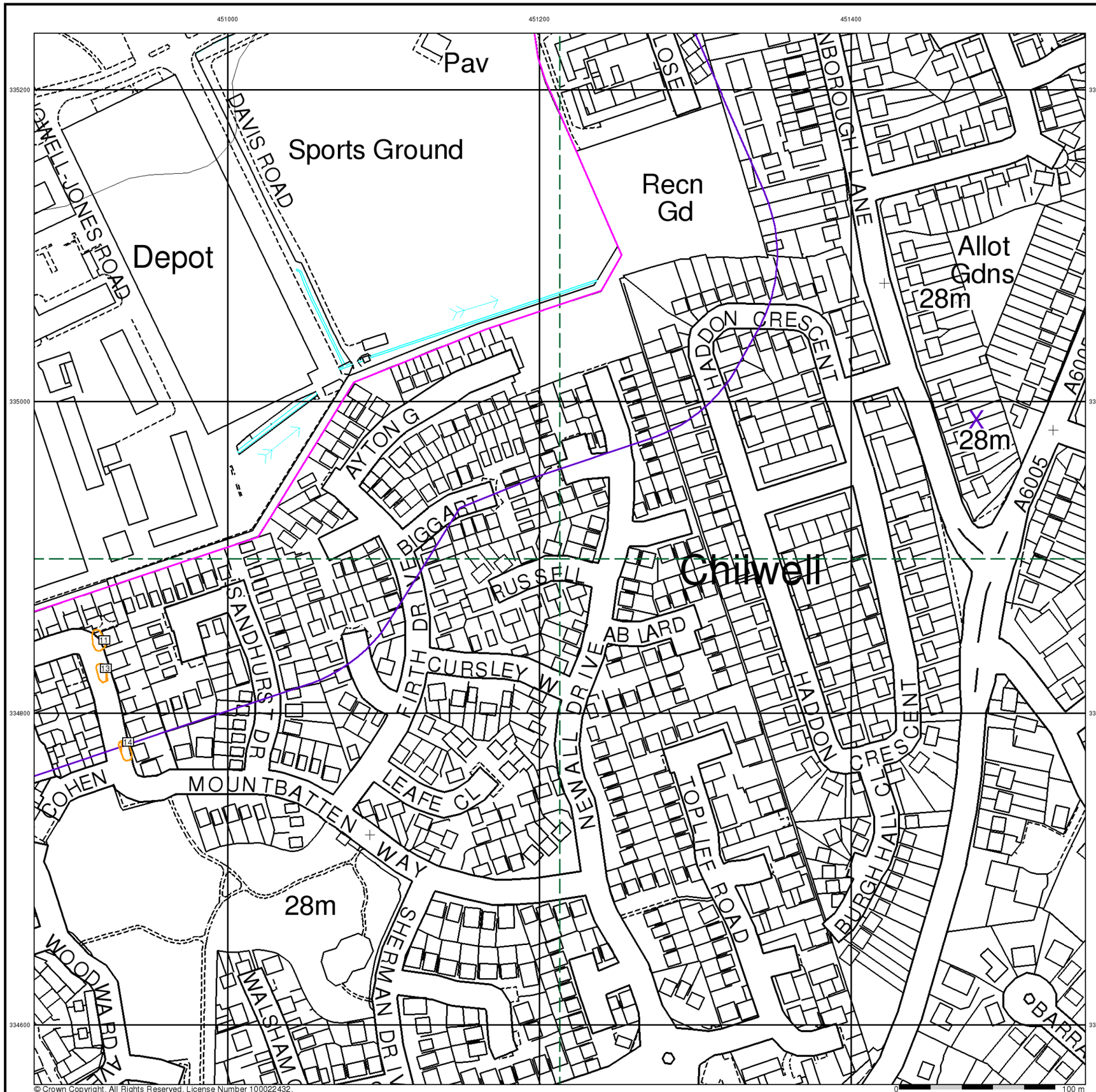
Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Contact	Name and Address	Contact Details
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	[redacted]
4	**Broxtowe Borough Council - Environmental Health Department** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted]
5	**Nottinghamshire County Council - Environment Department** 5th Floor, Trentbridge House, Fox Road, Nottingham, Nottinghamshire, NG2 6BJ	[redacted] Website: www.nottinghamshire.gov.uk
6	**Erewash Borough Council - Environmental Health Department** Merlin House, Merlin Way, Ikeston, Derbyshire, DE7 4RA	[redacted]
7	**Derbyshire County Council** County Offices, Matlock, Derbyshire, DE4 3AG	[redacted]re.gov.uk
8	**Broxtowe Borough Council** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted].gov.uk
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
10	**Erewash Borough Council** Town Hall, Long Eaton, Nottingham, Nottinghamshire, NG10 1HU	[redacted].gov.uk
11	**Rushcliffe Borough Council - Development Service** Civic Centre, Pavilion Road, West Bridgford, Nottingham, Nottinghamshire, NG2 5FE	[redacted] Website: www.rushcliffe.gov.uk
12	**Nottingham City Council** The Guildhall, South Sherwood Street, Nottingham, Nottinghamshire, NG1 4BT	[redacted]gov.uk
13	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	[redacted]
14	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	[redacted] Website: www.naturalengland.org.uk
15	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	[redacted]

Useful Contacts

Contact	Name and Address	Contact Details
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	[redacted]
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



pba peterbrett

Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

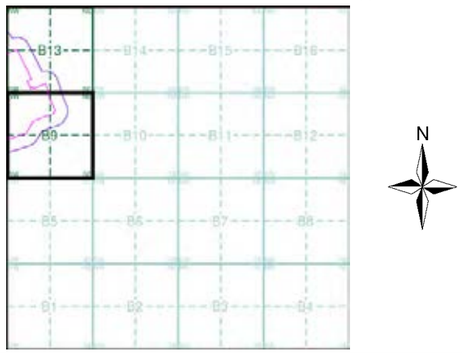
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▭
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment B9



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

pba peterbrett

Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID | Several of Type at Location

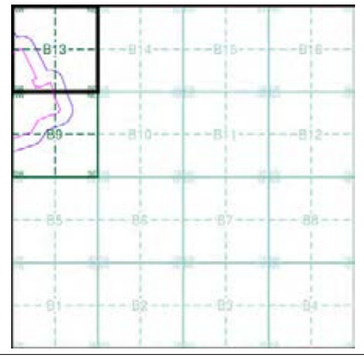
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▭
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▭

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment B13



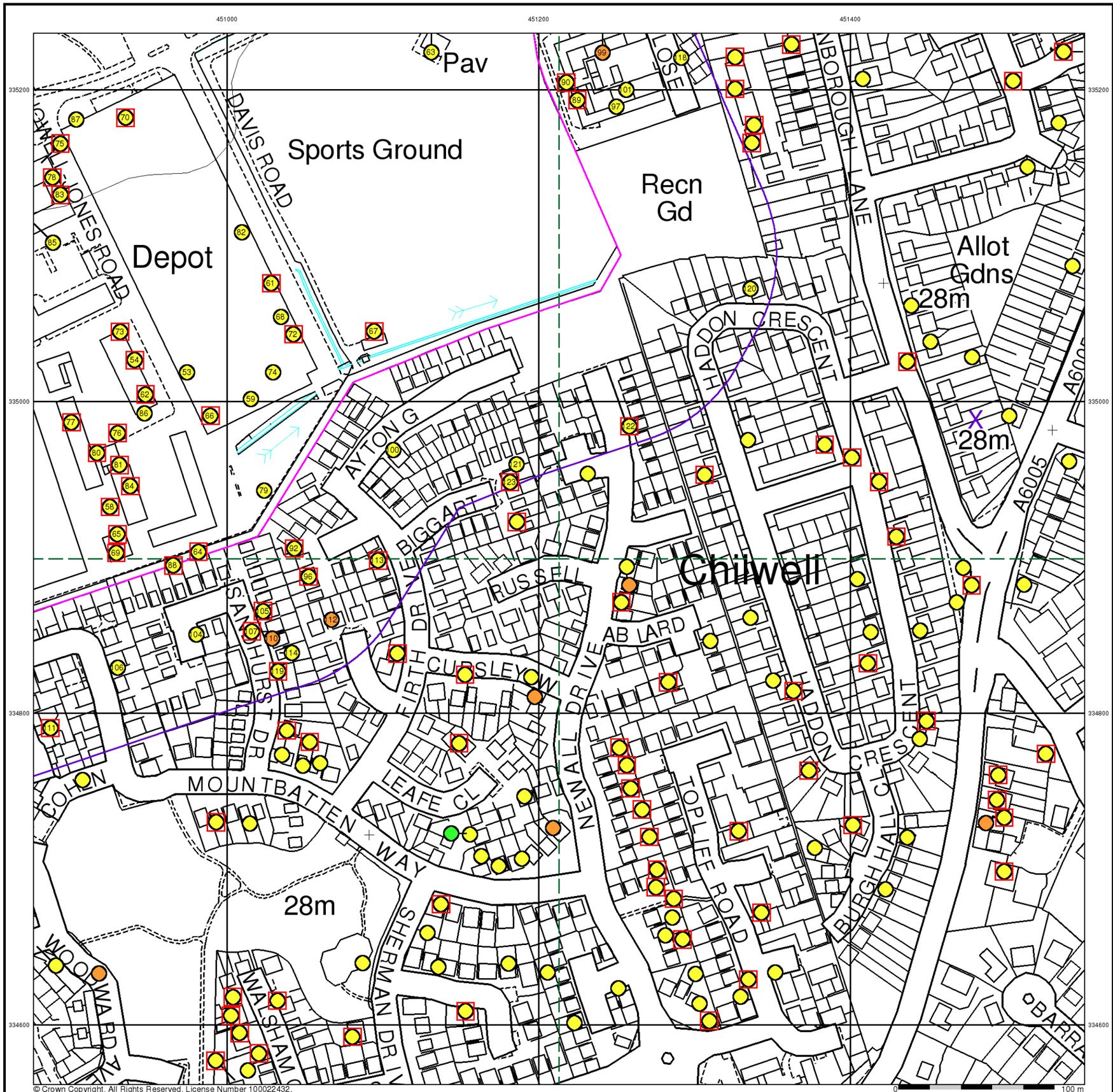
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



peterbrett

Motion Map Data (1:2,500)

General

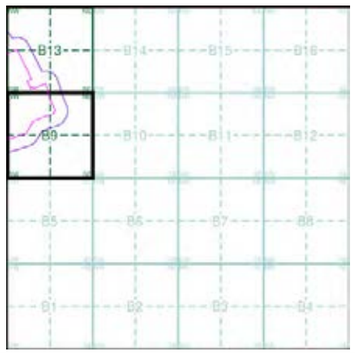
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Average Velocity Gradient

- Upward Movement > 3.5mm per year
- Upward Movement 1.5mm to 3.5mm per year
- Stable 1.5mm to -1.5mm per year
- Downward Movement -1.5mm to -3.5mm per year
- Downward Movement > -3.5mm per year

Mining and Ground Stability - Segment B9



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

pba peterbrett

Motion Map Data (1:2,500)

General

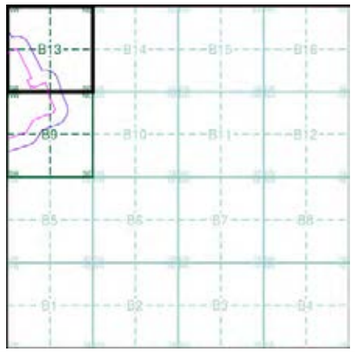
Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Average Velocity Gradient

- Upward Movement > 3.5mm per year
- Upward Movement 1.5mm to 3.5mm per year
- Stable 1.5mm to -1.5mm per year
- Downward Movement -1.5mm to -3.5mm per year
- Downward Movement > -3.5mm per year

Mining and Ground Stability - Segment B13



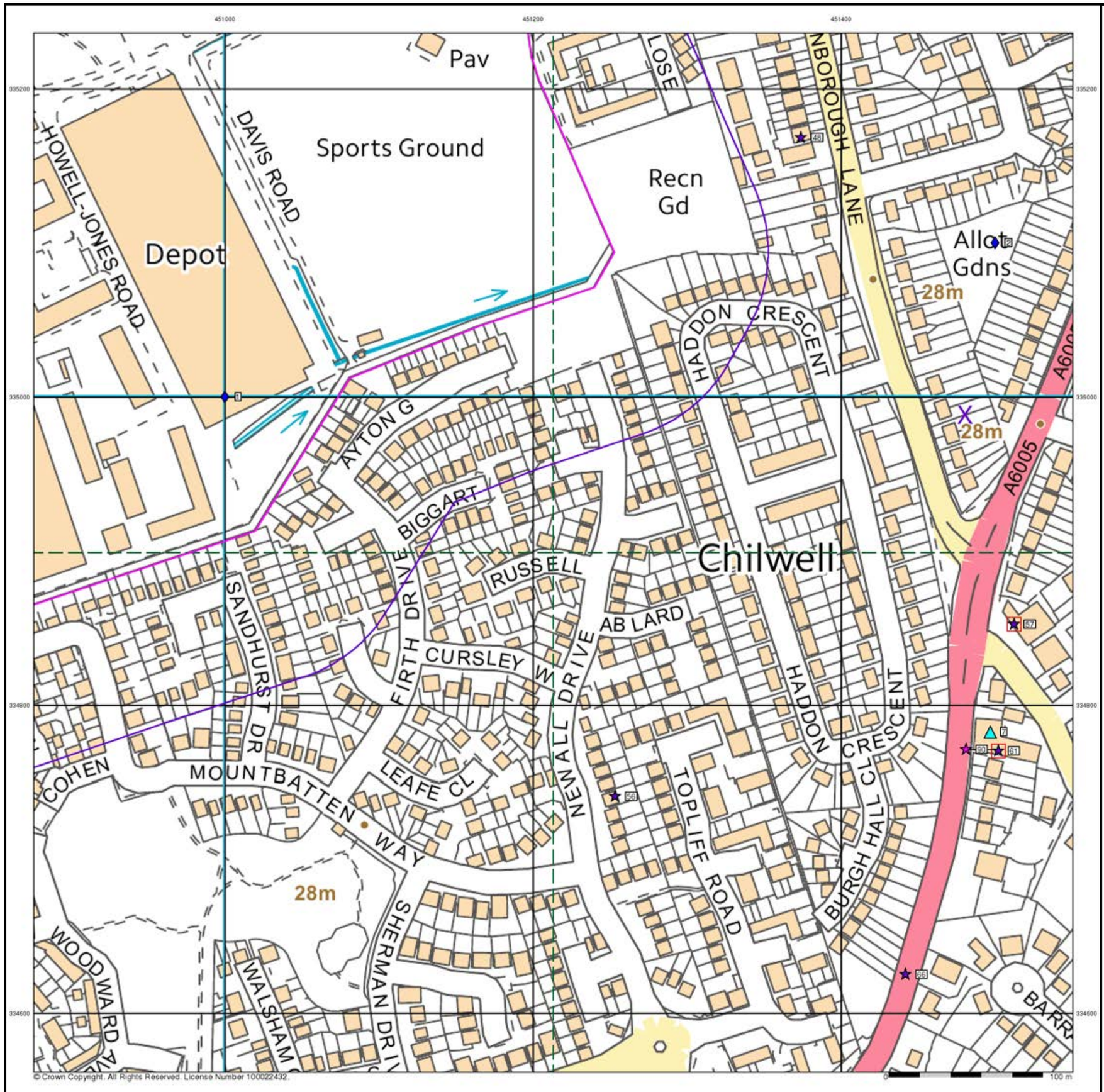
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Plot Buffer (m):	100

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

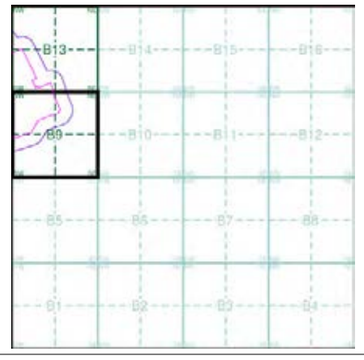
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment B9



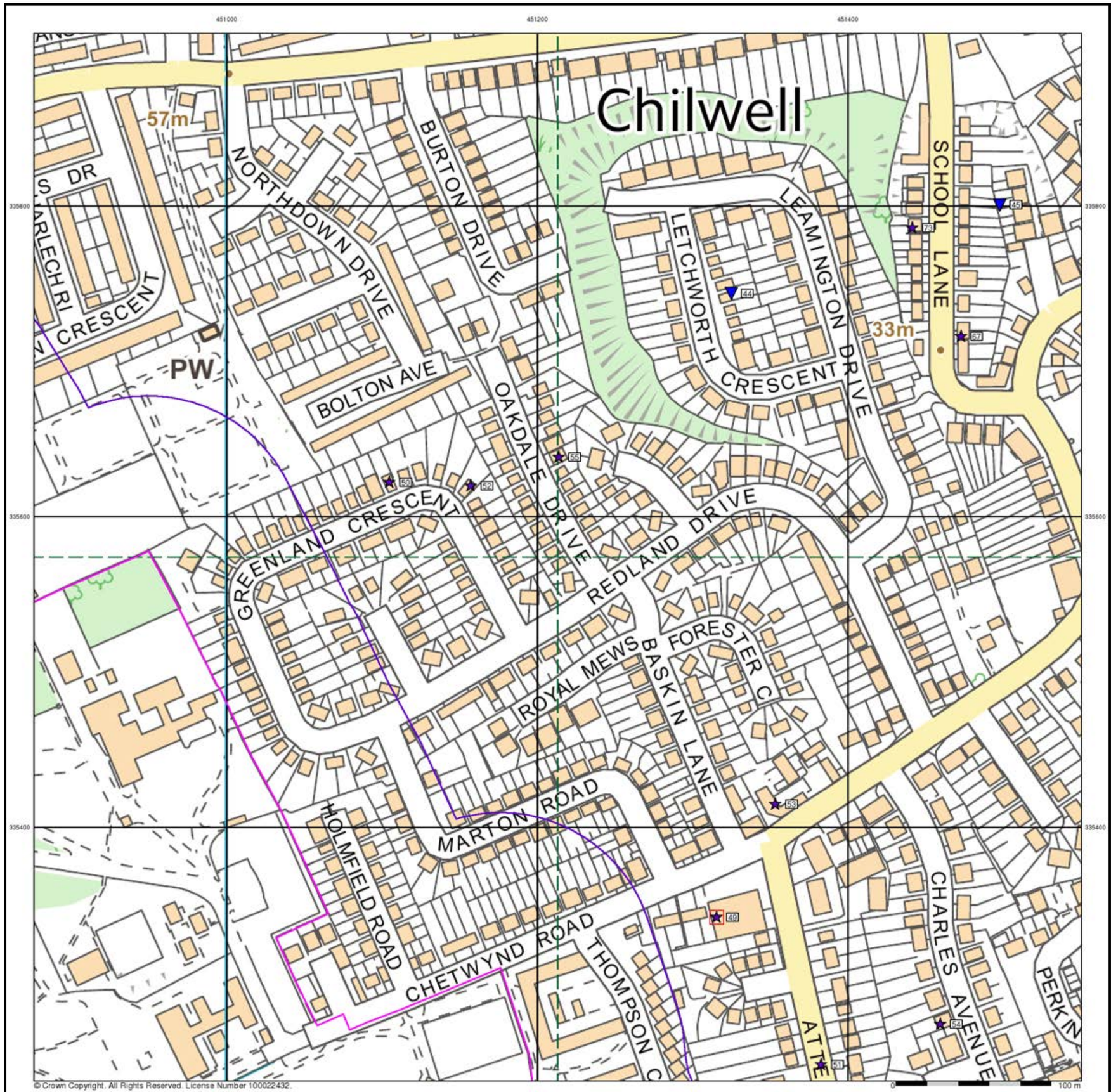
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry

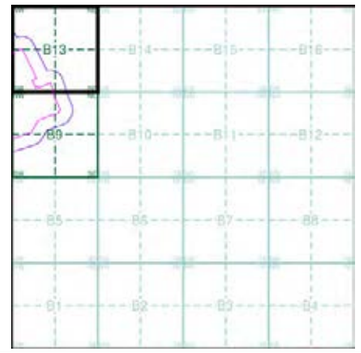
Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Segment B13



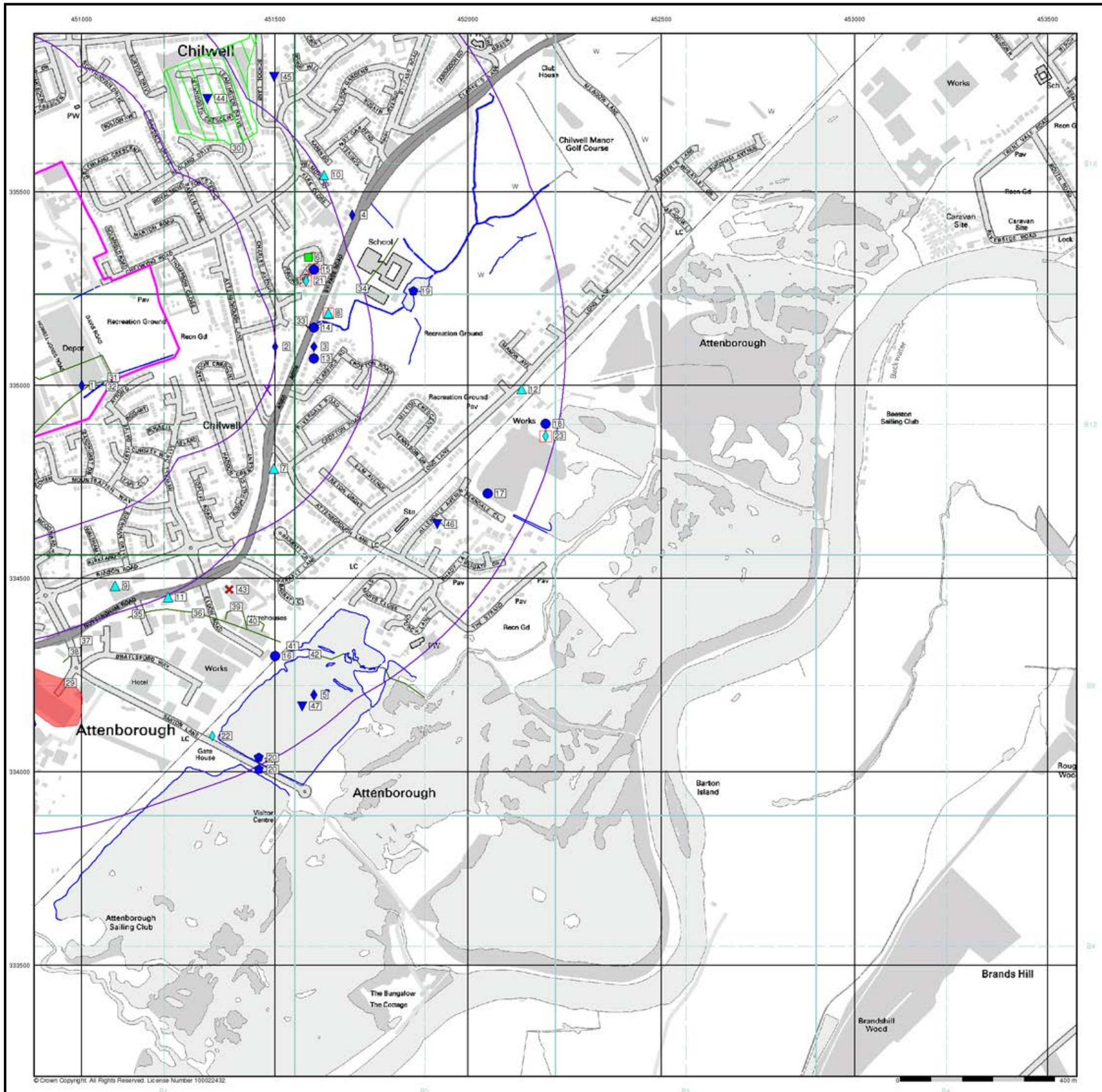
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

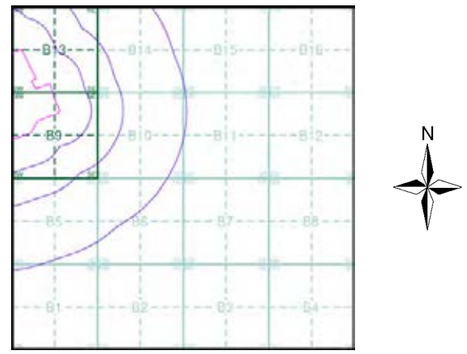
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological

- BGS Recorded Mineral Site

Site Sensitivity Map - Slice B



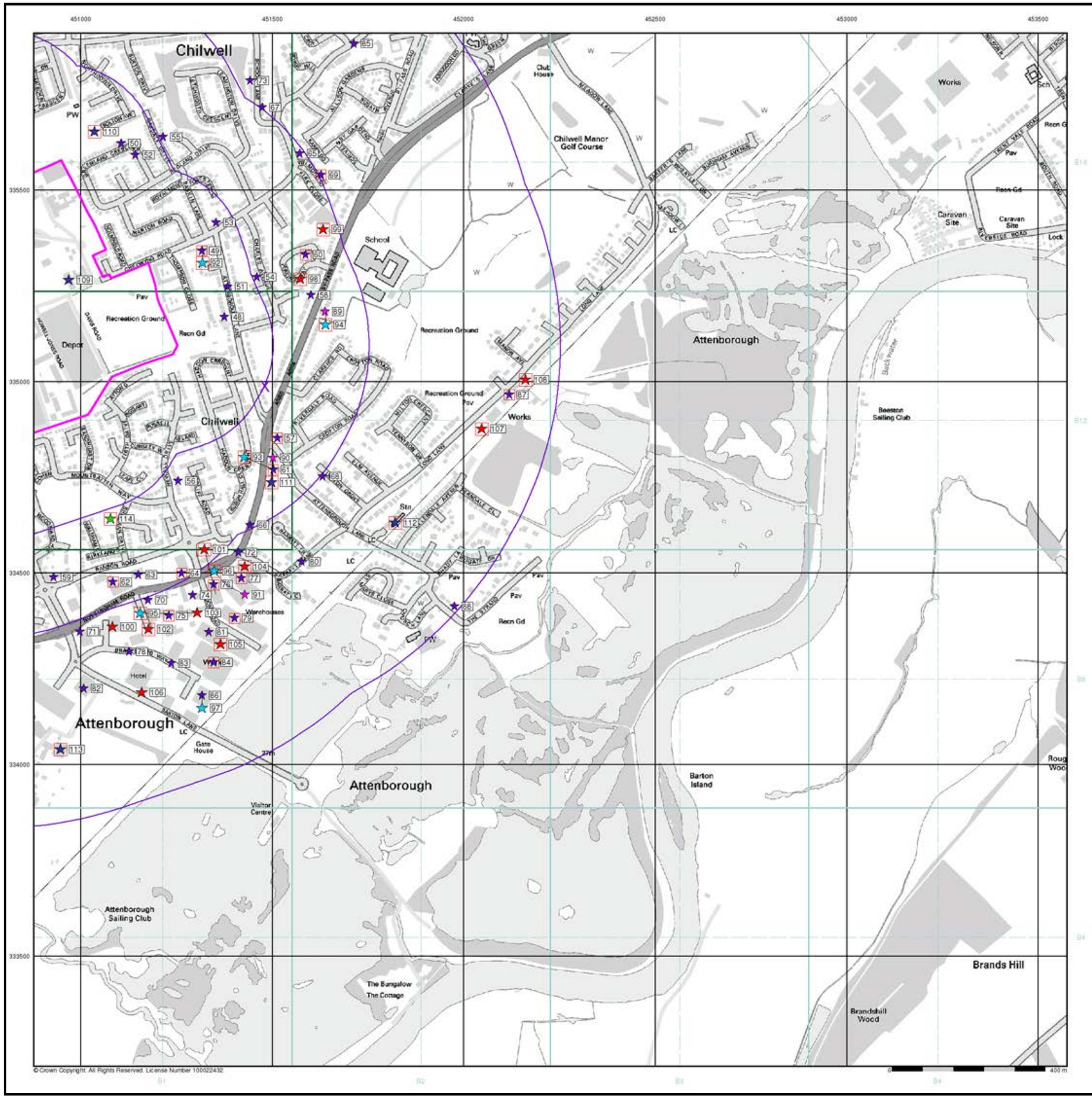
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Tel:
Fax:
Web:



pba peterbrett

Industrial Land Use Map

General

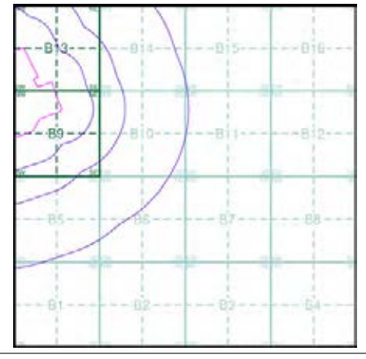
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice B



Order Details

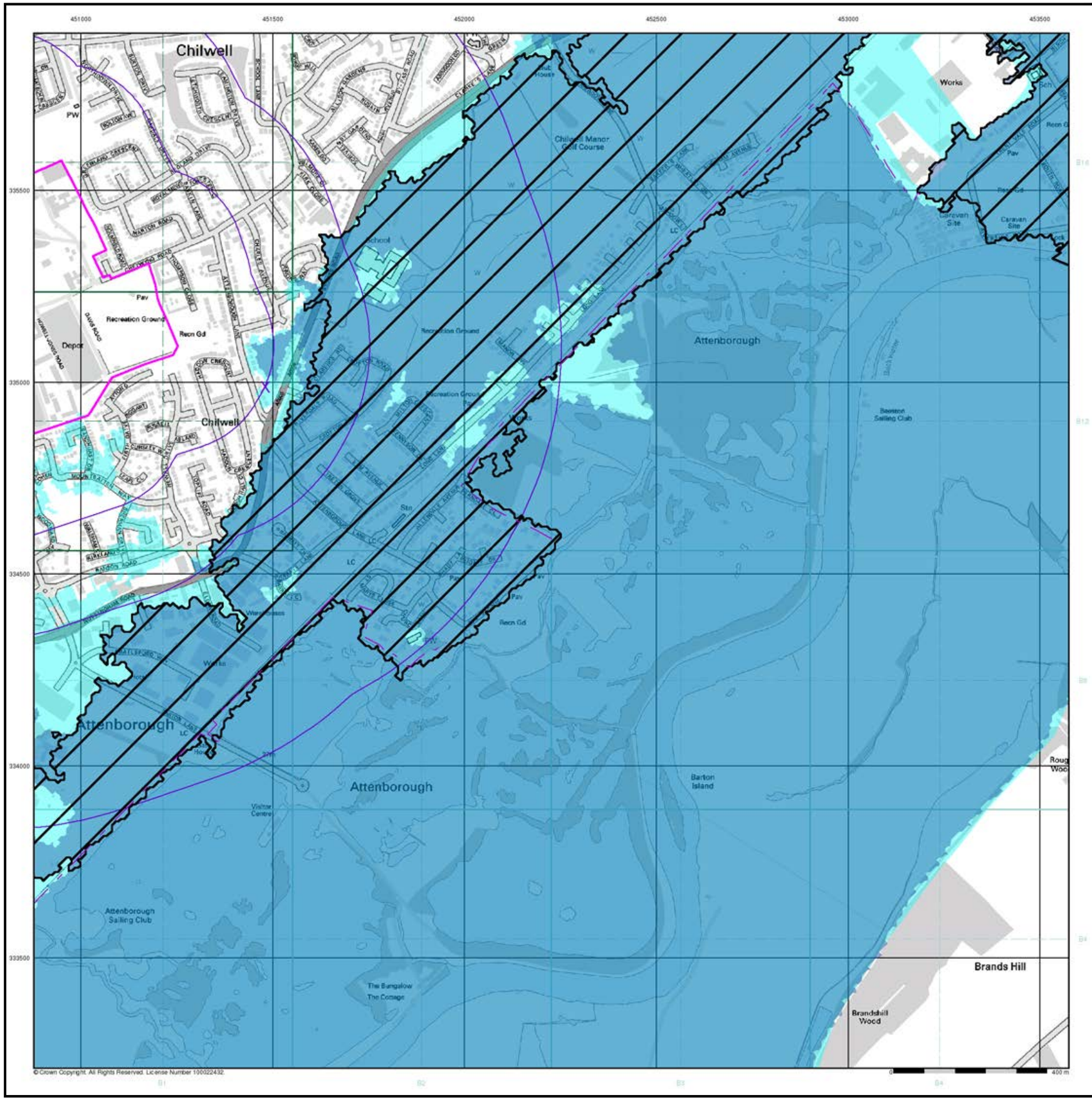
Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel:
Fax:
Web:



pba peterbrett

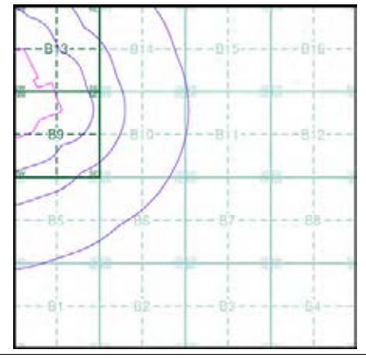
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice B

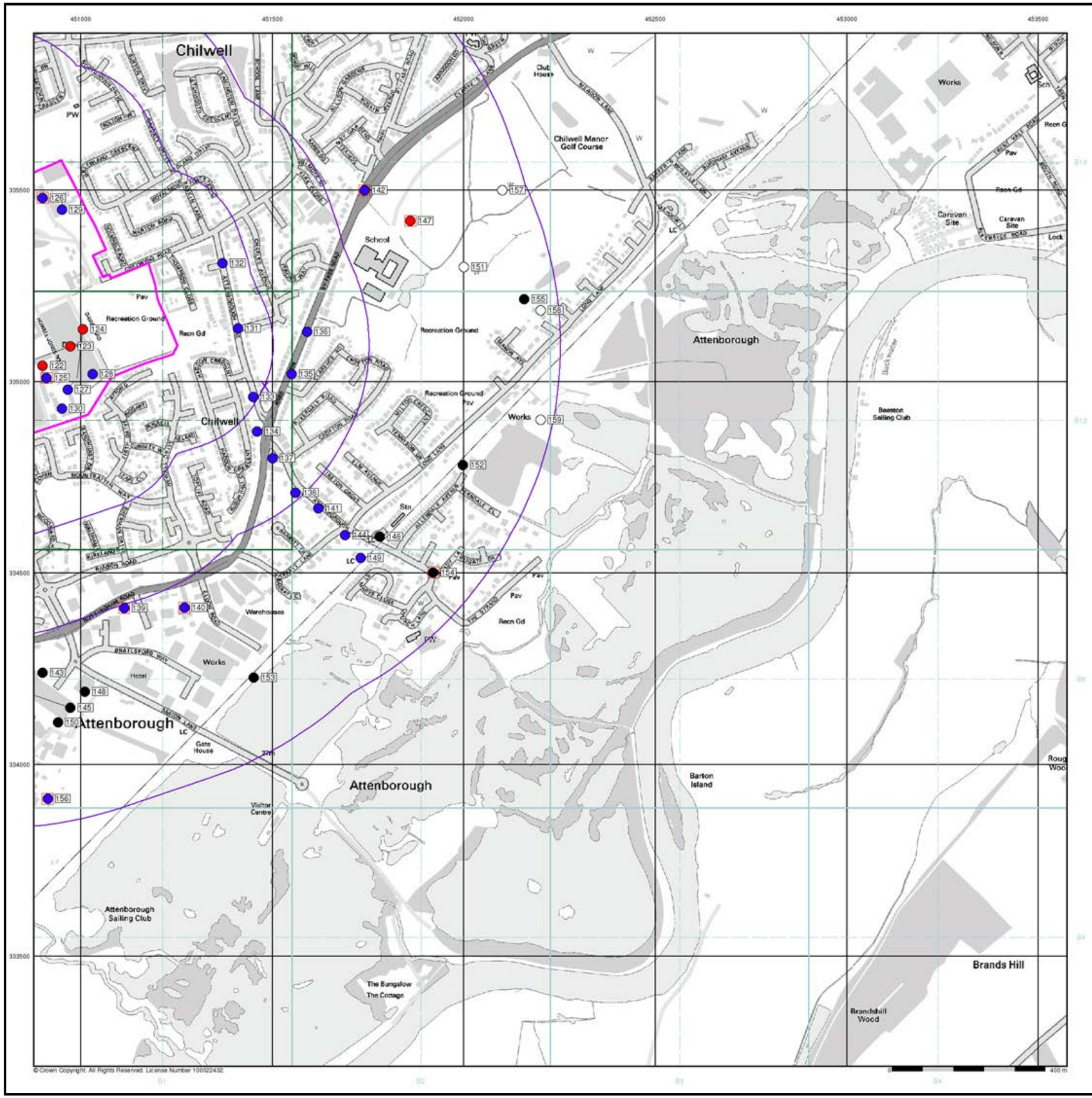


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

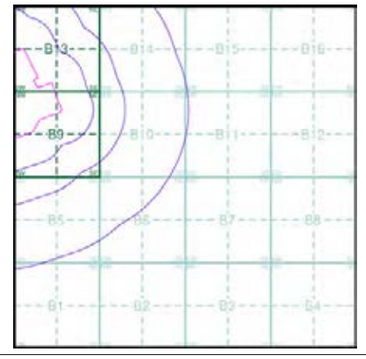
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice B



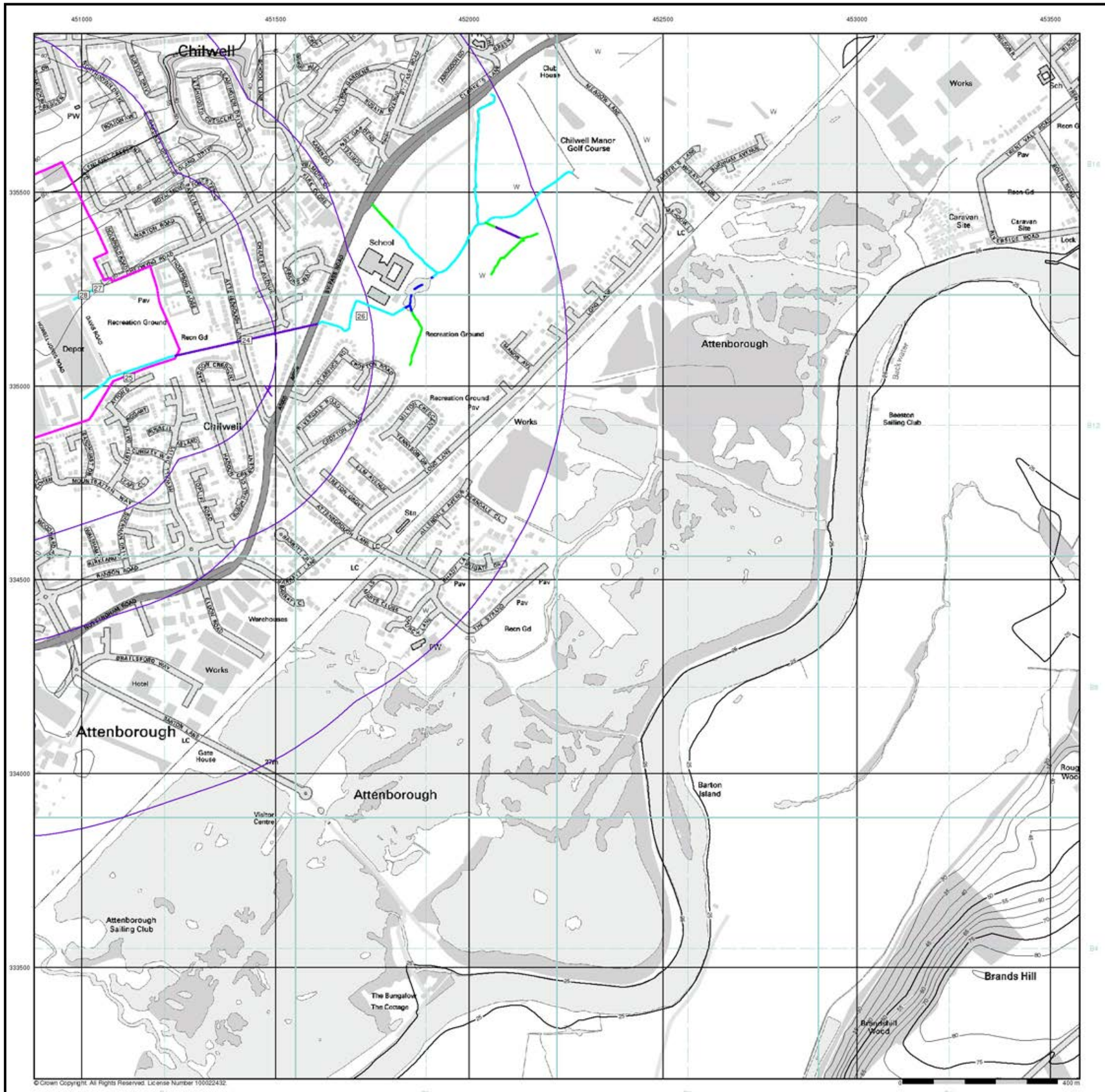
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

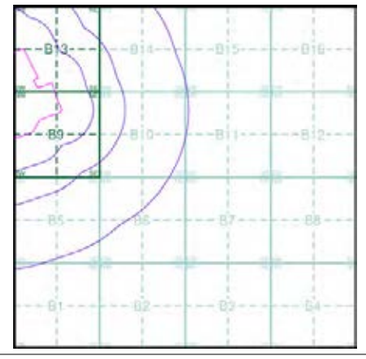
Standard Contour 105 100 95

Master Contour

Spot Height *167.3

- MLWV Mean Low Water
- MHWV Mean High Water

EA/NRW Detailed River Network Map - Slice B



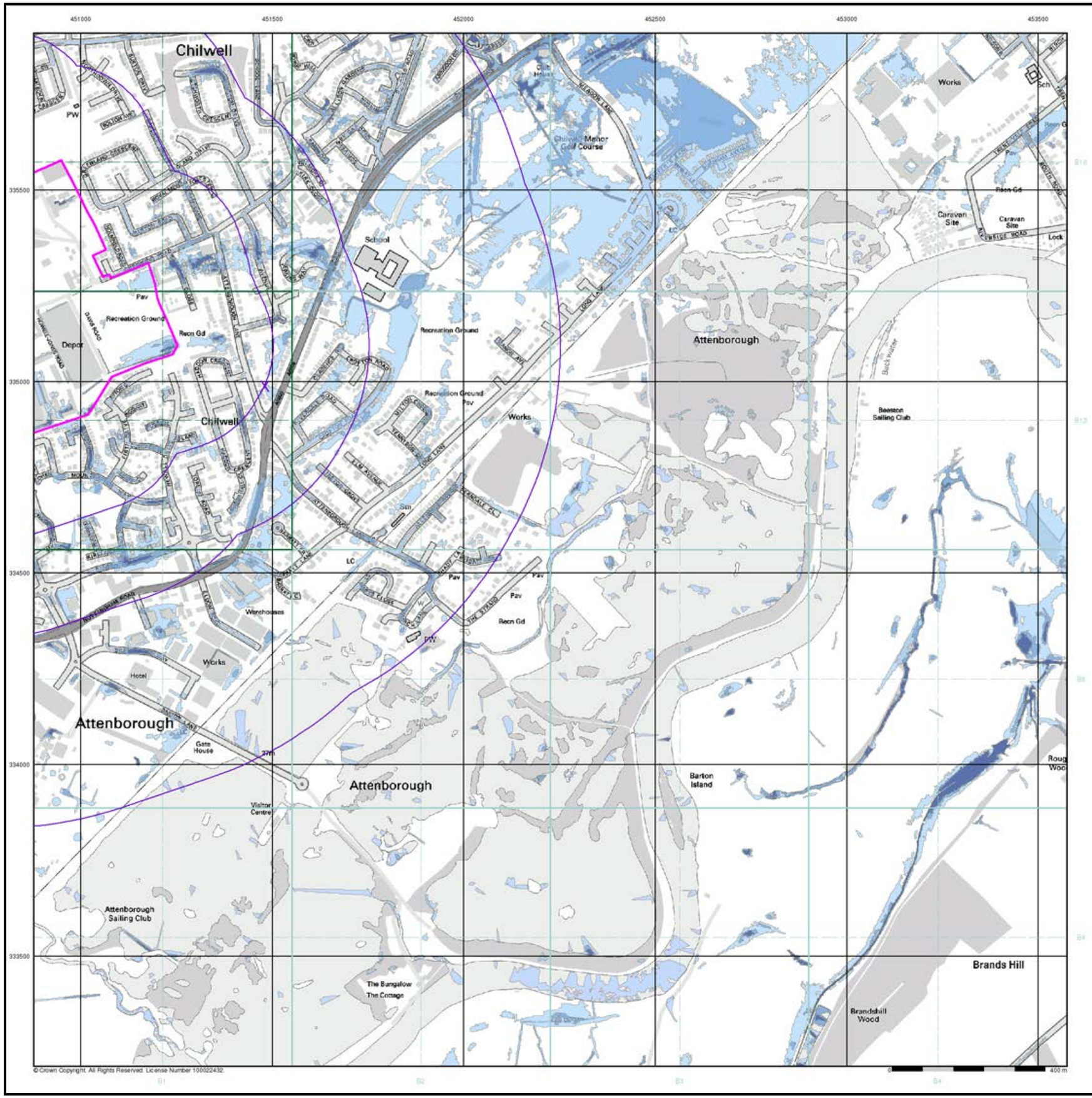
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

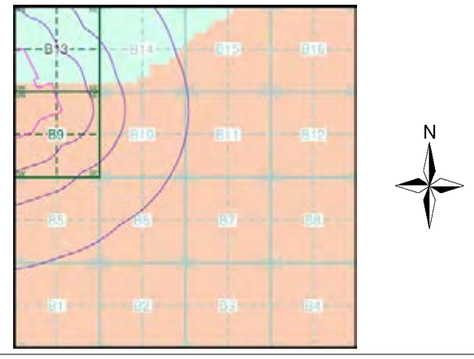
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice B



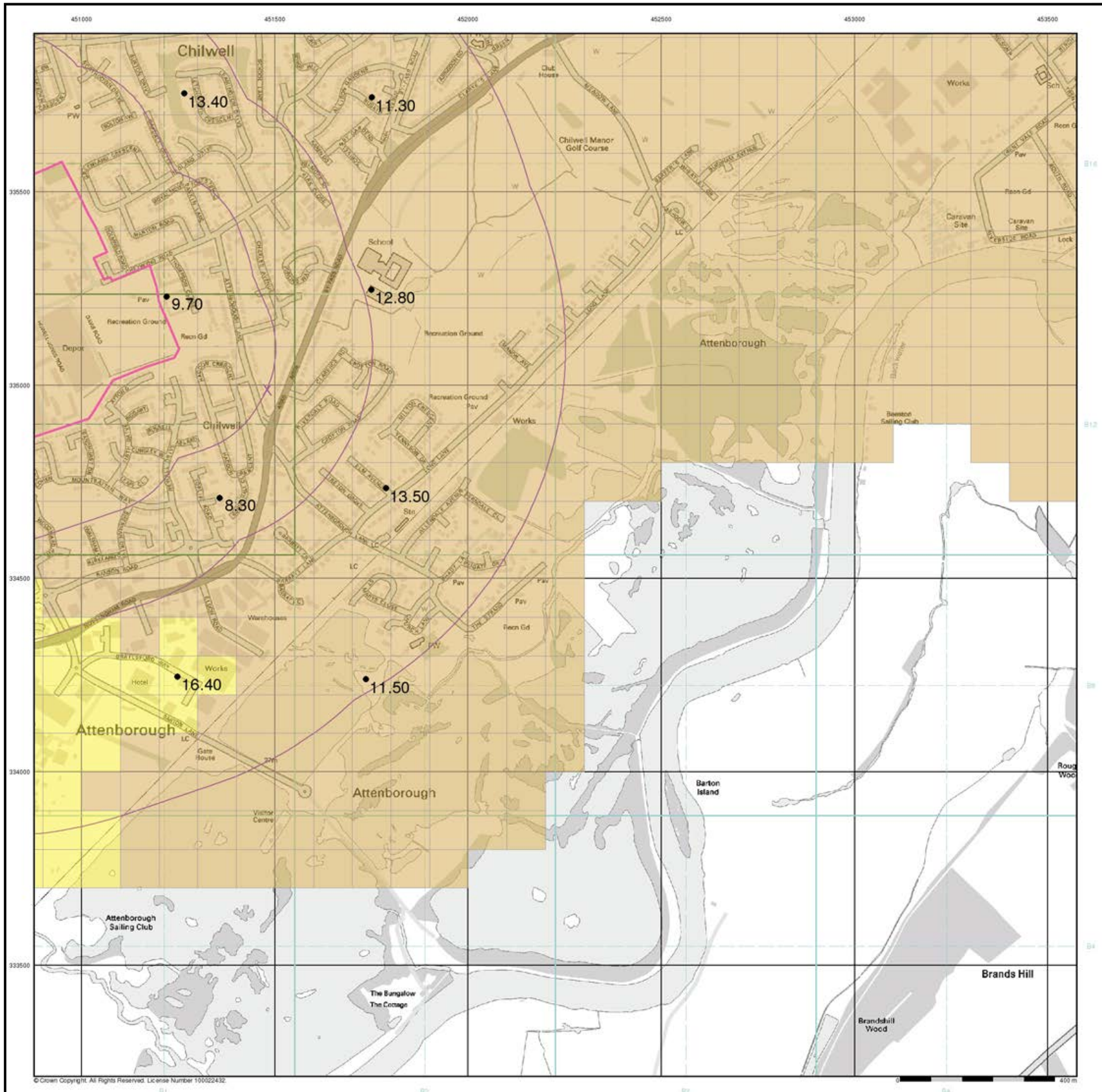
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

Specified Site | Specified Buffer(s) | Bearing Reference Point

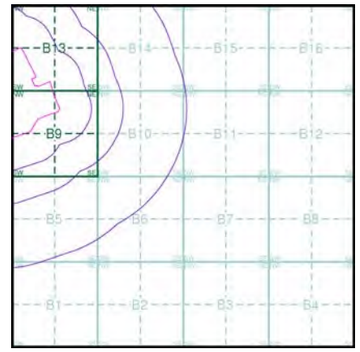
Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Urban Soil Chemistry Arsenic - Slice B



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

General

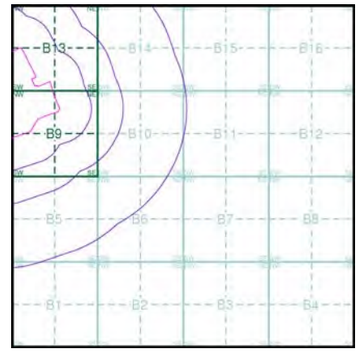
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice B



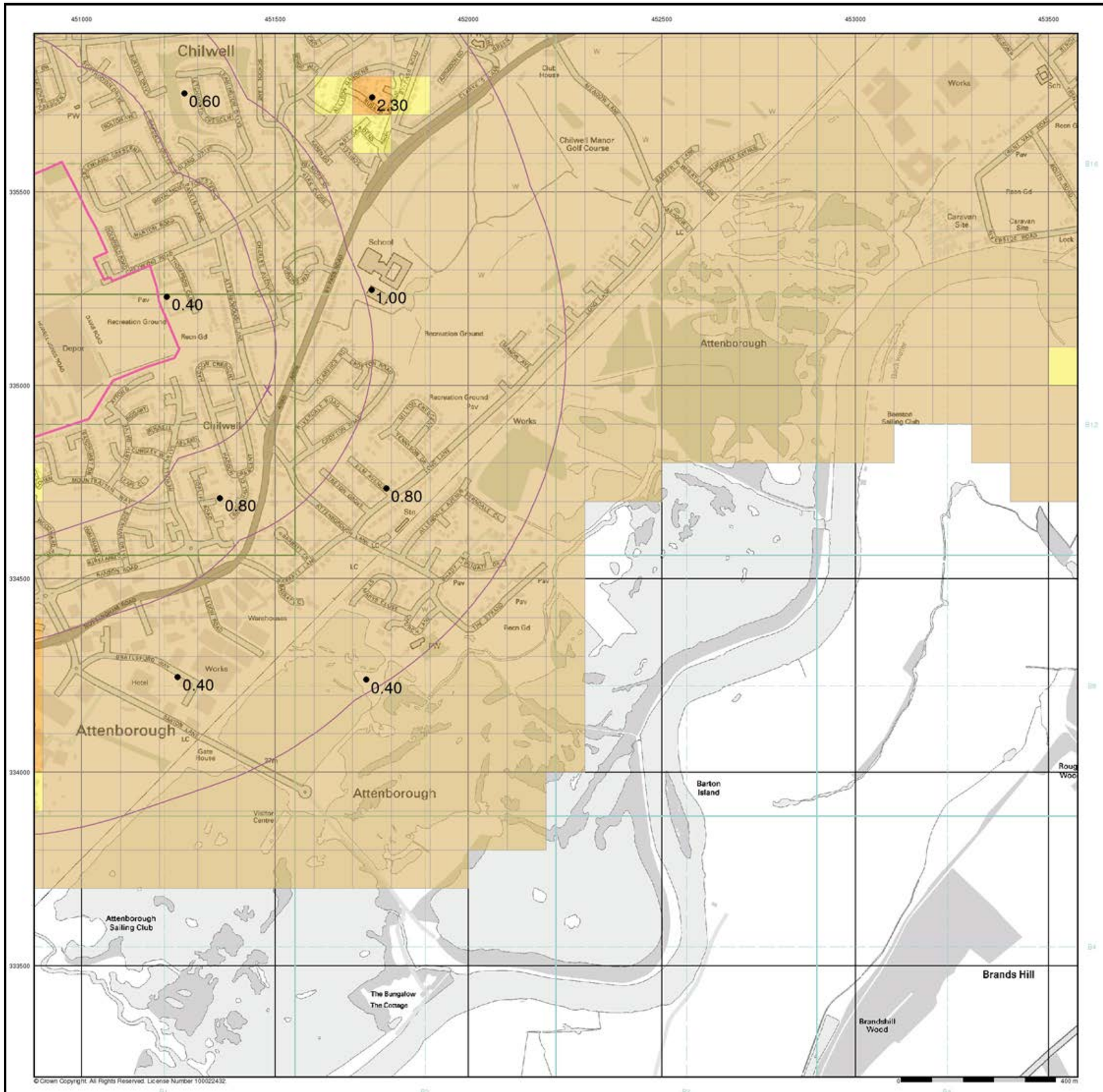
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

Specified Site | Specified Buffer(s) | Bearing Reference Point

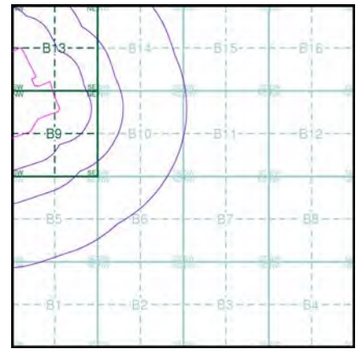
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Urban Soil Chemistry Cadmium - Slice B



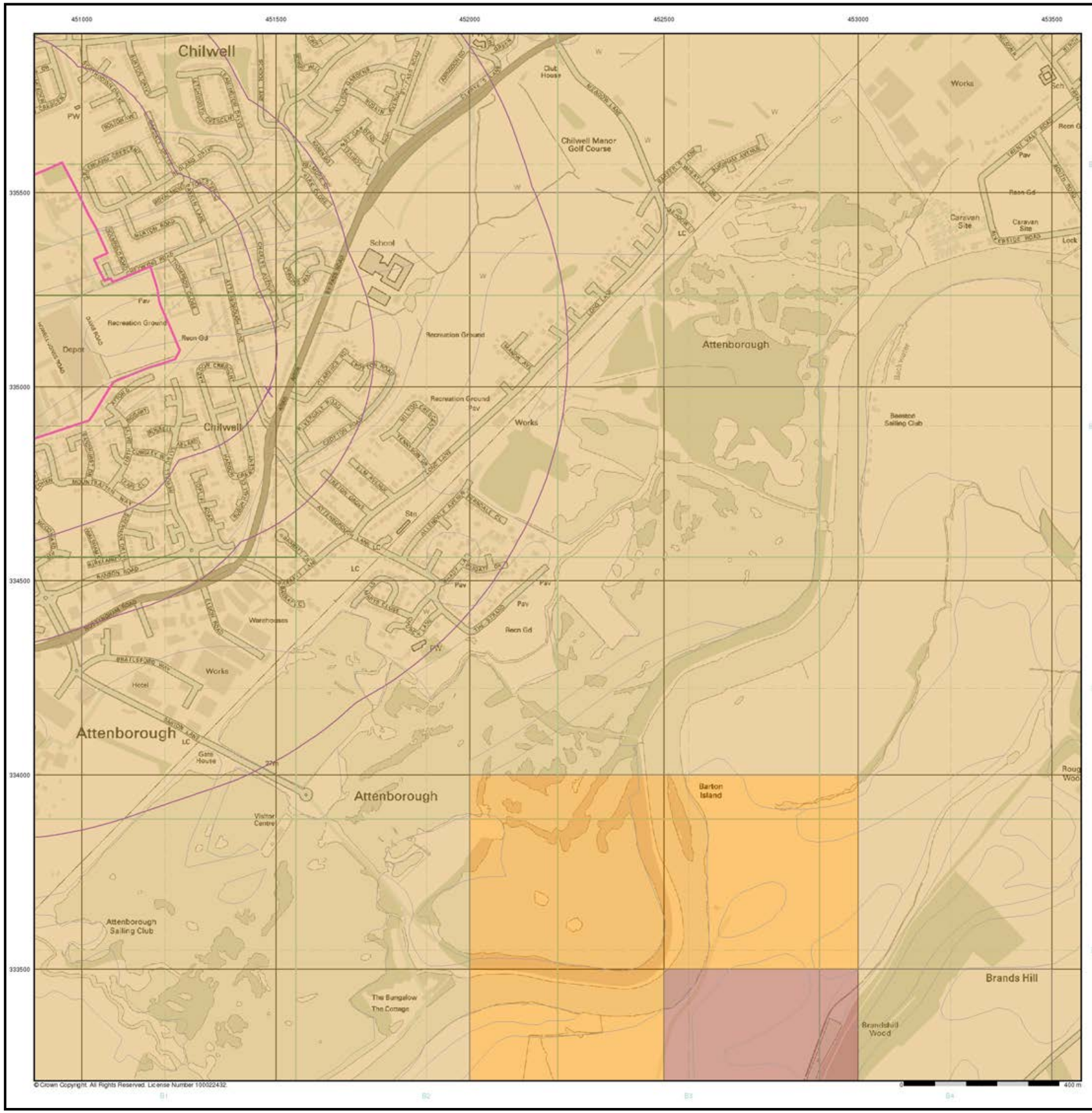
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

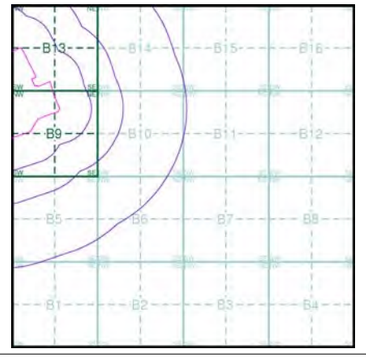
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice B



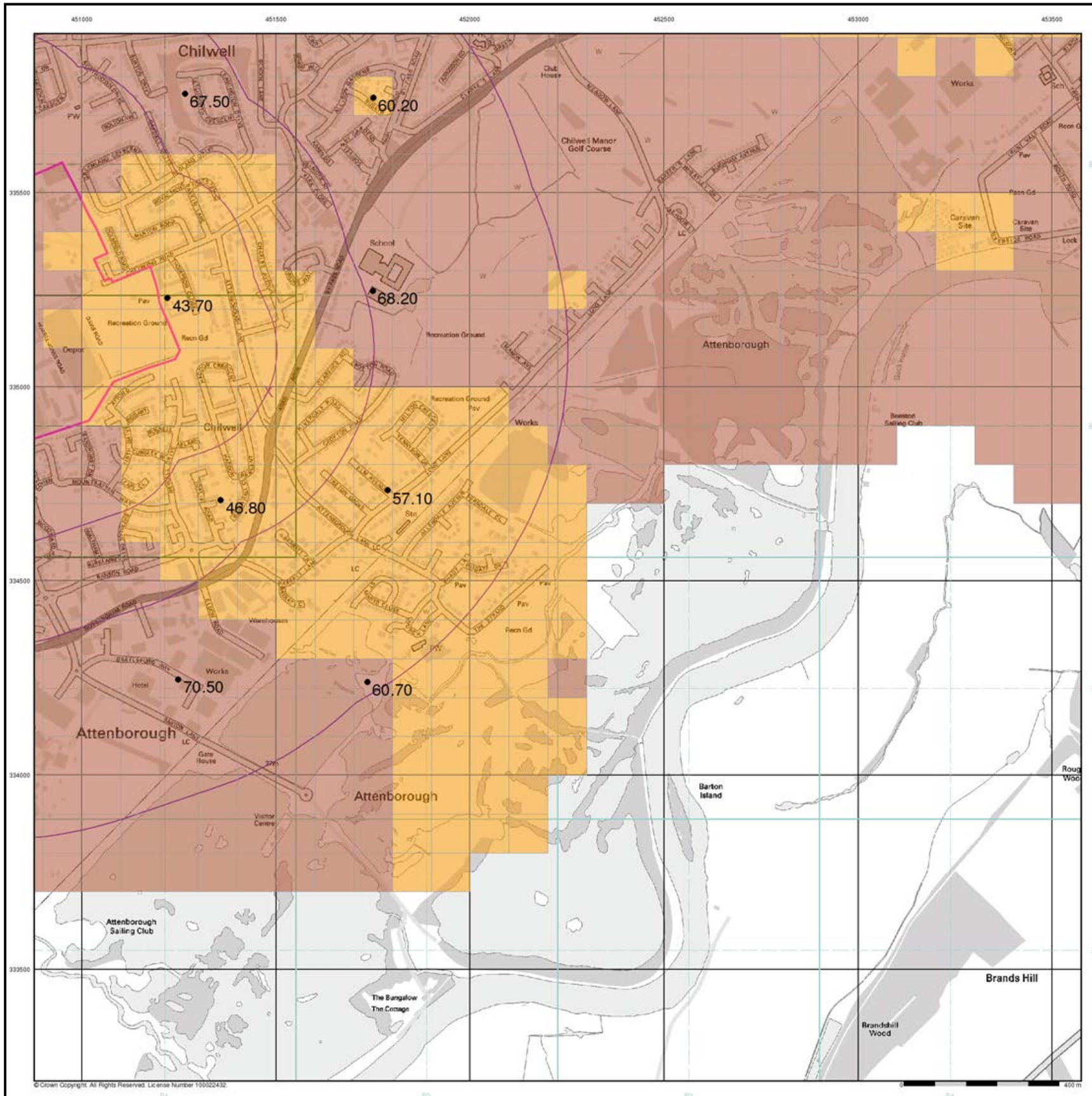
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

Specified Site | Specified Buffer(s) | Bearing Reference Point

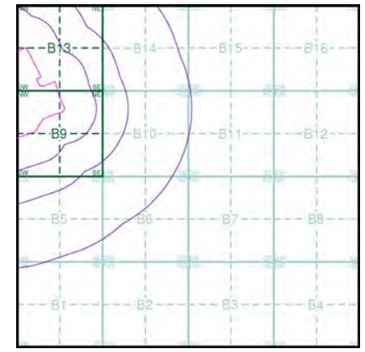
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

< 20
20 - 40
40 - 60
60 - 90
90 - 120
120 - 180
> 180

Urban Soil Chemistry Chromium - Slice B



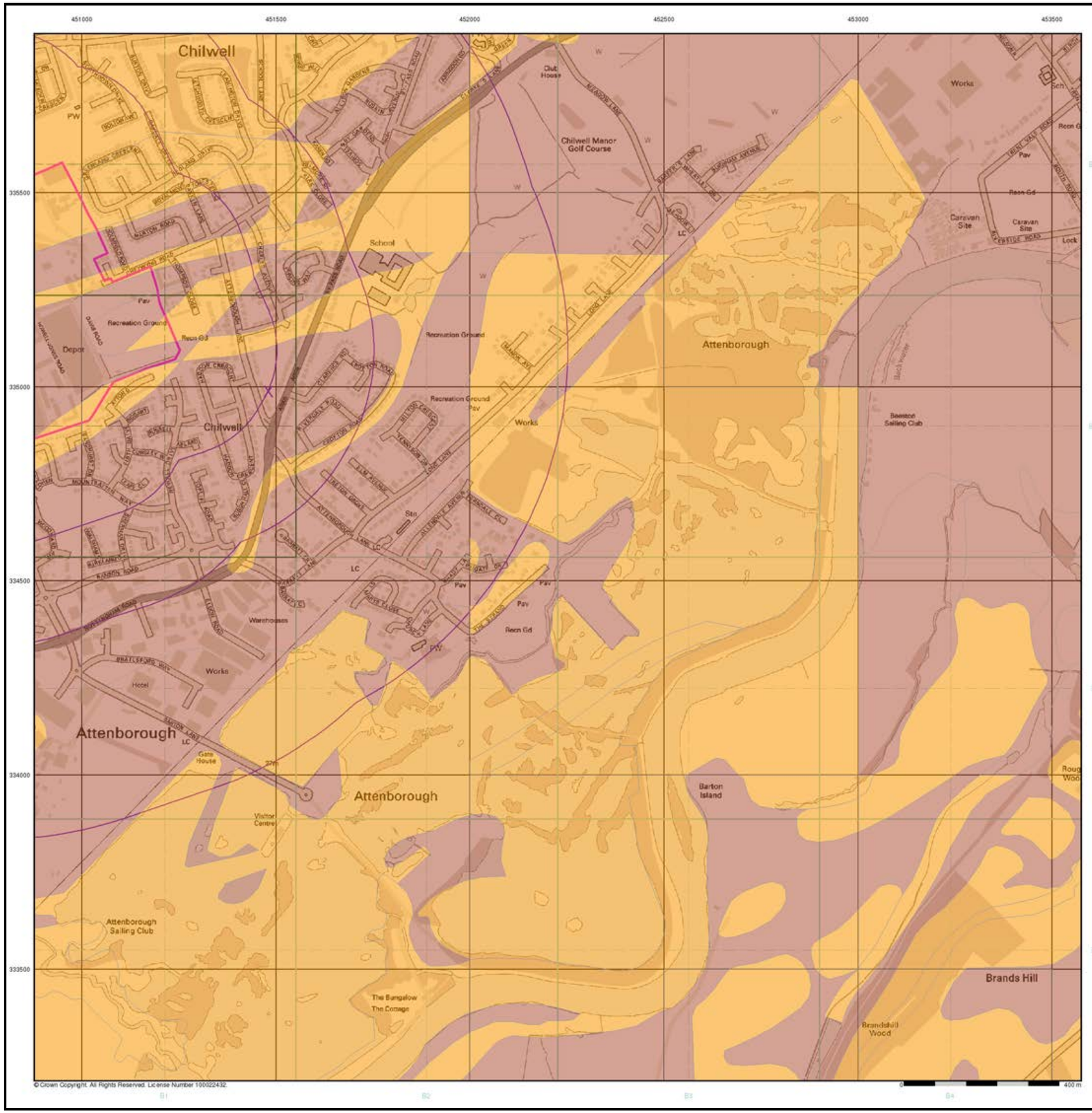
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web: [redacted].uk



General

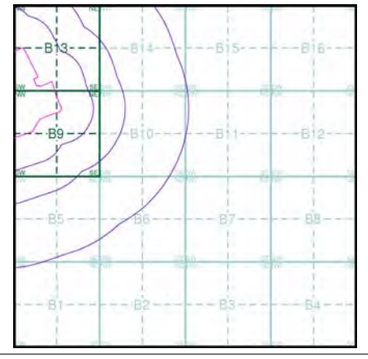
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice B



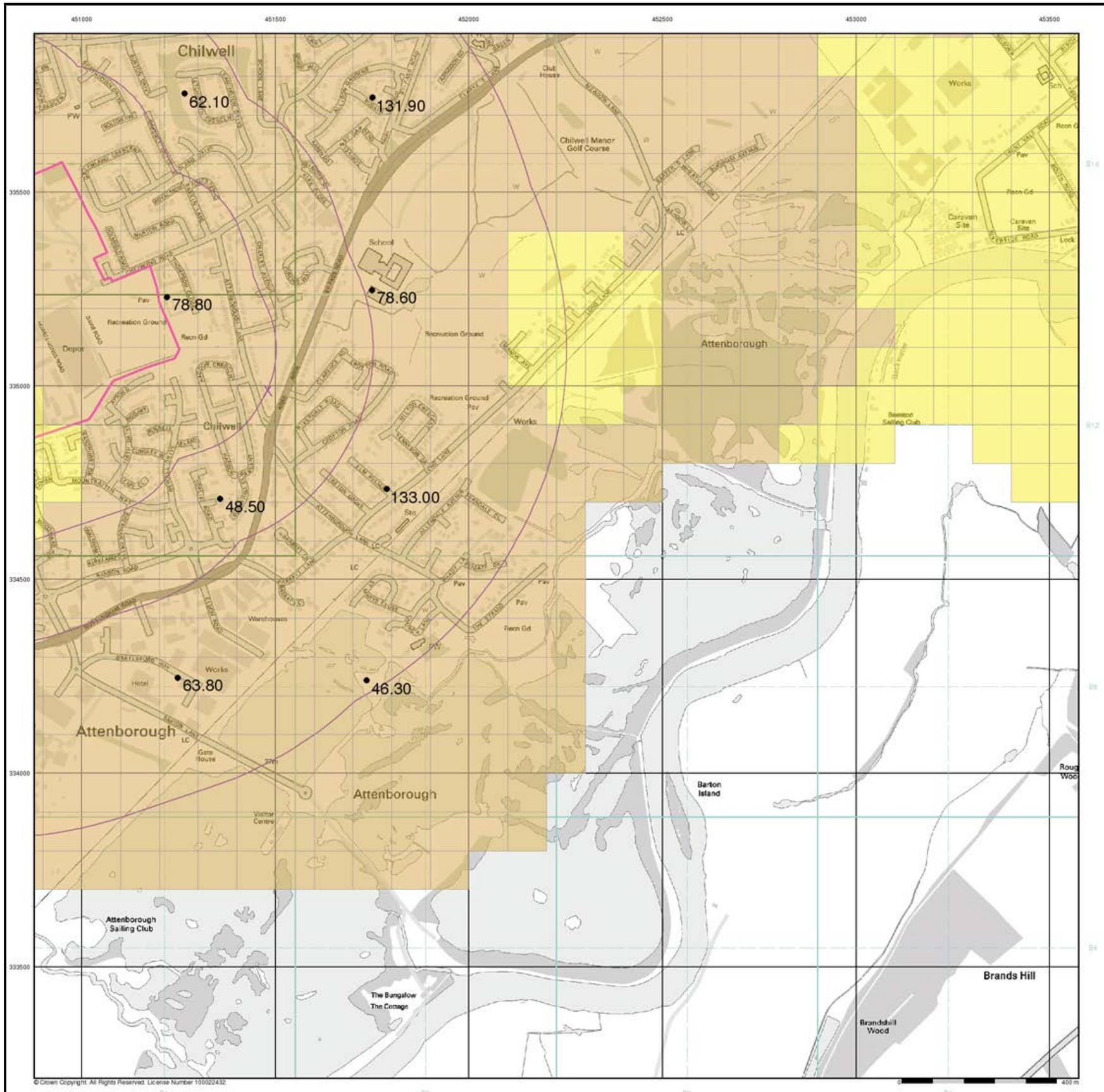
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

Specified Site | Specified Buffer(s) | Bearing Reference Point

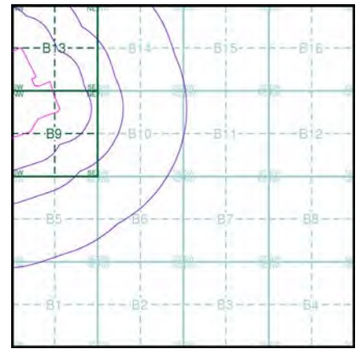
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

< 150
150 - 300
300 - 600
600 - 900
> 900

Urban Soil Chemistry Lead - Slice B



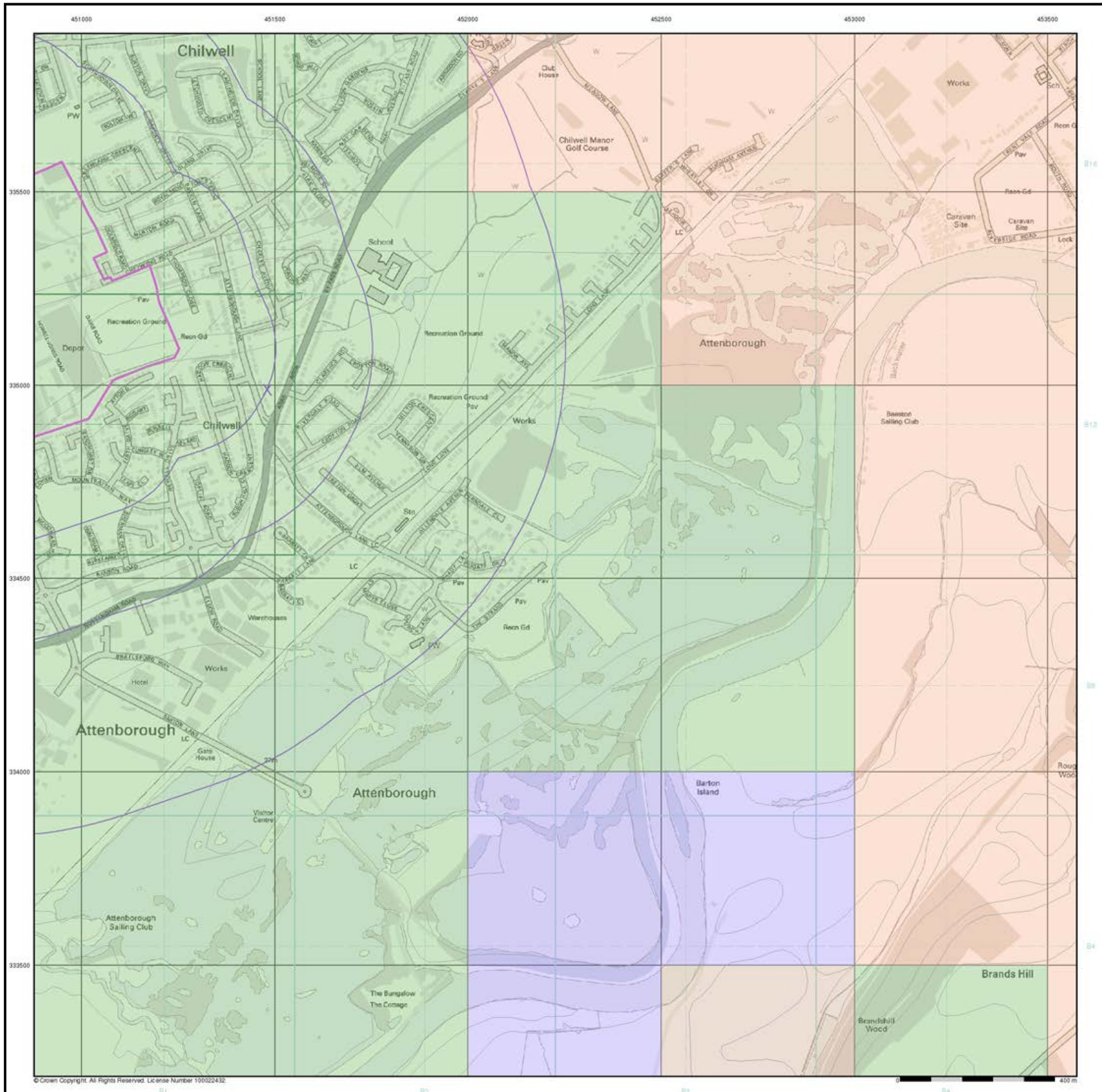
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

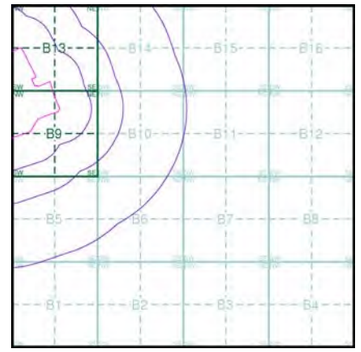
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice B



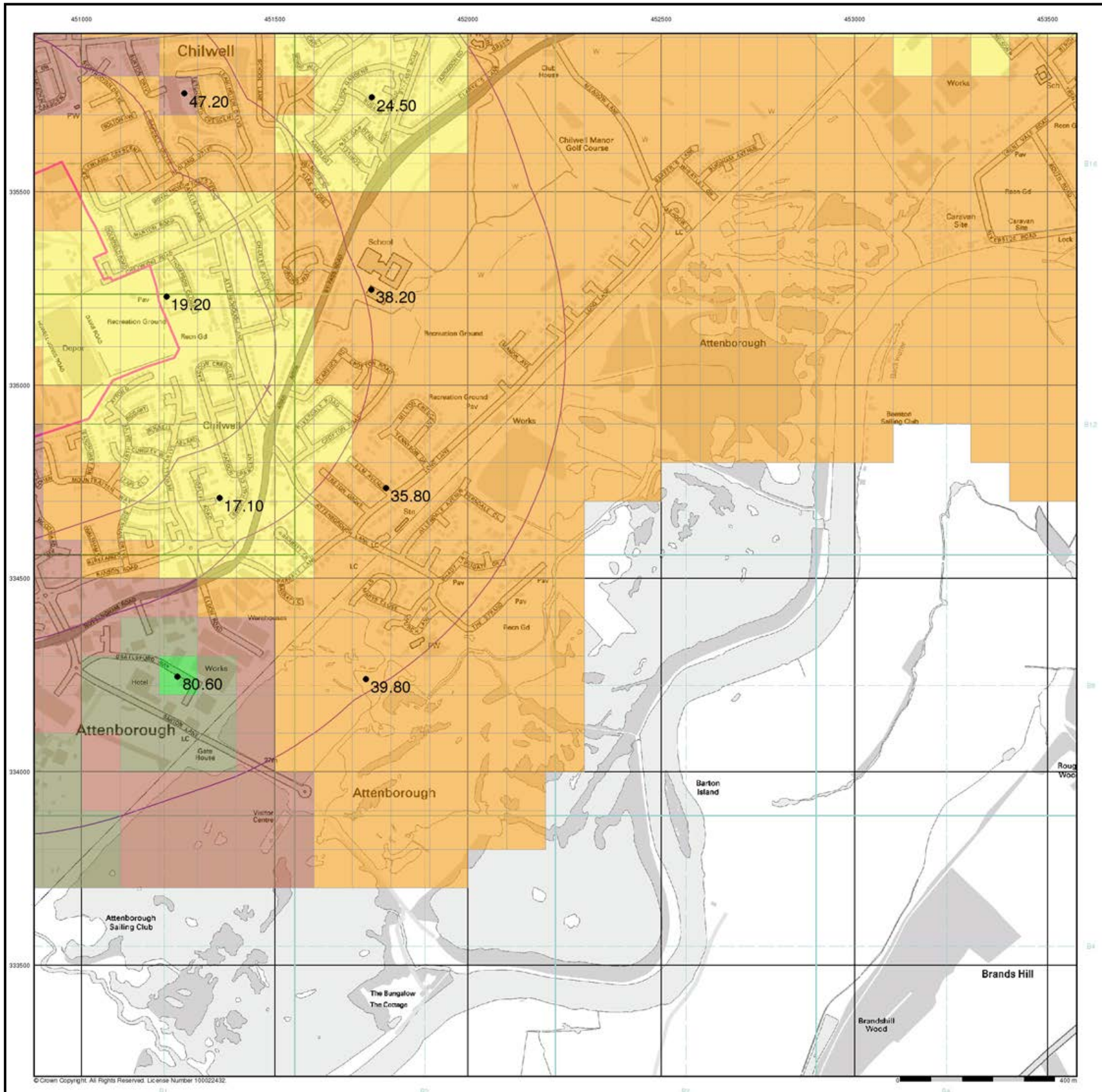
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

Specified Site | Specified Buffer(s) | Bearing Reference Point

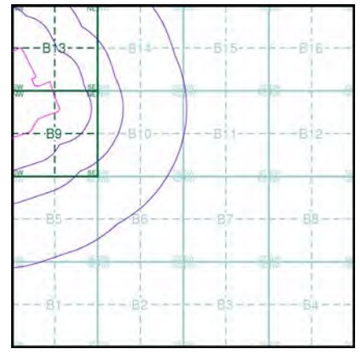
Urban Soil Chemistry Nickel

BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Urban Soil Chemistry Nickel - Slice B



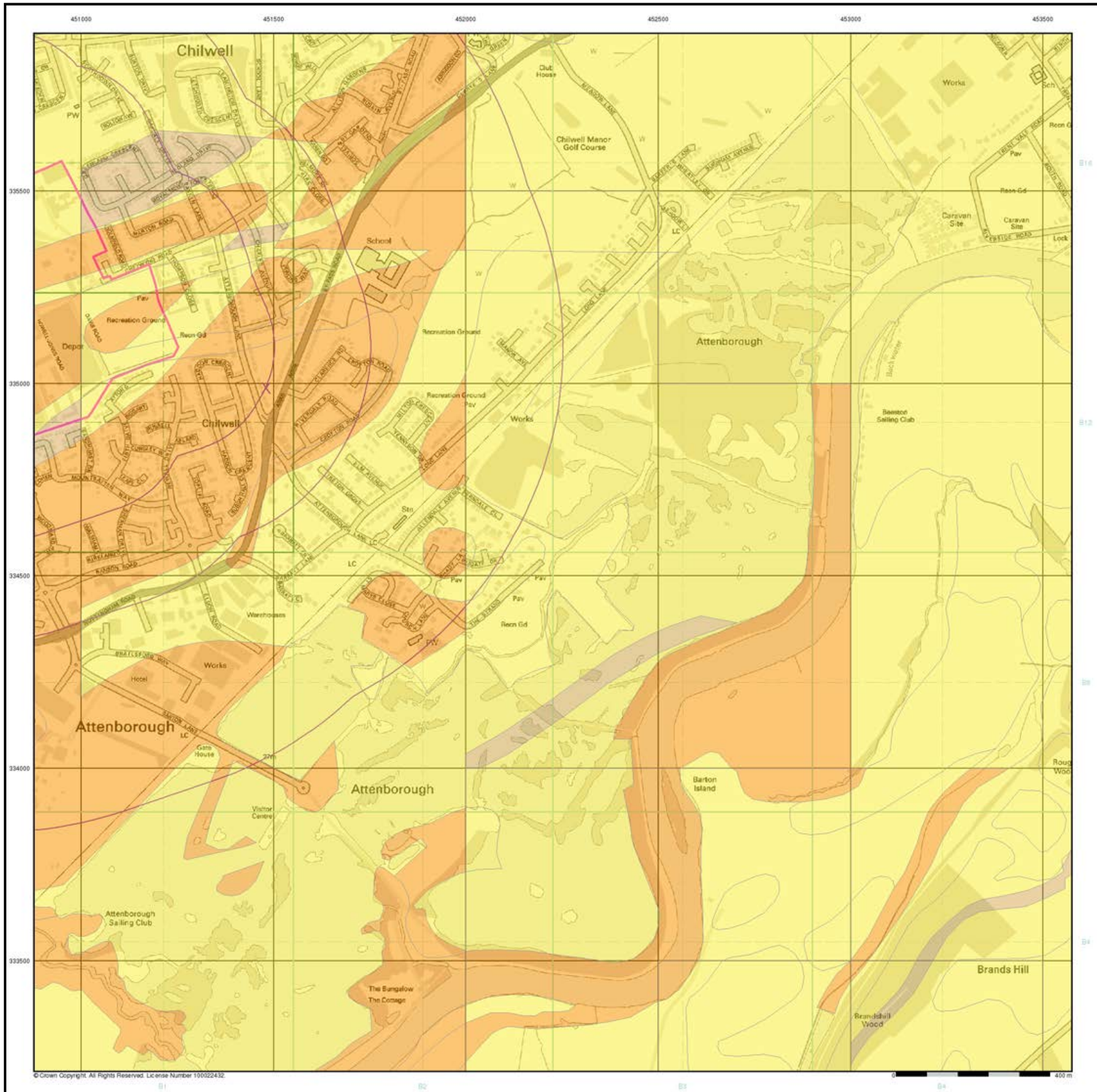
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

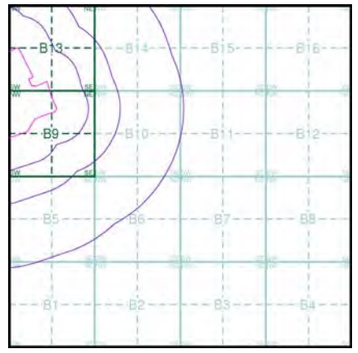
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice B



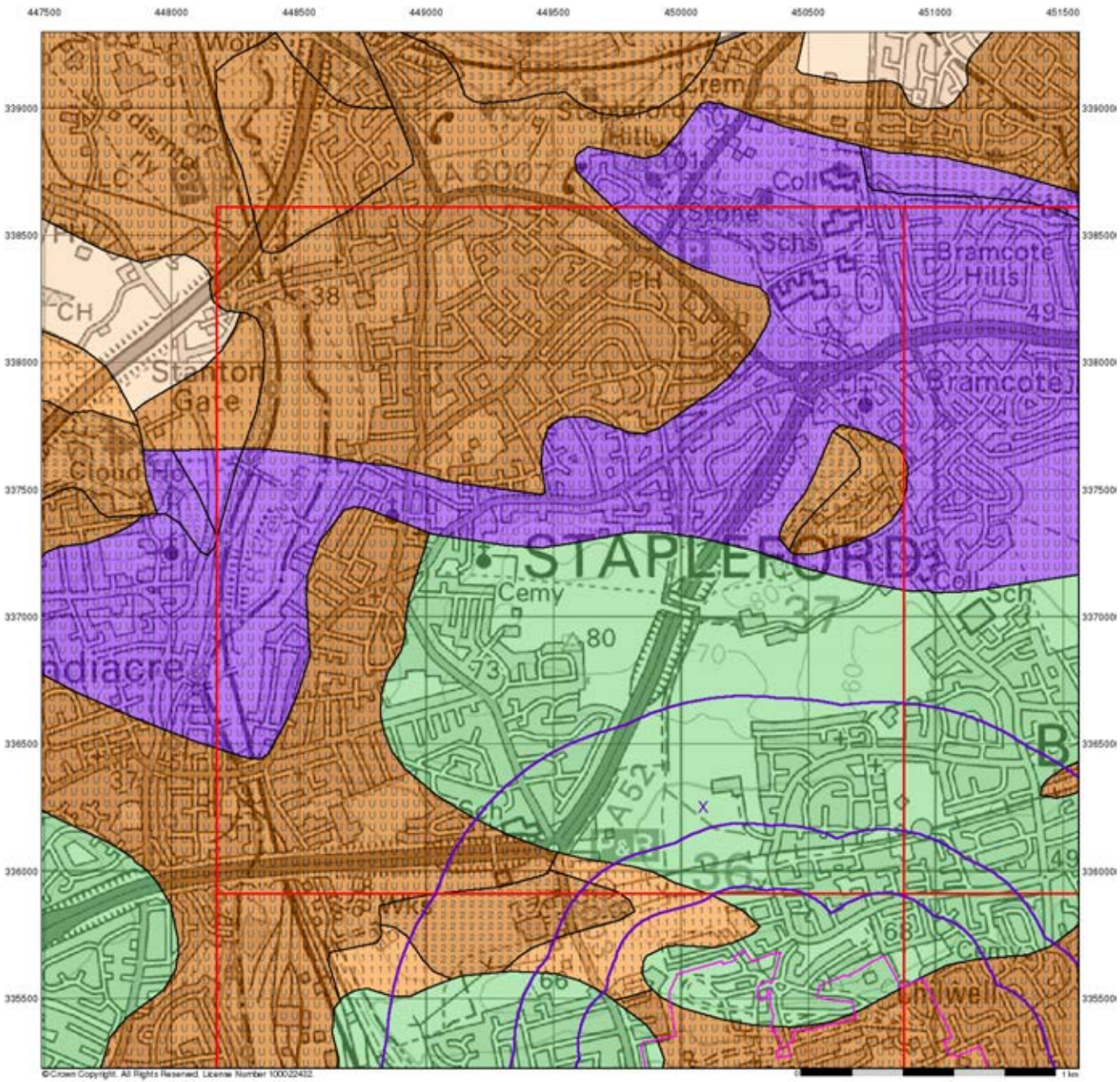
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451480, 334990
Slice:	B
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Groundwater Vulnerability

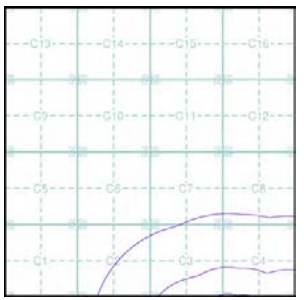
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice C

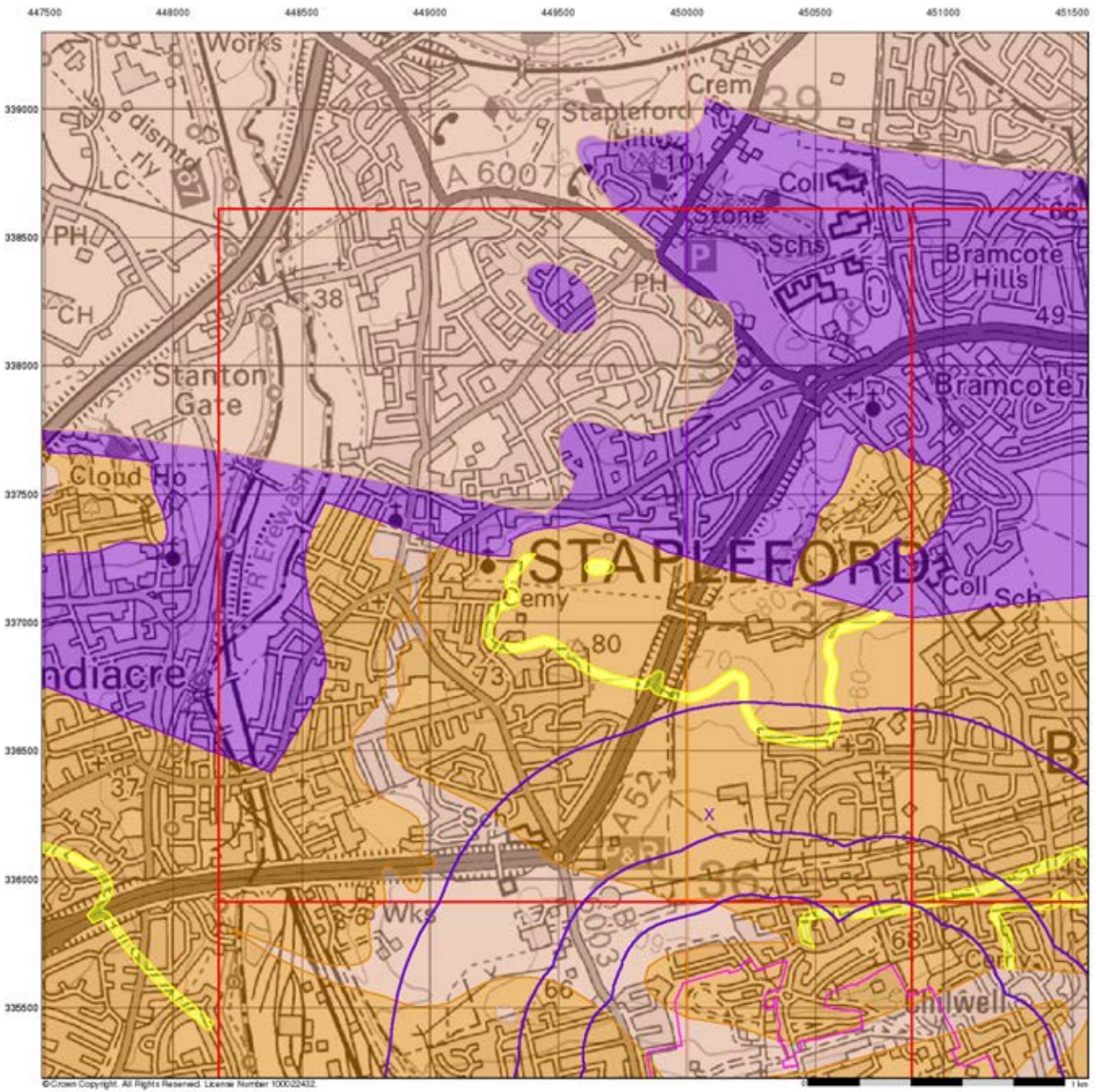


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Bedrock Aquifer Designation

General

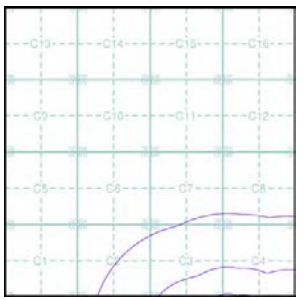
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice C



N

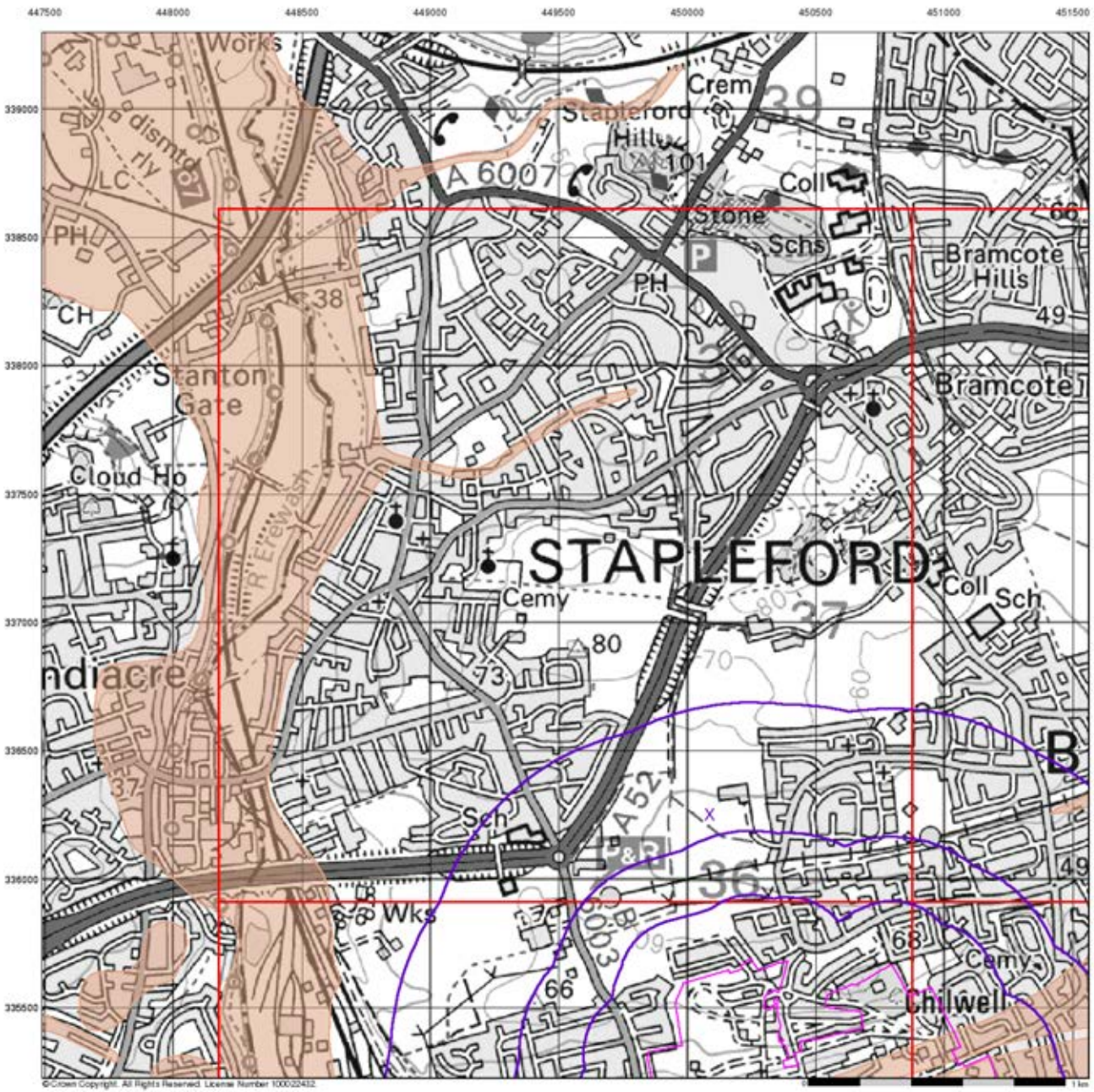
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Superficial Aquifer Designation

General

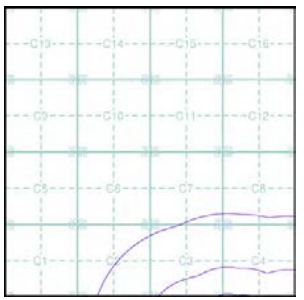
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice C



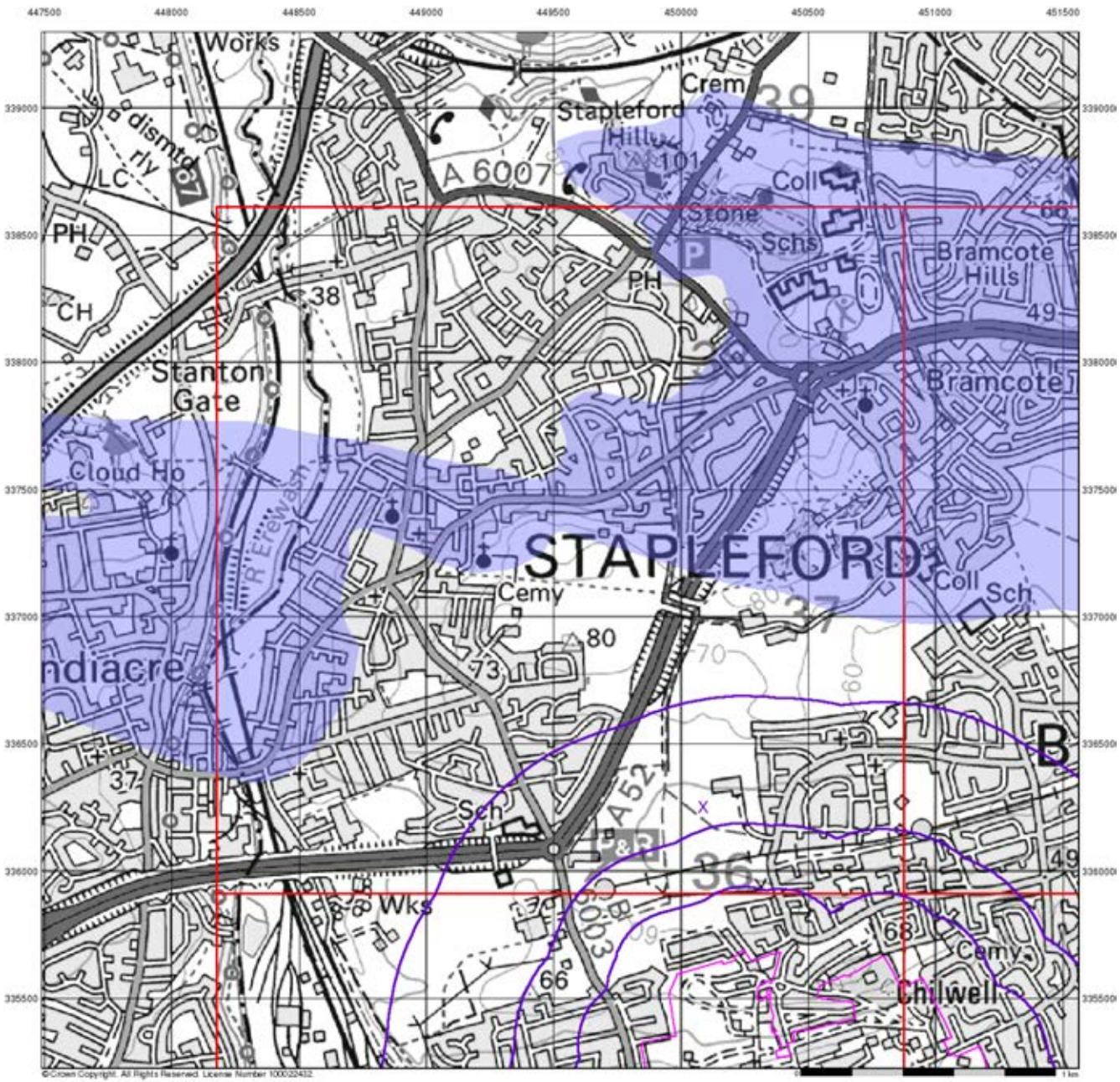
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Source Protection Zones

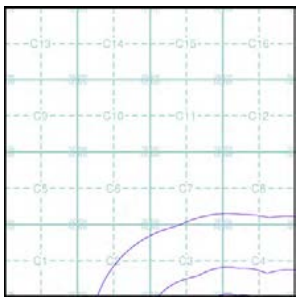
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice C



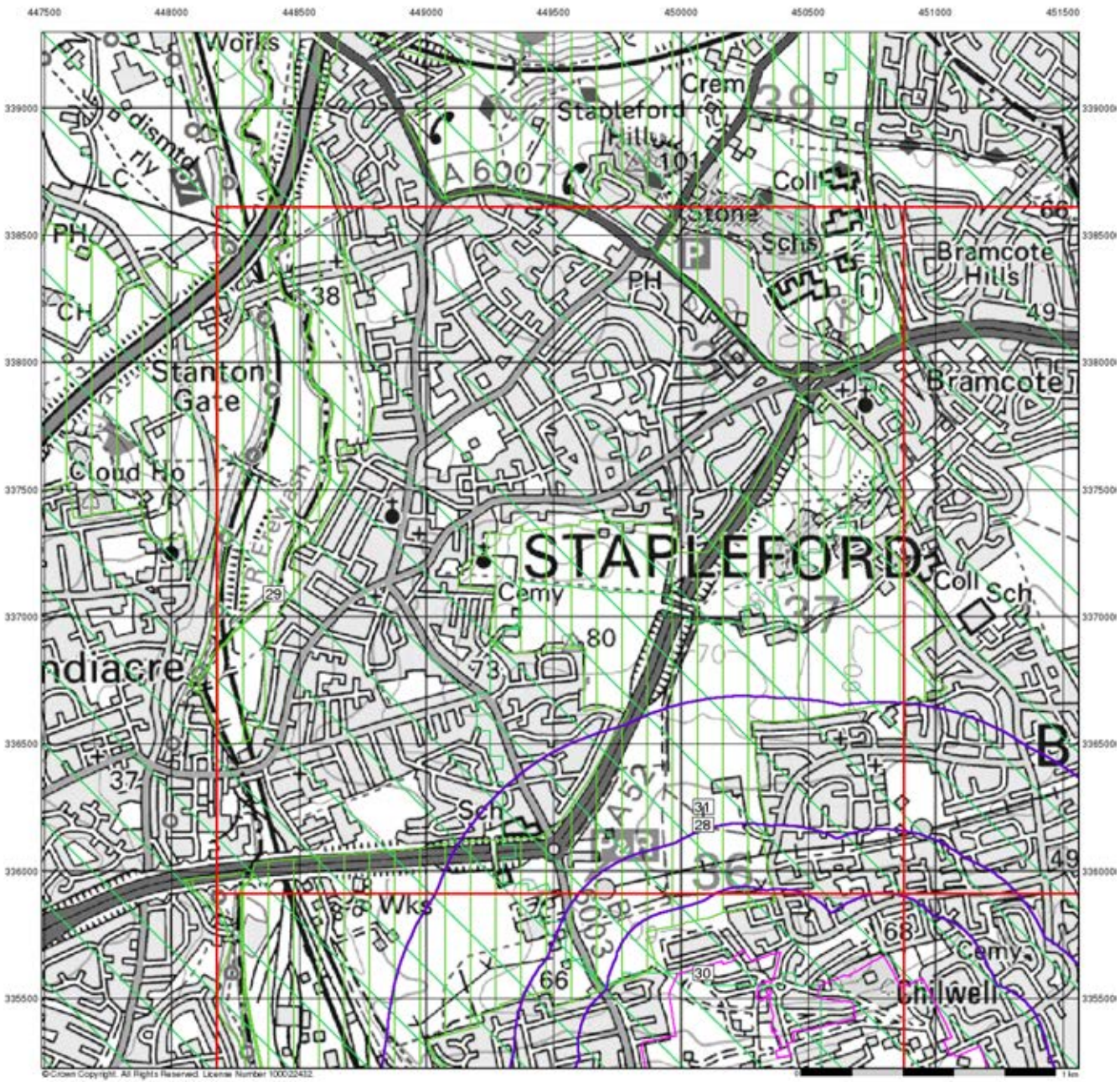
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



pba peterbrett

Sensitive Land Uses

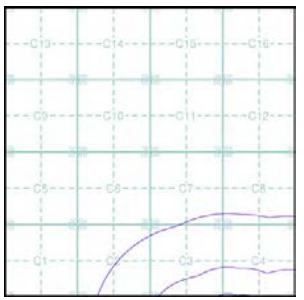
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice C



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

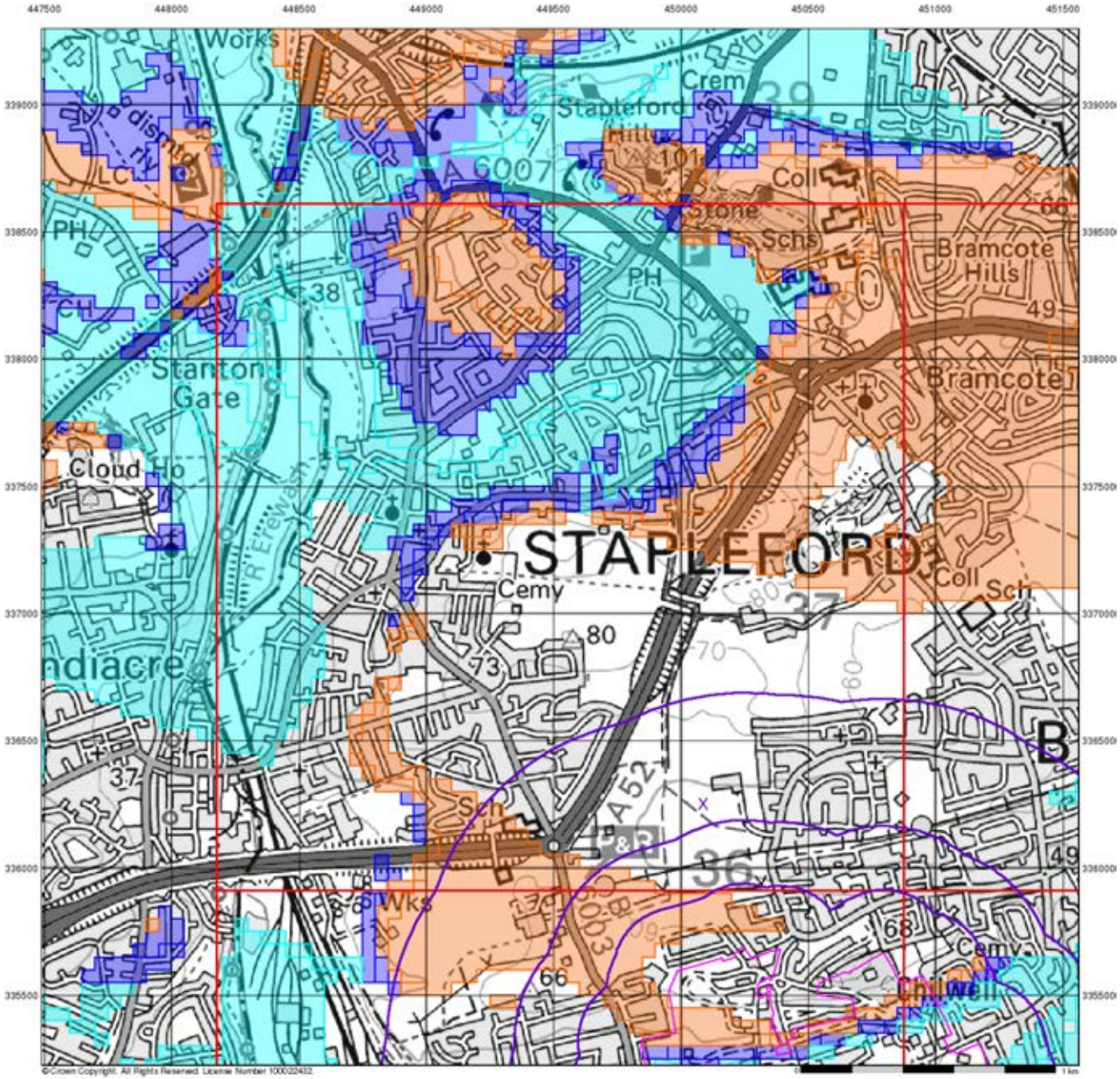
Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:

[redacted]



pba peterbrett

BGS Flood GFS Data

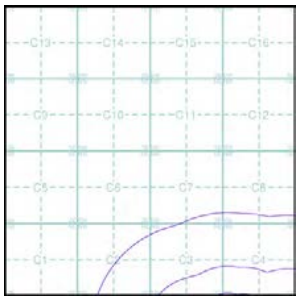
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice C



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
450090, 336250

Slice:
C

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Contents

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites					
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 1	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits					
Former Marshes					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 2			2	7

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 4	Yes	Yes	n/a	n/a
Salt Mining Related Features					
Subsidence Insurance Claims				n/a	n/a
Subsidence Investigations				n/a	n/a
Motion Map Data (1:2,500)					
Motion Map (100m)				n/a	n/a

Report Version v50.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	C3NE (NW)	0	1	450088 336254
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C4SW (SE)	439	-	450339 336143
2	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C4SE (E)	492	-	450627 336126
3	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C3SE (S)	532	-	450101 336200
4	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3SE (SW)	551	-	449958 336159
5	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3NE (NW)	728	-	449906 336372
6	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3NW (W)	786	-	449811 336361
7	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3NW (NW)	789	-	449847 336375
8	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C2SE (W)	849	-	449234 335990
9	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C4NE (NE)	909	-	450702 336568

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
10	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
11	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(E)	0	2	451413 336253
12	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(E)	0	2	451413 336253
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
13	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
14	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
15	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450706 335607
16	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450562 335584
17	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450557 335521
18	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450928 335532
19	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(E)	0	2	451413 336253
20	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450664 335141
21	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(S)	0	2	450172 335142
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450621 335168
22	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(S)	0	2	450000 335720
23	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(SW)	0	2	449615 335528
24	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SE (S)	0	2	450000 335918
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	450460 335869
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SE (S)	64	2	450083 335925

Historical Map List

No Historical Land Use information available.

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Nottinghamshire	041_SE	1884
Derbyshire	051_NW	1884
Nottinghamshire	041_NE	1886
Nottinghamshire	041_NW	1886
Derbyshire	051_SW	1889
Nottinghamshire	041_NE	1901
Nottinghamshire	041_NW	1901
Nottinghamshire	041_SE	1901
Nottinghamshire	041_SW	1901
Derbyshire	051_NW	1901
Derbyshire	051_SW	1901
Nottinghamshire	041_NW	1920
Nottinghamshire	041_NE	1921
Nottinghamshire	041_SE	1921
Nottinghamshire	041_SW	1921
Derbyshire	051_NW	1921
Derbyshire	051_SW	1921
Nottinghamshire	041_NE	1938
Derbyshire	051_NW	1938
Derbyshire	051_SW	1938
Nottinghamshire	041_SE	1939
Ordnance Survey Plan	SK53NW	1955
Ordnance Survey Plan	SK43NE	1956
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SK53NW	1984
Ordnance Survey Plan	SK43NE	1985

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Man Made Mining Cavities Peter Brett Associates	November 2016	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2016	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	September 2016	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Subsidence Insurance Claims SP Property Services	November 2016	Quarterly
Subsidence Investigations CET Structures Ltd	November 2016	Quarterly

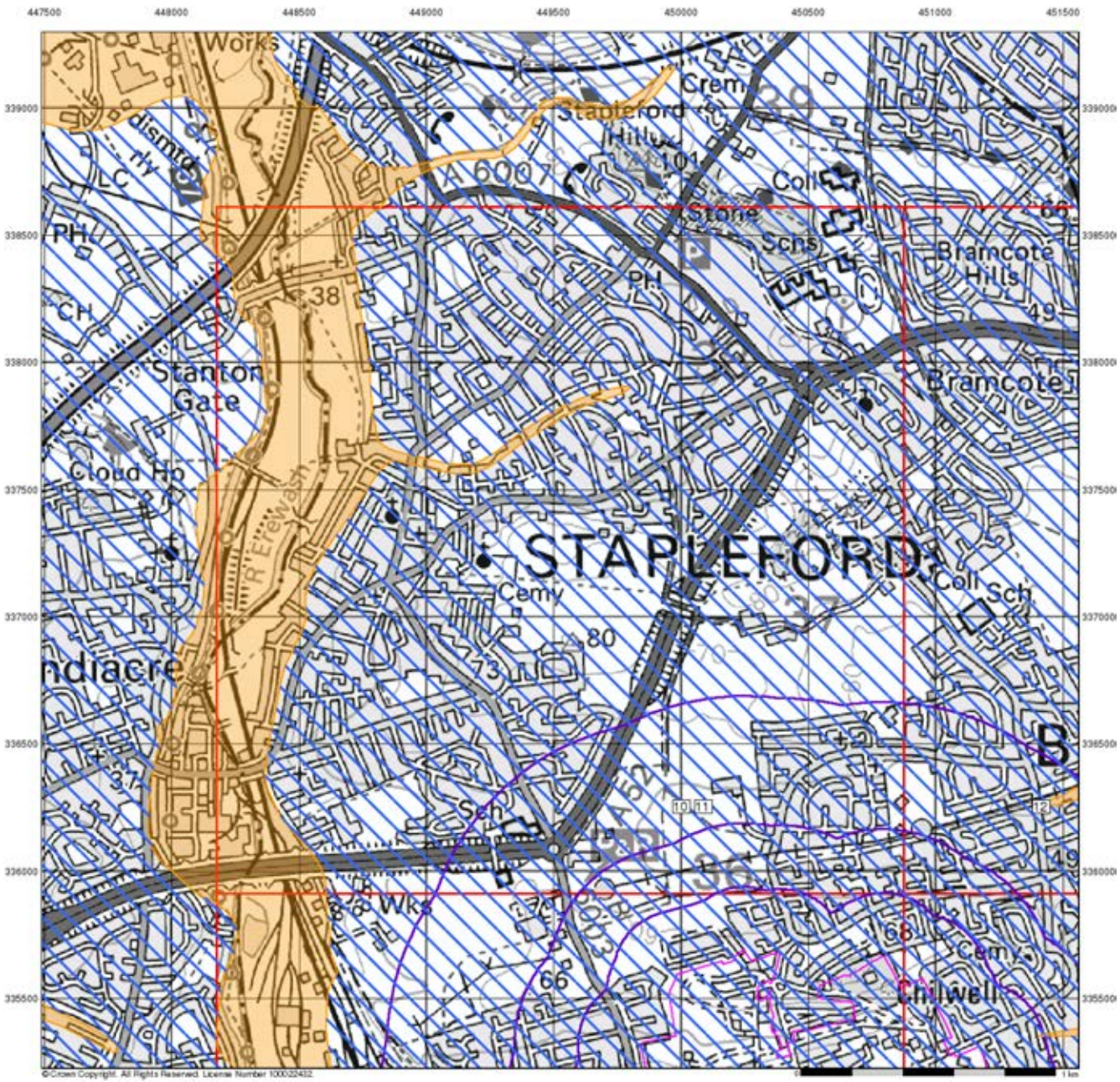
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	[redacted]
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

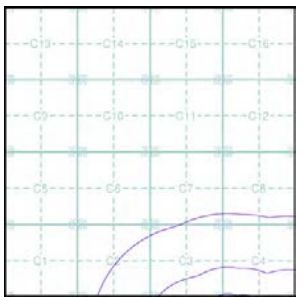
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice C



N

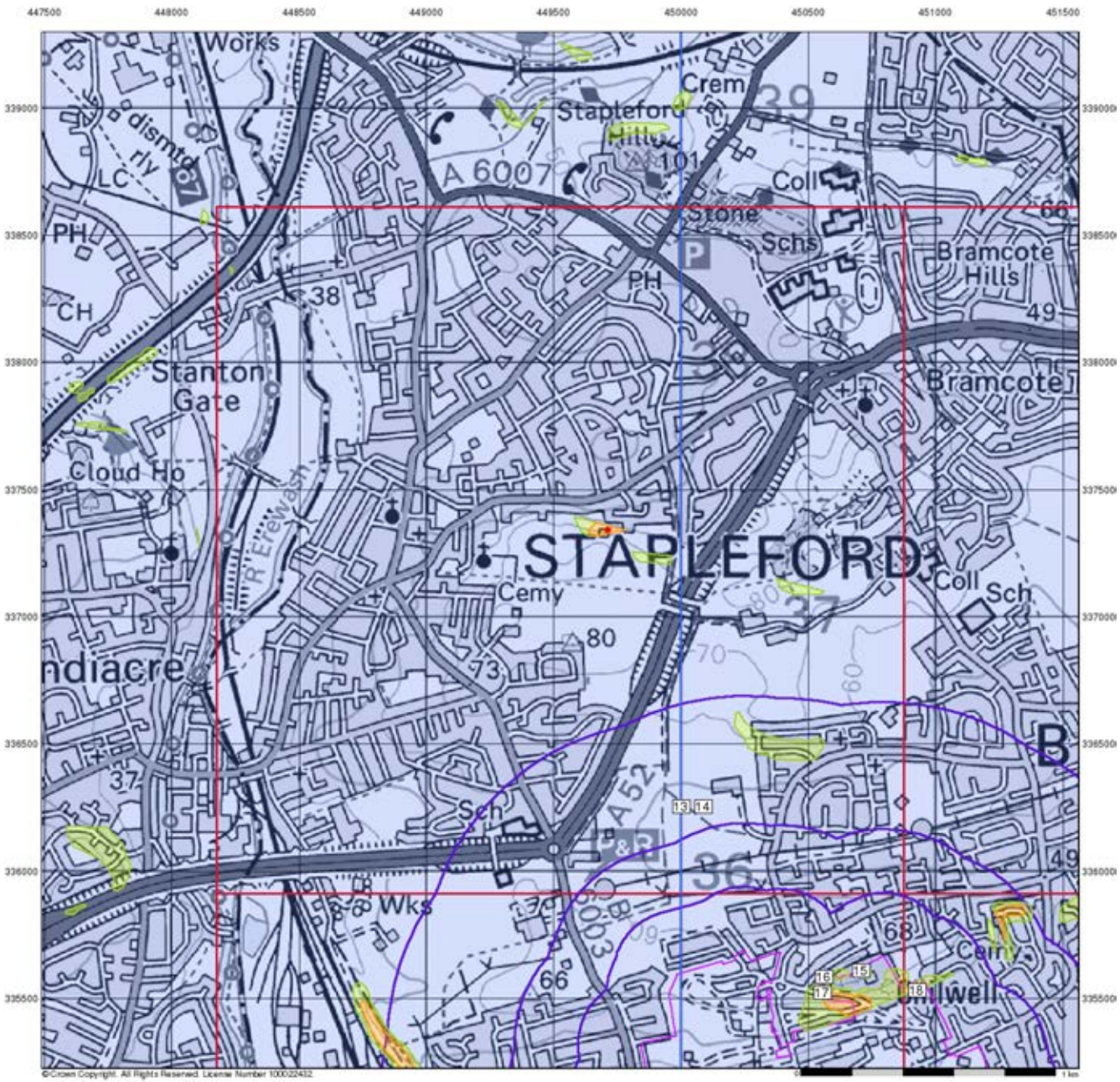
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

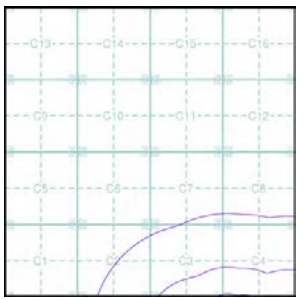
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice C

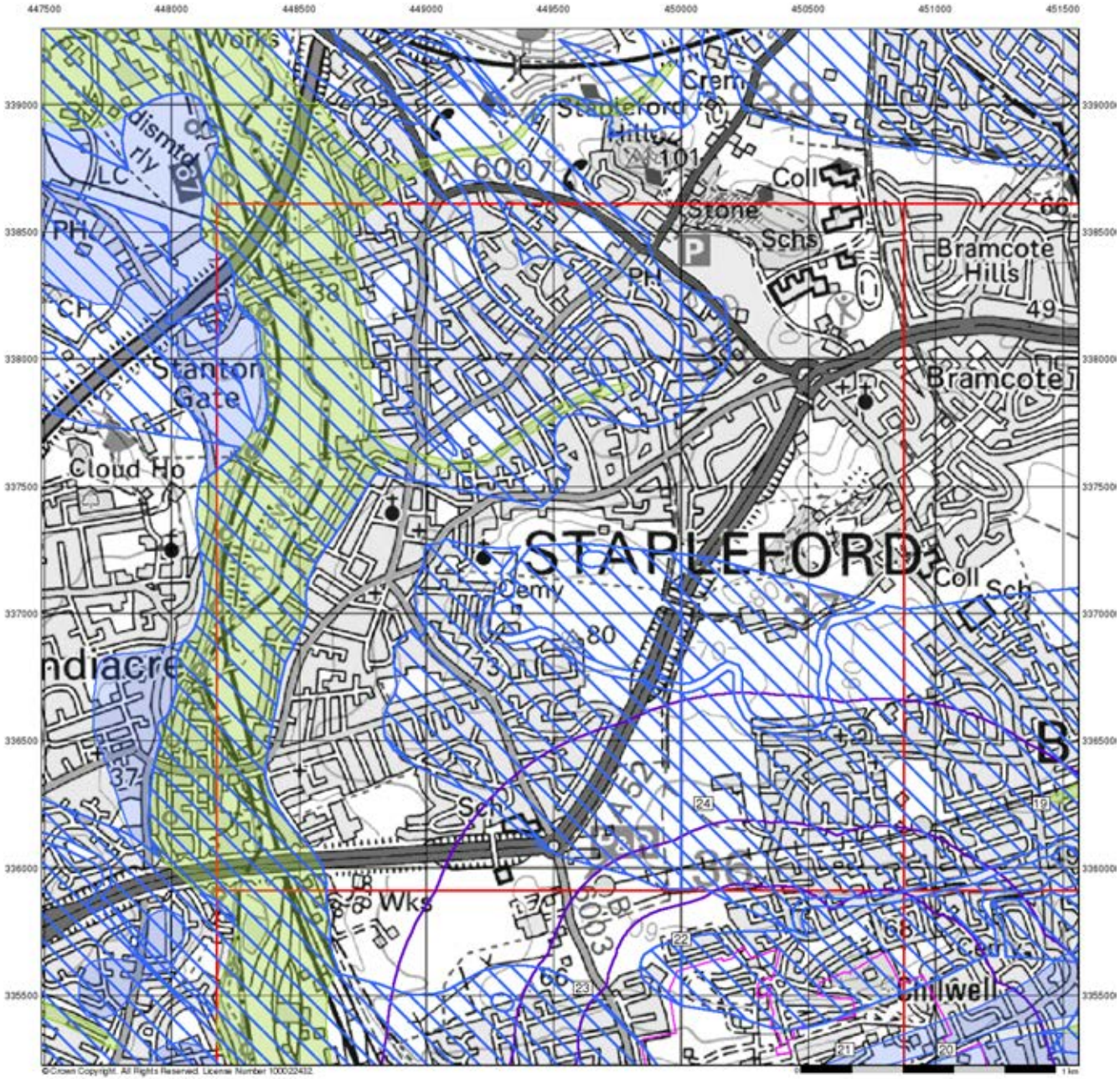


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

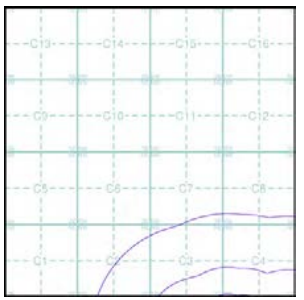
Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice C



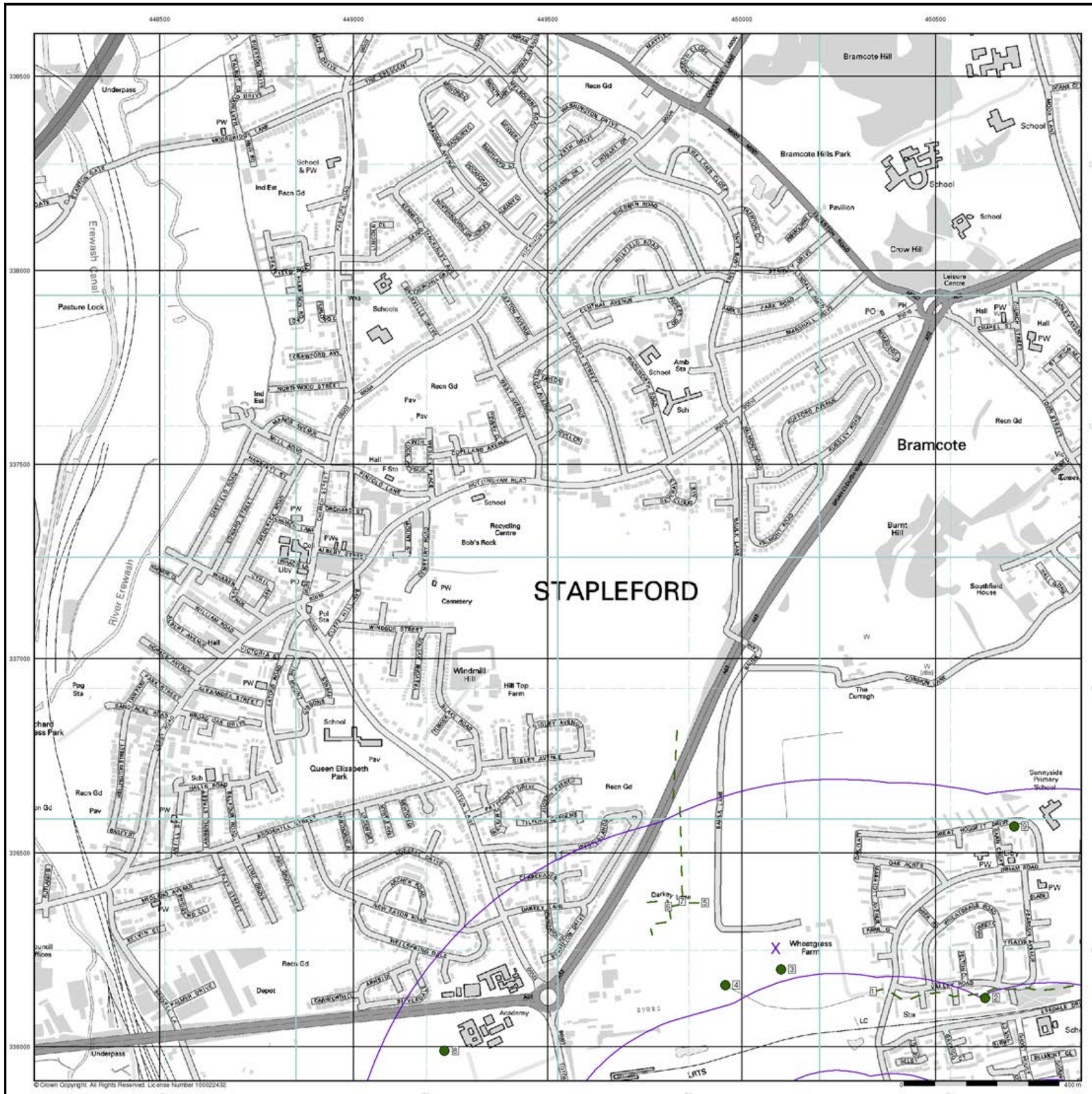
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts	◆	▬	▨
Disturbed Ground	◆	▬	▨
General Quarrying	◆	▬	▨
Heap, unknown constituents	◆	▬	▨
Mineral Railway	◆	▬	▨
Mining and Quarrying General	◆	▬	▨
Mining of Coal & Lignite	◆	▬	▨
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits	◆	▬	▨

Historical Land Use

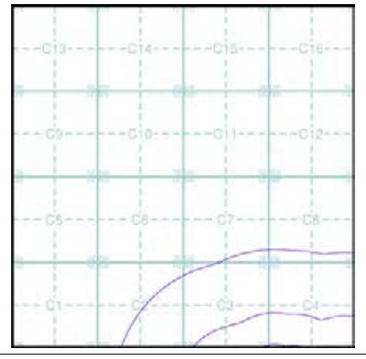
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●	▬	▨
Potentially Infilled Land (Water)	●	▬	▨
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice C



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
450090, 336250

Slice:
C

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 3				2
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 3				1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 3			Yes	
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
Substantiated Pollution Incident Register					
River Quality Chemistry Sampling Points					
Water Abstractions	pg 3				(*2)
Water Industry Act Referrals					
Groundwater Vulnerability	pg 4	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines					n/a
Detailed River Network Offline Drainage	pg 5			Yes	n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 6	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)	pg 6			2	7
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 7	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 7	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry	pg 8				Yes
BGS Urban Soil Chemistry Averages	pg 9	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability	pg 9	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards				n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 10	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 11			2	6
Fuel Station Entries	pg 11				1
Points of Interest - Commercial Services	pg 11				3
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production					
Points of Interest - Public Infrastructure	pg 12				4
Points of Interest - Recreational and Environmental	pg 12			6	
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 13		1		1
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 13	2			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	2	450900 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450950 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	451000 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	2	450650 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450850 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450900 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(S)	0	2	450000 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	0	2	450950 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(S)	0	2	450150 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450500 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450550 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	0	2	450650 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	2	450500 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	2	450600 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450700 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	2	450800 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	0	2	450850 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	449950 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	450000 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	450088 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	450300 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	0	2	450500 335300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	450088 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	2	450900 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	2	450000 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	C3SE (SW)	0	2	449900 335950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	2	450350 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(E)	0	2	451550 335700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	2	450088 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	10	2	451000 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	55	2	451050 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	62	2	450088 335900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	77	2	451050 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	100	2	451100 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	121	2	451100 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	166	2	451150 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	189	2	451150 335650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	212	2	451200 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	233	2	451200 335650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	278	2	451250 335650

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: C Cregory & Son Ltd Property Type: Not Given Location: The Rose Gardens, STAPLEFORD, Nottinghamshire Authority: Environment Agency, Midlands Region Catchment Area: Not Given Reference: 3/28/61/0547/1 Permit Version: Not Supplied Effective Date: Not Supplied Issued Date: 21st March 1967 Revocation Date: Not Supplied Discharge Type: Sewage Effluent Discharge Environment: Groundwater Receiving Water: Not Supplied **Status: Not Supplied** Positional Accuracy: Located by supplier to within 100m	C3SW (SW)	560	3	449600 336000
2	**Discharge Consents** Operator: N C & P K Sissons Property Type: DOMESTIC PROPERTY (SINGLE) (INCL FARM HOUSE) Location: 225 Toton Lane, Stapleford, Nottingham Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: Wq/72/3565 Permit Version: 1 Effective Date: 16th December 1982 Issued Date: 16th December 1982 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Land/Soakaway Receiving Water: Underground Strata **Status: Pre National Rivers Authority Legislation where issue date < 01/09/1989** Positional Accuracy: Located by supplier to within 100m	C3SW (W)	719	3	449650 336230
3	**Local Authority Pollution Prevention and Controls** Name: Toton Lane Services Location: 181 Toton Lane, Stapleford, NOTTINGHAM, Nottinghamshire, NG9 7JD Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 15/98 Dated: 31st December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	C2NE (W)	983	4	449398 336382
	Nearest Surface Water Feature	C4SW (SE)	306	-	450274 336016
	Water Abstractions Operator: William S Kenyon Ltd Licence Number: 03/28/61/0048 Permit Version: 100 Location: Bessell Lane Works,Stapleford - Borehole Authority: Environment Agency, Midlands Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Bessell Lane Works,Stapleford - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	C1SW (W)	1557	3	448480 336070

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: William S Kenyon Ltd Licence Number: 03/28/61/0048 Permit Version: 100 Location: Bessell Lane Works,Stapleford - Borehole Authority: Environment Agency, Midlands Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Bessell Lane Works,Stapleford - Borehole Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C1SW (W)	1557	3	448480 336070
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	(S)	0	3	449889 335534
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	(SW)	0	3	449696 335521
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	C3NE (NW)	0	3	450088 336254
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	C3SE (S)	0	2	450000 335918
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(S)	0	2	450000 335461
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	(SW)	0	2	449615 335528
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	(S)	0	2	450000 335720
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	C3NE (NW)	0	2	450088 336254
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	(S)	0	2	450297 335228
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(S)	0	2	450172 335142
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences None				
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
	Detailed River Network Lines None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Detailed River Network Offline Drainage** River Type: Tertiary River Hydrographic Area: D004	C3SE (SW)	412	3	450020 336124

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Broxtowe Borough Council - Has no landfill data to supply		0	4	450088 336254
	Local Authority Landfill Coverage Name: Nottinghamshire County Council - Has no landfill data to supply		0	5	450088 336254
5	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C4SW (SE)	439	-	450339 336143
6	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C4SE (E)	492	-	450627 336126
7	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C3SE (S)	532	-	450101 336200
8	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3SE (SW)	551	-	449958 336159
9	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3NE (NW)	728	-	449906 336372
10	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3NW (W)	786	-	449811 336361
11	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C3NW (NW)	789	-	449847 336375
12	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	C2SE (W)	849	-	449234 335990
13	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	C4NE (NE)	909	-	450702 336568

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	(SW)	0	2	449916 335892
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	C3NE (NW)	0	2	450088 336254
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	C3NE (NW)	0	2	450088 336254
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: <15 mg/kg	C3SE (S)	30	2	450000 335918
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	C3SE (S)	308	2	450000 336000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	C3NE (W)	387	2	450000 336254
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	C3SW (SW)	498	2	449697 336000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	C2SW (W)	867	2	449000 336000
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450755, 336250 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 19.50 mg/kg Cadmium Measured Concentration: 1.40 mg/kg Chromium Measured Concentration: 70.40 mg/kg Lead Measured Concentration: 243.70 mg/kg Nickel Measured Concentration: 59.70 mg/kg	C4NE (E)	587	2	450755 336250
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 450330, 336320 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 9.90 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 75.90 mg/kg Lead Measured Concentration: 51.00 mg/kg Nickel Measured Concentration: 34.30 mg/kg	C4NW (E)	637	2	450330 336320
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449750, 336250 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 13.40 mg/kg Cadmium Measured Concentration: 0.10 mg/kg Chromium Measured Concentration: 77.10 mg/kg Lead Measured Concentration: 58.00 mg/kg Nickel Measured Concentration: 30.90 mg/kg	C3NW (W)	698	2	449750 336250
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 449250, 336245 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 13.30 mg/kg Cadmium Measured Concentration: 0.30 mg/kg Chromium Measured Concentration: 75.70 mg/kg Lead Measured Concentration: 82.20 mg/kg Nickel Measured Concentration: 36.30 mg/kg	C2SE (W)	982	2	449250 336245

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Nottingham Count Id: 635 Arsenic Minimum Concentration: 4.00 mg/kg Arsenic Average Concentration: 13.00 mg/kg Arsenic Maximum Concentration: 86.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 0.80 mg/kg Cadmium Maximum Concentration: 14.20 mg/kg Chromium Minimum Concentration: 22.00 mg/kg Chromium Average Concentration: 61.00 mg/kg Chromium Maximum Concentration: 182.00 mg/kg Lead Minimum Concentration: 13.00 mg/kg Lead Average Concentration: 155.00 mg/kg Lead Maximum Concentration: 1810.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 30.00 mg/kg Nickel Maximum Concentration: 158.00 mg/kg	C3NE (NW)	0	2	450088 336254
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	C3NE (NW)	0	-	450088 336254
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SE (S)	0	2	450000 335918
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SE (S)	64	2	450083 335925
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	C3NE (W)	0	2	450000 336254
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	C3NE (NW)	0	2	450088 336254

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Contemporary Trade Directory Entries** Name: Chilwell Building & Roofing Location: 33, Eskdale Drive, Beeston, Nottingham, NG9 5NA Classification: Cladding Suppliers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	C4SE (E)	415	-	450644 336050
15	**Contemporary Trade Directory Entries** Name: Bennett Damp Proofing & Woodworm Control Location: 51, Valley Road, Beeston, Nottingham, NG9 4GG Classification: Damp & Dry Rot Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	C4SW (E)	444	-	450414 336124
16	**Contemporary Trade Directory Entries** Name: Mr Mobility Location: 251, Toton Lane, Stapleford, Nottingham, Nottinghamshire, NG9 7JA Classification: Disability Equipment - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	C3SW (W)	635	-	449557 336063
17	**Contemporary Trade Directory Entries** Name: S W Cox Location: 130, Inham Road, Beeston, Nottingham, NG9 4HX Classification: Waste Disposal Services **Status: Active** Positional Accuracy: Automatically positioned to the address	C4NW (NE)	784	-	450534 336450
18	**Contemporary Trade Directory Entries** Name: Esso Location: 181, Toton Lane, Stapleford, Nottingham, NG9 7JD Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	C2NE (W)	983	-	449398 336383
19	**Contemporary Trade Directory Entries** Name: Elles Ironing Location: 70, New Eaton Road, Stapleford, Nottingham, NG9 7EN Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	C2NE (W)	986	-	449283 336286
20	**Contemporary Trade Directory Entries** Name: Crescendo Fireworks Location: 26, Westerlands, Stapleford, Nottingham, NG9 7JG Classification: Firework Stockists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	C3NW (NW)	988	-	449583 336496
20	**Contemporary Trade Directory Entries** Name: Crescendo Fireworks Location: 26, Westerlands, Stapleford, Nottingham, Nottinghamshire, NG9 7JG Classification: Firework Stockists **Status: Active** Positional Accuracy: Automatically positioned to the address	C3NW (NW)	988	-	449583 336496
21	**Fuel Station Entries** Name: Rss Toton Lane Location: 181, Toton Lane, Stapleford, Nottingham, NG9 7JD Brand: Esso Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	C2NE (W)	983	-	449398 336382
22	**Points of Interest - Commercial Services** Name: S W Cox Location: 130 Inham Road, Beeston, Nottingham, NG9 4HX Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	C4NW (NE)	783	6	450533 336450
23	**Points of Interest - Commercial Services** Name: Rss Toton Lane Location: 181, Toton Lane, Stapleford, Nottingham, NG9 7JD Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	C2NE (W)	983	6	449398 336382
23	**Points of Interest - Commercial Services** Name: Car Wash Location: 181 Toton Lane, Stapleford, Nottingham, NG9 7JD Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	C2NE (W)	983	6	449398 336382

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	**Points of Interest - Public Infrastructure** Name: Esso Location: 181 Toton Lane, Stapleford, Nottingham, NG9 7JD Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	C2NE (W)	983	6	449398 336382
24	**Points of Interest - Public Infrastructure** Name: Esso Location: 181 Toton Lane, Stapleford, Nottingham, NG9 7JD Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	C2NE (W)	983	6	449398 336383
24	**Points of Interest - Public Infrastructure** Name: Toton Lane Service Station Location: 181 Toton Lane, Stapleford, Nottingham, NG9 7JD Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	C2NE (W)	983	6	449398 336383
24	**Points of Interest - Public Infrastructure** Name: Rss Toton Lane Location: 181 Toton Lane, Stapleford, Nottingham, NG9 7JD Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	C2NE (W)	983	6	449398 336382
25	**Points of Interest - Recreational and Environmental** Name: Playground Location: Gayrigg Court, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	C4SW (SE)	336	6	450503 335997
25	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	C4SW (SE)	340	6	450510 335998
26	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	C4SE (SE)	397	6	450611 336016
26	**Points of Interest - Recreational and Environmental** Name: Playground Location: Gayrigg Court, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	C4SE (SE)	398	6	450608 336016
27	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	C4SE (E)	459	6	450862 336119
27	**Points of Interest - Recreational and Environmental** Name: Playground Location: Eskdale Drive, NG9 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	C4SE (E)	461	6	450863 336121

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	C3NE (NW)	83	7	450088 336254
29	**Areas of Adopted Green Belt** Authority: Erewash Borough Council Plan Name: Proposal Map **Status: Adopted** Plan Date: 6th March 2014	C5NW (NW)	574	8	448402 337089
30	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	(S)	0	9	450088 335600
31	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	C3NE (NW)	0	9	450088 336254

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Erewash Borough Council - Environmental Health Department	August 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	January 2015	Annual Rolling Update
Broxtowe Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
Discharge Consents		
Environment Agency - Midlands Region	October 2016	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Midlands Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Midlands Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Midlands Region	January 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Erewash Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Midlands Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Midlands Region	July 2015	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Midlands Region	March 2013	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Midlands Region - East Area	January 2017	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	January 2017	Quarterly
Water Abstractions		
Environment Agency - Midlands Region	October 2016	Quarterly
Water Industry Act Referrals		
Environment Agency - Midlands Region	January 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified

Agency & Hydrological	Version	Update Cycle
Superficial Aquifer Designations British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones Environment Agency - Head Office	October 2016	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2016	Quarterly
Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	September 2014	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Midlands Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Midlands Region - East Area	August 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	August 2016	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Midlands Region - East Area	October 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	October 2016	Quarterly
Local Authority Landfill Coverage		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Derbyshire County Council	May 2000	Not Applicable
Erewash Borough Council - Environmental Health Department	May 2000	Not Applicable
Nottingham City Council	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Derbyshire County Council	May 2000	Not Applicable
Erewash Borough Council - Environmental Health Department	May 2000	Not Applicable
Nottingham City Council	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites		
Health and Safety Executive	September 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Erewash Borough Council	April 2015	Annual Rolling Update
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Derbyshire County Council	February 2016	Annual Rolling Update
Nottingham City Council - Planning Information Department	February 2016	Annual Rolling Update
Planning Hazardous Substance Consents		
Erewash Borough Council	April 2015	Annual Rolling Update
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Derbyshire County Council	February 2016	Annual Rolling Update
Nottingham City Council - Planning Information Department	February 2016	Annual Rolling Update

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2016	Quarterly
Points of Interest - Education and Health PointX	December 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2016	Quarterly
Points of Interest - Public Infrastructure PointX	December 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2016	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	August 2016	Bi-Annually
Areas of Adopted Green Belt		
Broxtowe Borough Council	November 2016	As notified
Erewash Borough Council	November 2016	As notified
Nottingham City Council	November 2016	As notified
Areas of Unadopted Green Belt		
Broxtowe Borough Council	November 2016	As notified
Erewash Borough Council	November 2016	As notified
Nottingham City Council	November 2016	As notified
Areas of Outstanding Natural Beauty		
Natural England	January 2017	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	Annually
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	January 2017	Bi-Annually
Marine Nature Reserves		
Natural England	January 2017	Bi-Annually
National Nature Reserves		
Natural England	January 2017	Bi-Annually
National Parks		
Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites		
Natural England	January 2017	Bi-Annually
Sites of Special Scientific Interest		
Natural England	April 2016	Bi-Annually
Special Areas of Conservation		
Natural England	January 2017	Bi-Annually
Special Protection Areas		
Natural England	January 2017	Bi-Annually
World Heritage Sites		
English Heritage - National Monument Record Centre	September 2015	Bi-Annually

Data Suppliers

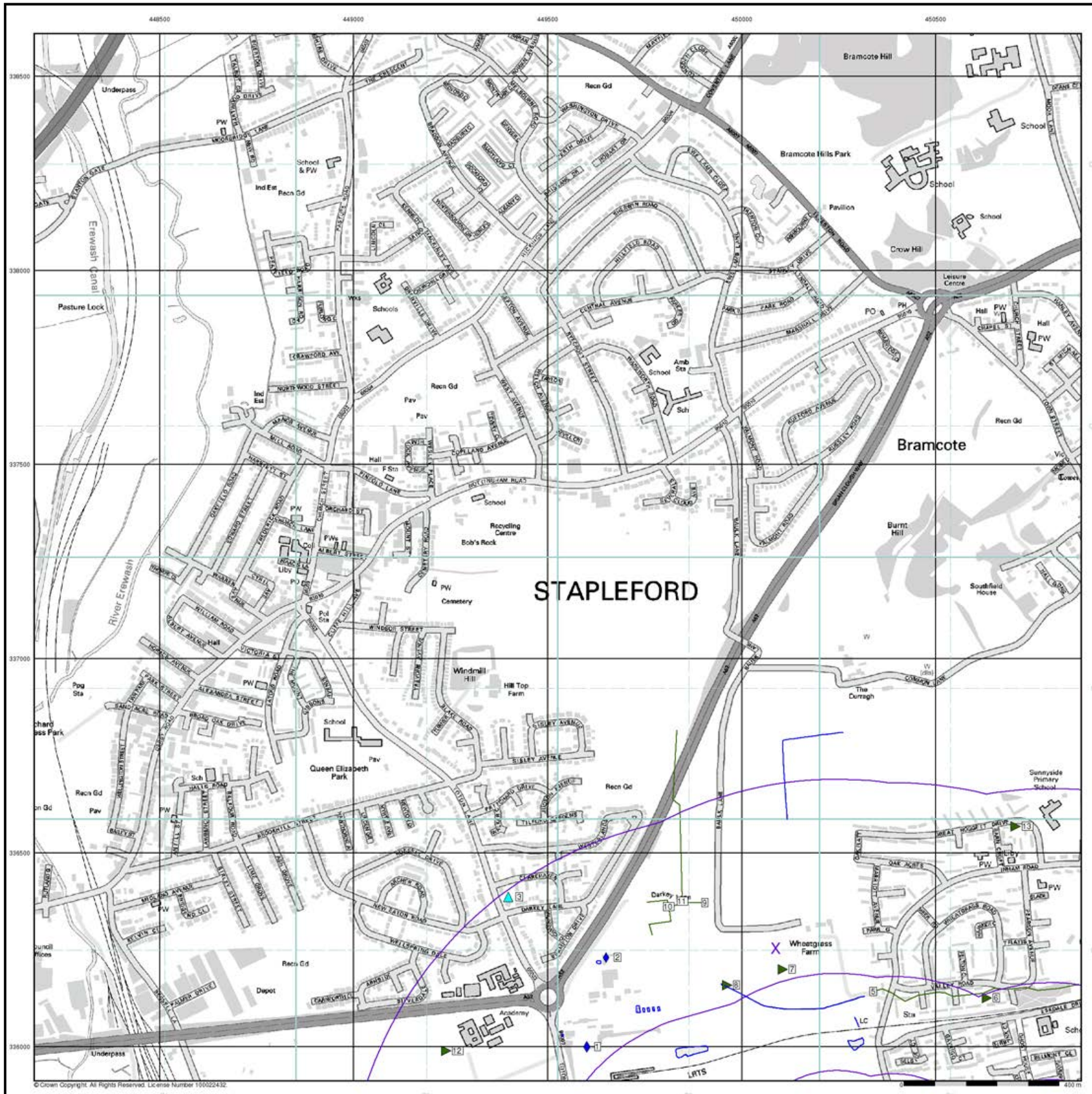
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	[redacted]
4	**Broxtowe Borough Council - Environmental Health Department** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted]e.gov.uk
5	**Nottinghamshire County Council - Environment Department** 5th Floor, Trentbridge House, Fox Road, Nottingham, Nottinghamshire, NG2 6BJ	[redacted]
6	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	**Broxtowe Borough Council** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted]uk
8	**Erewash Borough Council** Town Hall, Long Eaton, Nottingham, Nottinghamshire, NG10 1HU	[redacted]gov.uk
9	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	[redacted]
10	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	[redacted]
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	[redacted] Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

COMAH Site | Explosive Site

- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

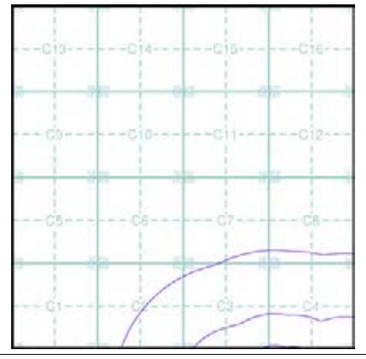
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice C



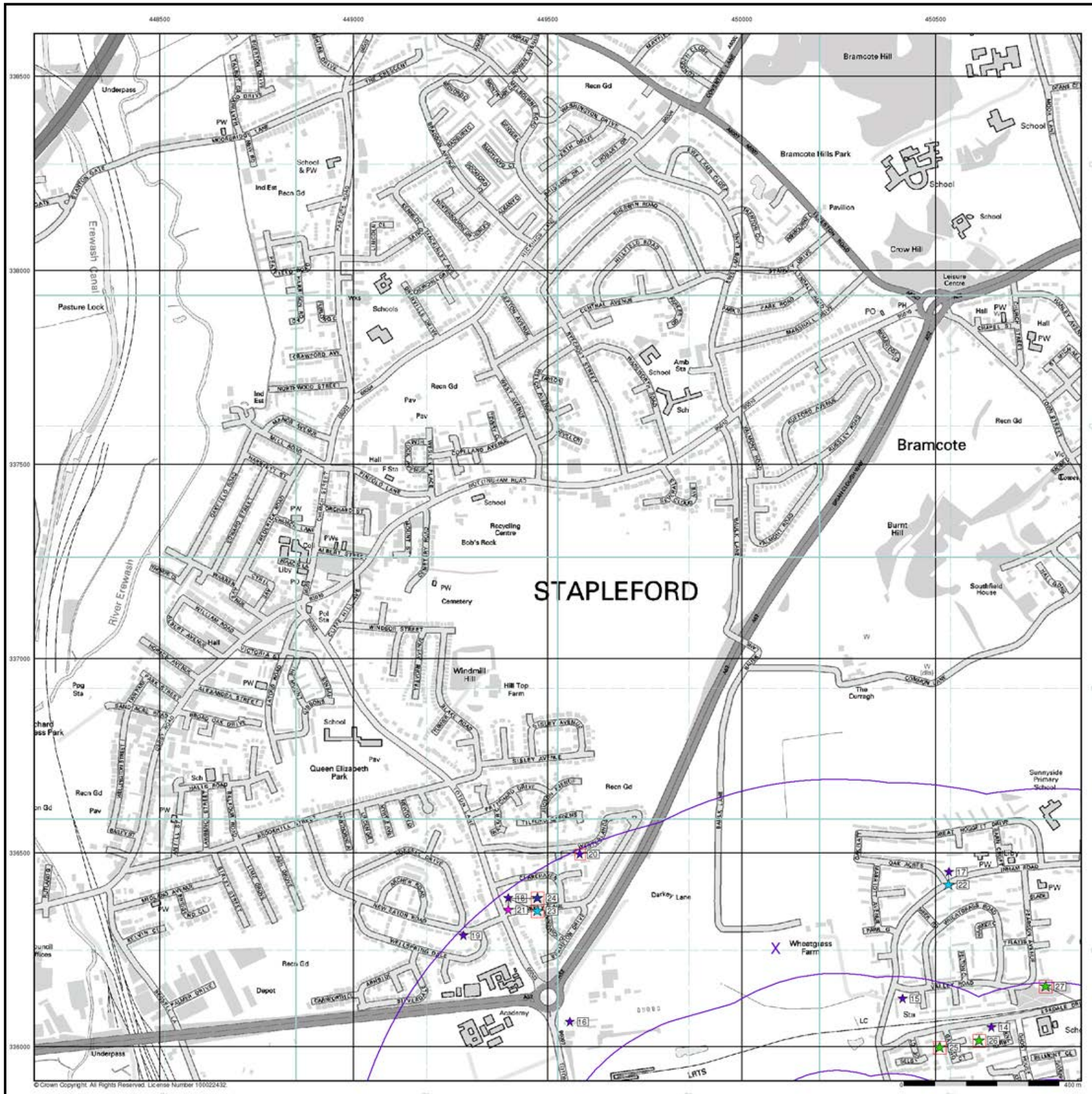
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Industrial Land Use Map

General

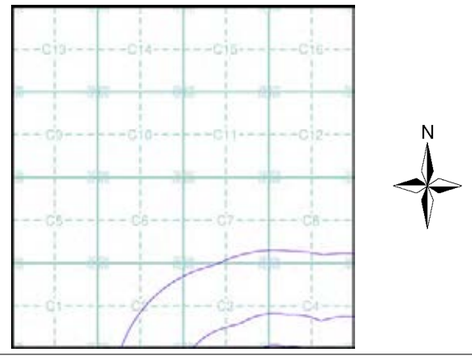
Specified Site | Specified Buffer(s) | Bearing Reference Point

Slice | Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice C



Order Details

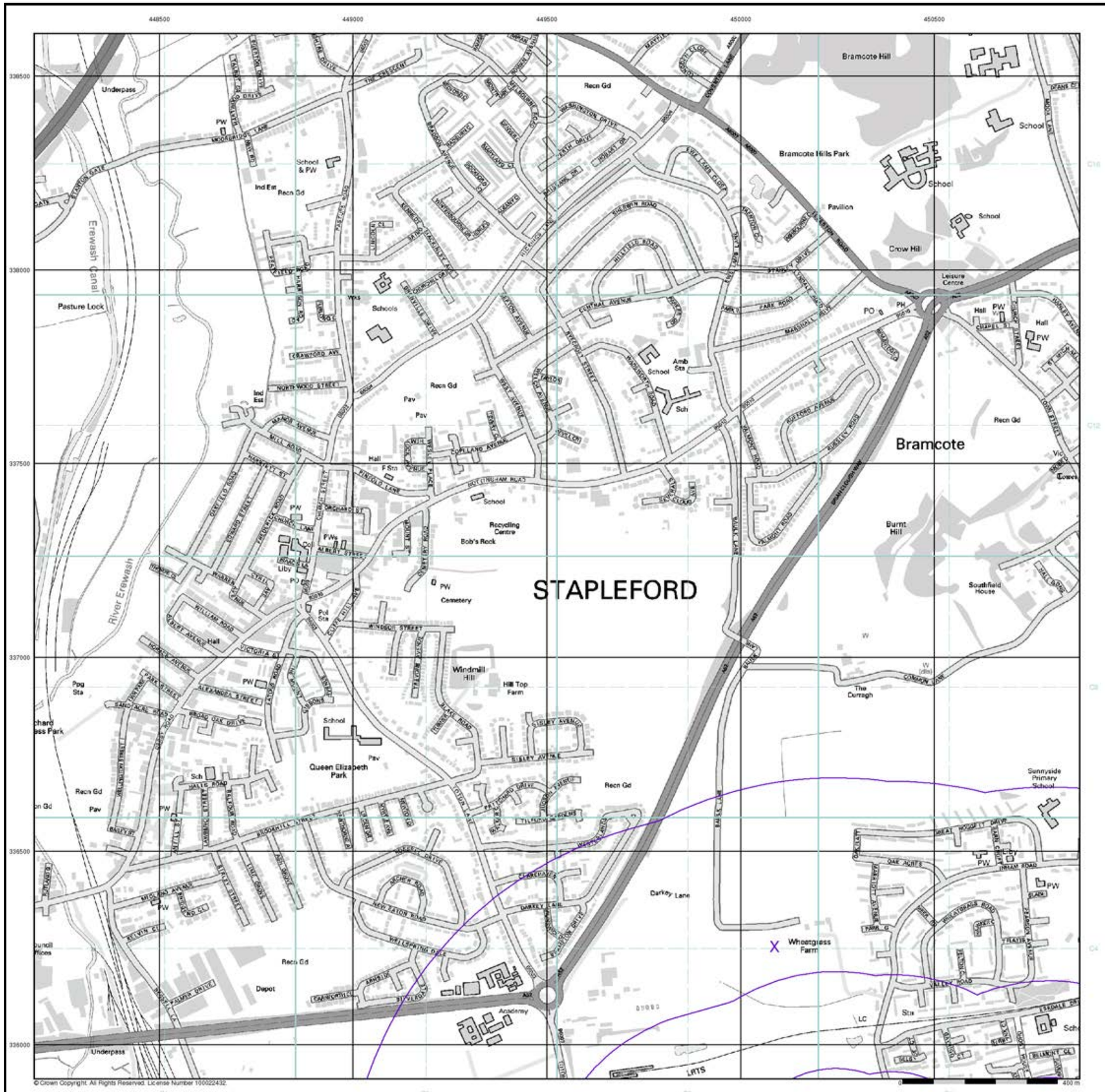
Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel: [redacted]
Fax:
Web:



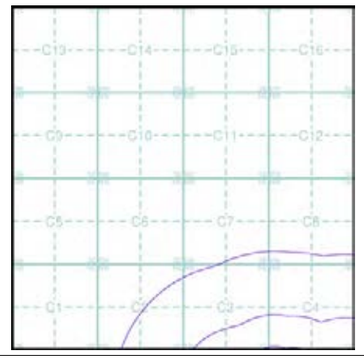
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice C



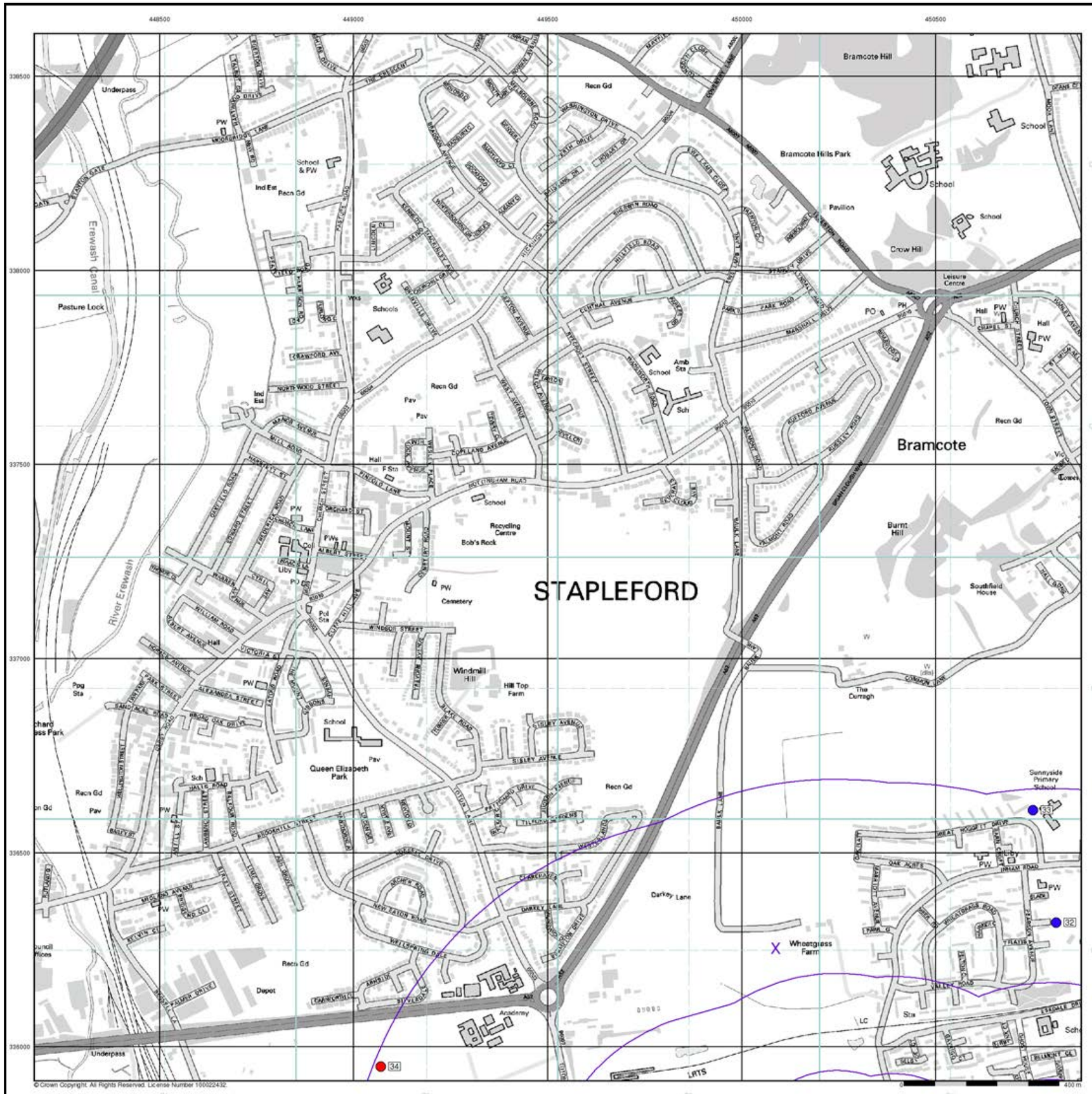
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

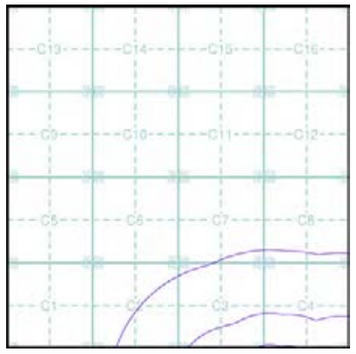
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice C

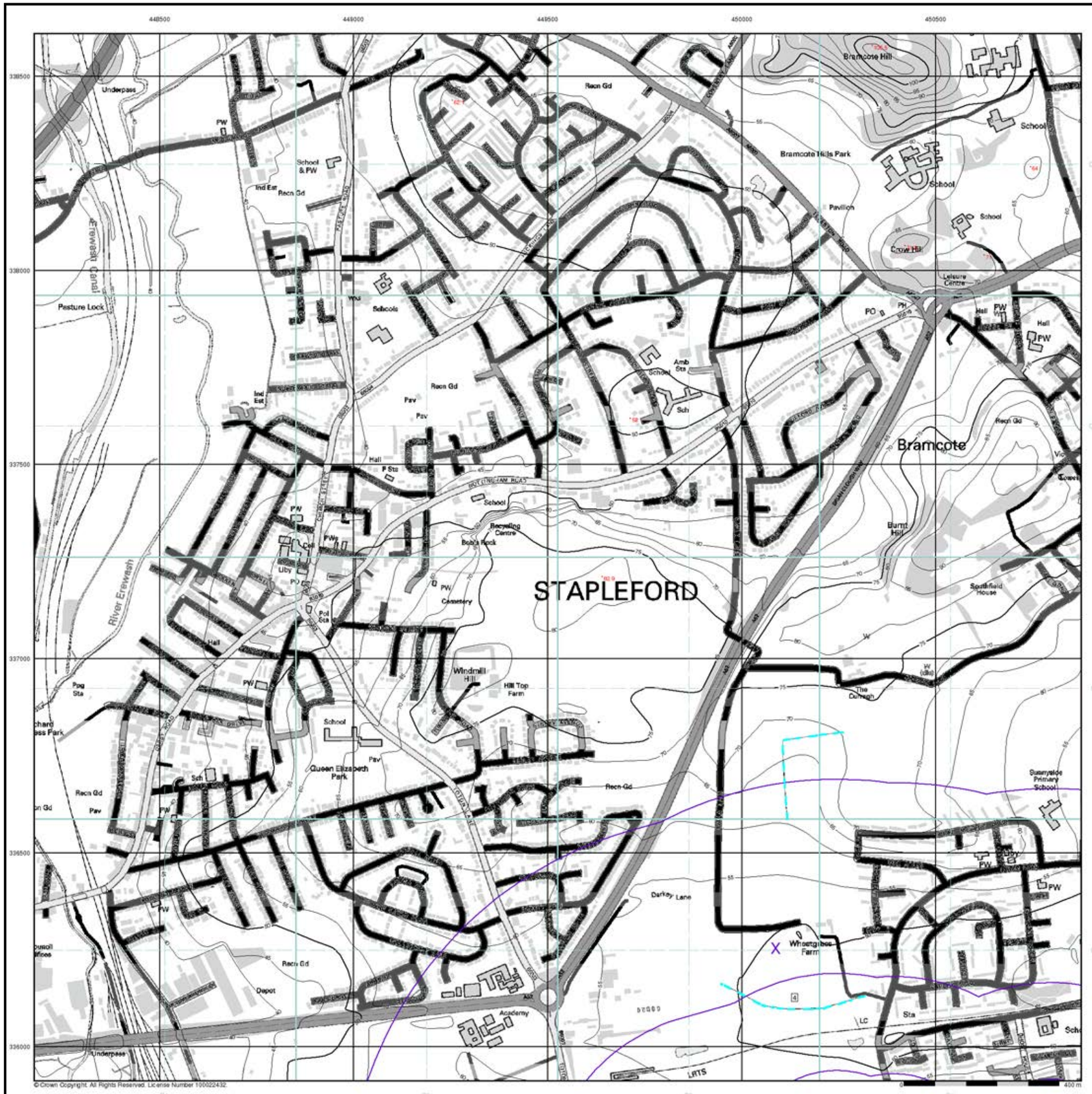


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

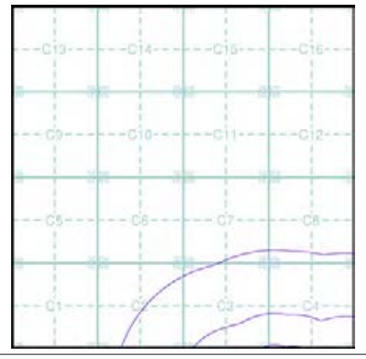
Standard Contour 105 100 95

Master Contour

Spot Height *167.3

- MLW Mean Low Water
- MHW Mean High Water

EA/NRW Detailed River Network Map - Slice C



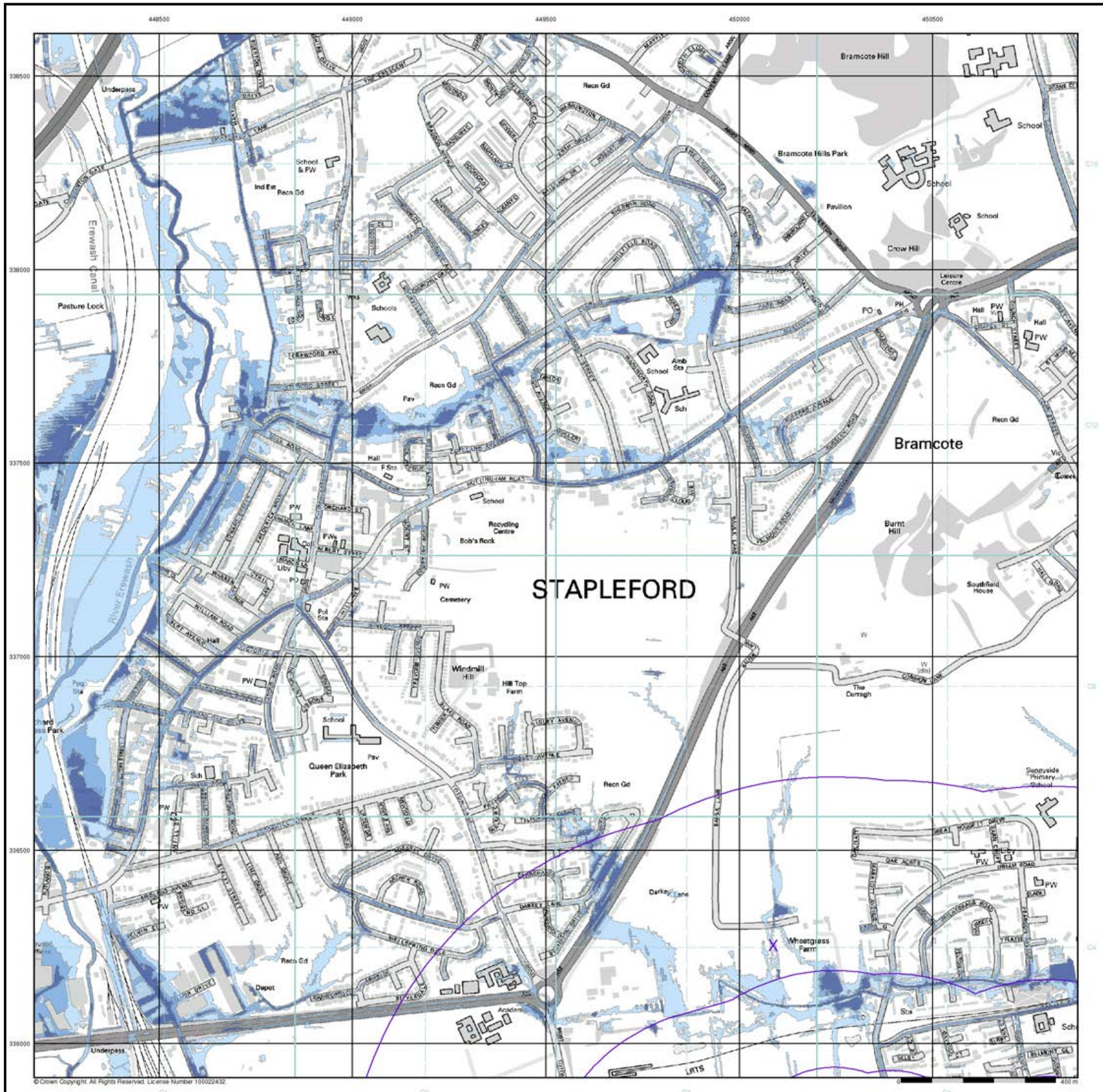
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

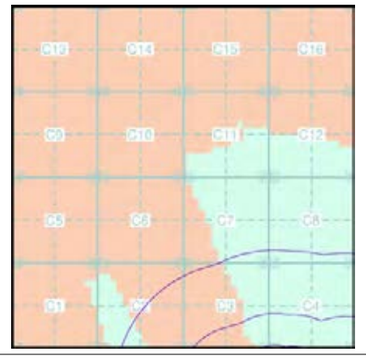
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice C



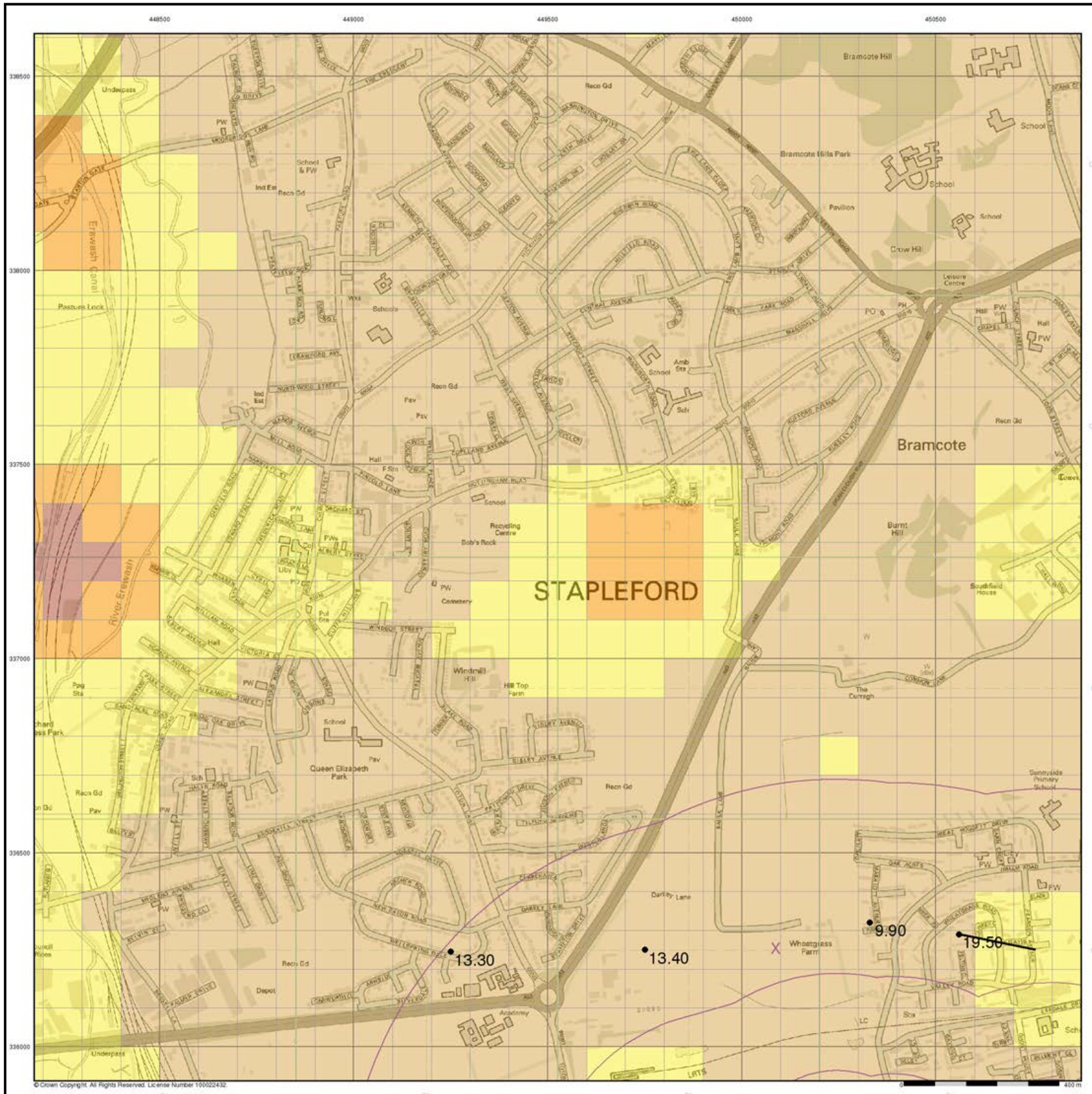
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Tel:
Fax:
Web:



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

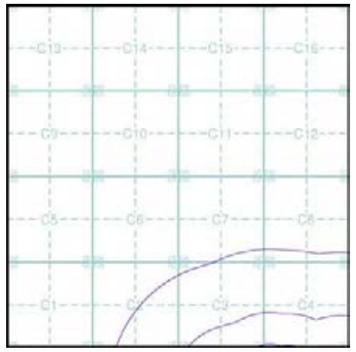
Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Urban Soil Chemistry Arsenic - Slice C



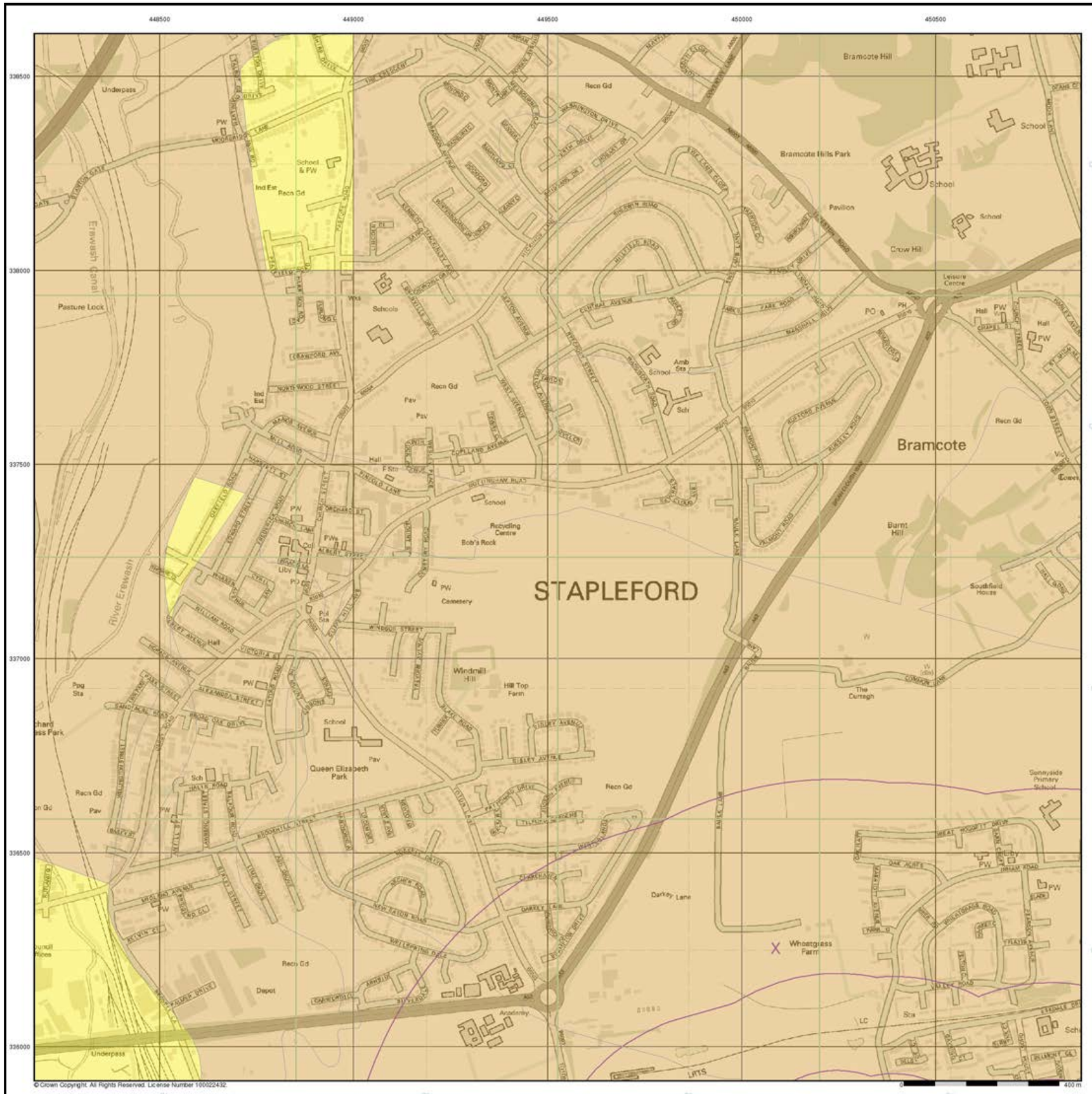
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

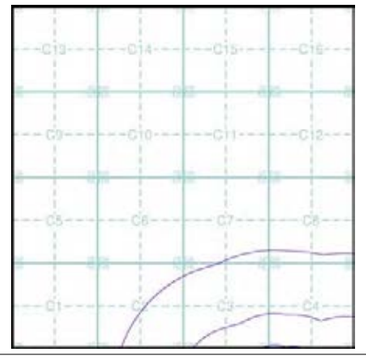
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice C



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

General

Specified Site | Specified Buffer(s) | Bearing Reference Point

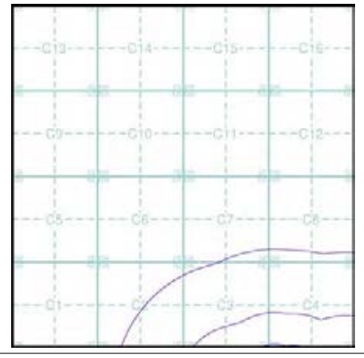
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

< 1.8
1.8 - 2.2
2.2 - 3.0
> 3.0

Urban Soil Chemistry Cadmium - Slice C

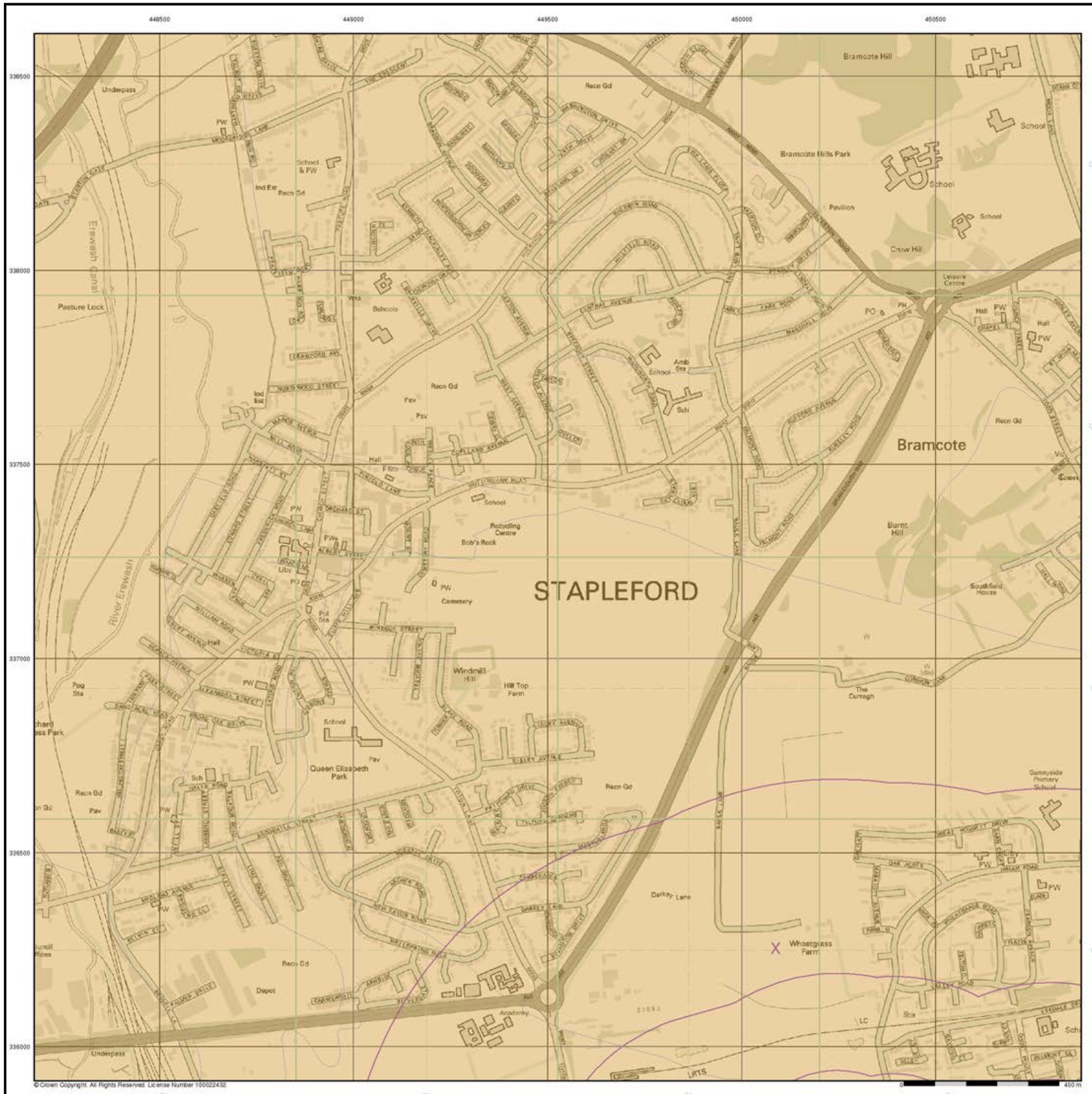


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

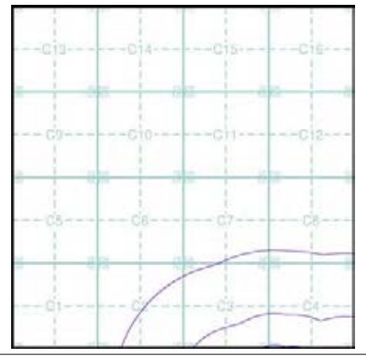
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice C



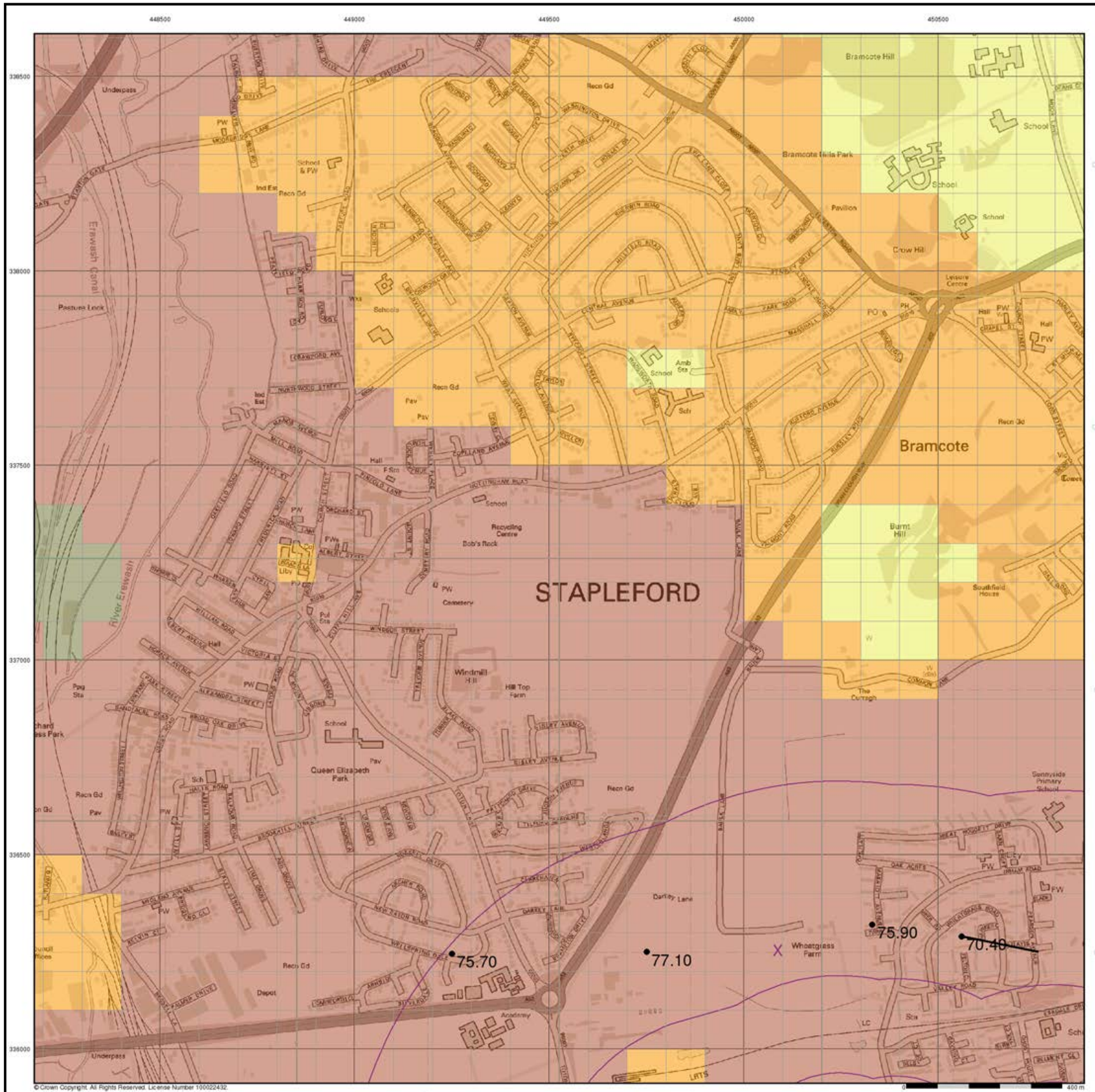
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

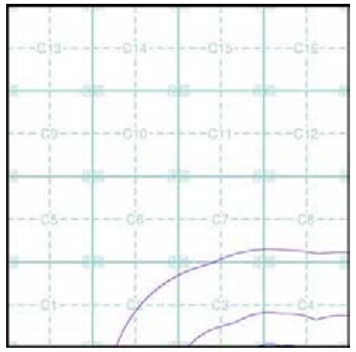
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Urban Soil Chemistry Chromium - Slice C

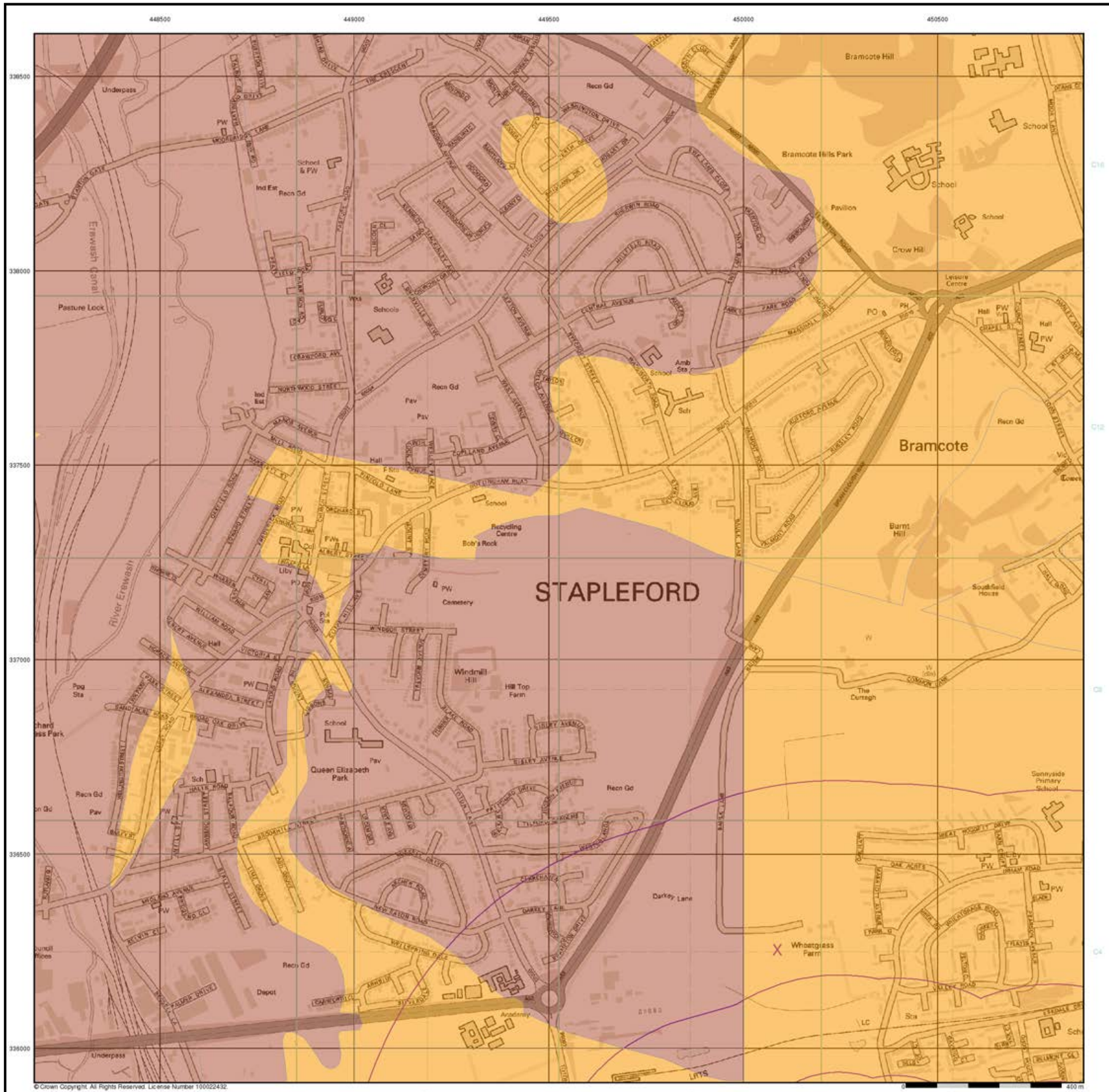


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

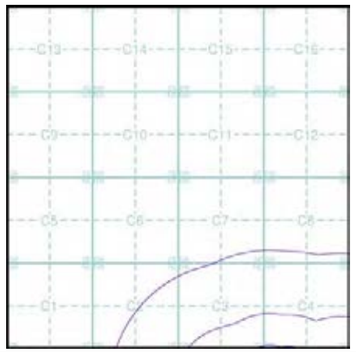
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice C



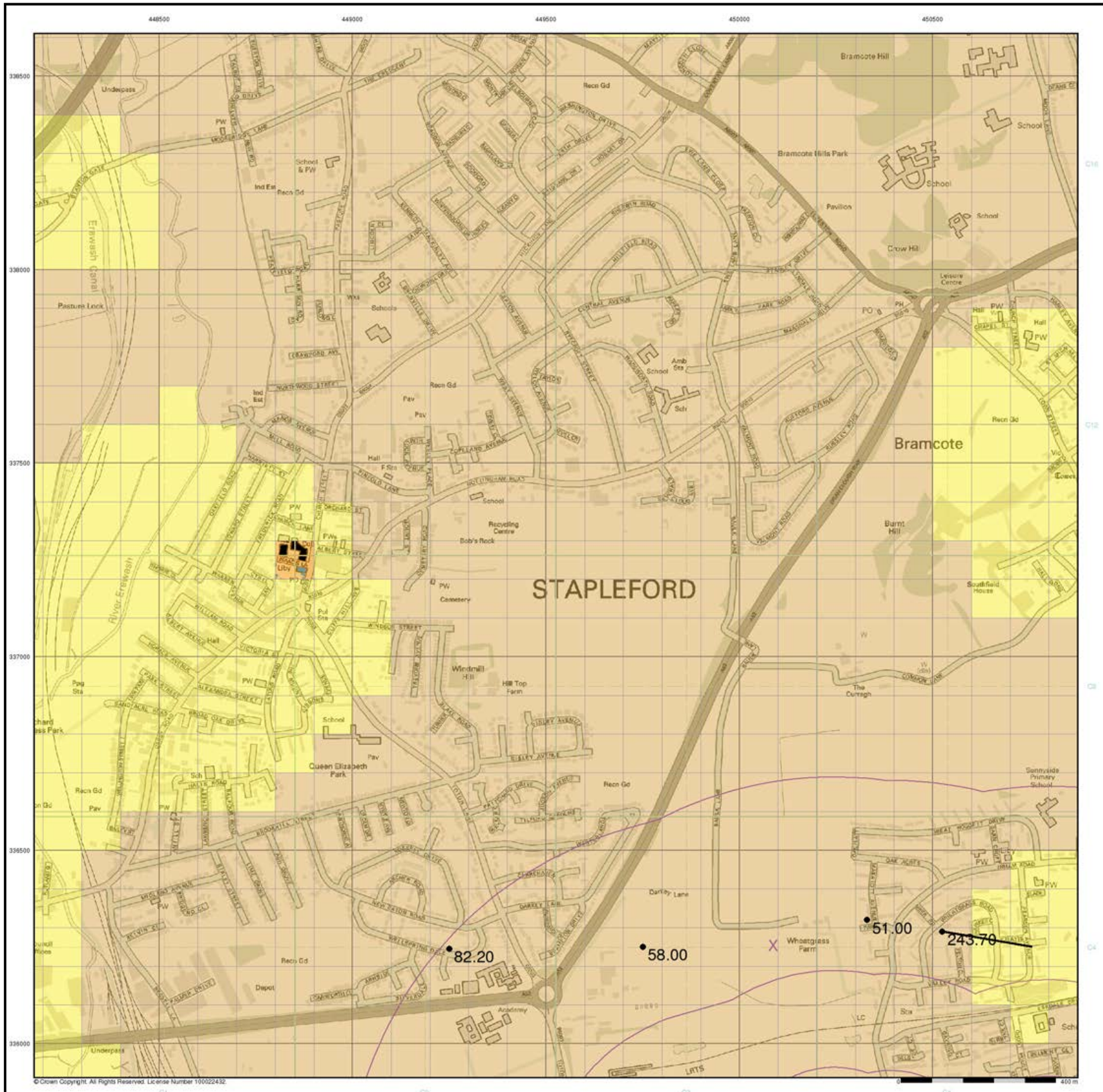
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

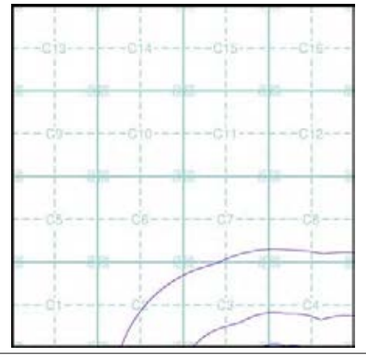
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

< 150
150 - 300
300 - 600
600 - 900
> 900

Urban Soil Chemistry Lead - Slice C

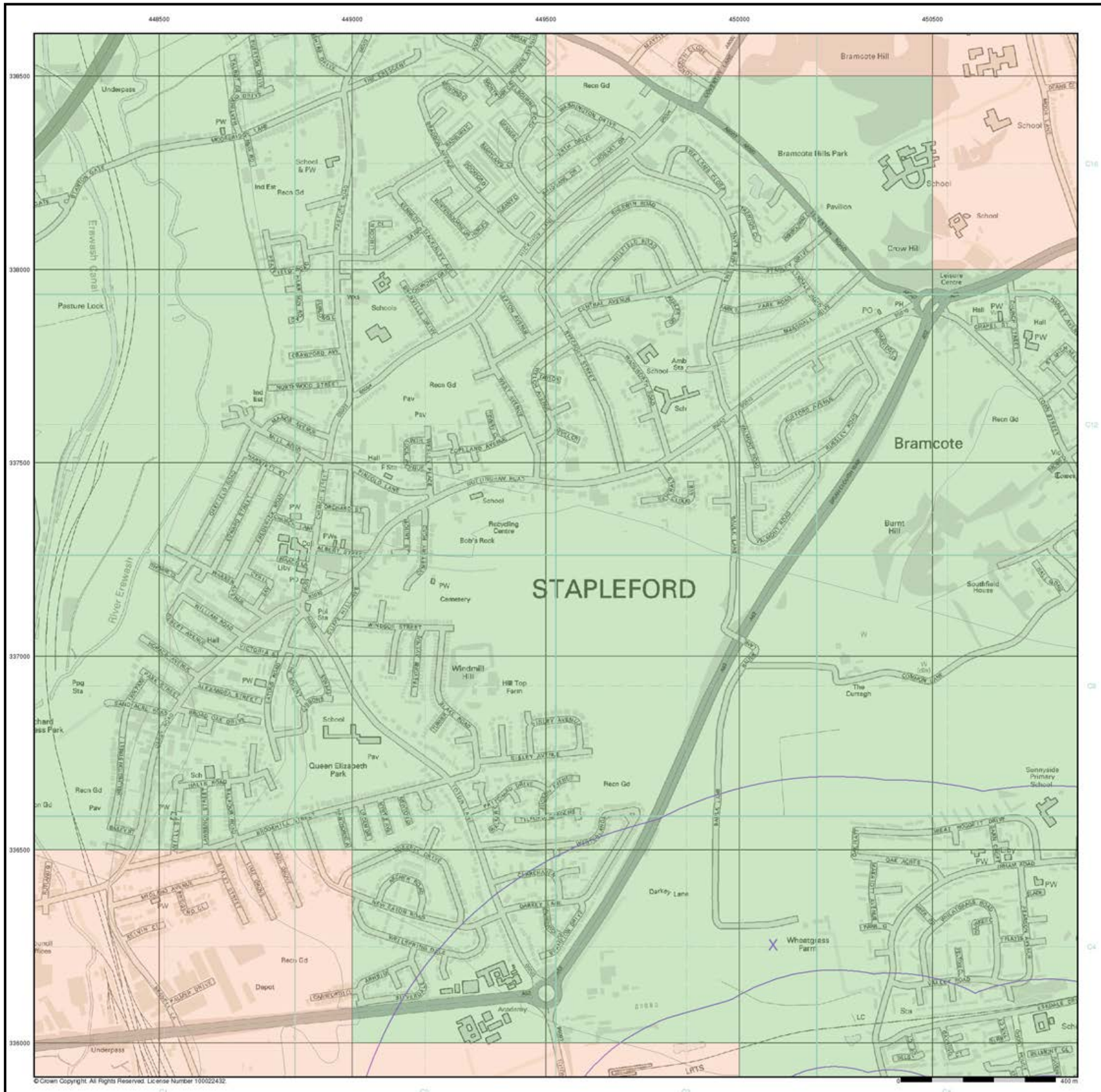


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

General

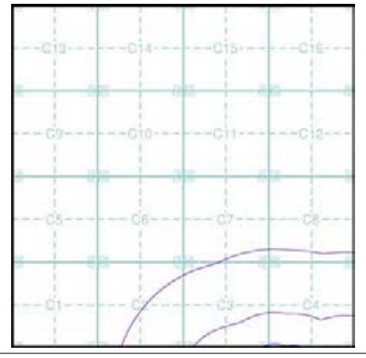
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice C

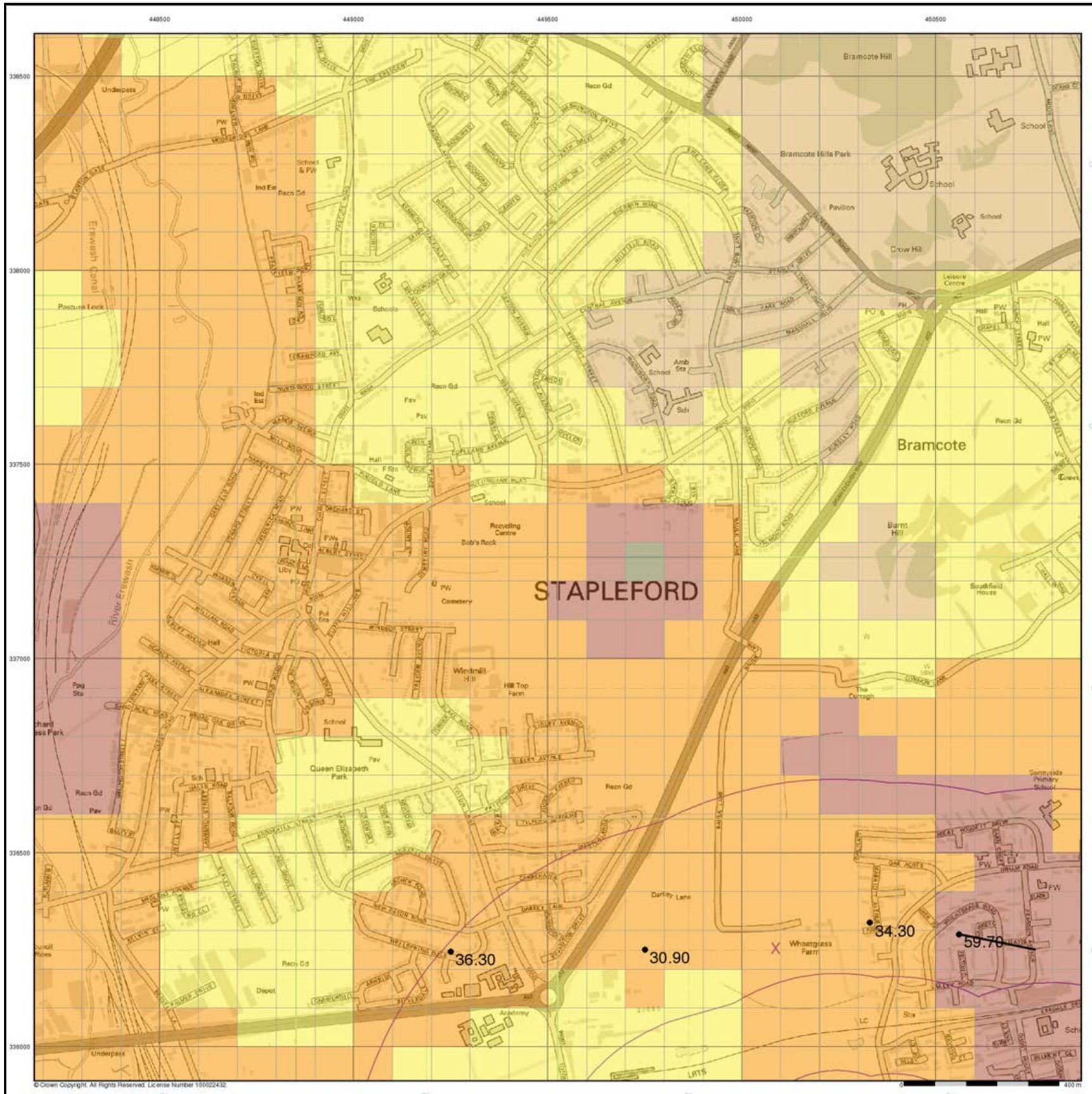


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

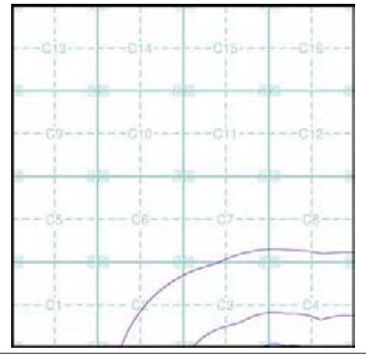
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Urban Soil Chemistry Nickel - Slice C

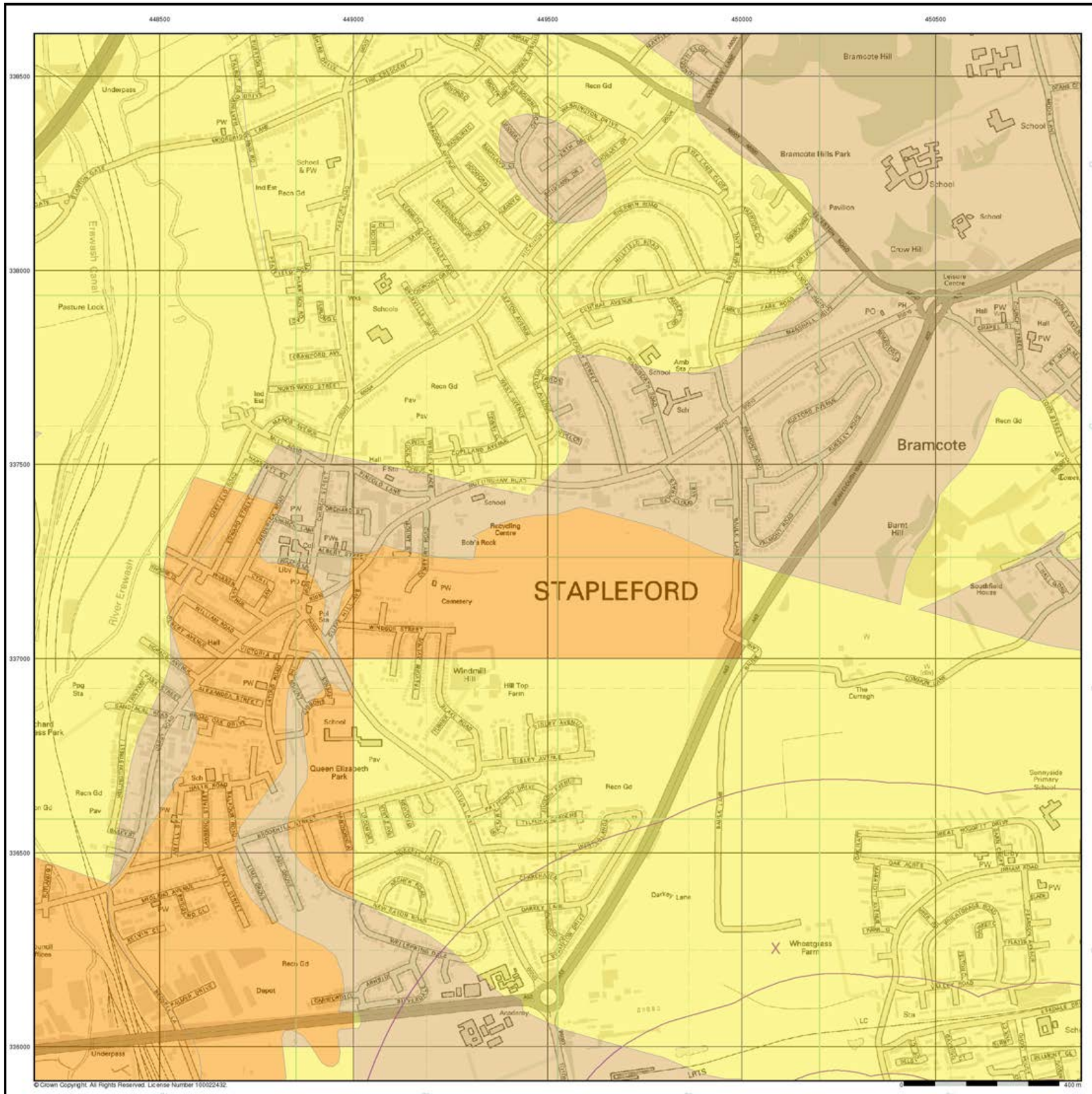


Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

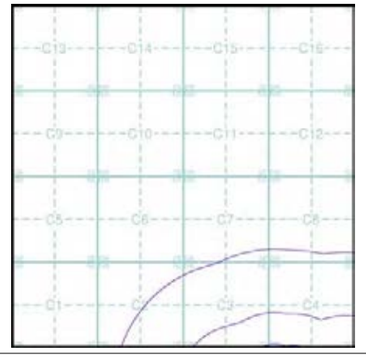
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice C



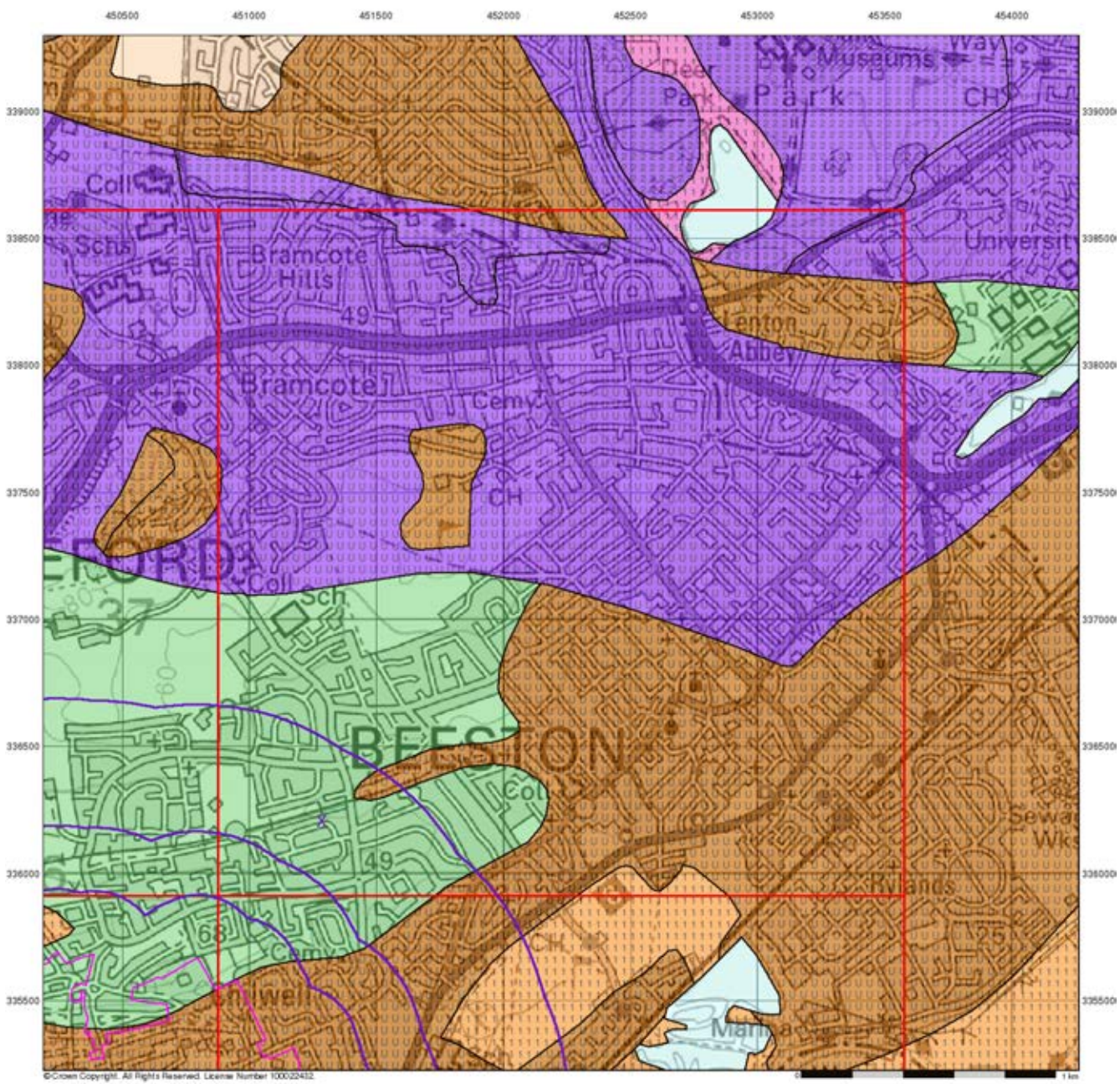
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450090, 336250
Slice:	C
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Groundwater Vulnerability

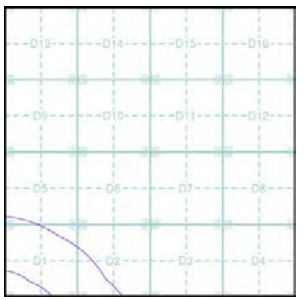
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes	Soil Classes
Major Aquifer (Highly Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Minor Aquifer (Variably Permeable)	High (H) 1, 2, 3, U
	Intermediate (I) 1, 2
	Low
Non Aquifer (Negligibly Permeable)	
Water or Sea	
Drift Deposit	

Site Sensitivity Context Map - Slice D



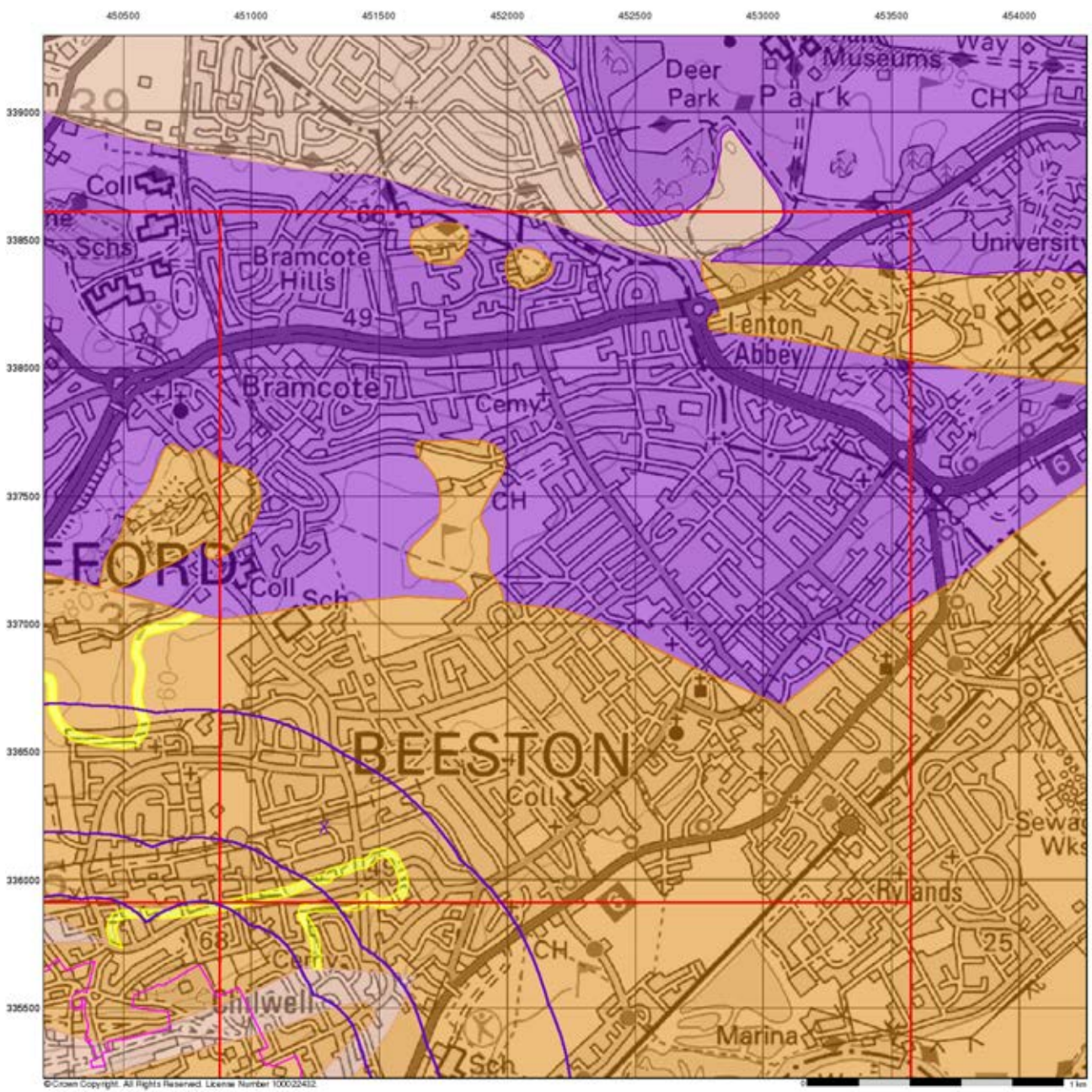
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Bedrock Aquifer Designation

General

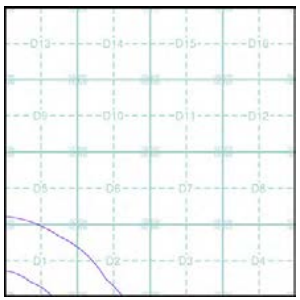
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice D



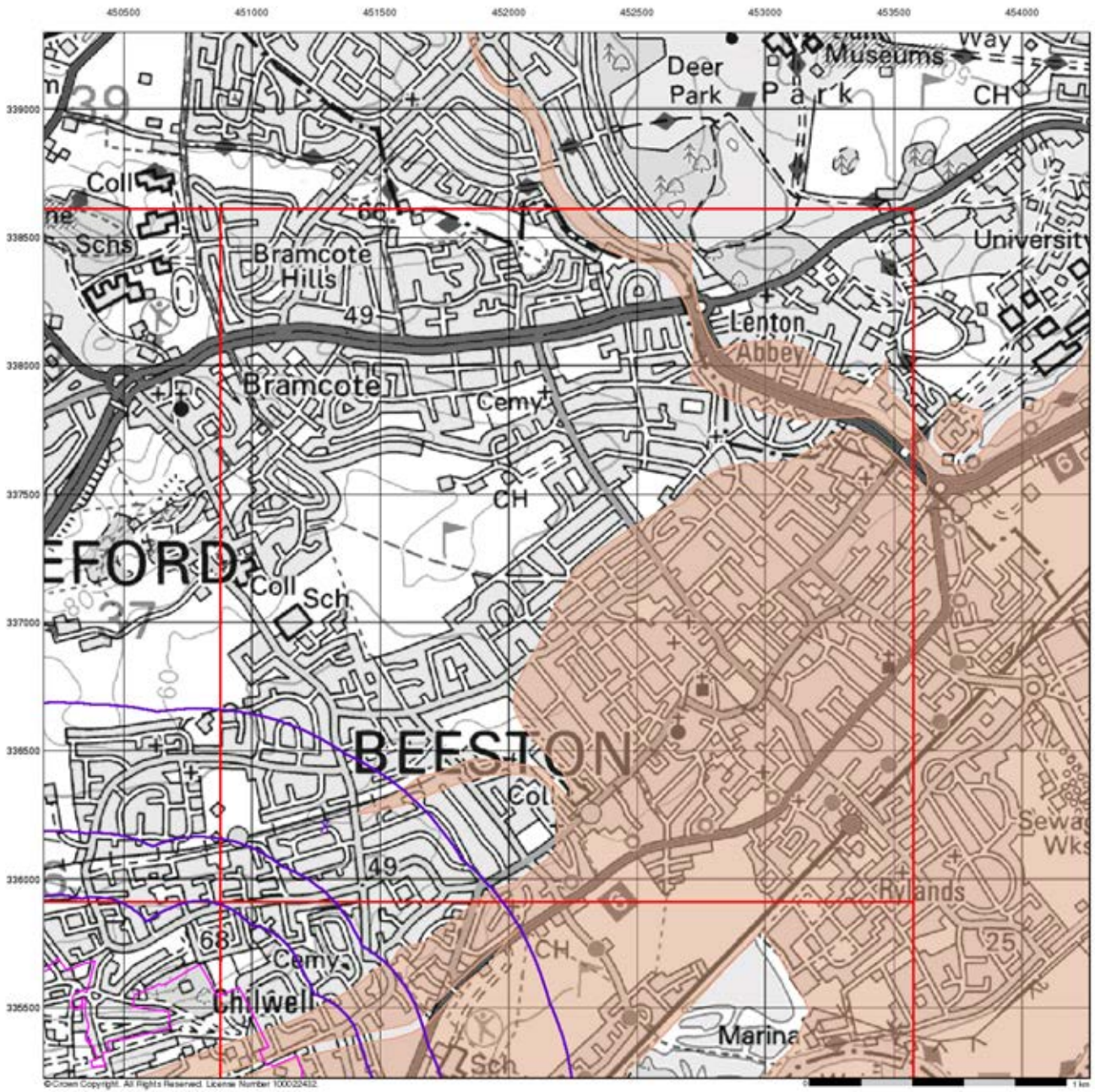
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP Tel: [redacted]



Superficial Aquifer Designation

General

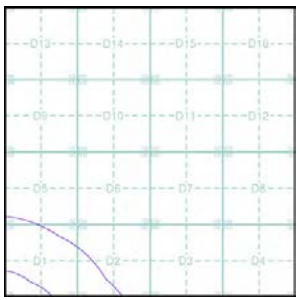
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice D

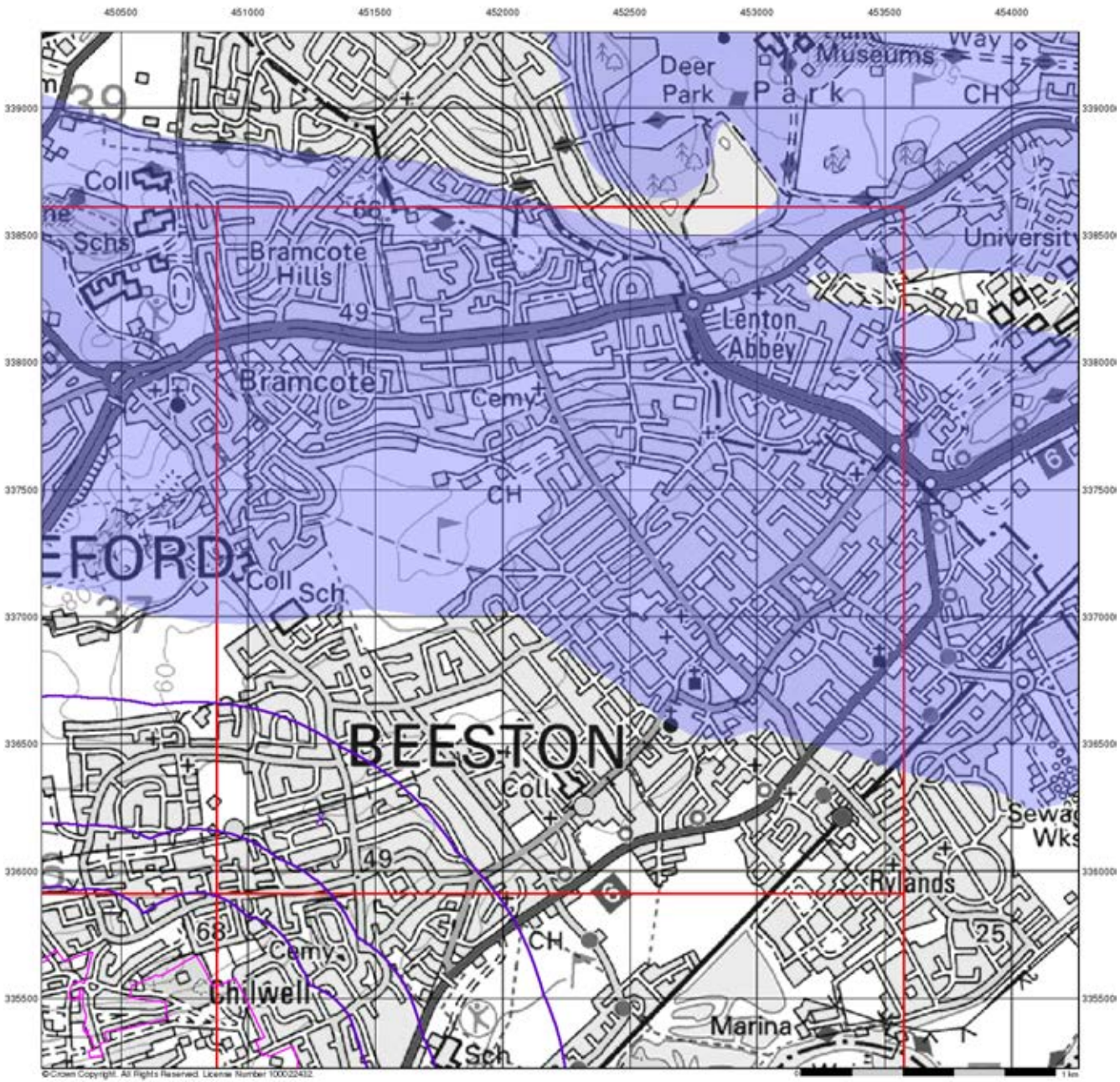


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

Source Protection Zones

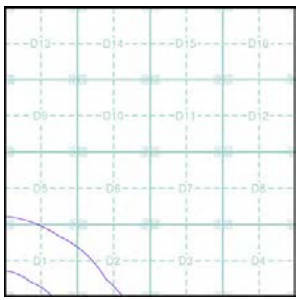
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)
- Source Protection Zone Borehole

Site Sensitivity Context Map - Slice D

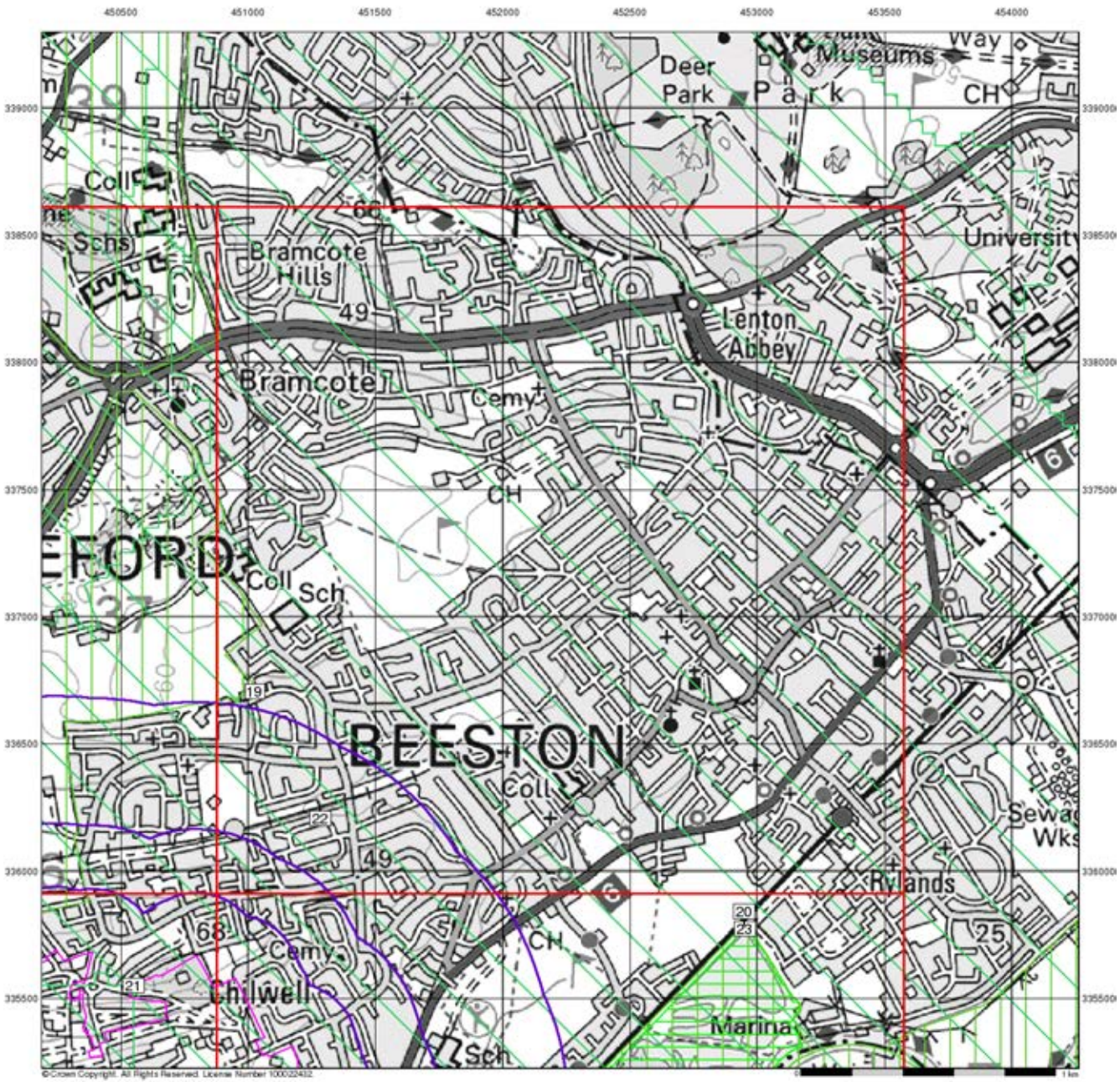


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



Sensitive Land Uses

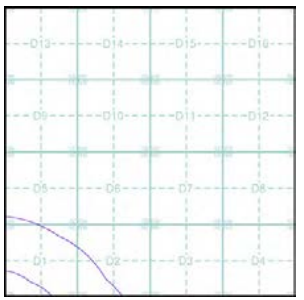
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice D



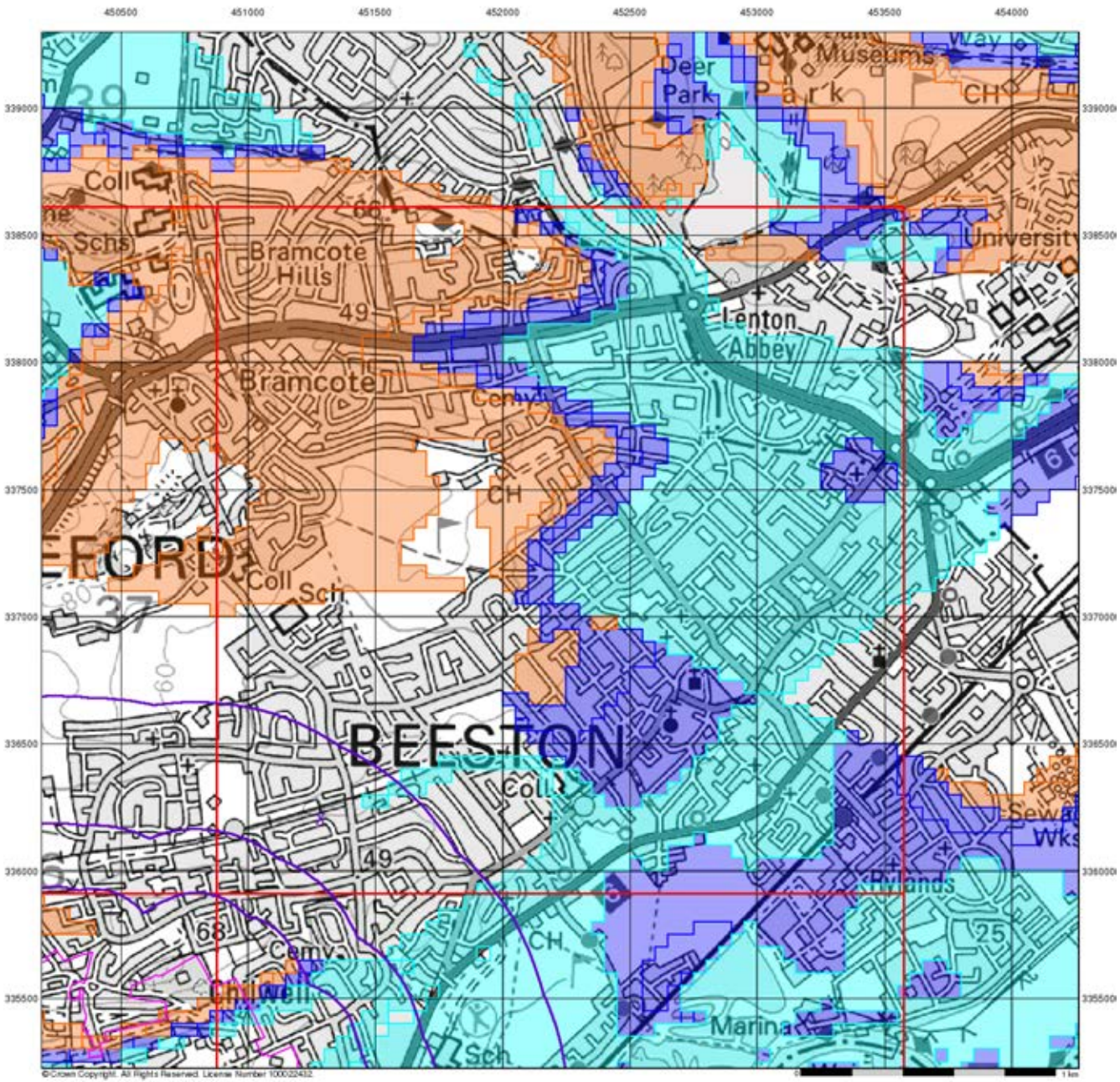
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



BGS Flood GFS Data

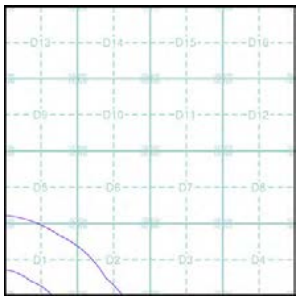
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice D



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
451280, 336210

Slice:
D

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]
Peter Brett Associates LLP
[redacted]

Prepared For:

DIO

Contents

Contents

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites					
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability	pg 1	Yes	n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)				n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying					
Heap, unknown constituents					
Mineral Railway					
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits					
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 2			1	
Potentially Infilled Land (Water)	pg 2			2	5

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 3	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 3	Yes	Yes	n/a	n/a
Salt Mining Related Features					
Subsidence Insurance Claims				n/a	n/a
Subsidence Investigations				n/a	n/a
Motion Map Data (1:2,500)					
Motion Map (100m)				n/a	n/a

Report Version v50.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	D1SE (NW)	0	1	451285 336207
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1984	D1SE (SE)	302	-	451439 335933
2	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1SW (W)	439	-	450998 336162
3	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1SW (W)	495	-	450905 336148
4	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1SW (W)	514	-	450910 336166
5	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1NE (E)	839	-	451429 336265
6	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1NW (NW)	868	-	450978 336514
7	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	D1NW (N)	922	-	451161 336512
8	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D2NW (E)	966	-	451573 336315

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
9	**Potential for Collapsible Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1NE (E)	0	2	451413 336253
10	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	D1NE (E)	0	2	451413 336253
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
11	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
12	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(SW)	0	2	450747 335611
13	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	(S)	0	2	451073 335592
14	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(SW)	0	2	450747 335488
15	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(SW)	0	2	450962 335551
16	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	D1NE (E)	0	2	451413 336253
17	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(S)	0	2	451406 335352
18	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	451586 335731
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	451824 335619
19	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (S)	0	2	451325 336046
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(SW)	64	2	450441 335755

Historical Map List

No Historical Land Use information available.

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Nottinghamshire	041_SE	1884
Nottinghamshire	041_NE	1886
Nottinghamshire	041_NE	1901
Nottinghamshire	041_SE	1901
Nottinghamshire	041_NE	1921
Nottinghamshire	041_SE	1921
Nottinghamshire	041_NE	1938
Nottinghamshire	041_SE	1939
Ordnance Survey Plan	SK53NW	1955
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	SK53NW	1984

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Man Made Mining Cavities Peter Brett Associates	November 2016	Bi-Annually
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Natural Cavities Peter Brett Associates	November 2016	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	September 2016	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Subsidence Insurance Claims SP Property Services	November 2016	Quarterly
Subsidence Investigations CET Structures Ltd	November 2016	Quarterly

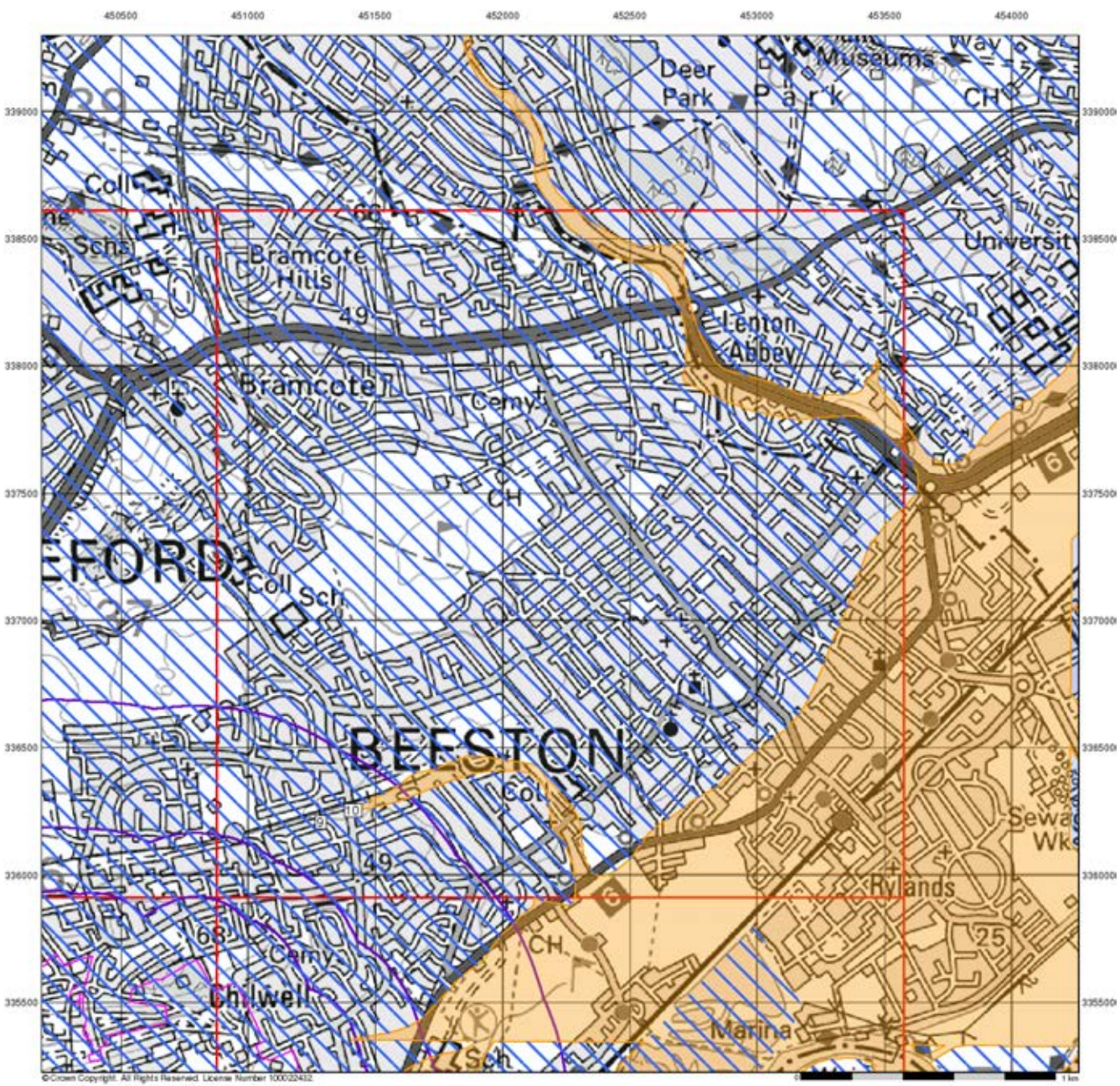
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
British Geological Survey	
The Coal Authority	
Ove Arup	
Peter Brett Associates	
Wardell Armstrong	
Johnson Poole & Bloomer	

Useful Contacts

Contact	Name and Address	Contact Details
1	**Ove Arup & Partners** Central Square, Forth Street, Newcastle upon Tyne, Tyne and Wear, NE1 3PL	[redacted]
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

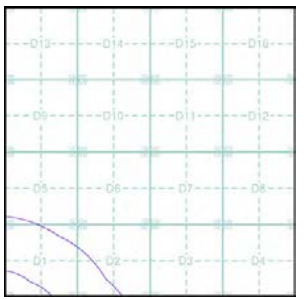
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice D



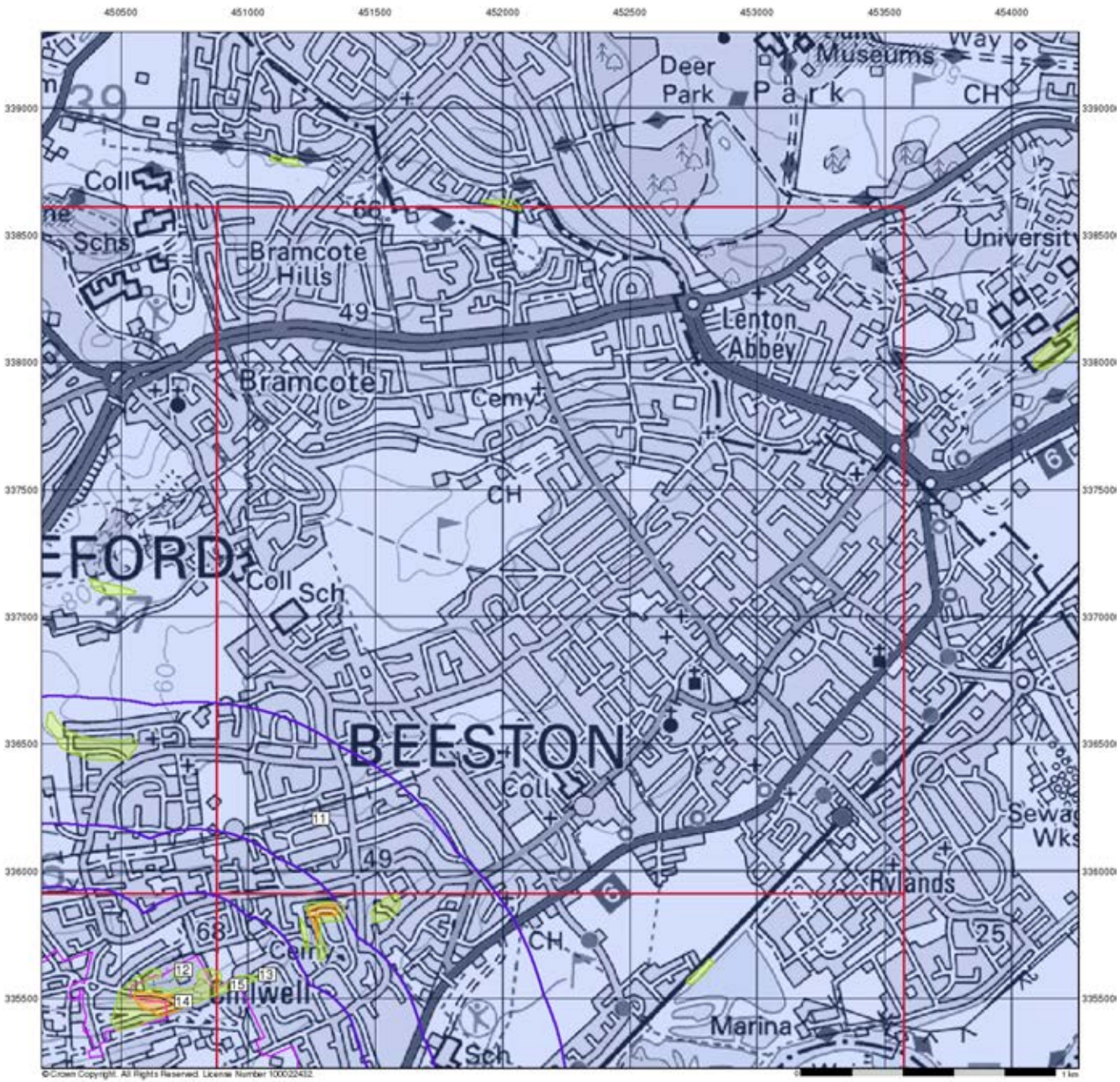
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

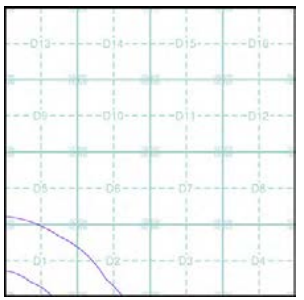
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice D



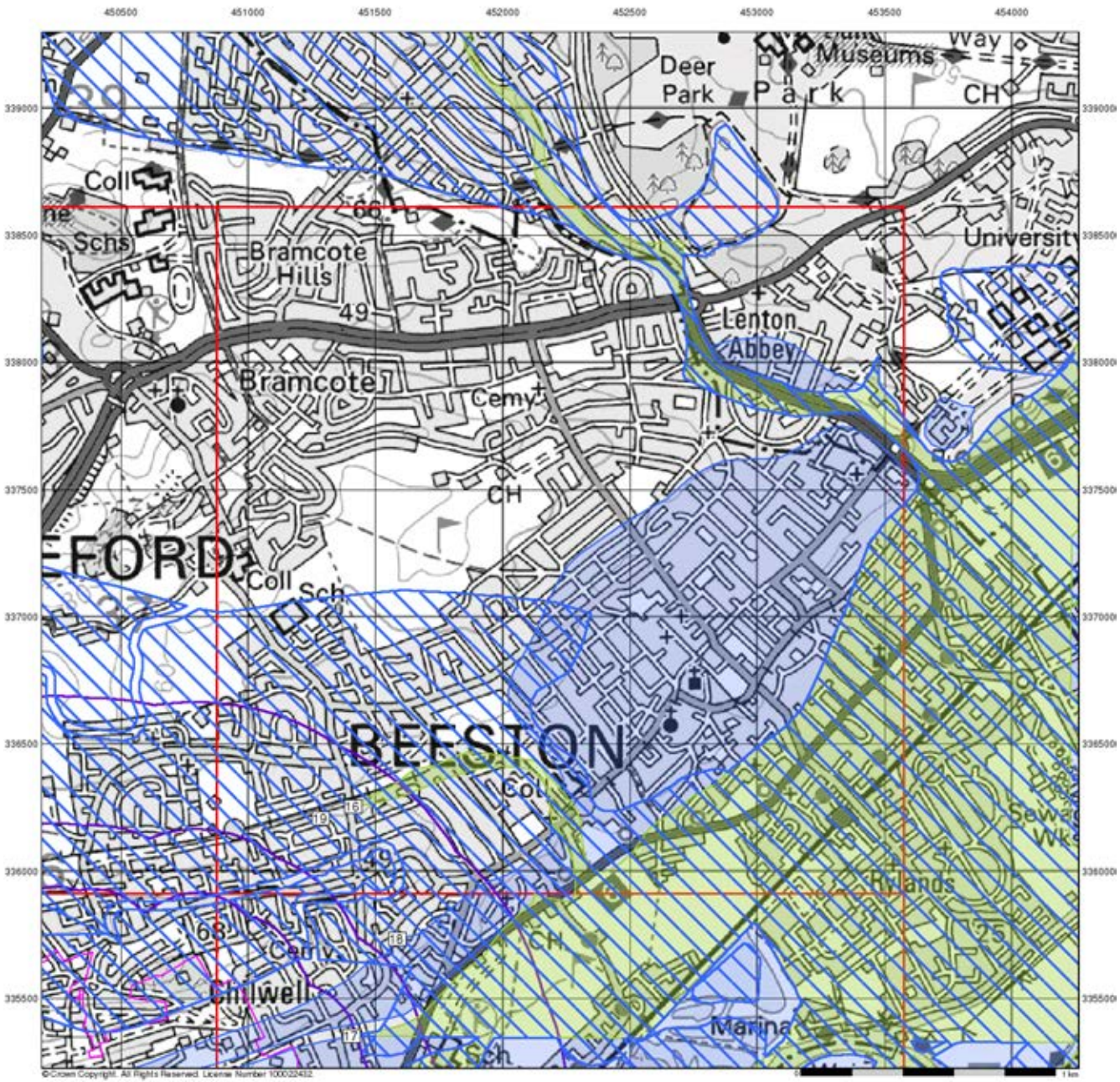
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:
[redacted]



Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

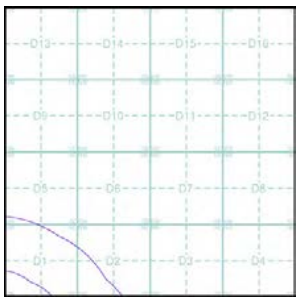
Potential for Running Sand Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice D



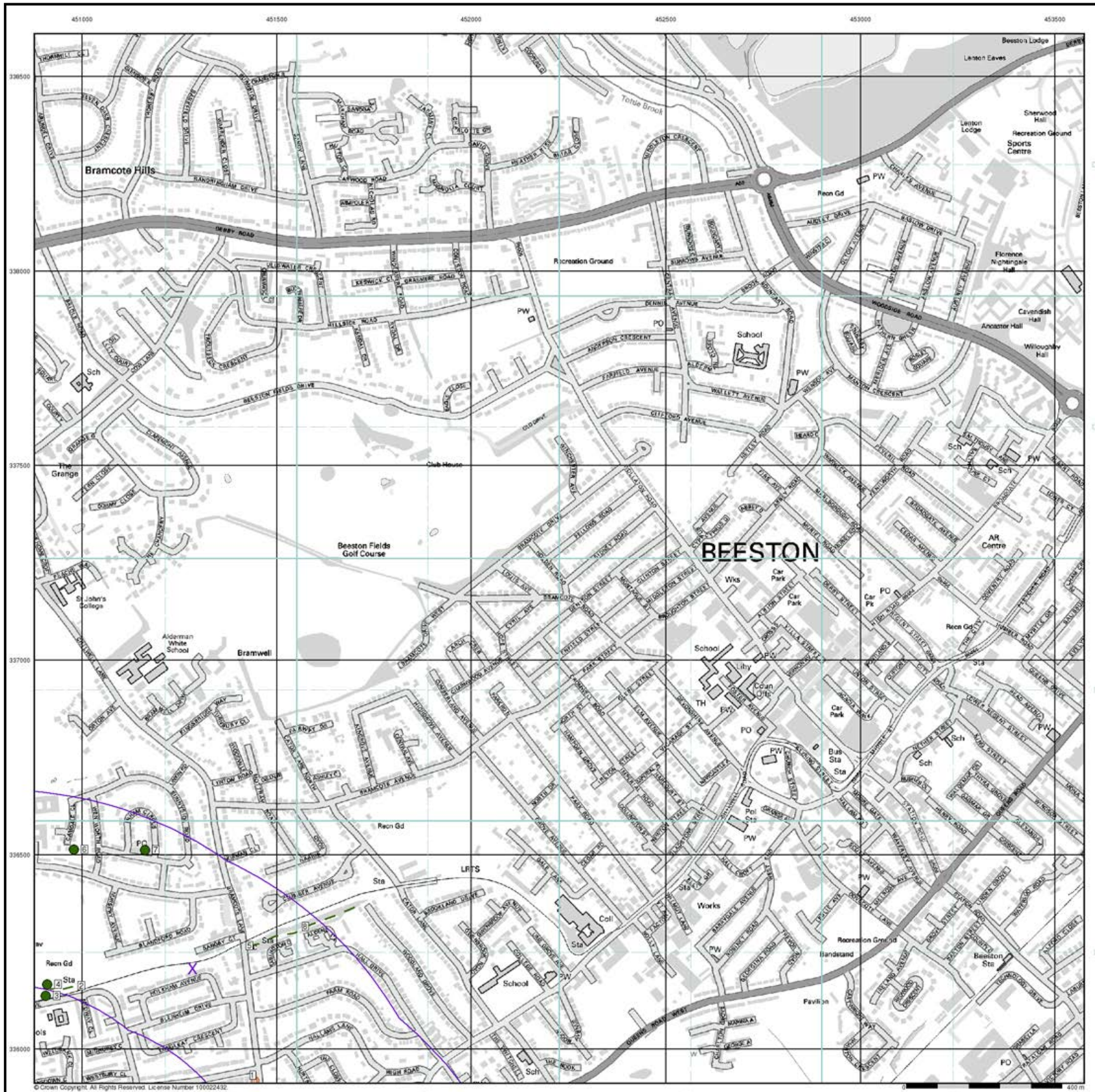
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts			
Disturbed Ground			
General Quarrying			
Heap, unknown constituents			
Mineral Railway			
Mining and Quarrying General			
Mining of Coal & Lignite			
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits			

Historical Land Use

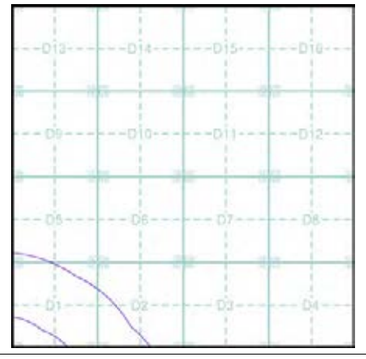
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)			
Potentially Infilled Land (Water)			
Former Marsh			

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice D



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
114077061_1_1

Customer Reference:
37782-3501

National Grid Reference:
451280, 336210

Slice:
D

Site Area (Ha):
75.28

Search Buffer (m):
1000

Site Details:

Chetwynd Barracks
Chilwell
Nottinghamshire

Client Details:

[redacted]

Prepared For:

DIO

Contents

Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.

In the attached datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

Copyright Notice

Natural England Copyright Notice

Ove Arup Copyright Notice

Peter Brett Associates Copyright Notice

Radon Potential dataset Copyright Notice

Report Version v50.0

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2				1
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 2				1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature					
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
Substantiated Pollution Incident Register					
River Quality Chemistry Sampling Points					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability	pg 2	Yes	n/a	n/a	n/a
Drift Deposits			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 3	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences	pg 3		Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
Detailed River Network Lines					n/a
Detailed River Network Offline Drainage					n/a

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 4	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 4			1	
Potentially Infilled Land (Water)	pg 4			2	5
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 5	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 5	Yes		Yes	Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry	pg 6				Yes
BGS Urban Soil Chemistry Averages	pg 6	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability	pg 6	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 6	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 6	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 7	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 7	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 8				6
Fuel Station Entries	pg 8				1
Points of Interest - Commercial Services	pg 8				1
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production					
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt	pg 9		1		1
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 9	2			
Ramsar Sites					
Sites of Special Scientific Interest	pg 9				1
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	450950 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	451000 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	2	451050 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	450900 335500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450900 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450950 335450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(S)	0	2	451300 335650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	0	2	450300 335250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450550 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450650 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	0	2	450750 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	450600 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	450700 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450800 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450850 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(S)	0	2	450950 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450300 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	2	450500 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	0	2	450600 335300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	451000 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	450500 335350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	0	2	451600 335750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	2	450350 335400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	10	2	451050 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	55	2	451100 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	62	2	450400 335800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	77	2	451100 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	100	2	451150 335550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	121	2	451150 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	166	2	451200 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	189	2	451200 335650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	212	2	451250 335600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	233	2	451250 335650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	278	2	451285 335650
1	**Discharge Consents** Operator: Severn Trent Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Bramcote Lane - Sws, Chilwell, Nottingham Authority: Environment Agency, Midlands Region Catchment Area: Trent Catchment To Confluence With Lean Reference: T/62/01061/O Permit Version: 1 Effective Date: 21st May 1963 Issued Date: 21st May 1963 Revocation Date: 20th March 2000 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Trent (Non Tidal) Trib **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	D1NE (NE)	852	3	451400 336300
2	**Local Authority Pollution Prevention and Controls** Name: Ambercote Service Station Location: Bramcote lane, Chilwell, NOTTINGHAM, Nottinghamshire, NG9 5EL Authority: Broxtowe Borough Council, Environmental Health Department Permit Reference: 16/98 Dated: 31st December 1998 Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorisation revokedRevoked** Positional Accuracy: Manually positioned to the address or location	D1SE (E)	775	4	451386 336217
	Nearest Surface Water Feature None				
	Groundwater Vulnerability Soil Classification: Soils of High Leaching Potential (U) - Soil information for restored mineral workings and urban areas is based on fewer observations than elsewhere. A worst case vulnerability classification (H) assumed, until proved otherwise Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	D1NE (NE)	0	3	451413 336299

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Soil Classification: Not classified Map Sheet: Sheet 23 Leicestershire Scale: 1:100,000	D1SE (NW)	0	3	451285 336207
	Drift Deposits None				
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	(S)	0	2	451253 335654
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	D1SE (NW)	0	2	451285 336207
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	(S)	0	2	451402 335519
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	D1NE (E)	0	2	451413 336253
	Extreme Flooding from Rivers or Sea without Defences None				
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	D2NW (NE)	191	3	451580 336335
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
	Detailed River Network Lines None				
	Detailed River Network Offline Drainage None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Broxtowe Borough Council - Has no landfill data to supply		0	4	451285 336207
	Local Authority Landfill Coverage Name: Nottinghamshire County Council - Has no landfill data to supply		0	5	451285 336207
3	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1984	D1SE (SE)	302	-	451439 335933
4	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1SW (W)	439	-	450998 336162
5	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1SW (W)	495	-	450905 336148
6	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1SW (W)	514	-	450910 336166
7	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1NE (E)	839	-	451429 336265
8	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D1NW (NW)	868	-	450978 336514
9	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1901	D1NW (N)	922	-	451161 336512
10	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1955	D2NW (E)	966	-	451573 336315

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	D1SE (NW)	0	2	451285 336207
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	D1SE (NW)	0	2	451285 336207
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	(SE)	385	2	451586 335731
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	D1NE (E)	819	2	451413 336253
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	(SE)	843	2	452000 335769
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 40 - 60 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	D2SE (E)	944	2	452000 336000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 451250, 336250 Soil Sample Type: Topsoil Sample Area: Nottingham Arsenic Measured Concentration: 11.60 mg/kg Cadmium Measured Concentration: 0.70 mg/kg Chromium Measured Concentration: 64.00 mg/kg Lead Measured Concentration: 114.00 mg/kg Nickel Measured Concentration: 26.90 mg/kg	D1NE (NW)	737	2	451250 336250
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Nottingham Count Id: 635 Arsenic Minimum Concentration: 4.00 mg/kg Arsenic Average Concentration: 13.00 mg/kg Arsenic Maximum Concentration: 86.00 mg/kg Cadmium Minimum Concentration: 0.10 mg/kg Cadmium Average Concentration: 0.80 mg/kg Cadmium Maximum Concentration: 14.20 mg/kg Chromium Minimum Concentration: 22.00 mg/kg Chromium Average Concentration: 61.00 mg/kg Chromium Maximum Concentration: 182.00 mg/kg Lead Minimum Concentration: 13.00 mg/kg Lead Average Concentration: 155.00 mg/kg Lead Maximum Concentration: 1810.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 30.00 mg/kg Nickel Maximum Concentration: 158.00 mg/kg	D1SE (NW)	0	2	451285 336207
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	D1SE (NW)	0	-	451285 336207
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1NE (E)	0	2	451413 336253
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	D1NE (E)	0	2	451413 336253
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	D1NE (E)	0	2	451413 336253
	Potential for Running Sand Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(SE)	0	2	451586 335731
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1SE (S)	0	2	451325 336046
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	D1SE (NW)	0	2	451285 336207

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Contemporary Trade Directory Entries** Name: M J W Industrial Supplies Ltd Location: 21, Blenheim Drive, Beeston, Nottingham, NG9 5ES Classification: Chemical Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	D1SE (S)	576	-	451250 336069
12	**Contemporary Trade Directory Entries** Name: Simply The Best Chem-Dry Location: Longleat Cres, Beeston, Nottingham, NG9 5ET Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	D1SE (S)	586	-	451318 336033
13	**Contemporary Trade Directory Entries** Name: X L Motors Location: Bramcote Lane, Beeston, Nottingham, NG9 5EL Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	D1SE (E)	738	-	451389 336171
14	**Contemporary Trade Directory Entries** Name: A E Reeder & Sons Location: 27, The Close, Beeston, Nottingham, Nottinghamshire, NG9 5DF Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	D2SW (SE)	794	-	451677 335926
15	**Contemporary Trade Directory Entries** Name: Mucky Dusters Location: Inham Rd, Beeston, Nottingham, Nottinghamshire, NG9 4HW Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	D1NW (NW)	826	-	451162 336406
16	**Contemporary Trade Directory Entries** Name: Paul Coleman Location: 30, Aldene Court, Beeston, Nottingham, NG9 5BS Classification: Staircase, Balustrade & Handrail Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	D2NW (E)	932	-	451570 336272
17	**Fuel Station Entries** Name: Ambercote Service Station Location: Bramcote Lane, Chilwell, NOTTINGHAM, Nottinghamshire, NG9 5EL Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	D1SE (S)	665	-	451278 336155
18	**Points of Interest - Commercial Services** Name: A E Reeder & Sons Location: 27 The Close, Beeston, Nottingham, NG9 5DF Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	D2SW (SE)	794	6	451677 335926

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	D5SW (NW)	83	7	451028 336706
20	**Areas of Adopted Green Belt** Authority: Broxtowe Borough Council Plan Name: Broxtowe Local Plan **Status: Adopted** Plan Date: 30th September 2004	(SE)	673	7	452301 335126
21	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	(SW)	0	9	450550 335550
22	**Nitrate Vulnerable Zones** Name: Not Supplied Description: Surface Water Source: Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	D1SE (NW)	0	9	451285 336207
23	**Sites of Special Scientific Interest** Name: Attenborough Gravel Pits Multiple Areas: N Total Area (m2): 2265735.06 Source: Natural England Reference: 1003408 Designation Details: Site Of Special Scientific Interest Designation Date: 1st November 1982 Date Type: Notified Designation Details: Local Wildlife Site Designation Date: 1st November 1982 Date Type: Notified Designation Details: Water Framework Directive (WFD) Designation Date: 1st November 1982 Date Type: Notified	(SE)	759	10	452360 335161

Data Currency

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Nottingham City Council - Environmental Health Department	January 2015	Annual Rolling Update
Broxtowe Borough Council - Environmental Health Department	July 2013	Annual Rolling Update
Discharge Consents		
Environment Agency - Midlands Region	October 2016	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Midlands Region	March 2013	As notified
Integrated Pollution Controls		
Environment Agency - Midlands Region	October 2008	Not Applicable
Integrated Pollution Prevention And Control		
Environment Agency - Midlands Region	January 2017	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Controls		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Broxtowe Borough Council - Environmental Health Department	April 2014	Annual Rolling Update
Nottingham City Council - Environmental Health Department	June 2014	Annual Rolling Update
Nearest Surface Water Feature		
Ordnance Survey	July 2012	Quarterly
Pollution Incidents to Controlled Waters		
Environment Agency - Midlands Region	December 1999	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Midlands Region	July 2015	As notified
Prosecutions Relating to Controlled Waters		
Environment Agency - Midlands Region	March 2013	As notified
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - Midlands Region - East Area	January 2017	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	January 2017	Quarterly
Water Abstractions		
Environment Agency - Midlands Region	October 2016	Quarterly
Water Industry Act Referrals		
Environment Agency - Midlands Region	January 2017	Quarterly
Groundwater Vulnerability		
Environment Agency - Head Office	April 2015	Not Applicable
Drift Deposits		
Environment Agency - Head Office	January 1999	Not Applicable
Bedrock Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified
Superficial Aquifer Designations		
British Geological Survey - National Geoscience Information Service	August 2015	As notified
Source Protection Zones		
Environment Agency - Head Office	October 2016	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	November 2016	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	November 2016	Quarterly
Flood Defences Environment Agency - Head Office	November 2016	Quarterly
Detailed River Network Lines Environment Agency - Head Office	September 2014	Annually
Detailed River Network Offline Drainage Environment Agency - Head Office	March 2012	Annually
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	As notified
Surface Water Suitability Environment Agency - Head Office	October 2013	As notified
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Midlands Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - Midlands Region - East Area	August 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	August 2016	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - Midlands Region - East Area	October 2016	Quarterly
Environment Agency - Midlands Region - Lower Trent Area	October 2016	Quarterly
Local Authority Landfill Coverage		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Nottingham City Council	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Broxtowe Borough Council - Environmental Health Department	May 2000	Not Applicable
Nottingham City Council	May 2000	Not Applicable
Nottinghamshire County Council - Environment Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - Midlands Region - Lower Trent Area	March 2003	Not Applicable
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	July 2016	Bi-Annually
Explosive Sites		
Health and Safety Executive	September 2016	Bi-Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Nottingham City Council - Planning Information Department	February 2016	Annual Rolling Update
Planning Hazardous Substance Consents		
Nottinghamshire County Council	August 2007	Annual Rolling Update
Broxtowe Borough Council	February 2016	Annual Rolling Update
Nottingham City Council - Planning Information Department	February 2016	Annual Rolling Update

Data Currency

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	October 2016	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	As notified
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	As notified
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	As notified
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	June 2015	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	As notified
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	As notified

Data Currency

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	November 2016	Quarterly
Fuel Station Entries Catalist Ltd - Experian	November 2016	Quarterly
Gas Pipelines National Grid	July 2014	Quarterly
Points of Interest - Commercial Services PointX	December 2016	Quarterly
Points of Interest - Education and Health PointX	December 2016	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2016	Quarterly
Points of Interest - Public Infrastructure PointX	December 2016	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2016	Quarterly
Underground Electrical Cables National Grid	December 2015	Bi-Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland Natural England	August 2016	Bi-Annually
Areas of Adopted Green Belt Broxtowe Borough Council Nottingham City Council	November 2016 November 2016	As notified As notified
Areas of Unadopted Green Belt Broxtowe Borough Council Nottingham City Council	November 2016 November 2016	As notified As notified
Areas of Outstanding Natural Beauty Natural England	January 2017	Bi-Annually
Environmentally Sensitive Areas Natural England	January 2017	Annually
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Natural England	January 2017	Bi-Annually
Marine Nature Reserves Natural England	January 2017	Bi-Annually
National Nature Reserves Natural England	January 2017	Bi-Annually
National Parks Natural England	August 2016	Bi-Annually
Nitrate Sensitive Areas Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	April 2016	Not Applicable
Nitrate Vulnerable Zones Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	Annually
Ramsar Sites Natural England	January 2017	Bi-Annually
Sites of Special Scientific Interest Natural England	April 2016	Bi-Annually
Special Areas of Conservation Natural England	January 2017	Bi-Annually
Special Protection Areas Natural England	January 2017	Bi-Annually
World Heritage Sites English Heritage - National Monument Record Centre	September 2015	Bi-Annually

Data Suppliers

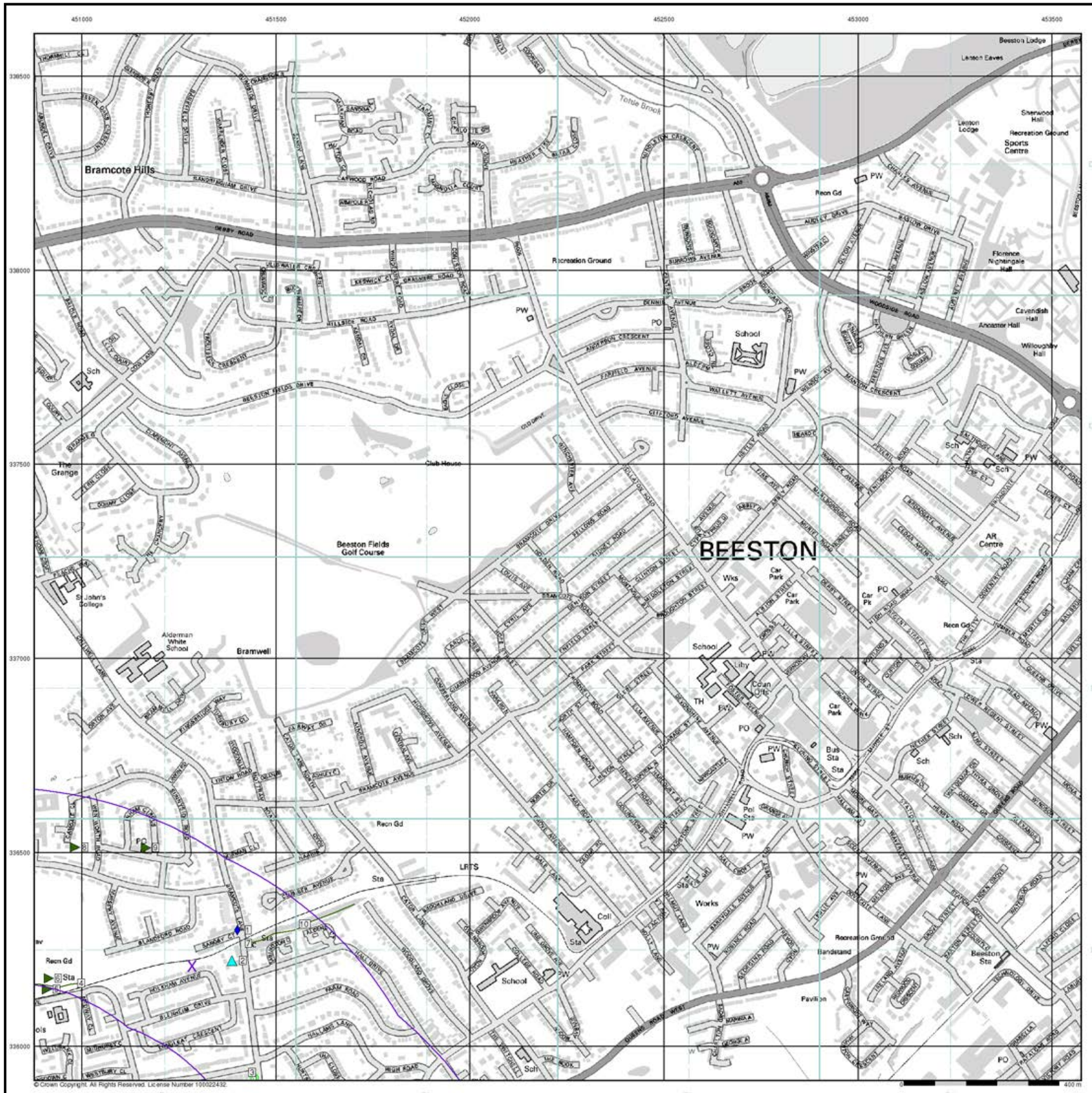
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
2	**British Geological Survey - Enquiry Service** British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	[redacted] Website: www.bgs.ac.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	[redacted]
4	**Broxtowe Borough Council - Environmental Health Department** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted].gov.uk
5	**Nottinghamshire County Council - Environment Department** 5th Floor, Trentbridge House, Fox Road, Nottingham, Nottinghamshire, NG2 6BJ	[redacted] Website: www.nottinghamshire.gov.uk
6	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
7	**Broxtowe Borough Council** Council Offices, Foster Avenue, Beeston, Nottingham, Nottinghamshire, NG9 1AB	[redacted]
8	**Nottingham City Council** The Guildhall, South Sherwood Street, Nottingham, Nottinghamshire, NG1 4BT	[redacted] Website: www.nottinghamcity.gov.uk
9	**Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)** Government Buildings, Otley Road, Lawnswood, Leeds, West Yorkshire, LS16 5QT	[redacted]
10	**Natural England** County Hall, Spetchley Road, Worcester, WR5 2NP	[redacted] Website: www.naturalengland.org.uk
11	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	[redacted]
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	[redacted]
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	[redacted] Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



pba peterbrett

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

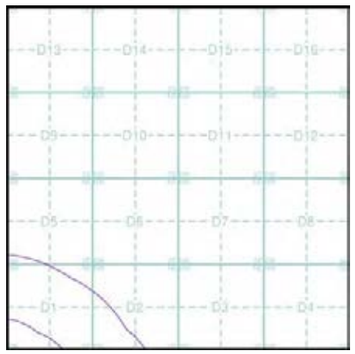
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice D



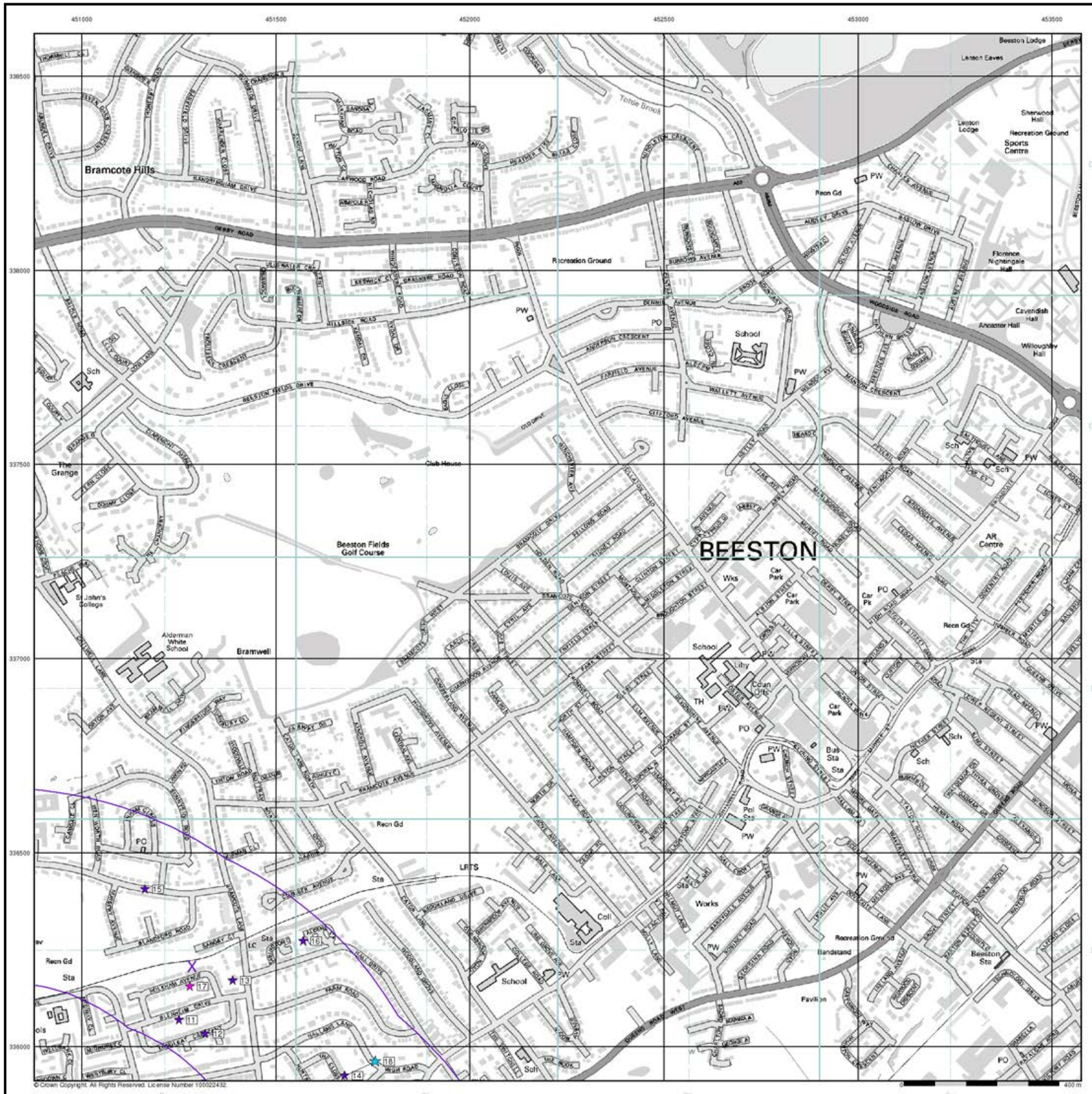
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



Industrial Land Use Map

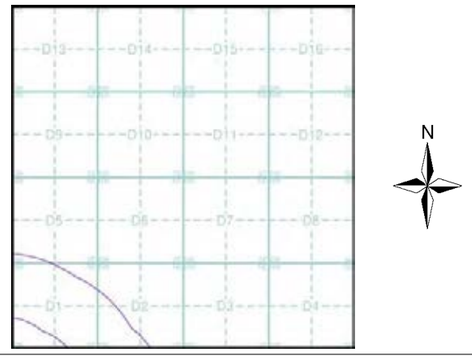
General

Specified Site
Specified Buffer(s)
Bearing Reference Point
Slice
Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice D

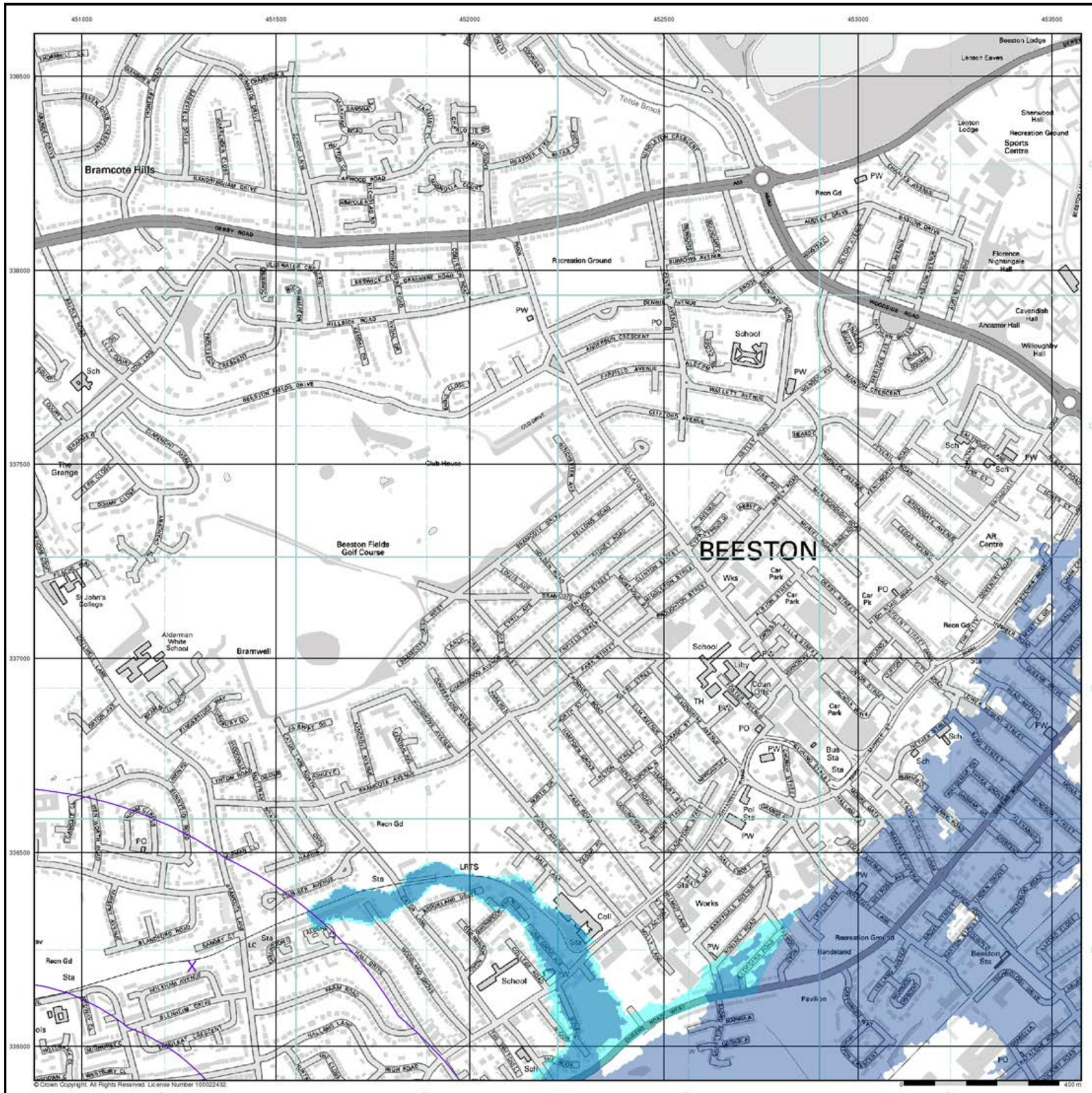


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



pba peterbrett

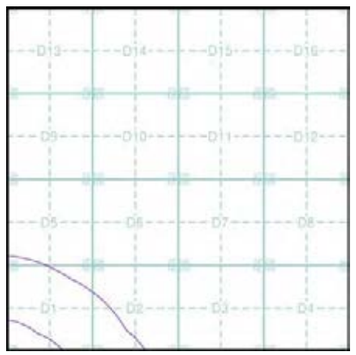
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice D



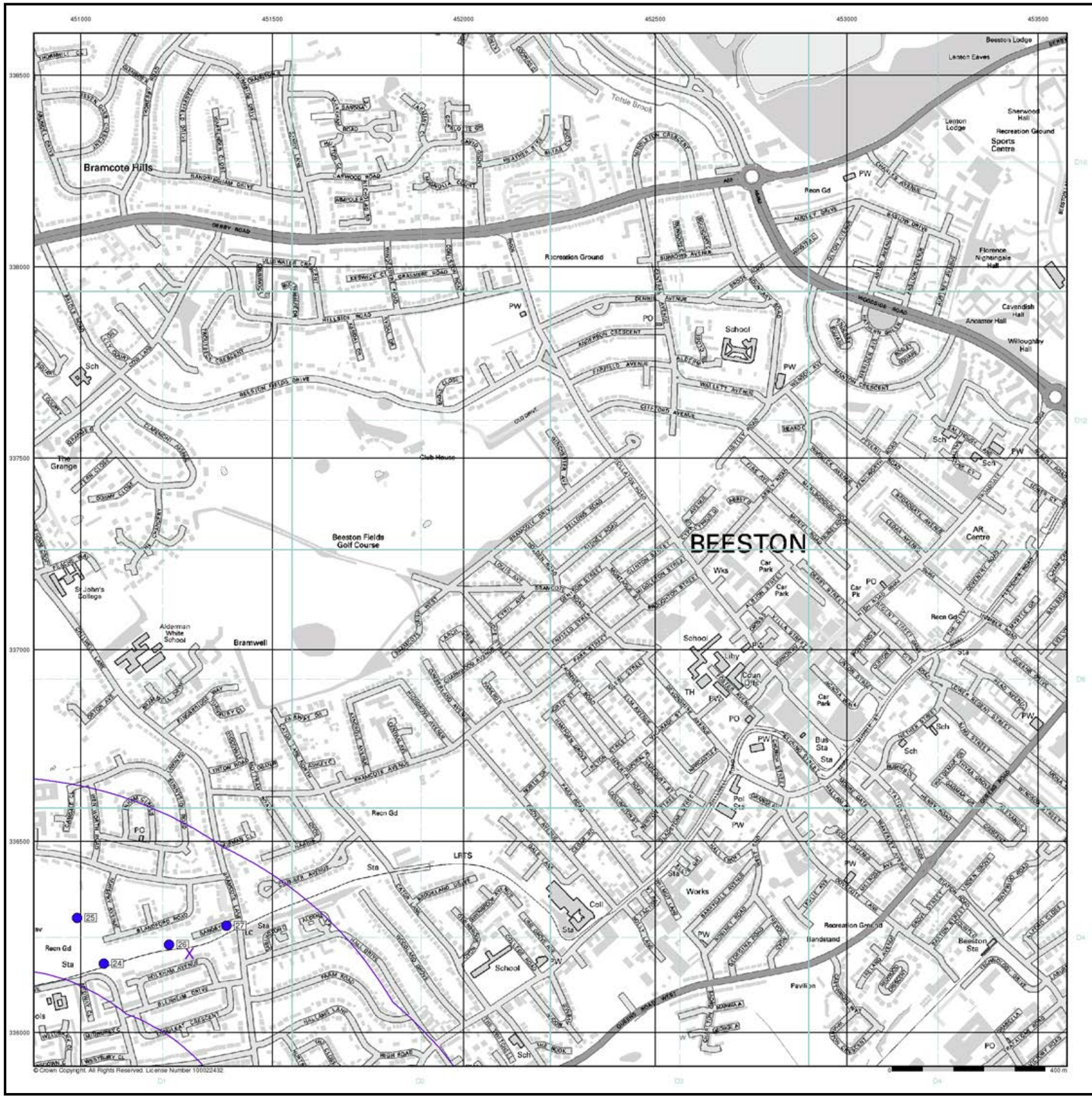
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel:
Fax:
Web:



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

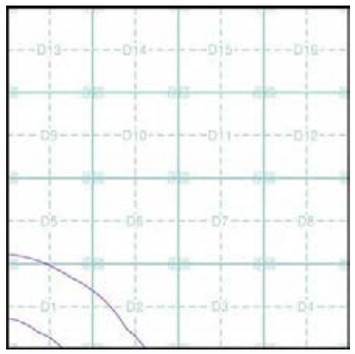
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice D

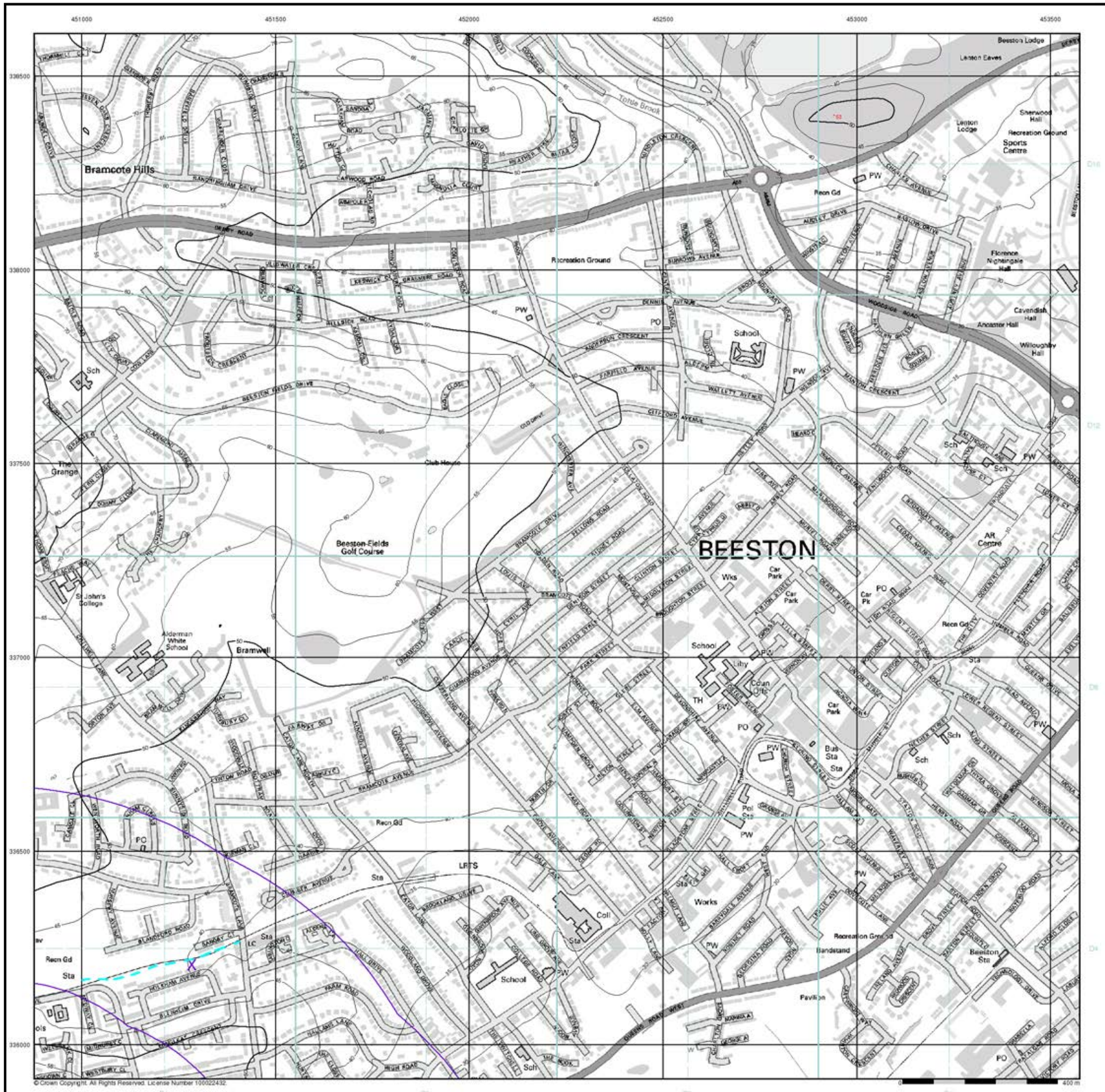


Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire



General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

Detailed River Network Data

- Primary River
- Secondary River
- Tertiary River
- Canal
- Canal Tunnel
- Undefined River
- Lake/Reservoir
- Offline Drainage Feature
- Extended Culvert (greater than 50m)
- Underground River (inferred)
- Underground River (local knowledge)
- Downstream of High Water Mark
- Downstream of Seaward Extension
- Not assigned River feature

Contours (height in metres)

Standard Contour 105 100 95

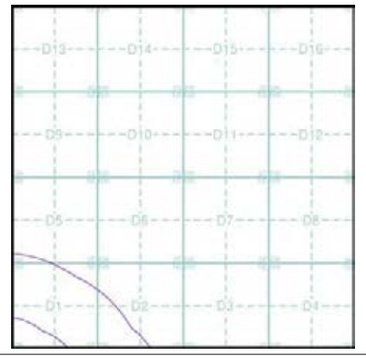
Master Contour

Spot Height *167.3

MLW Mean Low Water

MHW Mean High Water

EA/NRW Detailed River Network Map - Slice D



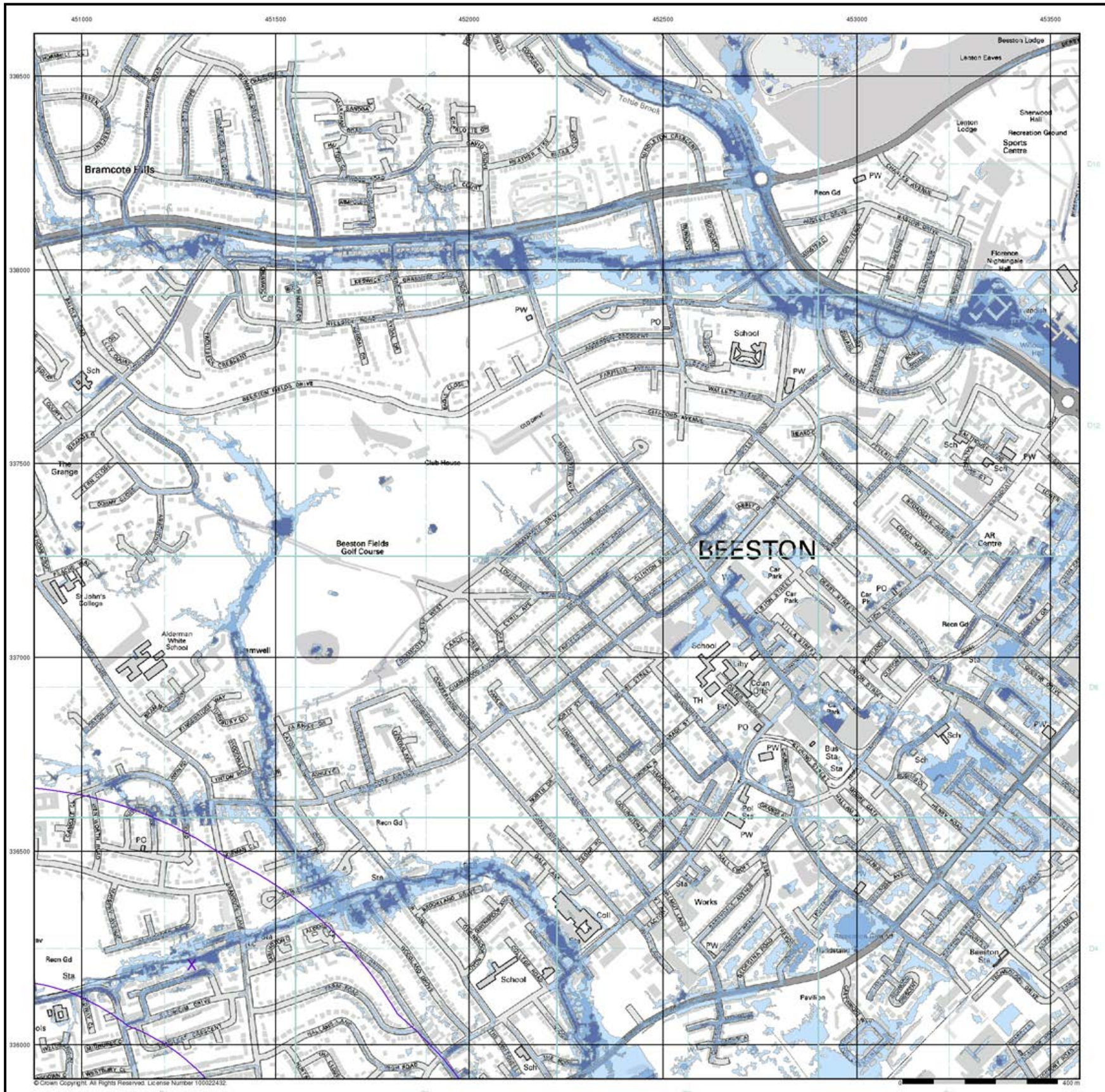
Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

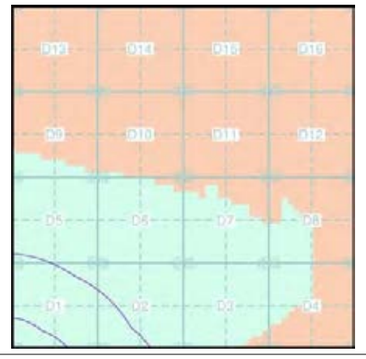
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice D



Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

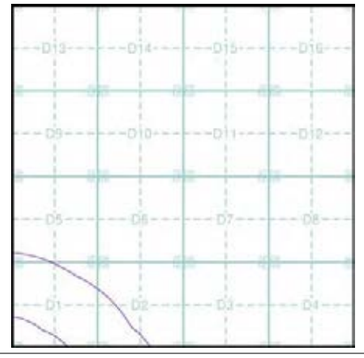
Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

< 15
15 - 25
25 - 35
35 - 45
45 - 60
60 - 120
> 120

Urban Soil Chemistry Arsenic - Slice D



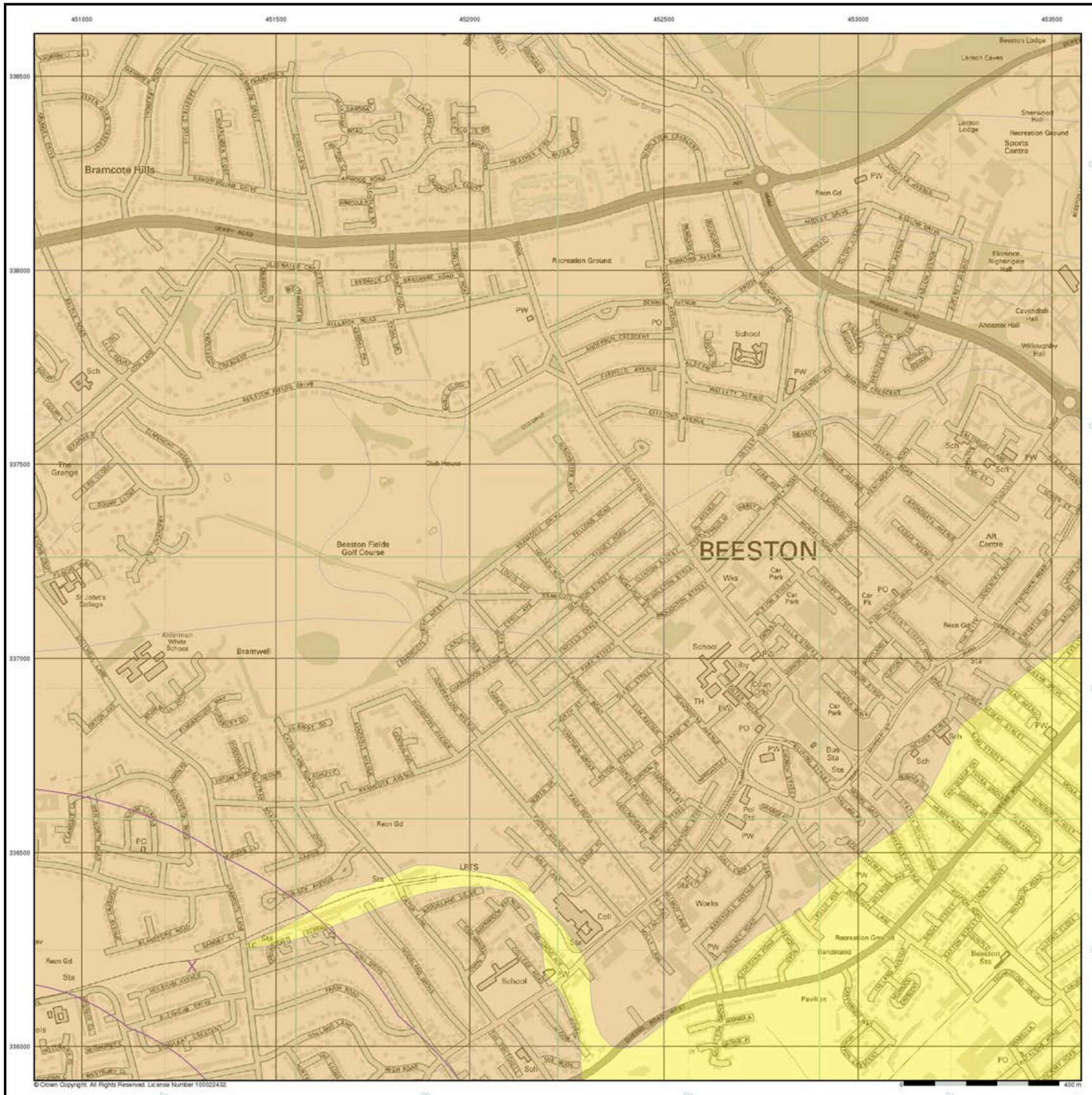
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

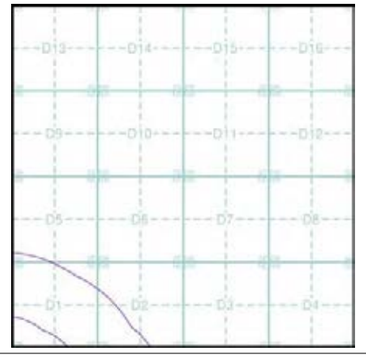
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice D



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

General

Specified Site | Specified Buffer(s) | Bearing Reference Point

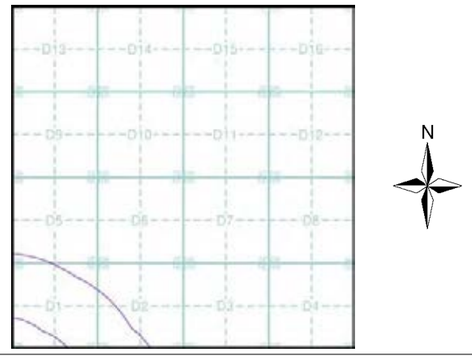
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

	< 1.8
	1.8 - 2.2
	2.2 - 3.0
	> 3.0

Urban Soil Chemistry Cadmium - Slice D



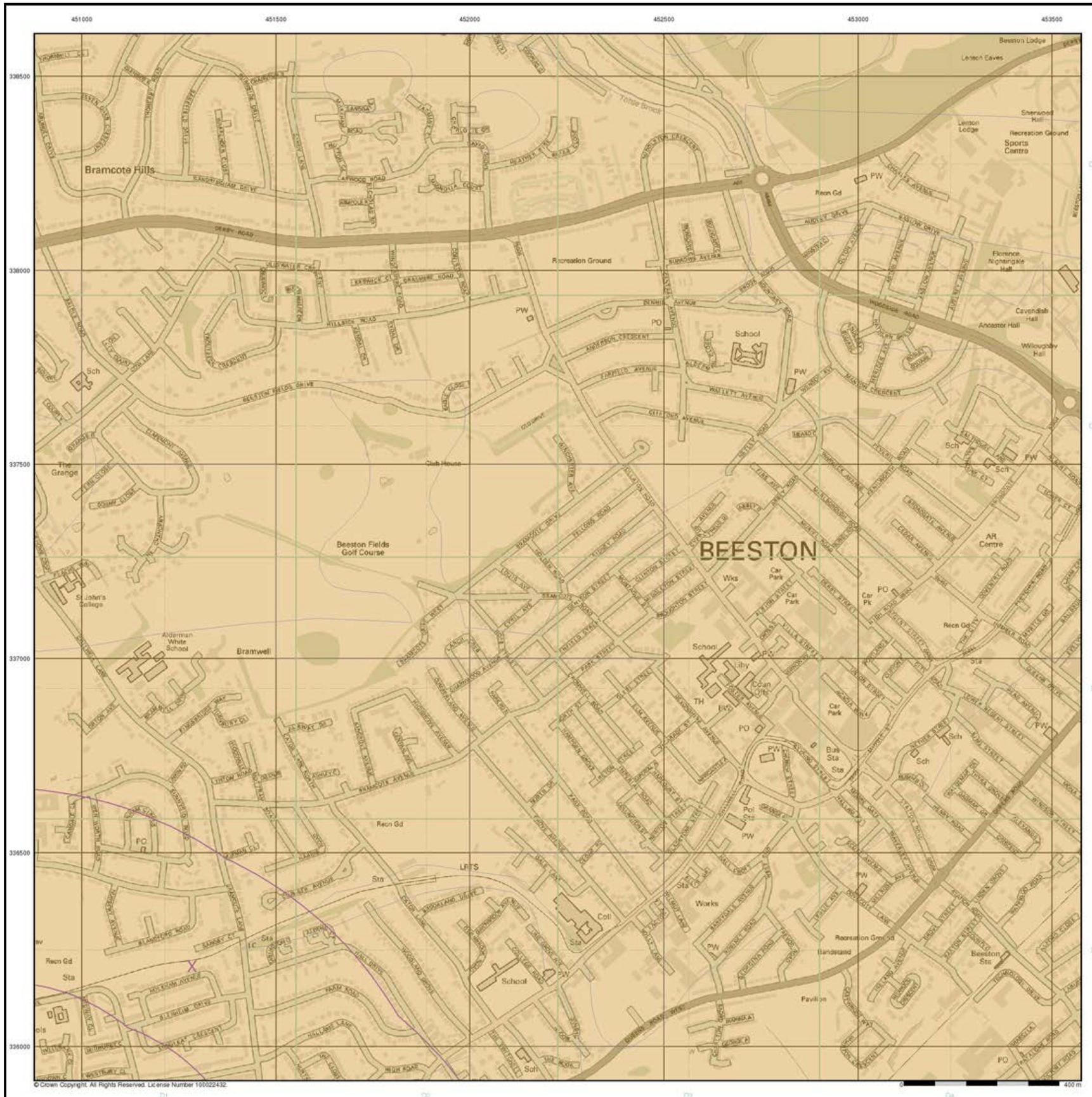
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



General

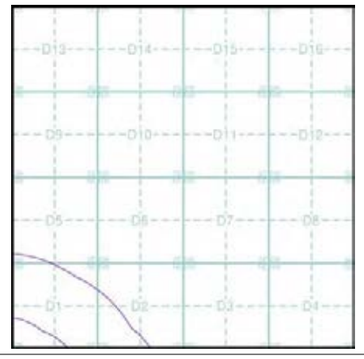
Specified Site | Specified Buffer(s) | Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice D



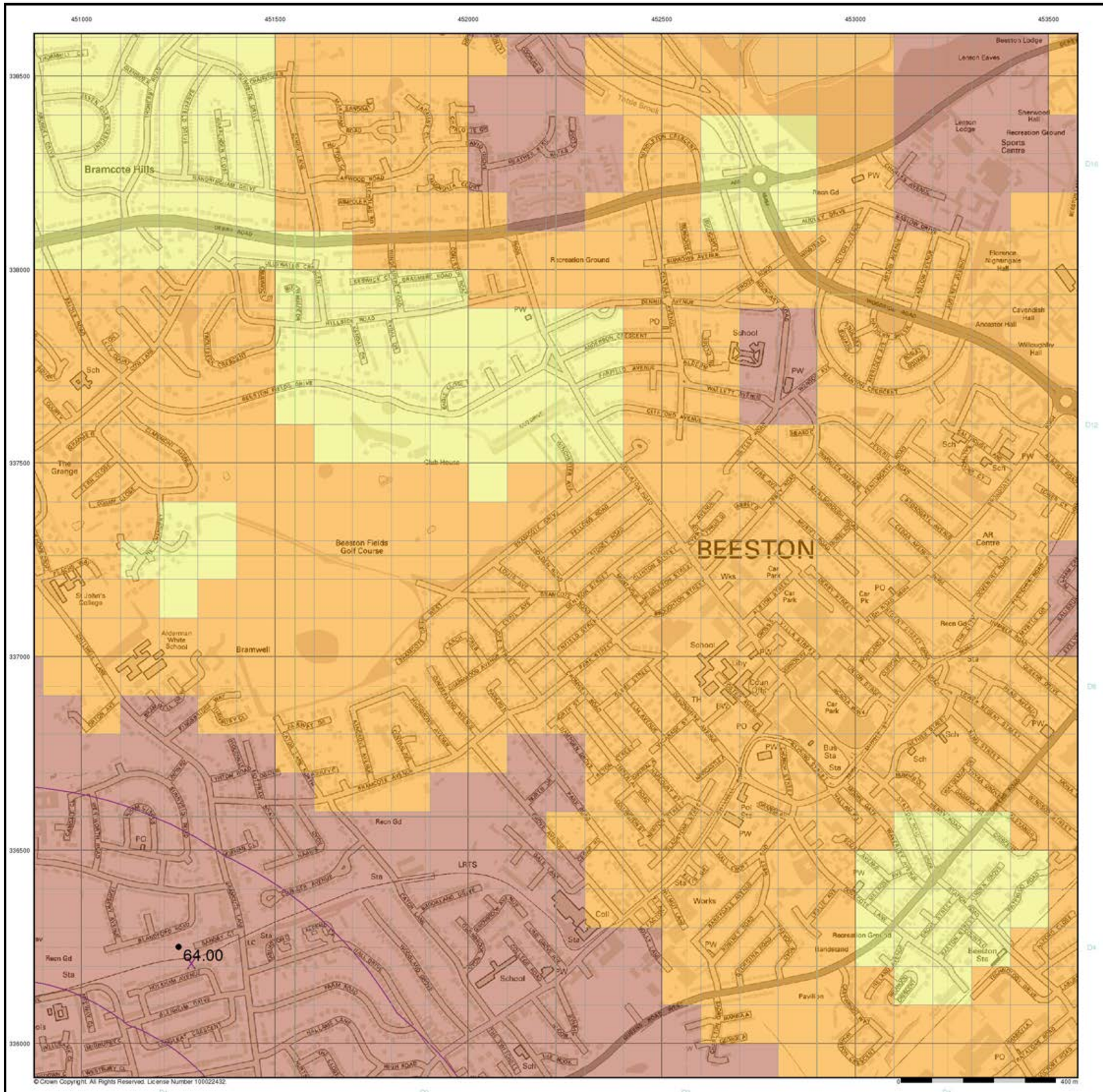
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

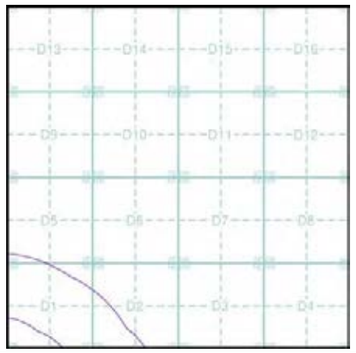
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Urban Soil Chemistry Chromium - Slice D



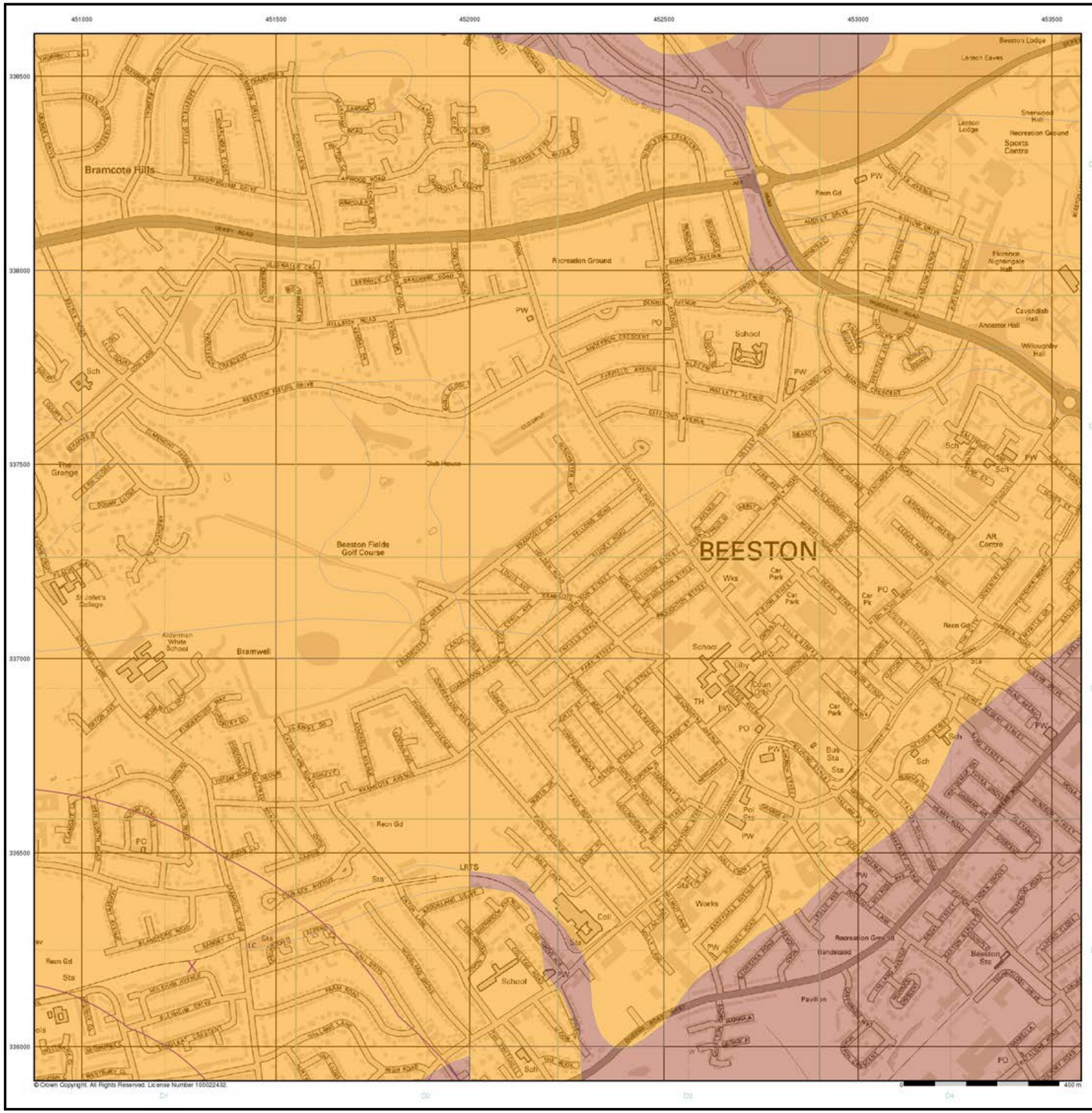
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

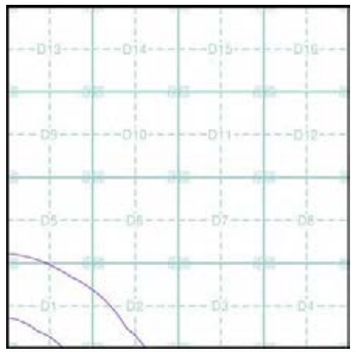
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice D



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

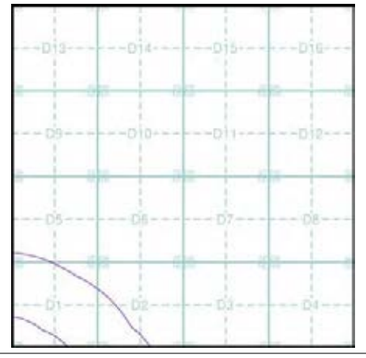
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

< 150
150 - 300
300 - 600
600 - 900
> 900

Urban Soil Chemistry Lead - Slice D



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

General

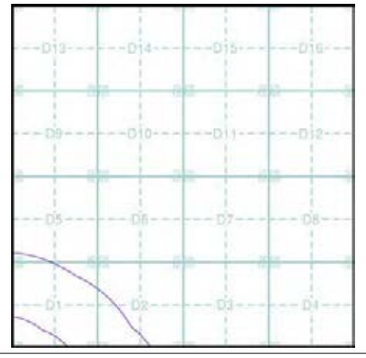
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice D



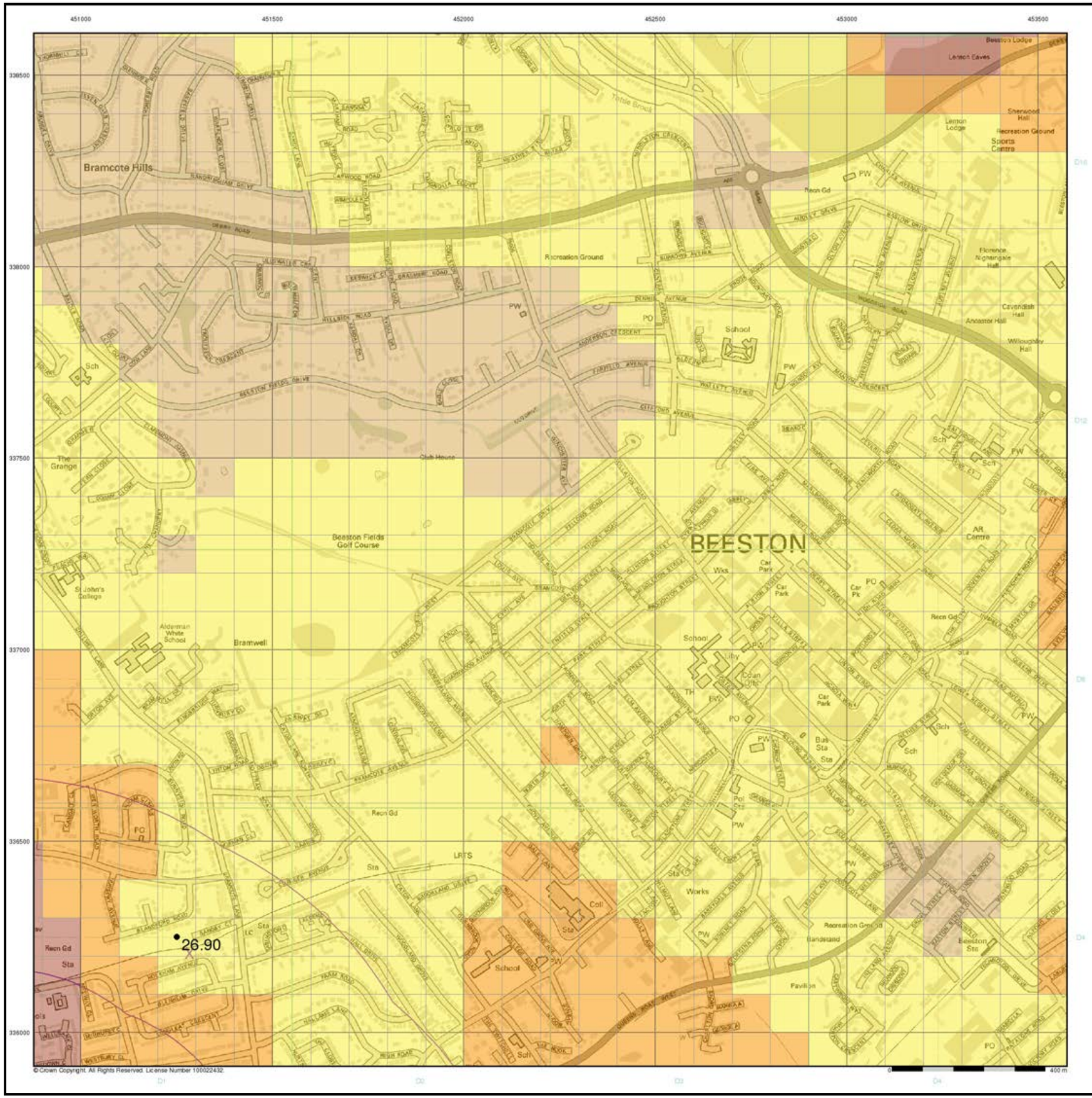
Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:



pba peterbrett

General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

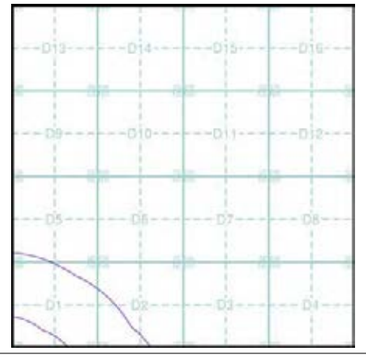
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

< 15
15 - 30
30 - 45
45 - 60
60 - 80
80 - 100
> 100

Urban Soil Chemistry Nickel - Slice D



Order Details

Order Details:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	451280, 336210
Slice:	D
Site Area (Ha):	75.28
Search buffer (m):	1000

Site Details

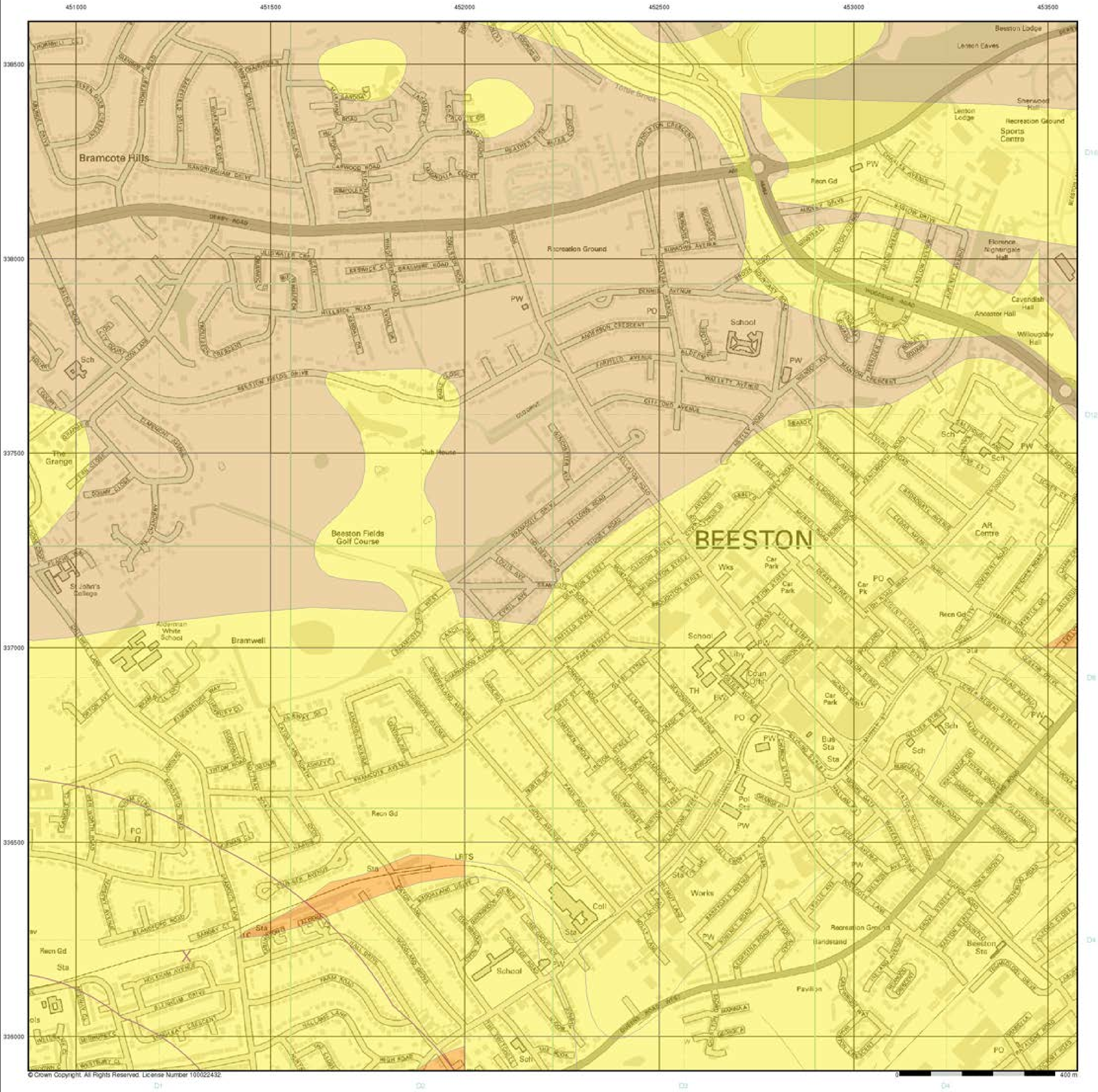
Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP
Tel: [redacted]
Fax:
Web:

General

Specified Site · Specified Buffer(s) · X Bearing Reference Point

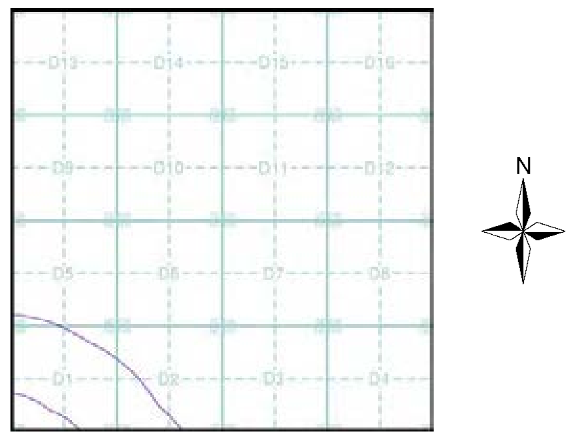
Estimated Soil Chemistry Nickel



Nickel Concentrations mg/kg

Concentration
< 15
15 - 30
30 - 45
45 - 60
60 - 80
80 - 100
> 100

Estimated Soil Chemistry Nickel - Slice D



Order Details

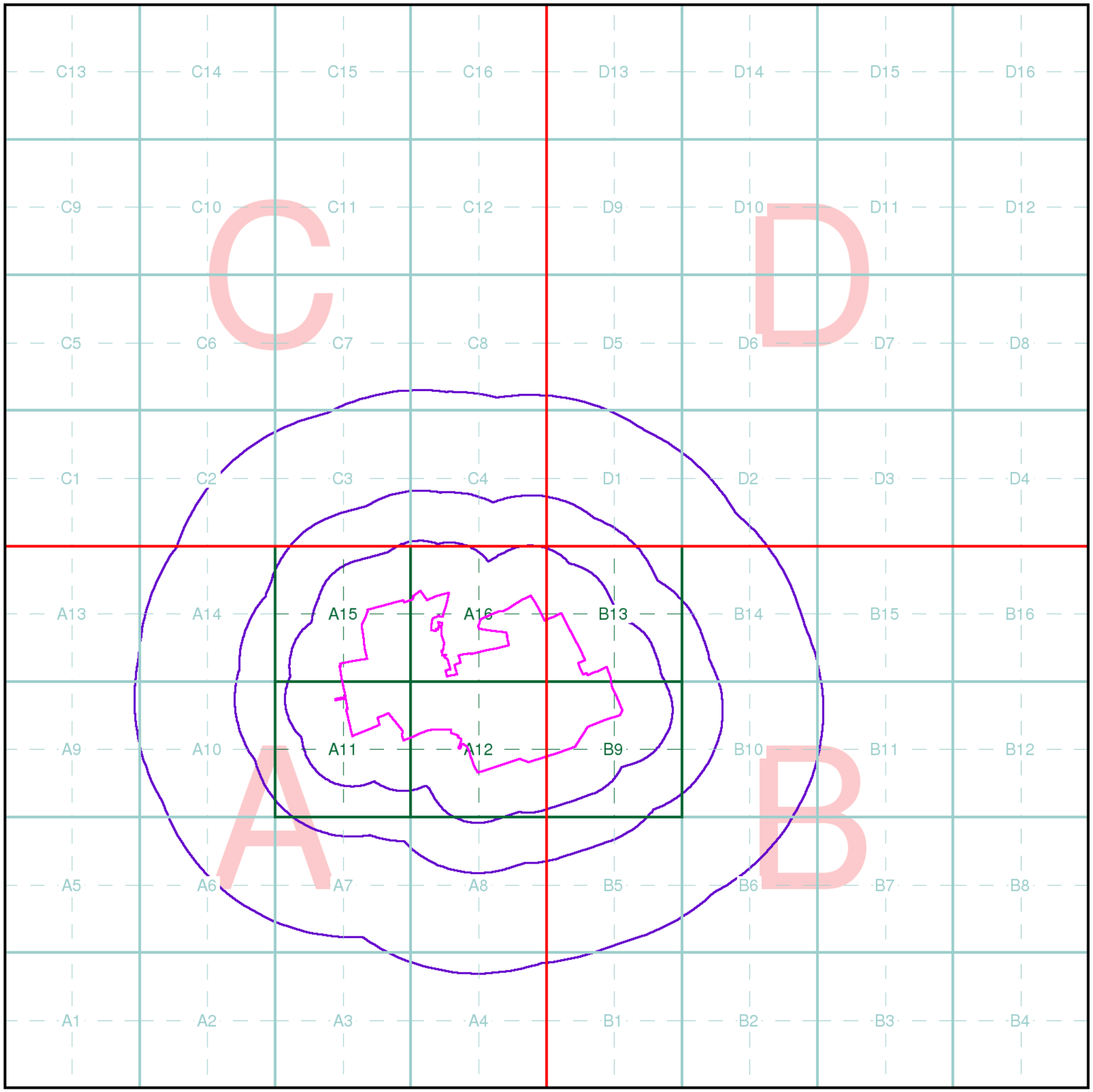
Order Details: 114077061_1_1
Customer Ref: 37782-3501
National Grid Reference: 451280, 336210
Slice: D
Site Area (Ha): 75.28
Search buffer (m): 1000

Site Details

Chetwynd Barracks, Chilwell, Nottinghamshire

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: [redacted]
Web:



Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Environment Agency

NATURAL ENGLAND

Envirocheck reports are compiled from 136 different sources of data.

Prepared For
DIO

Client Details
Mr D Bissell, Peter Brett Associates LLP, 11 Prospect Court, Courteenhall Road, Blisworth, Northampton, NN7 3DG

Order Details

Order Number:	114077061_1_1
Customer Ref:	37782-3501
National Grid Reference:	450530, 335230
Site Area (Ha):	75.28
Search Buffer (m):	1000

Site Details
Chetwynd Barracks, Chilwell, Nottinghamshire

Full Terms and Conditions can be found on the following link:
http://www.landmarkinfo.co.uk/Terms/Show/515

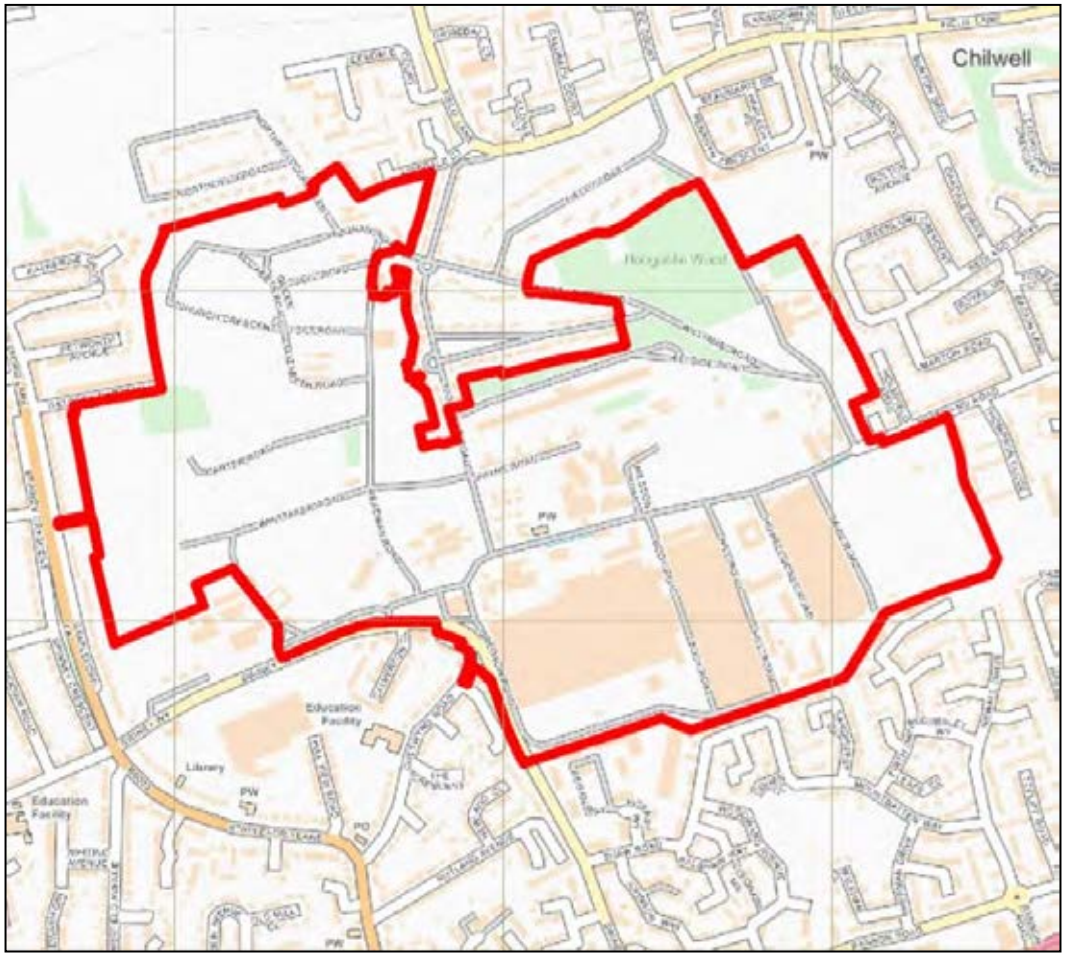
Landmark INFORMATION GROUP
Tel:
Fax:
Web:

Appendix G Preliminary UXO Risk Assessment Report

Landmark Information Group Ltd
[redacted]
W: www.envirocheck.co.uk

PRELIMINARY UNEXPLODED ORDNANCE (UXO) THREAT ASSESSMENT

Meeting the requirements of *CIRIA* C681 'Unexploded Ordnance (UXO) – A guide for the Construction Industry' Risk Management Framework



6 ALPHA PROJECT NUMBER	P5750	**ORIGINATOR**	C. Cole
LANDMARK ORDER NUMBER	114077061_2	**REVIEWED BY**	R. Griffiths (14th February 2017)
CLIENT REFERENCE	37782-3501	**RELEASED BY**	L. Askham (15th February 2017)
SITE	Chetwynd Barracks, Chilwell, Nottinghamshire		
RATING	**VERY HIGH** – This Site requires further action to establish and mitigate any UXO risk posed		

UNEXPLODED ORDNANCE THREAT ASSESSMENT

STUDY SITE

The Study Site is described as 'Chetwynd Barracks, Chilwell, Nottinghamshire', and it is centred on National Grid Reference 450530, 335230.

THREAT POTENTIAL AND RECOMMENDATIONS

UXO PROBABILITY ASSESSMENT = 5 RATING, INDICATING A VERY HIGH PROBABILITY OF UXO ENCOUNTER

The rating scale can be seen on *Figure 2* (Probability of UXO Encounter). In accordance with current guidelines (*CIRIA* C681 Chapter 5), the highest threat rating has been determined at this specific site for UXO threat consideration and has been used for the final assessment and recommendations.

In accordance with *CIRIA* C681 Chapter 5 on managing UXO risks, *6 Alpha* recommends that the next stage in the risk management framework is:

DETAILED UXO THREAT & RISK ASSESSMENT

We would be pleased to provide this service, please contact *Envirocheck* for further details:

REPORT SUMMARY

During WWII the Study Site was situated within *Beeston and Stapleford Urban District*, which recorded three High Explosive (HE) bomb strikes per 100 hectares; a low level of bombing.

Luftwaffe aerial reconnaissance photography associated with the Site identified army and navy stores (located on-site) as primary bombing targets. In addition, a factory, brick works, a railway station and railway sidings located in the vicinity may have been considered secondary bombing targets.

Neither Air Raid Precaution (ARP) records nor official bomb damage mapping were available. However, an analysis of post-war mapping identified 'ruins' situated 130m south, which are likely to be attributed to WWII bombing.

Further research revealed that *National Shell Filling Factory No.6* was located on-site during WWI and *Chetwynd Barracks* and *Chilwell Station* were located on-site during WWII.

Given that a shell filling factory was recorded on-site; it would suggest that further action is warranted to address the potential for UXO encounter.

USING THIS REPORT

This Preliminary Assessment is designed to inform environmental and construction professionals of the potential threat of military related explosives and/or ordnance on, or in, the vicinity of the Study Site.

This assessment is designed to be employed as a site-screening tool to meet with the requirement of Phase One of the *CIRIA UXO Risk Management Framework*; there are two broad prospective outcomes; either the threat level requires a detailed threat & risk assessment; or no further action is required. In the former instance we can provide a report within 14 working days (or more quickly upon application).

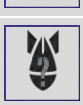
Two figures accompany the report, the *Second World War* (WWII) High Explosive (HE) Bomb Density and the final Probability of UXO Encounter. The purpose of this approach is to demonstrate that whilst bomb density statistics give an indication for WWII bombing, they should not be relied upon exclusively to generate a holistic assessment.

For further information, please contact *Envirocheck*:

Website: http://www.envirocheck.co.uk

Telephone: [redacted]

DATA FINDINGS

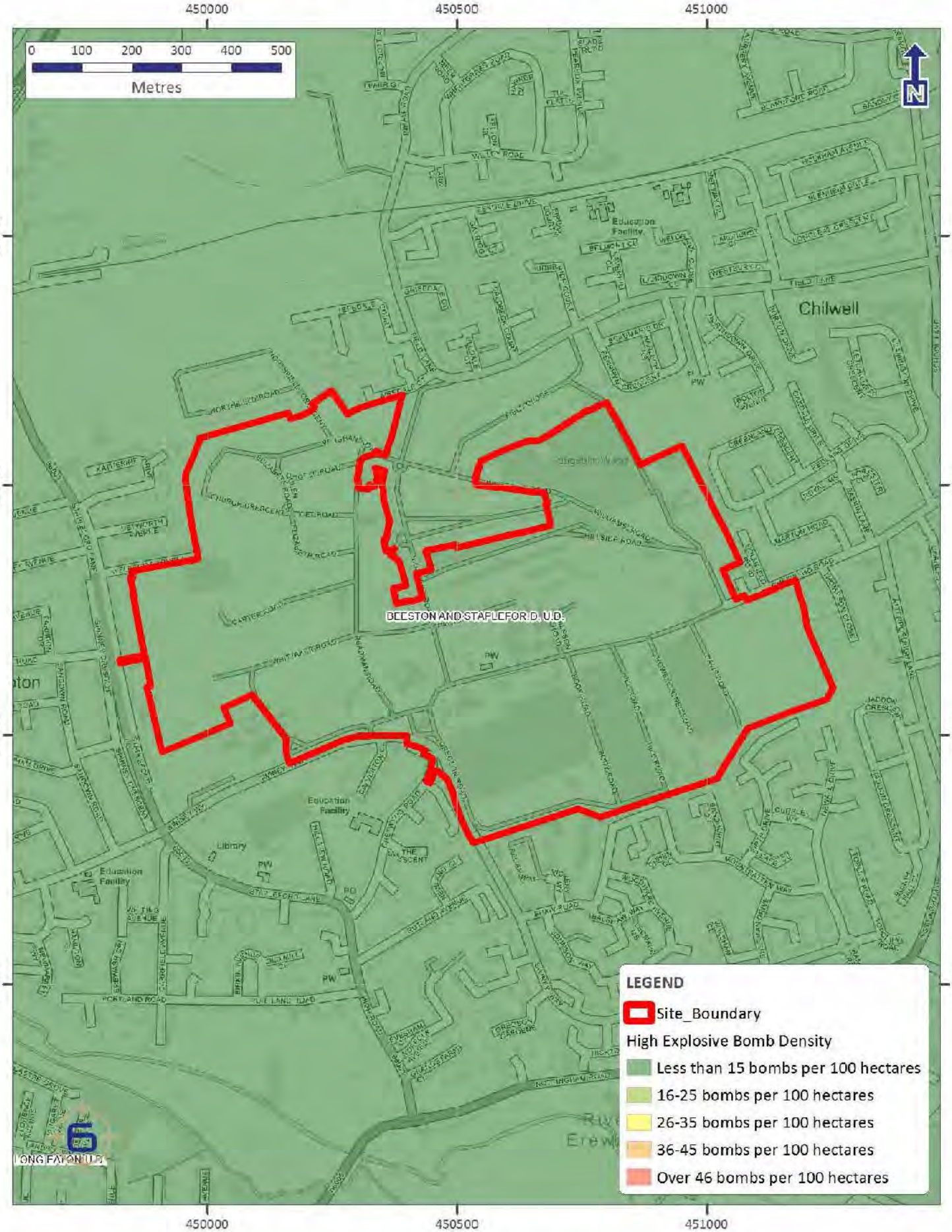
Threat Source (within 1,000m)		Detail	
		Identified	Comments
	Airfields/Military Facilities	✓	*Chetwynd Barracks* and *Chilwell Station* (both located on-site), *Cromwell Camp* (30m east) and a *TA Centre* (265m east).
	Ordnance Manufacture/Storage	✓	*National Shell Filling Factory No.6* was located on-site during WWI.
	WWII Decoy Bombing Sites	✗	None recorded within 1,000m.
	WWII Defensive Features	✗	None recorded within 1,000m.
	WWII *Luftwaffe* Designated Bombing Targets	✓	*Luftwaffe* aerial photography identified army and navy stores (on-site) as a primary bombing target.
	Secondary Bombing Targets	✓	A factory (335m east), brick works (345m north-east), a railway station (720m south-east) and railway sidings (755m west).
	WWII Bomb Strikes Within Site Boundary	✗	ARP records were not available.
	WWII Bomb Strikes Near Site Boundary	✗	ARP records were not available.
	WWII Bomb Damage	✓	Post-WWII mapping identified 'ruins' 130m south.
	Abandoned Bomb Register	✗	The official abandoned bomb list did not identify an abandoned bomb within 1,000m of the Site boundary.
	WWII Bombing Density Per 100 Hectares	✓	The Site was located within *Beeston and Stapleford Urban District*, which recorded three HE bomb strikes per 100 hectares.

IMPORTANT NOTES

1. The term 'Preliminary UXO Threat Assessment' has been used to describe this report, to fall in line with the *CIRIA* C681 guidelines. Whilst the term 'Risk' can be justifiably used at this stage, the reader should note that the 'Consequence' function of 'Risk' is not considered. Should it be required, this would be addressed in the 'Detailed UXO Threat & Risk Assessment' (Stages 2 and 3).
2. This report is accurate and up to date at the time of writing.
3. The assessment levels have been generated from historical data and third party sources. Where possible *6 Alpha* have sought to verify the accuracy of such data, but cannot be held accountable for inherent errors that may be in third party data sets (e.g. *National Archives* or library sources).
4. *6 Alpha* have exercised all reasonable care, skill and due diligence in producing this service.
5. Whilst every effort has been used to identify all potential UXO/explosive threats, there were a number of private facilities, which may not have released privately recorded information concerning UXO/explosive threats into the public domain. It is therefore possible that some of the aforementioned sites may not be included within the database.

CHETWYND BARRACKS, CHILWELL, NOTTINGHAMSHIRE

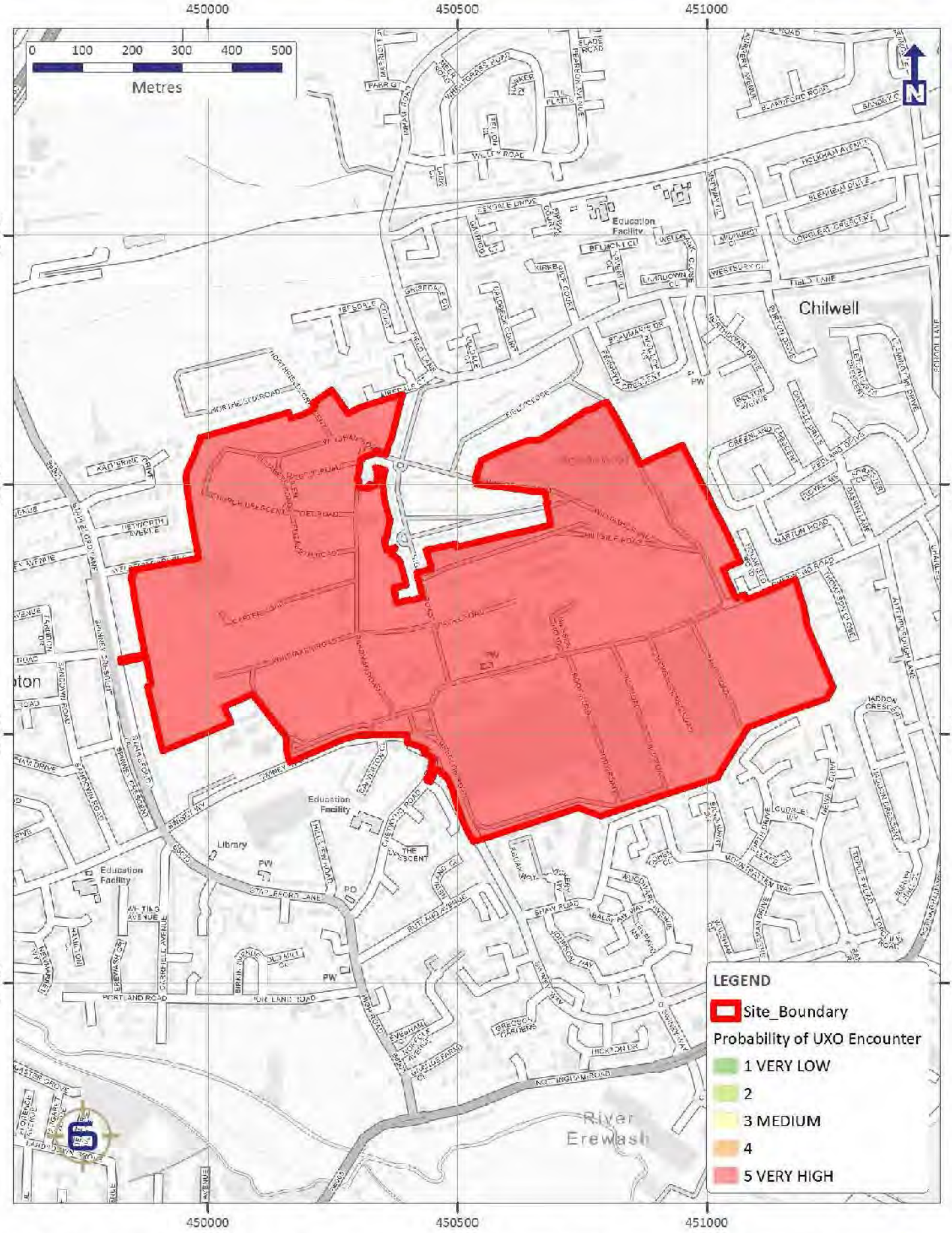
WWII High Explosive Bomb Density



PROJECT NO.	FIGURE	DRAWN	CHECKED	DATE
P5750	1	EP	RG	14 February 2017

CHETWYND BARRACKS, CHILWELL, NOTTINGHAMSHIRE

Probability of UXO Encounter



PROJECT NO	FIGURE	DRAWN	CHECKED	DATE
P5750	2	EP	RG	13 February 2017

Appendix H Summary of Pollutant Linkages & Risk Estimation

Receptor	Present (Y/N) & Sensitivity Value	Pathway	Present (Y/N)	EPH & Solvent	PAH	Metals	Inorganic	Biocides	Radioactivity	Ground Gas	Consequence (Hazard Classification x Sensitivity)	Probability	Estimated Risk
Human Health - On-Site Current Users	Y (4)	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	√	√	√	√	x			
		Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	8 (Mild)	Unlikely	Very Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	8 (Mild)	Unlikely	Very Low
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	8 (Mild)	Unlikely	Very Low
		Inhalation of vapours/gases – outdoor	Y	√	x	x	x	x	√	√	8 (Mild)	Unlikely	Very Low
		Inhalation of vapours/gases - indoor	Y	√	x	x	x	x	√	√	8 (Mild)	Unlikely	Very Low
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	8 (Mild)	Unlikely	Very Low
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health On-Site Future User	Y (5)	Ingestion of fruit or vegetable leaf or roots	Y	x	x	√	x	√	√	x	10 (Mild)	Low Likelihood	Low
		Ingestion of contaminated drinking water	Y	√	√	x	x	√	√	x	10 (Mild)	Low Likelihood	Low
		Ingestion of water / sediments when swimming	N	√	√	x	x	√	√	x			
		Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	10 (Mild)	Low Likelihood	Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	10 (Mild)	Low Likelihood	Low
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	10 (Mild)	Low Likelihood	Low
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√	10 (Mild)	Low Likelihood	Low
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	10 (Mild)	Low Likelihood	Low
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	10 (Mild)	Low Likelihood	Low
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health - Off-Site	Y (5)	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	x	x	√	√	x			
		Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	10 (Mild)	Unlikely	Very Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	10 (Mild)	Unlikely	Very Low
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	10 (Mild)	Unlikely	Very Low
		Inhalation of vapours – outdoor	N	√	x	x	x	x	√	√			
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	10 (Mild)	Unlikely	Very Low
		Dermal absorption via direct contact with soil	N	√	√	√	√	√	√	x			
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health - Construction/ Maintenance Workers*	Y (4)	Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	8 (Mild)	Likely	Moderate/ Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	8 (Mild)	Likely	Moderate/ Low
		Inhalation of particles (dust / soil) outdoor	Y	√	√	√	√	√	√	x	8 (Mild)	Likely	Moderate/ Low
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√	8 (Mild)	Likely	Moderate/ Low
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	8 (Mild)	Likely	Moderate/ Low
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	8 (Mild)	Likely	Moderate/ Low
Groundwater	Y (2)	Leaching	Y	√	√	√	√	√	√	x	4 (Minor)	Likely	Low
		Migration via natural or anthropogenic	Y	√	√	√	√	√	√	√	4 (Minor)	Likely	Low
Surface Water	Y (3)	Direct runoff or discharges from pipes	Y	√	√	√	√	√	√	x	6 (Mild)	Low Likelihood	Low
		Indirect via recharge from groundwater (hydraulic flow)	Y	√	√	√	√	√	√	x	6 (Mild)	Low Likelihood	Low
		Deposition of wind blown dust	Y	√	√	√	√	√	√	x	6 (Mild)	Low Likelihood	Low
Buildings	Y (1)	Direct contact	Y	√	√	x	x	x	x	x	2 (Minor)	Low Likelihood	Very Low
		Explosion due to gas migration via natural / anthropogenic	Y	√	x	x	x	x	x	√	2 (Minor)	Low Likelihood	Very Low
Ecological Systems	Y (4)	Direct deposition of particles / dust - wind blown or flood	Y	√	√	√	√	√	√	x	8 (Mild)	Unlikely	Very Low
		Indirect - through watering	Y	√	√	√	x	x	√	x			
		Inhalation of gases/vapours or particulates/dust by animals	Y	√	√	√	x	x	√	√			
		Ingestion of of vegetation / water / soil by animals	Y	√	√	√	√	√	√	x			
Property	Y (1)	Direct deposition via wind or flood	Y	√	√	√	√	√	√	x	2 (Minor)	Low Likelihood	Very Low
		Indirect through watering	N	√	√	√	x	x	√	x			
		Inhalation of gas / vapour / particulates / dust by animals	Y	√	x	x	x	x	√	√			
		Ingestion of vegetation / water / soil by animals	N	√	√	√	√	√	√	x			

Risk estimation establishes the magnitude and probability of the possible consequences (what degree of harm might result and how likely).
The criteria for classifying probability and consequence are set out in Tables 3 and 4 of the PBA methodology.
Green text highlights one or more elements of the Pollutant Linkage are missing and therefore eliminated

pba peterbrett

Client

Defence Infrastructure Organisation

[redacted]

[redacted]

TABLE SUMMARISING POLLUTANT LINKAGES AND RISK ESTIMATION - ON SITE PSC 1 (SITE WIDE)

Chetwynd Barracks, Chilwell, Nottinghamshire

POTENTIAL HAZARDS ARE GROUND GASES, ASBESTOS, METALS AND HYDROCARBONS (HAZARD CLASSIFICATION 2)

Date	05/04/2017
A3 Scale	nts
Drawn	LT
Checked	JA
Table	1

Receptor	Present (Y/N) & Sensitivity Value	Pathway	Present (Y/N)	EPH & Solvent	PAH	Metals	Inorganic	Biocides	Radioactivity	Ground Gas	Consequence (Hazard Classification x Sensitivity)	Probability	Estimated Risk
Human Health - On-Site Current Users	Y (4)	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	√	√	√	√	x			
		Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	12 (Mild)	Unlikely	Very Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	12 (Mild)	Unlikely	Very Low
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	12 (Mild)	Unlikely	Very Low
		Inhalation of vapours/gases – outdoor	Y	√	x	x	x	x	√	√	12 (Mild)	Unlikely	Very Low
		Inhalation of vapours/gases - indoor	Y	√	x	x	x	x	√	√	12 (Mild)	Unlikely	Very Low
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	12 (Mild)	Unlikely	Very Low
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health On-Site Future User	Y (5)	Ingestion of fruit or vegetable leaf or roots	Y	x	x	√	x	√	√	x	15 (Medium)	Likely	Moderate
		Ingestion of contaminated drinking water	Y	√	√	x	x	√	√	x	15 (Medium)	Likely	Moderate
		Ingestion of water / sediments when swimming	N	√	√	x	x	√	√	x			
		Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	15 (Medium)	Likely	Moderate
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	15 (Medium)	Likely	Moderate
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	15 (Medium)	Likely	Moderate
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√	15 (Medium)	Likely	Moderate
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	15 (Medium)	Likely	Moderate
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	15 (Medium)	Likely	Moderate
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health - Off-Site	Y (5)	Ingestion of fruit or vegetable leaf or roots	N	x	x	√	x	√	√	x			
		Ingestion of contaminated drinking water	N	√	√	x	x	√	√	x			
		Ingestion of water / sediments when swimming	N	√	√	x	x	√	√	x			
		Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	15 (Medium)	Unlikely	Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	15 (Medium)	Unlikely	Low
		Inhalation of particles (dust / soil) indoor and outdoor	Y	√	√	√	√	√	√	x	15 (Medium)	Unlikely	Low
		Inhalation of vapours – outdoor	N	√	x	x	x	x	√	√			
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	15 (Medium)	Unlikely	Low
		Dermal absorption via direct contact with soil	N	√	√	√	√	√	√	x			
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
		Dermal absorption via direct contact with soil	N	√	√	√	√	√	√	x			
		Dermal absorption via waters (swimming / showering)	N	√	√	√	√	√	√	x			
Human Health - Construction/ Maintenance Workers*	Y (4)	Ingestion of soil/dust indoors	Y	√	√	√	√	√	√	x	12 (Mild)	Likely	Moderate/ Low
		Ingestion of soil/dust outdoors	Y	√	√	√	√	√	√	x	12 (Mild)	Likely	Moderate/ Low
		Inhalation of particles (dust / soil) outdoor	Y	√	√	√	√	√	√	x	12 (Mild)	Likely	Moderate/ Low
		Inhalation of vapours – outdoor	Y	√	x	x	x	x	√	√	12 (Mild)	Likely	Moderate/ Low
		Inhalation of vapours - indoor	Y	√	x	x	x	x	√	√	12 (Mild)	Likely	Moderate/ Low
		Dermal absorption via direct contact with soil	Y	√	√	√	√	√	√	x	12 (Mild)	Likely	Moderate/ Low
Groundwater	Y (2)	Leaching	Y	√	√	√	√	√	√	x	6 (Mild)	Likely	Moderate / Low
		Migration via natural or anthropogenic	Y	√	√	√	√	√	√	√	6 (Mild)	Likely	Moderate/ Low
Surface Water	Y (3)	Direct runoff or discharges from pipes	Y	√	√	√	√	√	√	x	9 (Mild)	Low Likelihood	Low
		Indirect via recharge from groundwater (hydraulic flow)	Y	√	√	√	√	√	√	x	9 (Mild)	Low Likelihood	Low
		Deposition of wind blown dust	Y	√	√	√	√	√	√	x	9 (Mild)	Low Likelihood	Low
Buildings	Y (1)	Direct contact	Y	√	√	x	x	x	x	x	3 (Minor)	Low Likelihood	Very Low
		Explosion due to gas migration via natural / anthropogenic	Y	√	x	x	x	x	x	√	3 (Minor)	Low Likelihood	Very Low
Ecological Systems	Y (4)	Direct deposition of particles / dust - wind blown or flood	Y	√	√	√	√	√	√	x	12 (Mild)	Unlikely	Very Low
		Indirect - through watering	Y	√	√	√	x	x	√	x			
		Inhalation of gases/vapours or particulates/dust by animals	Y	√	√	√	x	x	√	√			
		Ingestion of of vegetation / water / soil by animals	Y	√	√	√	√	√	√	x			
Property	Y (1)	Direct deposition via wind or flood	Y	√	√	√	√	√	√	x	3 (Minor)	Low Likelihood	Very Low
		Indirect through watering	N	√	√	√	x	x	√	x			
		Inhalation of gas / vapour / particulates / dust by animals	Y	√	x	x	x	x	√	√			
		Ingestion of vegetation / water / soil by animals	N	√	√	√	√	√	√	x			

Risk estimation establishes the magnitude and probability of the possible consequences (what degree of harm might result and how likely).
The criteria for classifying probability and consequence are set out in Tables 3 and 4 of the PBA methodology.
Green text highlights one or more elements of the Pollutant Linkage are missing and therefore eliminated

pba peterbrett

Client

Defence Infrastructure Organisation

[redacted]

[redacted]

TABLE SUMMARISING POLLUTANT LINKAGES AND RISK ESTIMATION - VARIOUS ON SITE PSC (LOCALISED)

Chetwynd Barracks, Chilwell, Nottinghamshire

POTENTIAL HAZARDS ARE GROUND GASES, ASBESTOS, METALS AND HYDROCARBONS (HAZARD CLASSIFICATION 3)

Date	05/04/2017
A3 Scale	nts
Drawn	LT
Checked	JA
Table	2

Chetwynd Barracks

Utility Infrastructure Appraisal

On behalf of **Defence Infrastructure Organisation**

Project Ref: 37782 | Rev: 4 | Date: May 2017

[redacted]

Document Control Sheet

Project Name: Chetwynd Barracks
Project Ref: 37782
Report Title: Utility Infrastructure Appraisal
Doc Ref: 37782/BGL/001
Date: February 2017

	Name	Position	Signature	Date
Prepared by:	James Heptonstall	Senior Engineer	JH	04.04.17
Reviewed by:	Peter DeSouza	Director	PDS	04.04.17
Approved by:	Tim Allen	Partner	TA	12.04.17
For and on behalf of Peter Brett Associates LLP				

Revision	Date	Description	Prepared	Reviewed	Approved
1	04.04.17	Utility update	HM	PDS	TA
2	30.05.17	Utility update	HM	PDS	TA
3	29.06.17	Utility update	HM	PDS	TA
4	12.07.17	Drainage update	HM	PDS	TA

Contents

Figures

Tables

1 Introduction

1.1 Site Background

1.1.1 The purpose of this report is to summarise existing and potential utility constraints associated with the development of Chetwynd Barracks, located at Chilwell in Nottinghamshire.

1.1.2 **Figure 1** shows the red line boundary of Chetwynd Barracks (the Site) that covers an area of approximately 75 hectares. The Site comprises accommodation quarters, office buildings, large open span warehouse buildings, equipment stores, car park, recreational space and open grass land. All of which is surrounded by a secure razor wire boundary fence.

1.1.3 As shown on **Figure 1**, the Site is bordered on all sides by the built up residential areas of Chilwell and Toton.

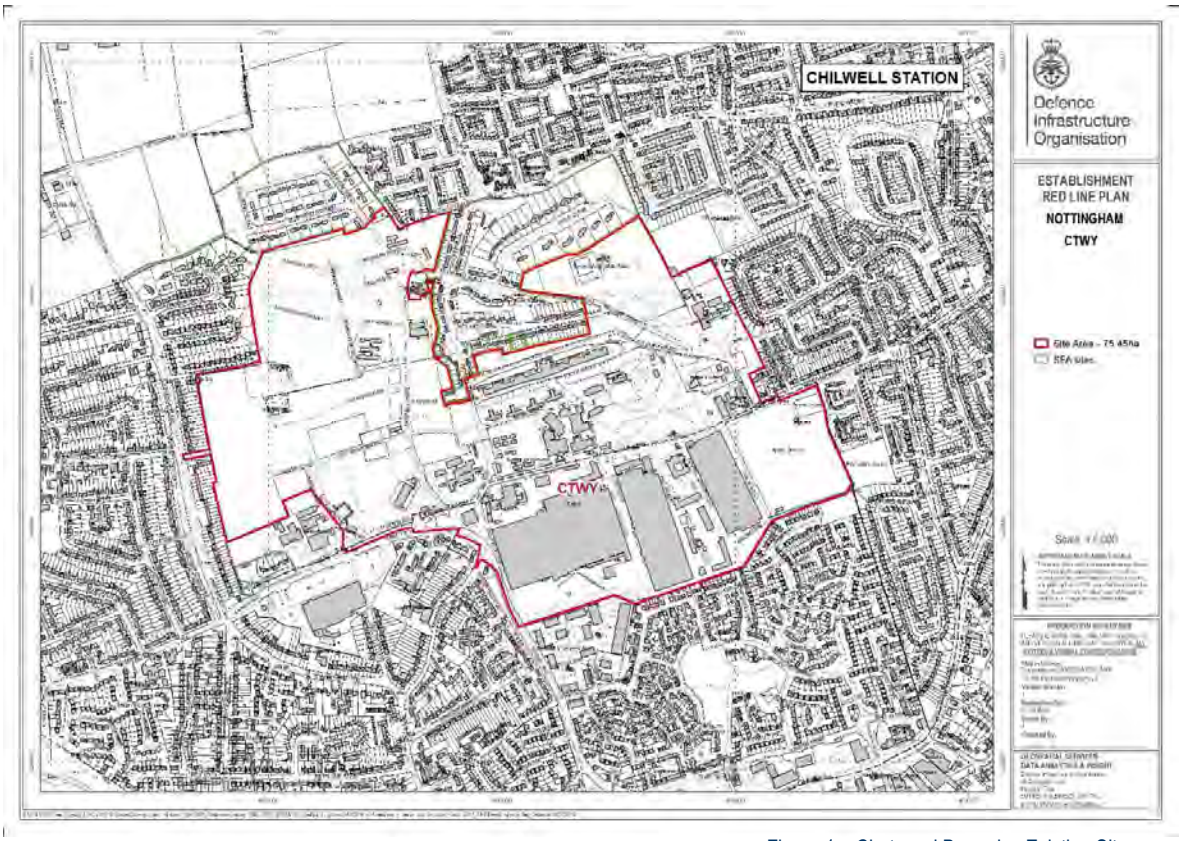


Figure 1 – Chetwynd Barracks, Existing Site

1.2 Site Disposal

1.2.1 The current planning intent for disposal changes to the future Army base laydown includes the proposed disposal of Chetwynd Barracks. The Barracks are due to be de-commissioned by 2021. As part of the disposal process, the DIO (as the legal landowner) is seeking to promote Chetwynd Barracks as a strategic housing-led mixed use allocation in the emerging Broxtowe Borough Council (BBC) Part 2 Local Plan for the following:

A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sqm of B Class employment, a primary school, associated community uses, the creation of new and re-opening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial.

1.2.2 **Figure 2** shows the concept masterplan for the Site.

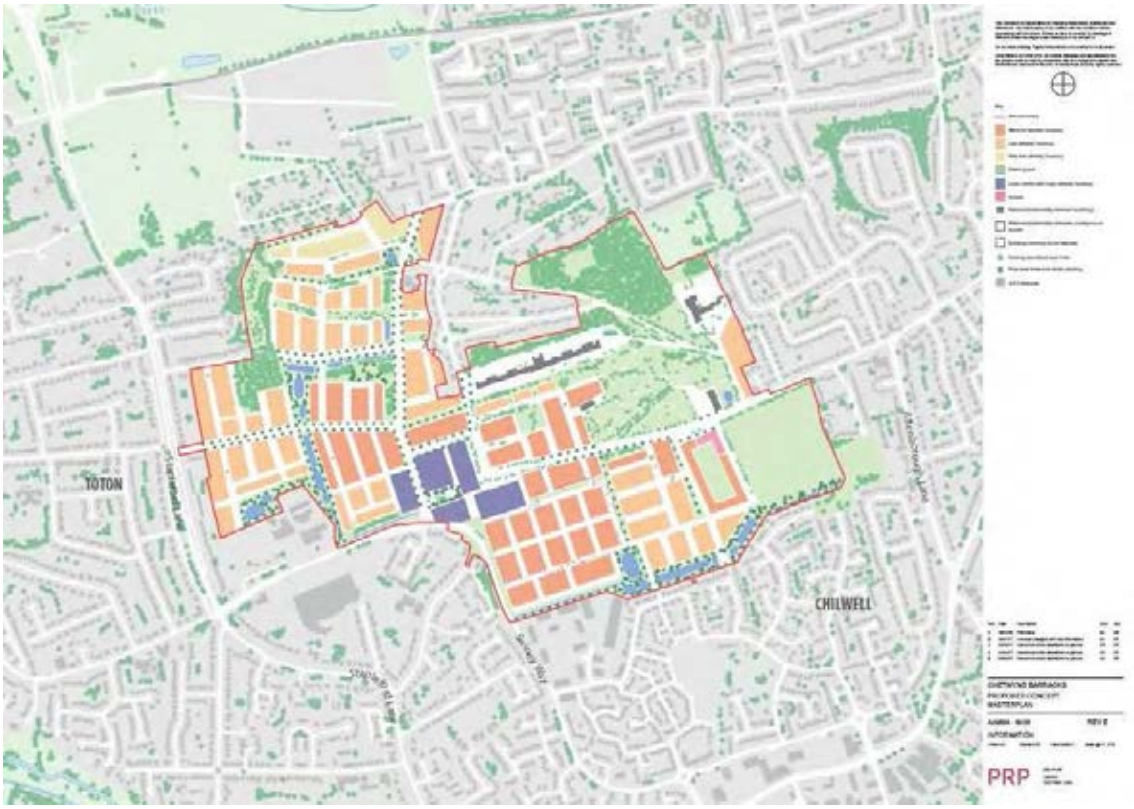


Figure 2 – Chetwynd Barracks, Concept Masterplan

1.2.3 **Table 1** shows a breakdown of the proposed accommodation schedule and density for the Site.

Table 1 – Proposed density and accommodation schedule

	Local Centre	Higher Density	Medium Density	Low Density	Retained Buildings	TOTAL
Net residential development area (ha)		21.1	12.3	1.7	-	35.1
Net Density dw/ha)	80	40	35	20	-	-
1 bed flats	50	0	0	0	28	78
2 bed flats	75	0	0	0	55	130
2 bed FOG	10	25	0	0	0	35
2 bed houses	65	390	40	0	0	495
3 bed houses	0	390	260	4	0	654
4 bed houses	10	40	130	30	0	210
TOTAL HOMES	**210**	**845**	**430**	**34**	**83**	**1,602**

1.2.4 It is anticipated that development will be phased, with the first phase comprising up to 600 units.

1.3 Utility Baseline

1.3.1 The Site currently has its own private network for some of its utilities, which is a common occurrence for military bases in the UK.

1.3.2 Connections to the relevant utilities network operators in the area are either made at the boundary or through a spur that enters the Site.

1.3.3 The Site is located in an area where National Grid operate the gas network, Western Power Distribution operate the electrical network and Severn Trent Water operate the potable water and drainage networks.

2 Gas

2.1 Existing Conditions

2.1.1 The Site is located within an area served by National Grid (NG) who have provided record plans of the Site and surrounding area.

2.1.2 Existing gas demand is unknown. The Site is supplied by a medium pressure gas main that enters the Site off Swiney Way and travels east along Chetwynd Road. The medium pressure spur comes off an intermediate pressure gas main located 800m southwest of the Site (see **Figure 3**).

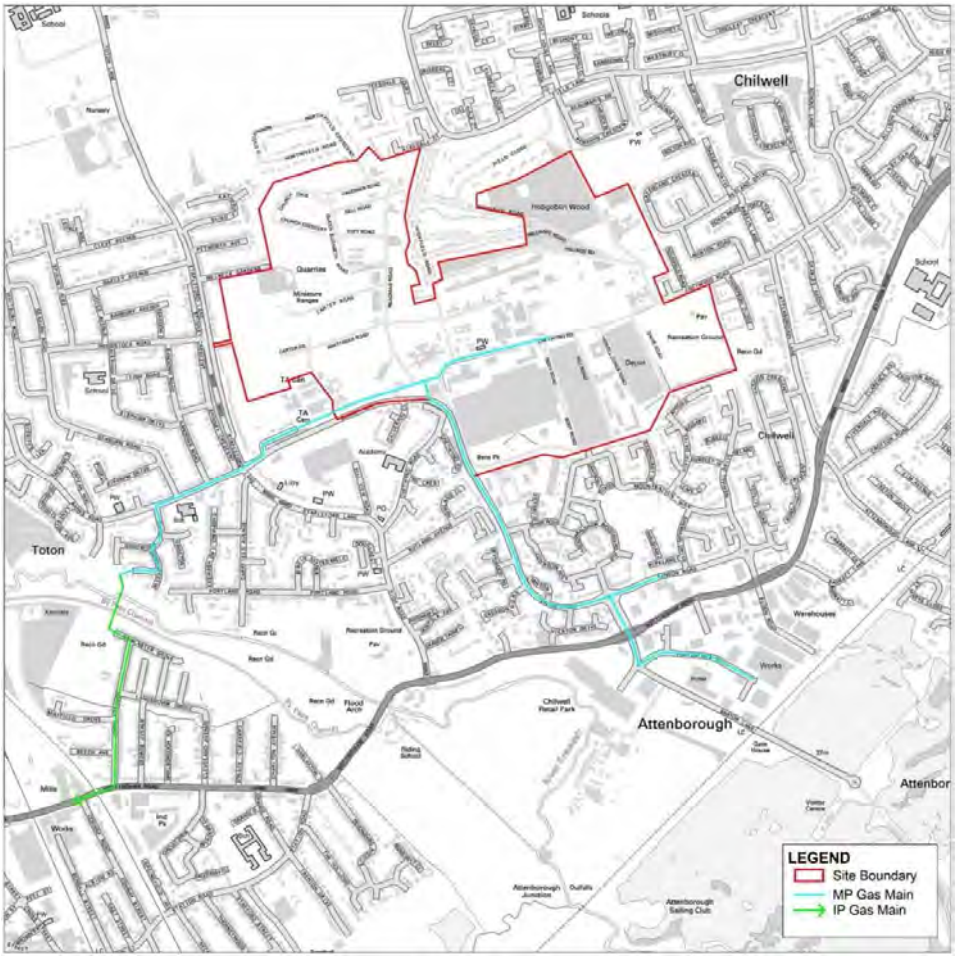


Figure 3 – Existing gas infrastructure (NG)

2.2 Implications for Development

2.2.1 NG has advised that the nearest gas main with sufficient capacity for all phases of the proposed development (1,600 dwellings) is a medium pressure main located 330m from the Site's western boundary. The point of connection suggested by NG, that has appropriate capacity, is located at the junction of Stapleford Lane and Swiney Way.

2.2.2 The location of the medium pressure gas main on-site has been considered within the concept masterplan and a road corridor has been maintained so that it will not have to be diverted.

2.2.3 The low pressure network that currently feeds the Site from the medium pressure spur is also owned by NG. However, its route does not align with the proposed corridors within the concept masterplan. Therefore, it is likely that elements of the low pressure network will be decommissioned or diverted as a result of development.

2.2.4 The Site's Energy Strategy will dictate whether a gas connection to a central energy centre will be required or whether gas will be supplied via a low pressure network to each unit.

3 Electricity

3.1 Existing Conditions

3.1.1 The Site is located within an area served by Western Power Distribution (WPD) who have provided record plans of the Site and surrounding area.

3.1.2 WPD have confirmed that the Site has a high voltage 11kv network with at least three sub stations located on-site. Existing electrical demand is unknown.

3.1.3 Three 33kv primary substations have been located within proximity of the Site, as shown in **Figure 4**. Toton Primary is located 1km northwest from the centre of the Site, Chilwell Primary is located 1.7km east from the centre of the Site and Long Eaton Primary is located 2.2km southwest from the centre of the Site.

Figure 4 – Existing electrical infrastructure (WPD)

3.2 Implications for Development

3.2.1 The existing high voltage 11kv network on-site has been considered in part within the concept masterplan. However, elements of this network and associated substations will need to be diverted or decommissioned as a result of development.

3.2.2 Development will increase electrical demand on-site, as confirmed in correspondence with WPD on the 3 March 2017. WPD indicated that the existing site capacity would provide a significant proportion of the required supply for the development's initial phase (of up to 600 houses). However, further reinforcing work would be required to provide the capacity for subsequent phases of development.

3.2.3 It should be noted that if the Site's existing capacity is reduced/decommissioned it will not be reserved and will immediately become available for use by WPD.

3.2.4 Required capacity for the total development will need to be calculated before WPD can fully advise on required reinforcing works and upgrades to the network. It has been initially suggested that distribution cables will require reinforcing towards the Toton Primary Substation, which itself may need upgrading.

3.2.5 The Site's Energy Strategy will determine the demand on the wider network as generation on-site may be provided in the form of CHP and/or solar PV.

3.2.6 A new low voltage network and associated substations will be needed to supply the on-site units.

3.2.7 To proceed, an initial application will need to be submitted requesting a point of connection and total supply requirement. This will initiate a response from WPD confirming the appropriate upstream reinforcement work needed to provide the total supply capacity. A further application will then identify the costs of these alterations.

4 Potable Water

4.1 Existing Conditions

4.1.1 The Site is located within an area served by Severn Trent Water (STW) who have provided record plans of the Site and surrounding area. There is no STW potable water infrastructure on the Site and the existing water demand is unknown.

4.1.2 Distribution water mains run around the Site to the north on Field Lane, to the east on Chetwynd Road, to the south on Swiney Way and to the west on Stapleford Lane (B6003). These mains provide potential supply options for the development, as shown in **Figure 5**. There is also a private reservoir and borehole on-site that provides non-potable water to the Site (see **Figure 5)**.

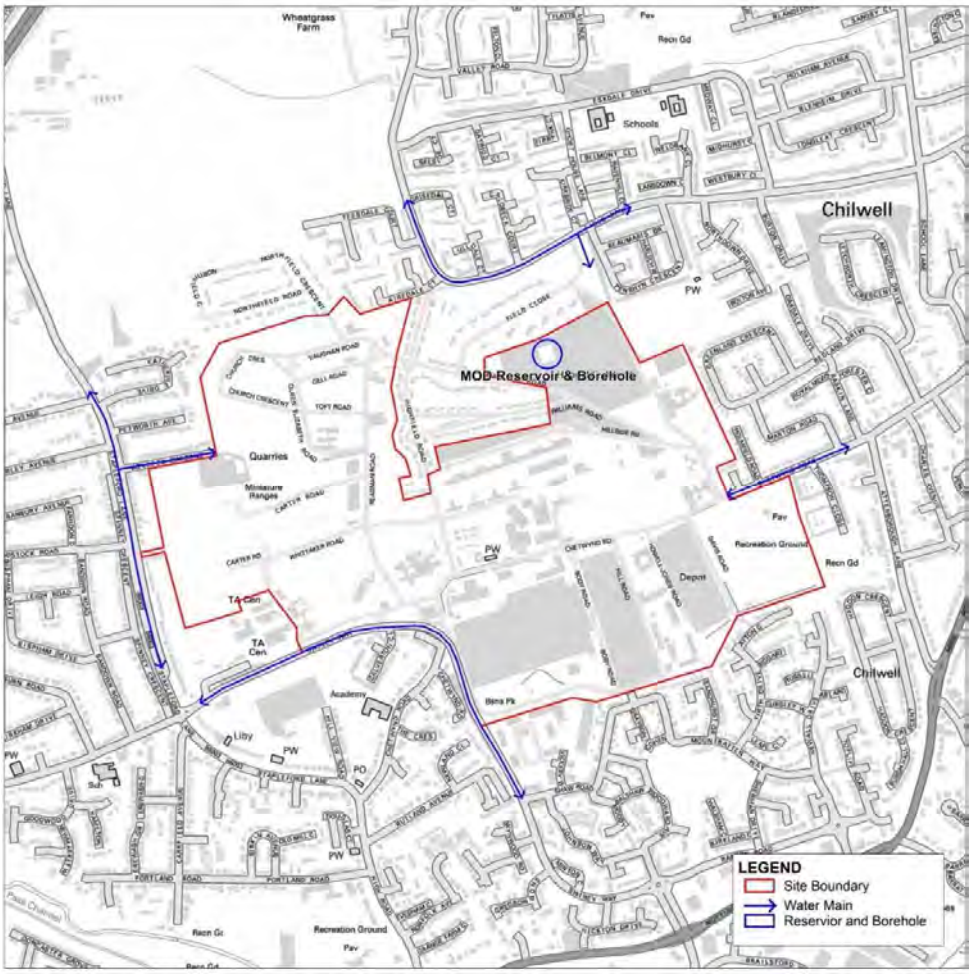


Figure 5 – Potable water infrastructure (STW and MOD)

4.2 Implications for Development

4.2.1 The existing potable water network on-site is a private network and its extent and whereabouts are unknown. There is also an unknown non-potable supply and network on-site. It is highly

likely that these networks will need to be diverted or decommissioned as a result of the proposed development, as they may not align with the proposed corridors within the concept masterplan.

4.2.2 A development enquiry was raised with STW to understand the capacity of their potable water network at present. STW's response states that their network currently has capacity to supply approximately 1,000 dwellings. Potential connection points would be via three water mains around the Site's boundary, located along Chetwynd Road, Swiney Way and Field Lane.

4.2.3 To provide capacity for the developments remaining dwellings, reinforcement of STW's network will be required. STW's initial cost estimate for the developer to contribute towards reinforcing work is approximately £91,700. This reinforcing work is likely to be in the form of a new water main. Timescales for upgrading works will be undertaken once a formal quote has been issued.

4.2.4 Development will clearly increase potable water demand on-site. A Water Cycle Strategy would help fully understand any on-site opportunities that may help balance the water demand.

4.2.5 Furthermore, given that a new potable water network will be needed to supply the units on-site, this network will require points of connection from existing water supply mains located on the Site's boundaries.

5 Surface Water, Foul Water and Drainage

5.1 Existing Conditions

5.1.1 The Site is located within an area served by Severn Trent Water (STW) who have provided drainage asset record plans of the Site and surrounding area. A 450mm surface water (SW) sewer and a short section of 900mm SW sewer is the only STW drainage infrastructure identified on the Site, as shown in **Figure 6.**

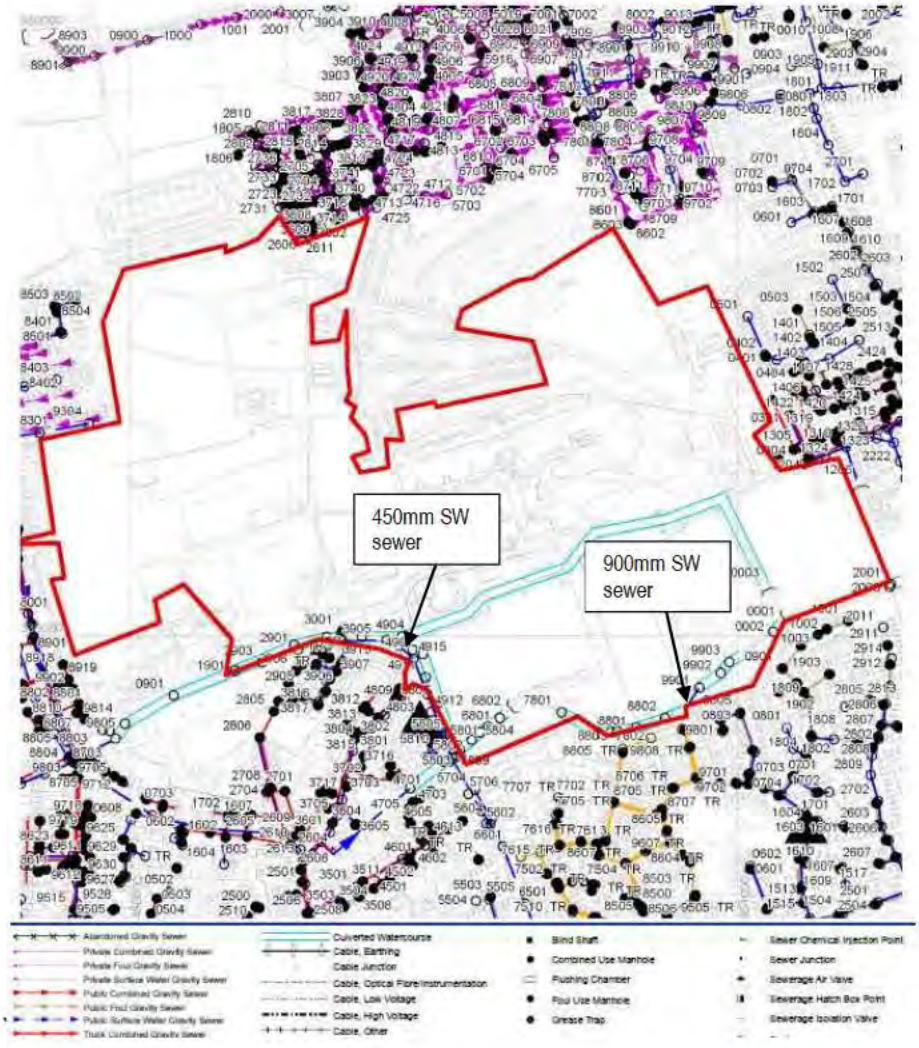


Figure 6 – Existing drainage infrastructure

5.1.2 There appears to be a private foul network on the Site. This network appears to have a point of connection to a 225mm diameter combined gravity sewer at the southern boundary of the Site, discharging to the Attenborough sewage treatment works, as shown in **Figure 7.**

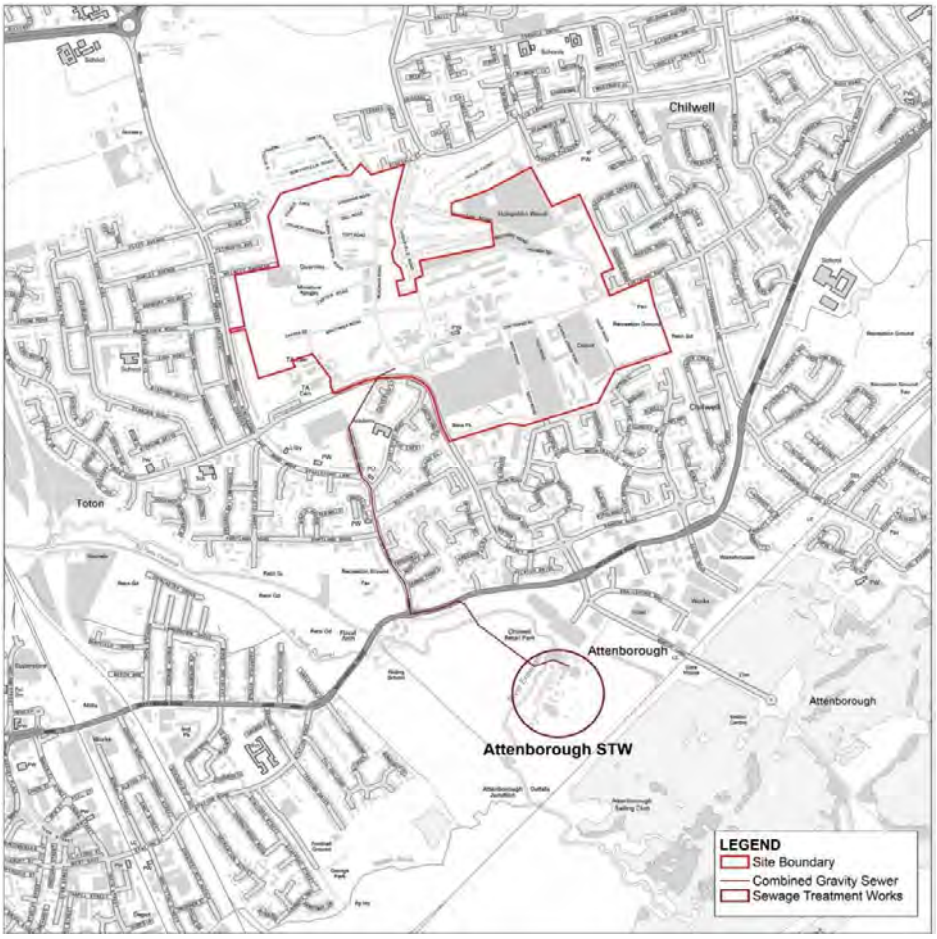


Figure 7 – Existing foul water infrastructure (STW)

5.2 Implications for Development

5.2.1 It is highly likely that the existing private on-site drainage networks (foul and surface water) will require some degree of diversion or decommissioning as a result of development, as they may not align with the proposed corridors within the concept masterplan. The extent of these alterations can be confirmed once these existing networks have been accurately located.

5.2.2 A development enquiry was raised with STW to understand the present capacity of their surface water network for the area. STW asset records (**Figure 6**) show two branches of culverted watercourse flowing east through the southern part of the Site. These branches then join at the Site's southeastern boundary, where they then leave the Site in a single culvert.

5.2.3 Small sections of these two culverted watercourse have been identified as open channels, flowing below ground level grills. The northern branch of the watercourse enters the Site via a 600mm STW SW sewer and the southern via a 300mm STW SW sewer. It has also been identified that the southern branch of the watercourse flows through a short section of 900mm STW SW sewer within the Site boundary.

5.2.4 Although the culverted watercourse may not be the responsibility of STW, it is their belief that it will provide adequate capacity for all surface water discharge from development. Discussions with the relevant authorities will be required to agree an acceptable surface water discharge

rate for the development site. These discussions will inform the Site's Drainage Strategy, identifying the requirement for surface water attenuation across the Site.

5.2.5 STW asset records also show a 450mm diameter surface water sewer within the Site boundary which is believed to also serve properties outside the Site boundary. STW have commented that a 10m easement free from development would be required above this sewer. Diversion of this sewer may be a possibility. However, it is advisable to open discussions with STW at an early stage to help identify if a diversion will be possible or other steps that can be taken to reduce the size of the required easement.

5.2.6 Development will increase foul water discharge on-site. A development enquiry was raised with STW to understand the present capacity of their foul water network for the area. STW have stated that, due to the scale of potential development, a Sewer Capacity Assessment (SCA) will be required to determine the impact that development will have on STW's existing foul network. This modelling will be able to provide advice on whether the existing foul network will require reinforcing. A time frame for STW to complete a SCA has been estimated at between 6 – 11 working weeks from receiving the appointment documentation. Should it be found that capacity improvements are required, a reinforcing program will have to be discussed with STW.

5.2.7 The Site discharges to the Attenborough sewage treatment works which may require capacity improvements to process an increased discharge. There is significant gradient fall across the Site from north to south that would allow for a gravity-fed network, eradicating the need for a foul rising main.

5.2.8 A Water Cycle Strategy would help fully understand any on-site opportunities for rainwater harvesting or grey water recycling.

6 Next Steps

6.1 Existing Demand

6.1.1 The existing demand on-site needs to be quantified to understand the current uses.

6.2 Capacity Enquiries

6.2.1 Severn Trent Water have requested to undertake foul sewer modelling to ascertain whether reinforcing works to the public foul water network will be required.

6.3 Emerging Strategies and Conclusion

6.3.1 Energy and water cycle strategies need to be undertaken to understand what on-site opportunities there are to reduce demand through generation and re-use. This will help inform what, if any, off-site reinforcement is needed.

6.3.2 National Grid have confirmed that there is sufficient capacity on their network to serve all phases of development via a medium pressure main located in proximity of the Site.

6.3.3 Western Power Distribution have confirmed that there is sufficient capacity in the electricity network to provide a significant proportion of the required supply for the development's initial phase and sufficient time to plan for subsequent phases which would require additional provision.

6.3.4 Severn Trent Water have confirmed that there is sufficient capacity within their potable water network to provide a supply to an estimated 1,000 dwellings. To supply the remaining development, STW have identified that reinforcing work will be required and have provided a cost estimate for this. A Water Cycle Strategy would be undertaken to balance the water demand and supply coupled with any water company assessments.

6.3.5 Severn Trent Water have confirmed that they believe the culverted watercourse within the Site should prove sufficient for all surface water discharge from the development. Discharge to the watercourse will require an agreement with the appropriate authority.

6.3.6 Severn Trent Water have stated that, due to the potential scale of development, a Sewer Capacity Assessment will be required to determine the impact that development will have on the area's existing foul network. The time frame for completion of a Sewer Capacity Assessment is 6 – 11 working weeks. Results from this modelling will advise as to whether foul sewer reinforcing work will be required.

6.3.7 From the responses received there is no reason why development should not be allocated from a utilities perspective. Received responses indicate that utility capacity can be provided by existing infrastructure or through network reinforcing work.

February 2017

Heritage Assessment

Defence Infrastructure Organisation
Chetwynd Barracks, Chilwell, Nottingham

Contents

1 Introduction

1.1 This Heritage Assessment has been prepared by JLL Heritage Planning & Development in connection with the proposed disposal of Chetwynd Barracks (the site) by the Defence Infrastructure Organisation. This disposal programme forms part of the wider rationalisation of the government's estate. This Heritage Assessment will provide a comprehensive historic narrative of the site's development and a summary of its significance through the assessment of buildings and structures which are considered to hold a degree of heritage interest. It is the intention that this report will be used to inform the formation of a concept masterplan in order to promote the site through the local plan review process with a site specific allocation.

1.2 There is one heritage asset within Chetwynd Barracks which has the potential to be affected by any development of the site; the National Shell Filling Factory Memorial which is listed for its special historic interest at grade II. There are also a number of additional buildings which date to the site's initial construction in 1916 and its subsequent redevelopment in 1935 which may contribute to the significance of the site.

1.3 The Chilwell Conservation Area is to the north-east of the site but it is unlikely that this would be affected by the development of the site.

1.4 Paragraph 128 of the National Planning Policy Framework (NPPF) 2012 sets out the information requirements for determining applications and states that:

'In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance'.

1.5 In response to the NPPF, section 2 of this report identifies the heritage assets which may be affected by any redevelopment proposals and section 3 sets out the history and development of the site. An assessment of a number of the historic buildings on the site is provided in section 4 and is followed by a proportionate summary of the site's significance. Section 5 sets out how the heritage potential of the site can be unlocked as part of redevelopment plans, through adopting a heritage-led strategy.

2 The Heritage Asset

2.1 A heritage asset is defined by the NPPF as:

'A building , monument, site, place, area of landscape identified as having a degree of significance meriting consideration in the planning decisions because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing'[1]).

Designated Heritage Asset

2.2 A Designated Heritage Asset is identified by the NPPF as:

'A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.[2]'

2.3 Such assets are statutorily identified as having a level of heritage (architectural and/or historic) interest to justify designation. There are then particular procedures in planning decisions to ensure that their special interest is preserved or enhanced.

Listed Building

National Shell Filling Factory Memorial

2.4 The National Shell Filling Factory Memorial was included on the statutory list of buildings of special architectural or historic interest at Grade II on 14 April 1987. The list entry description states:

"War Memorial. 1918. Concrete with ashlar dressings. Stepped square plinth. Truncated pyramid with vermiculated surface, obelisk finial. Inscribed bronze plaque to south. Railing of upright shell cases linked by chain. The memorial commemorates workers killed in accidents at the factory, particularly in the explosion of 1 July 1918".

Figure 2.1 – Location of the National Shell Filling Factory Memorial

[1] NPPF (2012) Annex 2: Glossary (p.52)
[2] NPPF (2012) Annex 2: Glossary (p.51)

3 History and Development

3.1 Following the outbreak of war in 1914, Field Marshal Lord Kitchener was appointed as Secretary of State for War. Following his concerns surrounding the inadequate ammunition supply, Lloyd George, then Chancellor of the Exchequer, became the head of the newly formed Ministry of Munitions. Kitchener reported to Lords in March 1915 that:

"….progress in equipping the new Forces is hampered by insufficient labour and delays in production of the plant needed…"

3.2 Consequently, one of Lloyd George's immediate tasks upon taking up his new post was to overcome the problem of the ammunition shortage. To assist with this task, he enlisted the services of Lord Chetwynd, a qualified civil engineer who had spent many years in America before returning to Britain where he became Director of Vickers Ltd., machine-gun manufacturers and ship builders. It was requested that Chetwynd undertake:

"…*the erection, organisation and superintendence of a large Factory for preparing high explosive charges of the larger calibres...*"

3.3 Chetwynd accepted the undertaking, however was immediately faced with multiple challenges; the requirement to identify a site to house a new factory as well as the outdated, costly and inefficient methods which were at the time being employed in shell manufacturing.

The Site of the National Shell Filling Factory

3.4 In August 1915, the site of the modern day Chetwynd Barracks was selected by Lord Chetwynd as the location for the National Shell Filling Factory (NSFF), a purpose built factory constructed for the production of ammunition. In addition to the identification of the site, Chetwynd was also responsible for the construction and operation of the new Factory. The site had two main aims; to meet the demands of the army on the Western Front for vast quantities of artillery shells and to fill these shells with an innovative product which was to be more cost efficient.

3.5 Chetwynd had identified Chilwell as the location of the new site due to its central position in the country where explosives manufactured in the North and Midlands could be brought together, filled and then moved south to the embarkation ports. The site offered open farmland on which to build the Factory and a ready supply of labour, in the form of the Nottingham laceworkers who had been laid off after demand for lace diminished following the outbreak of the war. It also had the benefit of good transport access and was surrounded by high ground which would provide a buffer in the case of an accident involving the explosive material.

3.6 Chetwynd Barracks is located to the south-west of the city of Nottingham, surrounded by a small collection of villages including Chilwell, Attenborough and Long Eaton. Prior to 1915, the area was predominantly rural and comprised fields, woodland, and a number of farmhouses, associated outbuildings and agricultural land. The 1901 Ordnance Survey (OS) Plan (*figure 3.1*) depicts the site prior to the construction of the NSFF and identifies *Woodside*, located to the north-east boundary of the current site. This building, although in a much altered form, remains on the site today. *Highfield House* can also be identified on the 1901 OS Plan, this building is said to have become the weekday residence of Lord Chetwynd during the years 1915 to 1918, and was later re-used as the sleeping quarters for the Highfield Officers' Mess during the Second World War before its demolition at the end of the war.

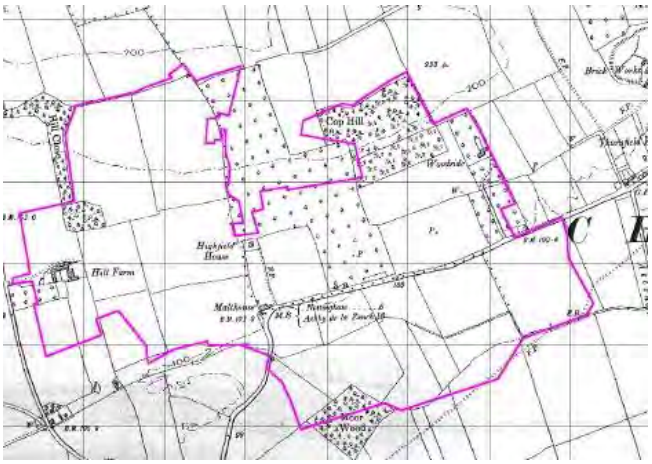


Figure 3.1 – 1901 Ordnance Survey Plan

The Factory

3.7 Construction began on the new site at Chilwell in September 1915 and the Factory had begun production in the Old Melt House and the Experimental House by March 1916. By 23rd April 1916, production had reached 7,000 shells per week and by October 1916 the Factory was largely complete with 6,000 workers employed.

3.8 The Factory complex, which covered 200 acres, comprised an Experimental Plant, Ammonium Nitrate Mill, a TNT Mill and Mixing House; the Mills and Mixing House stood seven, six and five storeys high respectively and were camouflaged in octagonal patches of red, yellow and blue paint, each patch being 15 inches wide. Furthermore, there were two rows of Press Houses towards the north of the site, each 1,000 feet long and dominating the hillside. Located on the plain to the south stood the Melt Plant covering 3 acres, together with the Empty Shell Store of 7 acres (formerly referred to as the Dirty Shell Store), the Filled Shell Store (now known as Building 157) of 9 acres, a Power Station, General Stores Shed and 15 miles of railway line. The facilities which had been provided for the Factory employees included a Red Cross Hospital, Canteen, Rest Rooms and Showers, as well as Recreation Club and Sports Facilities.

Figure 3.2 – Diagram of part of the National Shell Filling Factory site, 1918

3.9 At the outbreak of the First World War, the principal British shell filling had been picric acid or lyddite. TNT had been used by the Germans since the beginning of the century but was only manufactured by a few British factories prior to 1914. Experiments at this time showed that relatively expensive TNT could be mixed with ammonium nitrate, which acted as a diluter. This mixture became known as amatol when used as a shell filling. Chetwynd was quick to identify that this method would simplify the shell filling process and be more cost effective, helping the NSFF to meet the high supply quota which they had been set.

3.10 TNT and ammonium nitrate were supplied to the Factory by rail from different chemical works and were stored on the southern side of the factory before mixing. Ammonium nitrate absorbs moisture and before it could be processed needed to be dried and crushed. The two ingredients then passed to two separate multi-storey mill buildings, similar in design to contemporary flour mills. The ingredients were then milled and sifted and allowed to fall through the buildings from the upper floors to the ground.

3.11 In the design of the plant, Chetwynd had innovatively adapted coal crushing, stone pulverising, sugar drying, paint making, sugar sifting, flour milling and bread making machines to the processes of preparing the ingredients and mixing the amatol. The prepared powders then passed to the Mixing House where they were combined in the correct proportions. The powdered amatol then moved along a covered passage to the Press Houses, in the meantime empty shells were brought up from the Empty Shell Store at the base of the hill. These were then filled with the powdered amatol before the contents were compacted under hydraulic pressure. The filled shells were then moved down the hill to the Filled Shell Store ready for dispatch, at times the store held 600,000 filled shells in addition to 100,000 empty shells ready for filling.

3.12 The NSFF at Chilwell became one of the most important filling factories in the country. It filled over 50% of the 15-inch shells used during the war, approximately equating to 19,250,000 shells. In addition, it also filled naval mines and aerial bombs. The Factory had produced 1 million shells by September 1916 and had filled 60% of the shells used during the First World War as well as filling 25,000 mines for the Royal Navy and 2,500 large bombs for the Royal Flying Corps/RAF. In June 1918, the NSFF achieved a national record when its workers filled 46,725 in a 24 hour period. At its peak, the factory employed 6,000 men and 4,000 women.

3.13 On 1 July 1918, an explosion at the NSFF killed 134 workers, the majority of whom were never identified. In addition to the initial fatalities, 250 people were wounded and 5 later died of their injuries. During the explosions, the Mixing House, Mixing House Extension, TNT Mill and TNT Stores were completely destroyed and many other buildings were seriously damaged. The explosion was of such magnitude that glass was shattered in houses and buildings up to 3 miles away from the blast site.

Figure 3.3 – The National Shell Filling Factory at Chilwell during the First World War

3.14 Remedial action began soon after the explosion, engineers worked to clear the Power House and water was being pumped back into the three boilers of the subsidiary Boiler House by midnight on the day of the incident. Urgent repairs also commenced on the other important buildings on site, in conjunction with the removal of debris and the fatally wounded. At 6am on 2nd July, the day shift was able to resume work in the Shell Stores and Melt House, however production was limited as most efforts were focussed upon clearing the damaged areas.

Figures 3.4 and 3.5 – The aftermath of the explosion at the munitions plant in Chilwell

3.15 Despite the explosion at Chilwell, the urgency to supply ammunition to the soldiers fighting on the Western Front was ever present and Lord Chetwynd worked fast to ensure that the NSFF would supply the required ammunition in time for the planned offensive on 18th July to end the second battle of the Marne. On the morning after the explosion, out of 7,000 men and women all but 12 arrived at the Factory for work.

3.16 Following the declaration of an Armistice in November 1918, the war ended and the NSFF had fulfilled its purpose, over the following months the workforce received their notice and the Factory was partly dismantled. Many of the Factory buildings were demolished and their equipment removed.

3.17 On 13th March 1919, the Duke of Portland, the Lord Lieutenant of Nottinghamshire, unveiled a memorial on the site of the explosion. A sealed jar was placed within the memorial during construction, within it Lord Chetwynd's account of the disaster, it was the intention that this would be discovered by future generations who would be able to learn the story of the disaster so that it would not be forgotten.

3.18 Following the end of the First World War, the NSFF was converted into an Army military stores depot for returned equipment and was subsequently renamed the RAO Depot Chilwell. It operated as such until its closure in 1926. The land was retained by the War Office and for the following 8 years the site and the stored equipment lay untouched.

Mechanical Transport Depot

3.19 In 1934, the War Office decided that the support for the Army's mechanical transport should be centralised, with all stocks of vehicles and spare parts located in one place, and with this came a new era for the NSSF. Temporary Lieutenant –Colonel L.H. Williams was posted to Chilwell from Catterick to undertake the work required for the former Factory site to become the central, mechanical transport depot. Williams recalls his first sighting of the complex standing atop the hill on the site of the former Press Houses:

"…my first view of this magnificent Depot was of a square mile of junk, weeds, railway lines, one messenger, one civilian artificer with a few maintenance men employed mainly on the heavy guns mounted on the railway mountings…"

3.20 By early 1935, work had begun to turn the site into a modern mechanical transport depot which would house and maintain the Army's vehicle fleet. During this time, the majority of the buildings and structures surviving from the NSFF were replaced with modern facilities at a cost of £22,000.

3.21 The site is not depicted on any OS Plans between the years 1913 and 1937, the sensitive nature of the site during this time meant that it was unlikely to have been mapped whilst it was in operation. The 1938 OS plan, illustrates the composition of the site subsequent to its significant redevelopment between 1935 and 1938. In this plan, a number of buildings associated with the original Factory can be identified including the Filled Shell Store, Woodside House and the Red Cross Nurses building. The NSFF Memorial, located towards the eastern site boundary, and the open space which surrounds it can also be identified on the 1938 OS Plan. The Press Houses, which had been located on the terrace, were demolished subsequent to the closure for the NSFF.

3.22 Other buildings such as the Club Room and Institute can also be identified on the 1938 plan and were also constructed during the development of the site in 1915. These buildings remain today, though have been heavily altered, or entirely rebuilt in their adaptation to new uses.

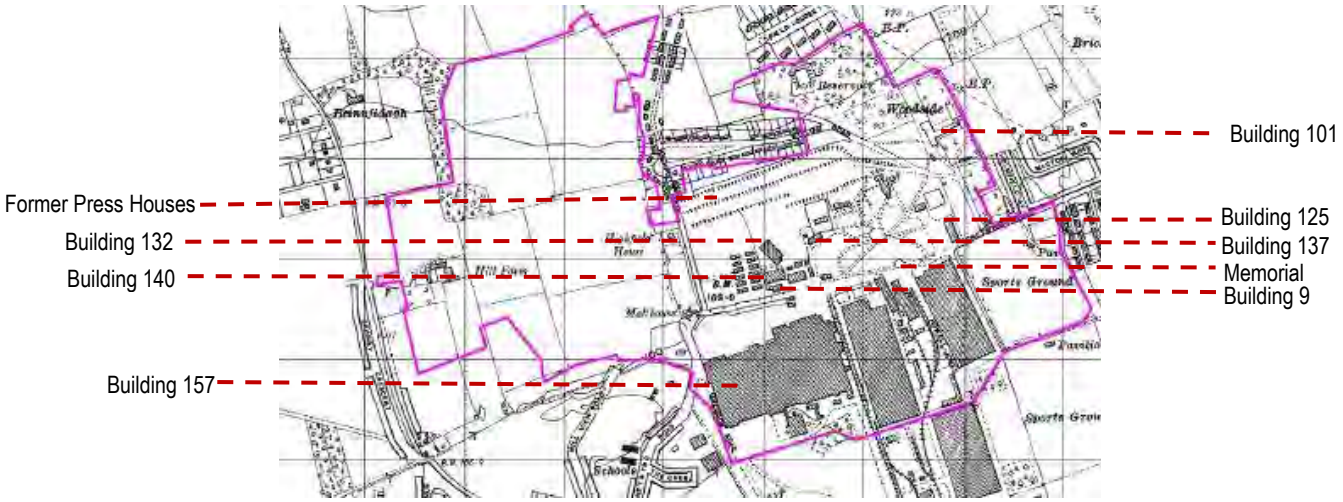


Figure 3.6 – 1938 Ordnance Survey Plan

3.23 By the beginning of the Second World War, the Royal Army Ordnance Corps (RAOC) at Chilwell was equipped to withstand the strain of the six years of mechanised warfare to come. However, the hundreds of conscripts arriving in 1940 did not have proper accommodation as the hutted camps and brick barracks which had begun to be built before the start of the war had not been completed. Consequently, soldiers were given temporary accommodation in one of the large sheds which was fitted with sleeping quarters, a dining room and cookhouses.

3.24 Substantial changes were made to the site during the years preceding 1938; significant accommodation was added to the west of the site during 1941 and in 1943 Williams Barracks opened on the site of the Press Houses (*figure 3.7*). Between 1938 and 1967, Woodside House to the north-east of the site was further extended and the area surrounding the Club and Institute was also added to.

Subsequent Years

3.25 Following the end of World War II, the RAOC at Chilwell continued to store and maintain large reserves of vehicles and undertook maintenance of the stocks for the peacetime Army. Whilst vehicle activities at Chilwell reduced dramatically, the site continued to serve as a depot and stores for equipment.

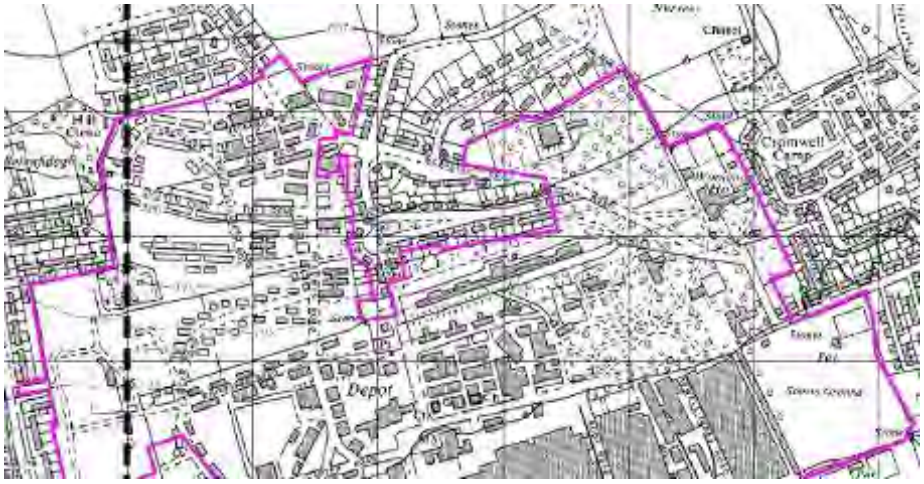


Figure 3.7 – 1967 Ordnance Survey Plan

3.26 By 1972, the Central Ordnance Depot had reduced its workforce to 225 military personnel and 2,157 civilians. In 1978 the decision was made to close the Depot and to begin a phased rundown whereby the contents of the stores would be transferred to other sites. Parts of the site to the north and south were subsequently sold off, however a military presence in Chilwell has been maintained and is has since housed the 7th Infantry Brigade and Headquarters East.

4 Site Assessment – Significance

4.1 The significance of a heritage asset is defined within the glossary to the NPPF as:

'The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.'

4.2 Listed buildings are statutorily designated and, for the purposes of the NPPF, are designated heritage assets. Recognising this statutory designation, buildings must hold special architectural or historic interest. The Department for Culture, Media and Sport publish the *'Principles of Selection for Listed Buildings (2010)'* which is supported by thematic papers, *'Listing Selection Guides'*, based on building type, which give more detailed guidance.

4.3 Historic England has published 'Conservation Principles, Policies and Guidance' (2008) which identifies four types of heritage value that a heritage asset (whether it be designated or non-designated) may hold – aesthetic, communal, evidential or historic interest. Historic England has also published a Good Practice Advice Note on the 'Setting of Heritage Assets' (2015) which is used to understand the surroundings of a heritage asset which may contribute to the significance of a heritage asset.

Assessment

4.4 The following section provides a significance assessment of those buildings and structures located on site. From the detailed historical analysis provided within section 3, it is evident that two key phases of development occurred on site comprising 1900-1933: *the first phase* and 1934-1945: *the second phase*. These phases include a grade II listed War Memorial and a number of buildings associated with the NSFF and the Mechanical Transport Depot, these structures and buildings have been included for further assessment within this section. The buildings constructed on site post 1945 form part of an ad-hoc phase of development in association with the site's continued military occupation. The buildings and structures from this period to the present day hold no architectural or historic interest and consequently have not been included within this section for further assessment.

4.5 Within the present depot, one building which pre dates the First World War has been retained as well as a number of buildings and structures dating to the military occupation of the site during the First and Second World Wars. Whilst still identifiable, these have been heavily altered and adapted to new uses in conjunction with the continued military occupation of the site. The buildings and structures which have been identified as dating to the two key phases of development include:

- Building 101 (Woodside House);
- Building 157 (former Shell Store);
- Building 137 (former Red Cross nurses building);
- Building 140 (former Women's Mess);
- Building 132 (former Women's Changing Room);
- Building 9 (former Time Office);
- Building 125;

- National Shell Filling Factory Memorial; and,
- Building 102 (Williams Barracks, on site of former Press House).

4.6 In order to understand each building's level of interest and the contribution which they make to our understanding of the site, the buildings and structures identified above have been grouped into the two key building phases as follows and are illustrated at figure *4.1*. The buildings and structures from 1945 to the present day hold no architectural or historic interest and consequently have not been included within this section for further assessment.

- Phase 1: 1900 - 1933
- Phase 2: 1934 - 1945

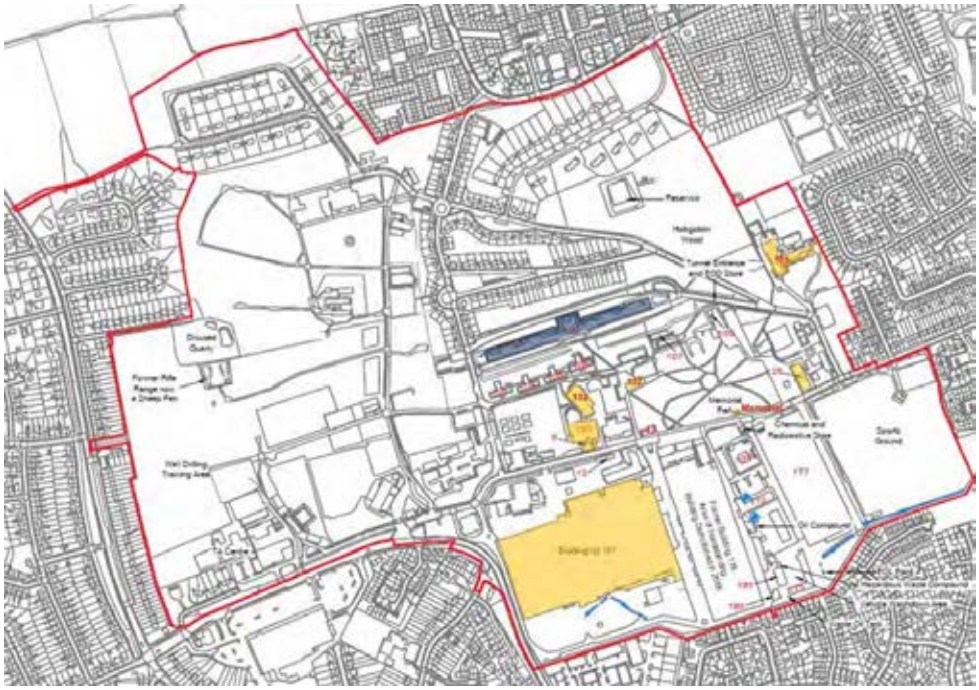


Figure 4.1 – Site location plan highlighting the phases of the buildings and structures which old heritage interest

Phase 1: Pre 1918

4.7 Prior to Chetwynd's acquisition of the site in August 1915, the site was predominantly rural and comprised fields, woodland, and a number of farmhouses, associated outbuildings and agricultural land. The 1901 OS Plan identifies *Woodside*, located to the north-east boundary of the site, which whilst much altered and extended, has been retained.

4.8 Despite the explosion in 1918, some buildings dating to this early phase of the site's occupation have been retained. On entering the site along Chetwynd Road from the east and on the north side of the road is Building 125, a large single storey building with stone faced piers. To its west, also on the north side of Chetwynd Road is the monument to those killed in 1918, located on the site of the ammonium nitrate melt house where the explosion took place. Building 137, the former Red Cross Nurses building, is located at the centre of the site and to its west are Buildings 9, 132 and 140, which were used by the female workers of the NSFF. On the southern side of Chetwynd Road is Building 157, the former shell store, the largest surviving building remaining on site.

4.9 Other features, such as underground tunnels, gates and lamp posts which date to this early phase also remain on site.

National Shell Filling Factory Memorial

4.10 The National Shell Filling Factory Memorial was erected following the worst accidental munitions explosion in Britain during the First World War, which took place at Chilwell on 1st July 1918 when the ammonium nitrate plant exploded resulting in the loss of 134 lives. The memorial to commemorate those killed was unveiled in March 1919.

4.11 The monument, built by workmen still employed at the Factory, is located on the site of the ammonium nitrate melt house where the explosion took place. The memorial, constructed of Stancliffe stone, comprises a truncated pyramid set on a square stepped plinth surmounted by an obelisk and is surrounded by a chain link fence supported on upright shells.

4.12 The significance of the memorial derives from its historic and architectural (primary aesthetic) interest, serving as a poignant reminder of the loss of life which occurred in 1918, as a result of the war efforts lead by workers at the NSFF. The monument is located on the northern side of Chetwynd Road, which runs from east to west through the site. Historically, the area between Chetwynd Road to the south and the Press Houses to the north comprised green space surrounding a bandstand. The gradual incline to the north prevented building in this location. The setting of the war memorial is characterised by the retained parkland which surrounds it and the grassy tree-planted slope leading up to the terrace. Due to the heavy tree planting, the war memorial is obscured in the majority of the views from the north, west and east and is most visible along Chetwynd Road.

Figure 4.29 – NSSF Memorial

Figure 4.30 – Setting of NSFF Memorial

Building 101

4.13 Building 101 is located to the north-east corner of the site and comprises multiple building phases, the first of which (Woodside House) represents the earliest building to have occupied site. Initially constructed late C19/early C20, Woodside House can first be seen on the 1901 OS Plan comprising a single dwelling set within open fields and woodland. Woodside House was later heavily extended shortly after Chetwynd's acquisition of the site in 1916. Further extensions to the rear were also added after 1967.

4.14 1918 OS Plans of the site identify Building 101 as being used as the NSFF's main offices and Officers' Mess, it is also the former house of Chetwynd who used the building as his weekday residence whilst on site at the NSFF. The building is currently used as the Officers' Mess and an administration centre, retaining its historic use as a high status building since 1916.

4.15 Whilst Building 101 consists of multiple building phases, the first two phases were both constructed during the Edwardian period and in the Arts and Crafts style. The first phase is domestic in appearance, comprising two storeys and attic with a projecting gable and weather vane to the centre. A mix of materials have been used, it is constructed primarily of brick with red hung tiles and a white rough rendered surface to the upper section and exposed brick to the ground floor. There are bow windows to the front of the building at ground and first floor which originally comprised large single panes in timber frames, these have subsequently been replaced with PVC. Some leaded casement windows have been retained to the rear of the building and in the attic storey.

Figures 4.2 – Building 101, from the south

Figure 4.3 – Woodside House

4.16 Within Woodside House, much of the original panelling to the ground floor rooms remain though there has been later replacements in some areas. Fire places and parquet flooring have also been retained. Circulation through the building was originally via two staircases, however the central staircase has been blocked between ground and first floor (*figure 4.6 and 4.7*)

Figures 4.4 and 4.5 –Panelling and fireplaces within Woodside House


Figures 4.6 and 4.7 – Central staircase which has been blocked from ground to first floor

4.17 Building 101 was extended significantly shortly after 1916, however the extension was a continuation in the same Arts and Crafts style used in the initial construction of Woodside House. The second phase of works extended Woodside House to the west; the first range is oriented east to west and comprises a single storey which is surmounted by a clock tower with a rounded dome cupola. This range is then connected to an additional range, oriented north to south, at lower ground and ground floor levels with a balcony at its southern end. To the centre of its western elevation are steps leading to an entrance door with decorative ironwork supporting a canopy. The brickwork to both ranges has been laid out to represent a series of ashlar columns with a white, rough rendered surface and PVC windows between them.


Figures 4.8 and 4.9 – c.1916 extenstions to Woodside House

Summary of Significance

4.18 Building 101 has limited significance which derives, in part, from its historic interest. It is the oldest building to be retained on site having been constructed in the c.1900 and heavily extended in 1916. The building has continued to play a prominent role throughout the site's development, which has included intermittent occupation by a variety of military personnel. Having opened as an Officers' Mess in 1916, Building 101, which is located towards the north of the site on a terrace with open views across the site, has retained the integral role which it plays within the military and continues to be a building which is held in high regard.

4.19 Building 101 also has a degree of architectural interest but to a lesser degree than its historic interested. Constructed in the Arts and Crafts style and is an example of an architectural style which was employed during the Edwardian era. Whilst it does retain some features of interest such as internal fireplaces, panelling, floors and leaded casement windows, the building has undergone a high degree of alteration. Consequently, the building is not a high quality example of its type and is of limited significance.

Building 157

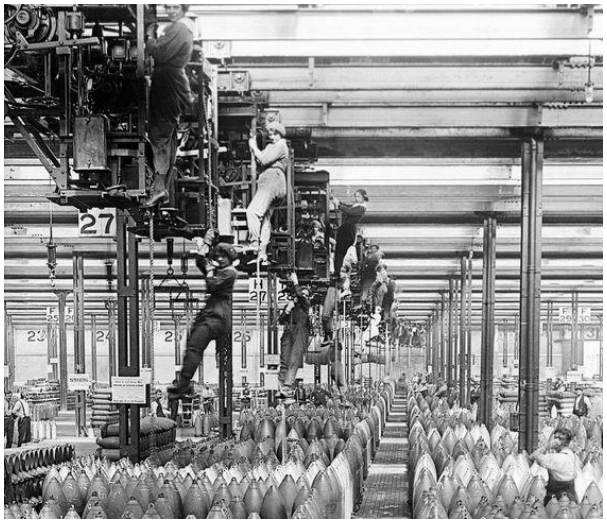
4.20 Building 157 is located to the south-east of the site, it is the former Filled Shell Store and is part of the original phase of the site's development. It is the largest surviving building on site and the only building to remain which is directly associated with the industrial operations undertaken at the NSFF.

4.21 The building is steel framed with brick infilled external walls and a floor area which covers nearly 9 acres. During the First World War it could hold up to 600,000 filled shells and 100,000 empty shells. The store suffered some damage during the explosion in 1918, a crane worker described the *'great hole in the wall of the Filled Shell Store'.* Internally, the store is open plan and remains largely unaltered having been used primarily as a storage depot and training area in the years following the NSFFs' closure.

Figure 4.10 – Northern elevation of the Filled Shell Store

Figure 4.11 – Open plan interior of the former Filled Shell Store

4.22 During the First World War, the store was served by a system of overhead cranes (*figure 4.12*). Whilst the cranes have been removed, the holes for the guide rails can still be seen in some of the roof girders. Features such the original wood block floor (*figure 4.13*) appear to have subsequently been lost. It must be noted that due to the sensitive nature of the site, a full inspection of the building was not possible during the site visit.



Figures 4.12 and 4.13 – Inside the Filled Shell Store, 1917


Figures 4.14 and 4.15 – Inside the Filled Shell Store, 1917

4.23 During the 1930s and 1940s, the Filled Shell Store was converted and sub-divided for the purposes of the Central Ordnance Depot for the Royal Army Ordnance Corps. The building housed the stores accounts office as well as the stores bins and floor conveyor belt for the transfer of stock (*figure 4.14 and 4.15*). The temporary partitions as well as other machinery, equipment and furniture have all been removed and the space is now largely open plan.

Figure 4.16 – A section of the vast Mechanical Transport Spares, Stores Accounts Office in Building 157 during the Second World War

Summary of Significance

4.24 The limited significance of Building 157 primarily derives from its historic interest, and to a lesser extent its architectural interest. It is the only surviving structure to have played a direct role in the filling of shells for use during the First World War, this and its use as a stores for military equipment serving army personnel during the Second World, further contributes to our understanding of the development of the site.

4.25 Internally, the building retains its vast and open space however it has been sub-divided throughout its use to serve a number of different purposes. Whilst little of interest remains internally, there are architectural remnants such as guide rails used for the cranes which allude to its former uses, contributing to its level of interest.

4.26 During 1916-1918, Building 157 would have sat at the centre of the site with many other similar size sheds to the east and the south, forming an industrial complex. This relationship has been lost with the demolition of the buildings to the east and the development of housing estate on former military land to the south. The current relationship of the building with its surroundings is in stark contrast to the brick built, low-rise C20 buildings which now characterises the site.

Building 137

4.27 Building 137 is the former Red Cross nurses building and is oriented north east to south west with its southern elevation facing towards the memorial park. It is a brick, single storey structure comprising 10 bays with a tall central tower. A notable feature of the building is a red cross device which is picked out in brick on the central tower and the end gables.

4.28 Brick buttresses originally aligned the southern and northern elevations, however a number of these have been removed. There are also windows of varying forms to each elevation, whilst these were originally timber casement windows they have been replaced with PVC. Some of the openings to the northern elevation have been in filled with brick.

4.29 The building is set within close proximity to a number of other retained structures associated with the NSFF which are situated to its west, however it has maintained the relationship which it originally held with the open space to its south-east (*figure 4.18*). This open area is now the setting of the memorial park.

Figure 4.17 – Southern elevation of Building 137, the former Red Cross nurses building

Figure 4.18 – View of the Red Cross nurses building on the site of the Shell Filling Factory, 1916
Figure 4.19 – Workers congregating within the grounds of the Shell Filling Factory, the former Red Cross building can be seen on the right hand side

4.30 Internally, *figure 4.20* illustrates that the building had a modest interior during 1916-1918 with white, rectangular block tiles and blinds to the casement windows being the only features of particular note. Due to the sensitive nature of the current use of this building, access could not be obtained to ascertain the degree of alteration which it has undergone internally.

Figure 4.20 – A nurse tending an injured man in the hospital of the National Shell Filling Factory
Source: Imperial War Museum Archive

Summary of Significance

4.31 The Red Cross Nurses building dates to the construction of the NSSF in 1916 and is one of the few buildings towards the centre of the site which survived the explosion in 1918. It has a limited degree of significance which mostly derives from its early C20 construction and its association with the NSFF, playing a crucial role in the welfare of those working within a dangerous environment. The building holds a degree of historic interest in that it contributes to our understanding of the site during 1916-1918, however little is known about its use in the subsequent years. It also holds an element of architectural interest which stems from its tall central tower and the Red Cross device picked out in brick on the external elevations.

Buildings 132, 140 and 9

4.32 Historic maps illustrate that buildings 132, 140 and 9 form part of a complex of buildings located to the west of the site which date to the NSFF. Building 132 is identified as a women's changing rooms in 1918, the building was later sub-divided and converted into a dining room, cook house, office, stores and bath house during 1936. In 1918, Building 140 was used for the Women's Mess and Building 9 was the Time Office. Both buildings have been extended and converted to new administrative uses.

4.33 This complex of buildings comprise brick built sheds, each of a single storey. Whilst dating to 1918, the buildings do not comprise any details of architectural interest, internally or externally, and have been heavily altered since their construction.

Figure 4.20 – Eastern elevation of Building 132 and Figure 4.21 – Southern elevation of Building 9

Summary of Significance

4.34 These buildings are brick-built sheds and of a generic construction for their time. Whilst historic map regression indicates that they date to 1916, they hold no historic or architectural interest. The buildings have been heavily altered, and in some cases extended, in association with their continued use as part of an active military site and very little is known about the role which they have played in the development of the site.

Building 125

4.35 Building 125 is located adjacent to the eastern entrance to the site. It is a large single storey building with stone faced piers and on the front elevation is a carved stone plaque inscribed `NSFF Chilwell' with the crossed `C' monograph of Chetwynd of Chilwell in its centre.

4.36 The building's brick construction has been covered with a coloured render and its windows replaced with PVC, it has also been extended with a single storey brick structure to the east (*figure 4.24*). Internally, the building would most likely have been open plan, it now comprises a central corridor running the length of the buildings with a series of offices and meeting rooms to either side.


Figures 4.22 and 4.23 – Building 125

Figure 4.24 – Eastern extension to Building 125

Summary of Significance

4.37 Building 125 dates to the construction of the NSFF and has undergone substantial external alteration and extension. It has limited significance which primarily derives from its association with the first phase of the NSFF, having survived the 1918 explosion, and therefore holds a level of historic interest. The building is currently occupied by the 7th Armoured Division, however little is known of its earlier use and its role as part of the Shell Filling Factory.

Other

4.38 There are a number of additional smaller structures and features located to the western side of the site which appear to date to this earlier phase, these include 3 monographed lamp posts (*figures 4.25 and 4.26*) on the approach to Building 101 and a gatehouse with entrance gates on the western boundary (*figure 4.27*). Also surviving from the NSSF is a magazine storage tunnel with a set of steps leading down into it from a circular brick cupola at its northern end. Access to the tunnel for further assessment has not been possible

4.39 These additional structures contribute to our understanding of the history of the site and are of limited significance due to their historic and architectural interest.

Figure 4.25 and 4.26 – Monographed lamp posts

Figure 4.27 – Gatehouse at western site entrance

Figure 4.28 – Western entrance gates

Phase 2: 1934 – 1945

4.40 By early 1935, work had begun to turn the site of the NSFF into a mechanical transport depot which would house and maintain the Army's vehicle fleet. At this time, most of the buildings associated with the NSFF were replaced and rebuilt. Of the buildings constructed during this phase, Building 102 has been identified as having a degree of interest.

Building 102

4.41 Building 102 (Williams Barracks), is located on the original terrace at the sites' highest point. It is a 3 storey, brick built structure which replaced the Press Houses associated with the original NSFF site which were most likely demolished during the early 1930s. By 1940 the envelope of the replacement building was complete, however it did not open until 1943.

4.42 The building follows the same linear form as the Press Houses and was constructed to form part of the living quarters for the women of ATS. The building comprised its own cookhouses, baths and showers and lecture rooms, it is now vacant.

Figures 4.30 and 4.31 – Southern elevation of Building 102

Summary of Significance

4.43 Building 101 is of limited historic interest, having been constructed during the 1940s. It is located on the site of the former Press Houses which played a crucial role in the filling of shells for the First World War and later served as barracks accommodation, shedding light on the use of the site following the closure of the NSFF. The significance of the building primarily derives from its architectural interest, it is c.1,000 feet in length and located on the terrace to the far north of the site. As a result, it is a distinctive landmark from the south and visible in views from beyond the site.

Significance of Chetwynd Barracks

4.44 The significance of Chetwynd Barracks can be attributed largely to its historic interest which is manifested, in part, through some of the buildings on site. The retained buildings contribute to our understanding of how the site functioned during the period in which it housed the NSFF and its development as a military site in the subsequent years.

4.45 During 1916-1918, the NSFF supplied shells for the war effort and played a crucial role in its success. The NSFF Memorial is the most significant element of the site, listed at grade II it commemorated those who lost their lives during an explosion in 1918. As well as the loss of life, the explosion resulted in the loss of many key, innovative buildings which had been central to the Factory's' efficient operation. The loss of these buildings also resulted in the loss of the industrial nature which had previously characterised the site.

4.46 A number of buildings from the time of the NSFF's occupation of the site survive; whilst the buildings are of limited significance individually, collectively they do contribute to our understanding of the history of the site and its association with the First Word War.

4.47 The site continued to play an integral role within war efforts during the Second World War where it acted as a storage and repair depot for military vehicles and equipment. During this phase of the site's history, it was no longer characterised by tall industrial buildings but by a wealth of low-rise storage sheds. These buildings hold little historic and/or architectural interest, they comprise cheap and standard building materials and are of a generic construction for their time. The exception to this is Building 101, which stands on the site of the former Press Houses and resembles the form of the monumental buildings which had previously occupied the terrace.

5 Heritage-led Strategy to Redevelopment

5.1 The Defence Infrastructure Organisation (DIO) is undertaking a nationwide review of its portfolio and has set out that a number of sites will be vacated shortly as part of its disposal programme, which includes this site. This provides an opportunity to take a strategic view of the wider significance of sites across the portfolio, identifying those which have the potential to be of a higher level of interest, architectural and/or historically when compared to a site of limited significance – as is the case here. This process must also be seen in the context of achieving best value for the public purse, ensuring that an appropriate return is made from its assets to be disposed of. This can be achieved by providing a redevelopment scheme which makes a more efficient use of the site, through high quality design and increased density - realising the potential of the site.

5.2 The following section will set out a heritage-led strategy associated with the redevelopment of the site based on the significance of the associated structures/buildings (as set out in section 4 of this report). It will also demonstrate how the heritage potential of the site can be unlocked as part of redevelopment plans. It is the intention that this will inform the formation of a concept masterplan in order to promote the site through the local plan review process with a site specific allocation. This has been presented in accordance with the relevant heritage legislation, planning policy and guidance context - as set out in Appendix 1.

Key Heritage Issues

5.3 The key heritage issues in the development of the site are the impact on the significance (including any contribution made by their setting) of the designated and non-designated heritage assets (as set out in section 4 of this report):

Designated Heritage Asset

- National Shell Filling Factory Memorial – listed at grade II.

Non-designated Heritage Assets

- Building 101;
- Building 157;
- Building 137; and,
- Building 125.

Heritage-led Strategy

5.4 The impending vacation of the site provides an opportunity for redevelopment that is steered by a design rationale that acknowledges and documents its significance, whilst also enhancing its character through high quality design. Furthermore, vacation and subsequent redevelopment will open a locally important site to members of the public for the first time, providing opportunities for public engagement and dissemination of a shared understanding.

War Memorial - Setting

5.5 The most important structure located within the site is the designated war memorial, which should be retained as part of the redevelopment and its setting preserved or where possible, enhanced. Paragraph 137 of the NPPF requires Local Authorities to look for opportunities for new development within the setting of heritage assets to enhance or better reveal their significance. Redevelopment of the site should seek to ensure that the memorial is accessible and is visible from key routes through the site, better revealing its significance. In order to achieve this, new development should seek to maintain the current extent of the memorial park (*figure 5.1*) and commence beyond the boundary of the shaded area illustrated below.

Figure 5.1 – Extract of site plan showing extent of parkland to be maintained

Non-Designated Heritage Assets – Issues and Options

5.6 Redevelopment of the site offers the opportunity to enhance the appreciation of any retained non-designated heritage assets. Inevitably, these buildings will prove complex and difficult for conversion, especially when addressing the current position and configuration of the buildings of interest, within any redevelopment scheme.

5.7 There will be a presumption in favour of retaining the non-designated heritage assets, due to their historic and architectural interest and any demolition will require justification of the loss. Paragraph 135 of the NPPF notes that the effect of an application on the significance of a non-designated heritage asset should be taken into account and that a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset. This does not preclude loss, but does require a convincing justification to be made. This specifically relates to Building 157, which due to its extensive footprint would limit its reuse and hamper the ability to maximise the potential development of the site.

5.8 Any supporting information must demonstrate a clear thought process concerning the non-designated heritage asset in considering their capacity to accommodate conversion to alternative uses:

- The significance of the asset must be defined;
- Is the building constrained in any way? i.e. structural issues which may hamper conversion;

- Can the identified significance of the asset be maintained through accommodating an alternative use within the structure?; and,

- If it is deemed that demolition is required, what will be achieved as a result that could not be achieved through retention?

5.9 The redevelopment of the site offers the opportunity to provide a scheme which makes a more efficient use of the site through high quality design and increased density - realising the potential of the site – and achieving the maximum return for the public purse as well as making the best possible use of the site. There will, inevitably, be a balancing effect of the loss of any non-designated heritage assets against the wider planning and heritage benefits which would be delivered, which will need to be identified as part of the planning process.

Public Access to the Site

5.10 The redevelopment of the site provides the opportunity for the local community to have a greater awareness of the historic interest of the site and the role which it played within their community during two World Wars. This should be at the centre of the redevelopment, and, where possible, physical remnants which contribute to the development of this understanding should be incorporated into proposals. These include the buildings of significance identified above, historic routes through the site, gates and lampposts. Furthermore, by opening the site to the public a shared understanding of its significance can be made available through the provision of a community space, such as an on-site museum, which provides educational tools and interpretation panels.

Summary

5.11 In conclusion, a heritage-led approach to the redevelopment of this site will ensure that the memory of its former use is maintained and that the local community are able to benefit from the closure of the existing site. Many of the existing buildings will be complex to reuse and their loss will need to be weighed against the wider heritage benefits which the scheme is able to deliver.

Appendix 1: Heritage Planning Policy Context

National Legislation

Planning (Listed Buildings and Conservation Areas) Act 1990.

Legislation regarding buildings and areas of special architectural and historic interest is contained within the Planning (Listed Buildings and Conservation Areas) Act 1990.

The relevant legislation in this case extends from Section 16 of the 1990 Act which states that in considering applications for listed building consent, the local planning authority shall have special regard to the desirability of preserving the Listed Building or its setting or any features of special architectural or historic interest which it possesses.

Section 66 further states that special regard must be given by the authority in the exercise of planning functions to the desirability of preserving or enhancing Listed Buildings and their setting.

According to Section 69 of the Act a Conservation Area (CA) is an "area of special architectural or historic interest the character and the appearance of which is desirable to preserve or enhance". It is the duty of Local Authorities to designate such areas and to use their legal powers to safeguard and enhance the special qualities of these areas within the framework of controlled and positive management of change.

Section 69 further states that it shall be the duty of a local planning authority from time to time to review the past exercise of functions under this section and to determine whether any parts or any further parts of their area should be designated as conservation areas; and, if they so determine, they shall designate those parts accordingly. Adding, The Secretary of State may from time to time determine that any part of a local planning authority's area which is not for the time being designated as a conservation area is an area of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance; and, if he so determines, he may designate that part as a conservation area.

Further to this Section 72 of the 1990 Act states that in exercising all planning functions, local planning authorities must have special regard to the desirability of preserving or enhancing the character and appearance of Conservation Areas. Further provisions are detailed in Section 74 of the Act.

National Planning Policy

N.B. the current policy regime identifies, through the National Planning Policy Framework (NPPF), that applications should consider the potential impact of development on Heritage Assets. This term includes both designated heritage assets, which possess a statutory designation (for example listed buildings, conservation areas, and registered parks and gardens), as well as undesignated heritage assets.

National Planning Policy Framework (NPPF), (March 2012)

The National Planning Policy Framework (NPPF) was published on 27 March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. It has purposefully been created to provide a framework within which local people and Local Planning Authorities (LPAs) can produce their own distinctive Local and Neighbourhood Plans which reflect the needs and priorities of their communities.

When determining Planning Applications the NPPF directs LPAs to apply the approach of presumption in favour of sustainable development; the 'golden thread' which is expected to run through the plan-making and decision-taking activities. It should be noted however, that this is expected to apply except where this conflicts with other policies combined within the NPPF, inclusive of those covering the protection of designated heritage assets, as set out in paragraph 14 of the NPPF.

Within section 7 of the NPPF, 'Requiring Good Design', Paragraphs 56 to 68, reinforce the importance of good design in achieving sustainable development by ensuring the creation of inclusive and high quality places. This section of the NPPF affirms, in paragraph 58, the need for new design to function well and add to the quality of the area in which it is built; establish a strong sense of place; and respond to local character and history, reflecting the built identity of the surrounding area.

Section 12, 'Conserving and Enhancing the Historic Environment', Paragraphs 126-141, relate to developments that have an effect upon the historic environment. These paragraphs provide the guidance to which local authorities need to refer when setting out a strategy for the conservation and enjoyment of the historic environment in their Local Plans. This should be a positive strategy for the conservation and enjoyment of the historic environment and should include heritage assets which are most at risk through neglect, decay or other threats. It is also noted that heritage assets should be conserved in a manner appropriate to their significance.

The NPPF further provides definitions of terms which relate to the historic environment in order to clarify the policy guidance given. For the purposes of this report, the following are important to note:

- Heritage asset. This is 'a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions'. These include designated heritage assets and assets identified by the local planning authority.

- Significance. The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

The NPPF advises local authorities to take into account the following points when drawing up strategies for the conservation and enjoyment of the historic environment. These considerations should be taken into account when determining planning applications:

- The desirability of sustaining and enhancing the significance of heritage assets and preserving them in a viable use consistent with their conservation;

- The wider social, cultural, economic and environmental benefits that the conservation of the historic environment can bring;

- The desirability of new development in making a positive contribution to local character and distinctiveness;

- Opportunities to draw on the contribution made by the historic environment to the character of a place.

In order to determine applications for development, Paragraph 128 of the NPPF states that LPAs should require applicants to describe the significance of the heritage assets affected and the contribution made by their setting. Adding that the level of detail provided should be proportionate to the significance of the asset and sufficient to understand the impact of the proposal on this significance.

According to Paragraph 129, LPAs should also identify and assess the significance of a heritage asset that may be affected by a proposal and should take this assessment into account when considering the impact upon the heritage asset.

Paragraph 130 adds that where there is evidence of deliberate neglect of or damage to a heritage asset the deteriorated state of the heritage asset should not be taken into account in any decision.

Paragraphs 132 to 136 consider the impact of a proposed development upon the significance of a heritage asset. Paragraph 132 emphasises that when a new development is proposed, great weight should be given to the asset's conservation and that the more important the asset, the greater this weight should be. It is noted within this paragraph that significance can be harmed or lost through the alteration or destruction of the heritage asset or by development within its setting.

Paragraph 134 advises that where a development will cause less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

Paragraph 135 notes that the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. Adding, that in weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgment will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

Paragraph 136 stipulates that local planning authorities should not permit loss of the whole or part of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred.

In addition, Paragraph 137 notes that local planning authorities should look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance. Adding, proposals that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset should be treated favourably.

The NPPF therefore continues the philosophy of that upheld in PPS5 in moving away from narrow or prescriptive attitudes towards development within the historic environment, towards intelligent, imaginative and sustainable approaches to managing change. Historic England defined this new approach, now reflected in the NPPF, as 'constructive conservation'. This is defined as 'a positive and collaborative approach to conservation that focuses on actively managing change...the aim is to recognise and reinforce the historic significance of places, while accommodating the changes necessary to ensure their continued use and enjoyment.' (Constructive Conservation in Practice, Historic England, 2009).

National Planning Guidance

Planning Policy Guidance *(2014)*

This guidance has recently been adopted in order to support the NPPF. It reiterates that conservation of heritage assets in a manner appropriate to their significance is a core planning principle. It also states, conservation is an active process of maintenance and managing change, requiring a flexible and thoughtful approach. Furthermore, it highlights that neglect and decay of heritage assets is best addressed through ensuring they remain in active use that is consistent with their conservation.

Importantly, the guidance states that if complete or partial loss of a heritage asset is justified, the aim should then be to capture and record the evidence of the asset's significance, and make the interpretation publically available.

Key elements of the guidance relate to assessing harm. It states, an important consideration should be whether the proposed works adversely affect a key element of the heritage asset's special architectural or historic interest. Adding, it is the degree of harm, rather than the scale of development that is to be assessed. The level of 'substantial harm' is stated to be a high bar that may not arise in many cases. Essentially, whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the NPPF.

Importantly, it is stated harm may arise from works to the asset or from development within its setting. Setting is defined as the surroundings in which an asset is experienced, and may be more extensive than the curtilage. A thorough assessment of the impact of proposals upon setting needs to take into account, and be proportionate to, the significance

of the heritage asset and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it.

Historic England Guidance - Overview

On the 25th March 2015 Historic England (formerly English Heritage) withdrew the PPS5 Practice Guide. This document has been replaced with three Good Practice Advice in Planning Notes (GPAs), 'GPA1: Local Plan Making' (Published 25th March 2015), 'GPA2: Managing significance in Decision-Taking in the historic Environment' (Published 27th March 2015) and 'GPA3: The Setting of Heritage Assets (25th March 2015). A further document entitled 'GPA4: Enabling Development' is yet to be adopted. GPA3 is undergoing a detailed review at present, with the intention of publishing a revised version incorporating 'Seeing the History in the View' (Historic England, May 2011).

Local Planning Policy

Broxtowe Borough Council Local Plan (2004)

The Local Plan (2004) sets out the Council's policies and proposals for development and use of land in the borough. In relation to the historic environment, Broxtowe Council's aims are to preserve and enhance the character of the conservation areas and protect listed buildings and sites of archaeological and historic interest. The Local Plan draws on content from the National Planning Policy Framework (NPPF), the East Midlands Regional Assembly and the Nottinghamshire Structure Plan (1996).

Broxtowe Council's Local Plan (2004) policies in relation to the Historic Environment are as follows:

Policy E3 – The aims of the Local Plan (2004) in relation to development within conservation areas are to provide a lists of factors to be taken into account for various types of proposal in conservation areas, enabling rigorous attention to be paid to the appropriateness of development in the borough's conservation areas.

Particular regard will be taken of such matters as scale, height, massing, respect for the traditional pattern of frontage, window opening and the nature and quality of materials. Development should also respect open spaces, road and footpath patterns, important viewpoints, trees and other features which contribute to the character of the area.

'Planning permission will only be granted for development within or in the vicinity of a conservation area which preserves or enhances the character and appearance of the area having regard to its location, scale, design and materials.'

Policy E4 – Planning permission is not required for demolition within a conservation area, 'conservation area consent' may be needed.

Conservation area consent will only be granted in exceptional circumstances where, for instance, a building makes little or no contribution to the character of appearance of the conservation area. It will also be necessary to ensure that redevelopment takes place within a specified period.

'Conservation area consent will not be given for the demolition of a building or structure which contributes to the character or appearance of a conservation area. Where a building makes little or no contribution to the character or appearance of the conservation area, conservation area consent will not be granted unless the proposed demolition forms part of a scheme which would preserve or enhance the character and appearance of the area.'

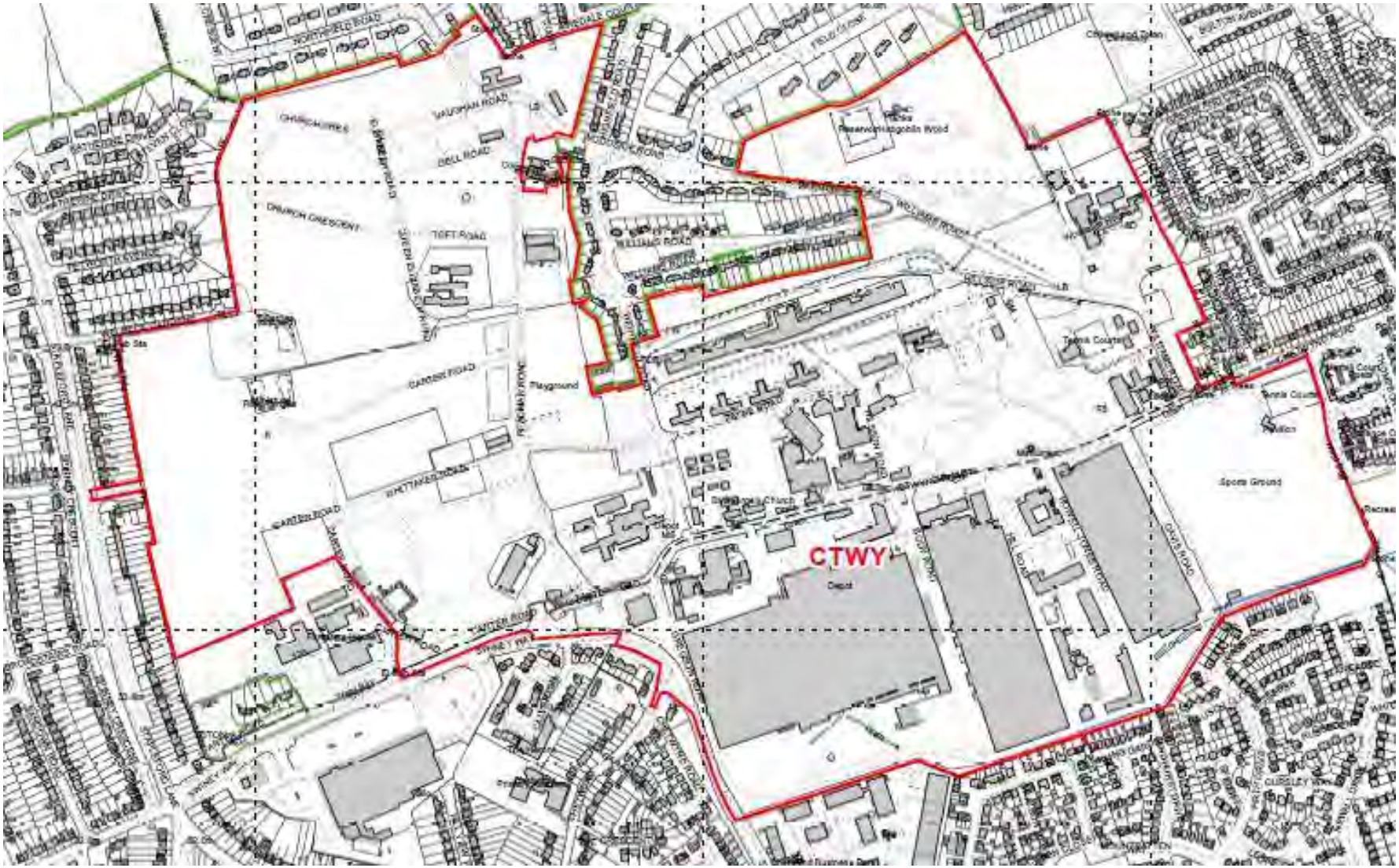
Policy E5 – Proposals to change the use of listed buildings which would otherwise be redundant may be appropriate in certain circumstances, although there will generally be a preference for retaining the building for the use for which it was originally built. Demolition of listed buildings will not be granted consent.

If the proposals have an adverse effect on the character or interest of a listed building, it will be important for the Council to assess whether the adverse effect is outweighed by the benefits of securing a long-term use for the building.

'Planning permission or listed building consent will not be granted for any alteration or addition to a listed building where there would be an adverse effect on its architectural or historic character or interest, unless, exceptionally, it can be demonstrated that the alteration or addition is essential to provide income for the upkeep of the building and/or secure a long-term beneficial use for the building, which is otherwise likely to become disused or fall into disrepair. Demolition of listed buildings will not be granted consent. Proposals to change the use of listed buildings which would otherwise be redundant may be appropriate in certain circumstances, although there will generally be a preference for retaining the building for the use for which it was originally built.'

Policy E6 – Planning permission will not be granted for development which would adversely affect the setting of a listed building in terms of the scale, form, siting or design or the proposals.

Appendix 2: Site Plan



[redacted]
Director – Heritage Planning and Development
[redacted]

[redacted]
Associate Director – Heritage Planning and Development
[redacted]

[redacted]
Associate Director – Heritage Planning and Development
[redacted]

[redacted]
Heritage Consultant – Heritage Planning and Development
[redacted]

jll.com

Jones Lang LaSalle

PRP

CHETWYND BARRACKS

VISION FOR DEVELOPMENT

November 2017

Client
Defence Infrastructure Organisation

Planning, Commercial and Heritage
Jones Lang Lasalle

Masterplanning and Landscape
PRP

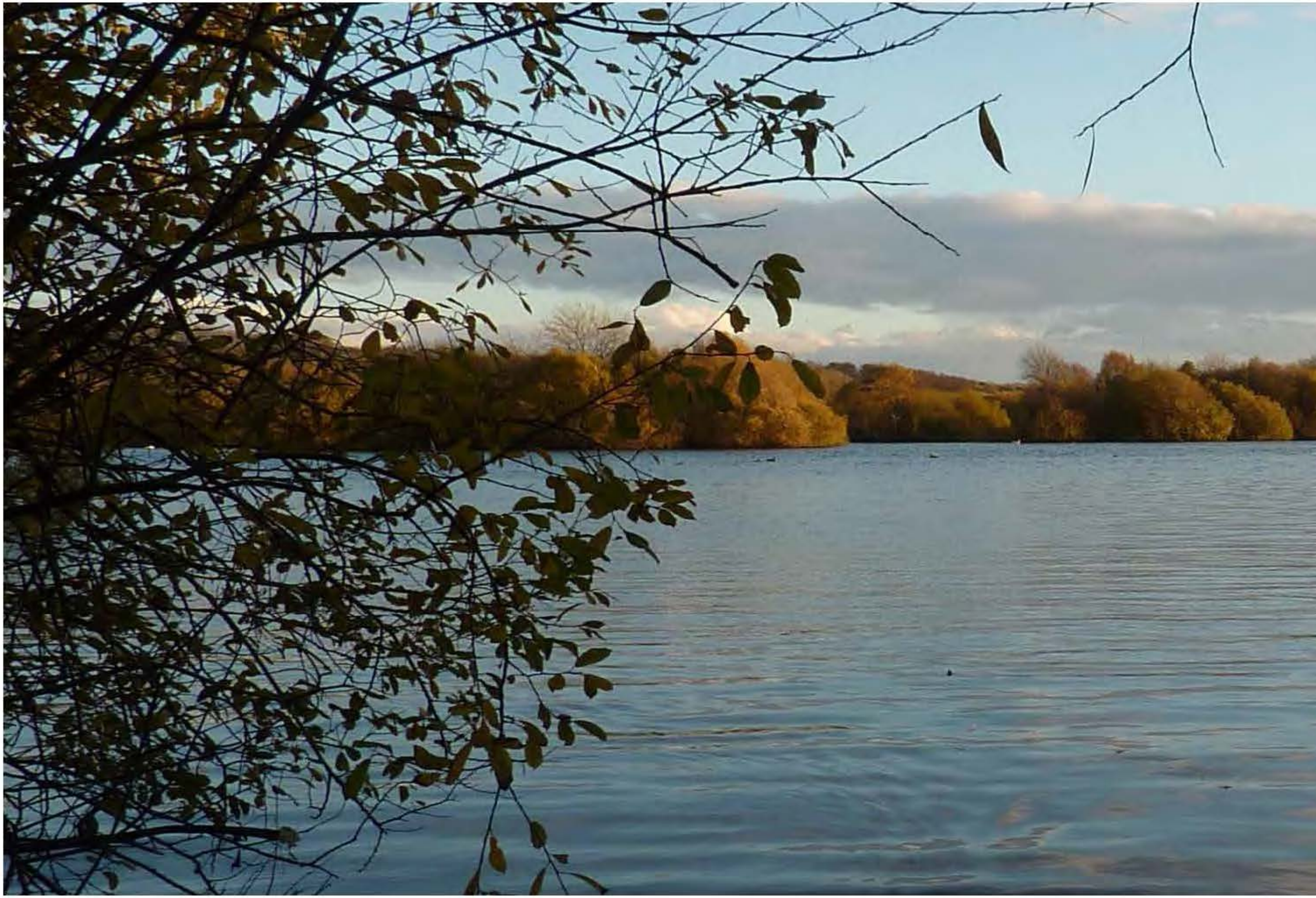
Transport, Drainage & Infrastructure, Ecology & Arboriculture
Peter Brett

PRP Job Reference
AA6584

Issuing Date / Office
12/04/2017/London

Project Lead
Kevin Radford

CONTENTS



1.0 SITE AND CONTEXT ANALYSIS

1.0 SITE AND CONTEXT ANALYSIS

1.1 Introduction to the Site

The Chetwynd Barracks site (referred to as "the Site") is located to the southwest of Greater Nottingham in the borough of Broxtowe. It lies between the settlements of Chilwell and Toton.

The Site is currently used as a military facility and is targeted for closure in 2021. It is 75.23 ha in size. Although the land will not be released in time to form part of Broxtowe Borough Council's 5 year land supply over the next 20 years, it will be able to provide up to 1,500 new homes.

Site location plan in wider context

Key

- Site boundary
- Toton and Chilwell Neighbourhood Forum

1. View to Chetwynd Business Park and adjacent new housing development
2. High Road Beeston, a typical primary urban street connecting Beeston to the City Centre
3. Major transport intersection in the centre of Beeston
4. Attenborough Village - surrounded by suburban housing but retaining a village character to its core
5. Beeston Village cottage housing
6. Tree lined footpath in the Site

1.0 SITE AND CONTEXT ANALYSIS

1.2 Wider Context

1.2.1 Area connectivity

The Site is currently accessed via Swiney Way, and links with Nottingham Road and Stapleford Lane. Stapleford Lane connects to the A52 Brian Clough Way to the north, from where connection to the Sandacre Interchange (J25) of the M1 is achievable.

The Nottingham Express Transit (NET) Tram line runs close to the northern boundary of the Site, providing a connection from the Toton Lane Park & Ride site to Nottingham City Centre via Beeston.

Attenborough rail station is accessible via Attenborough Lane which links with Nottingham Road, to the southeast of the Site. With HS2 to be built by 2032 this will make the settlements of Toton, Chilwell and Long Eaton extremely accessible.

Wider transport and movement diagram

1.2.2 Local designations

The Site contains a historical statutory designation: a Grade II listed memorial. It is also within close proximity to a number of other designations.

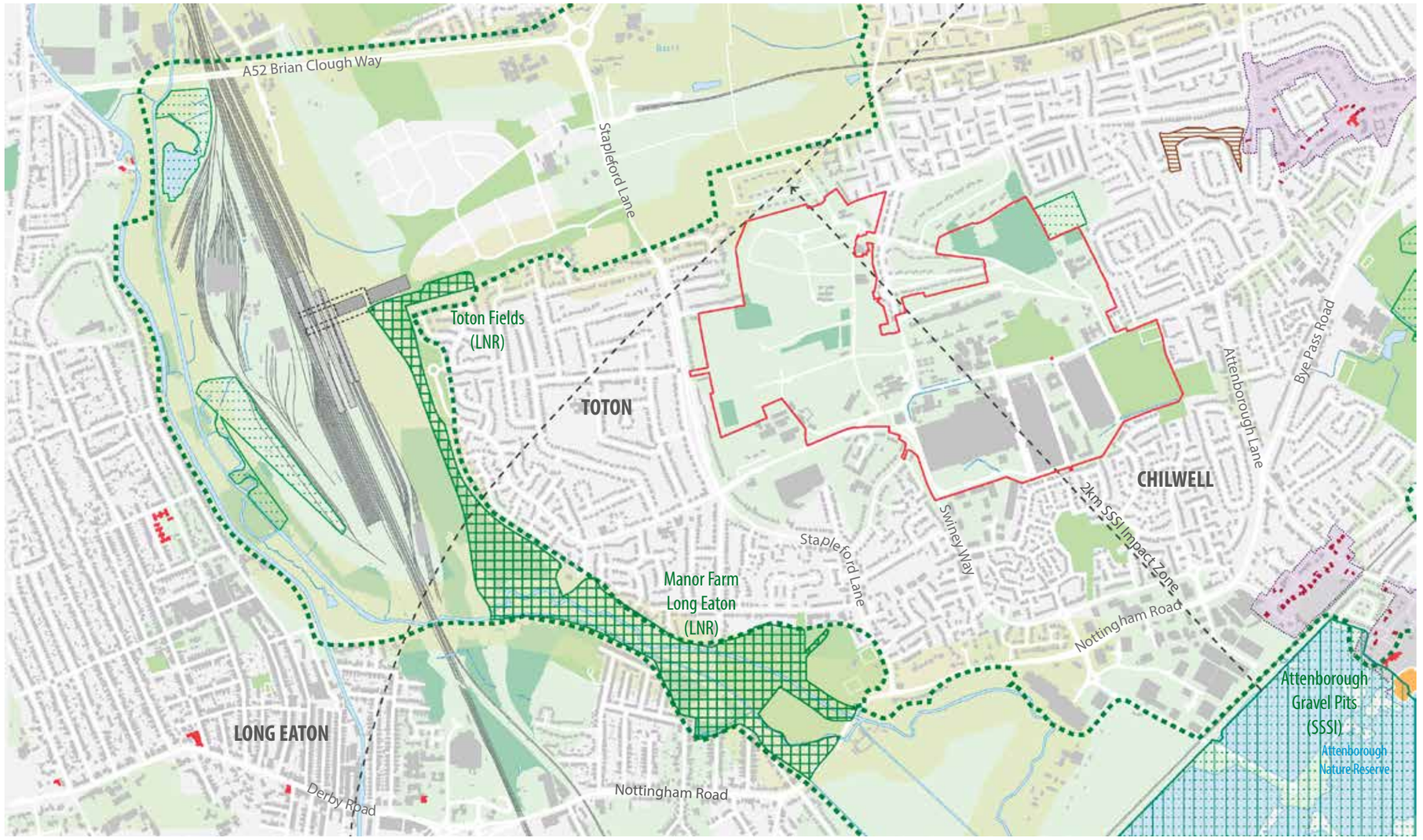
The Greater Nottingham Greenbelt extends around the edge of Toton and close to the north of the Site. It is understood that the boundary will change to the north of the Site to allow for employment land designation around the Toton Lane Tram Stop.

To the east lies two Conservation Areas. The Attenborough Village Conservation Area to the south east and Chilwell Conservation Area to the north east.

Finally, the Attenborough Gravel Pits is a designated Site of Special Scientific Interest (SSSI) and Nature Reserve. This is connected via the Greenbelt to the Manor Farm Long Eaton and Toton Fields Local Nature Reserves. There are also several Sites of Nature Conservation Interest (SINCs).

Key

- Site boundary
- Existing woodland
- Existing POS
- Local nature reserve
- SSSI and impact risk zone
- Green belt
- BioSINC
- GeoSINC
- Conservation area
- GI corridors - 100m buffer
- Scheduled monument
- Listed buildings
- Local interest buildings



Wider designations diagram

1.0 SITE AND CONTEXT ANALYSIS

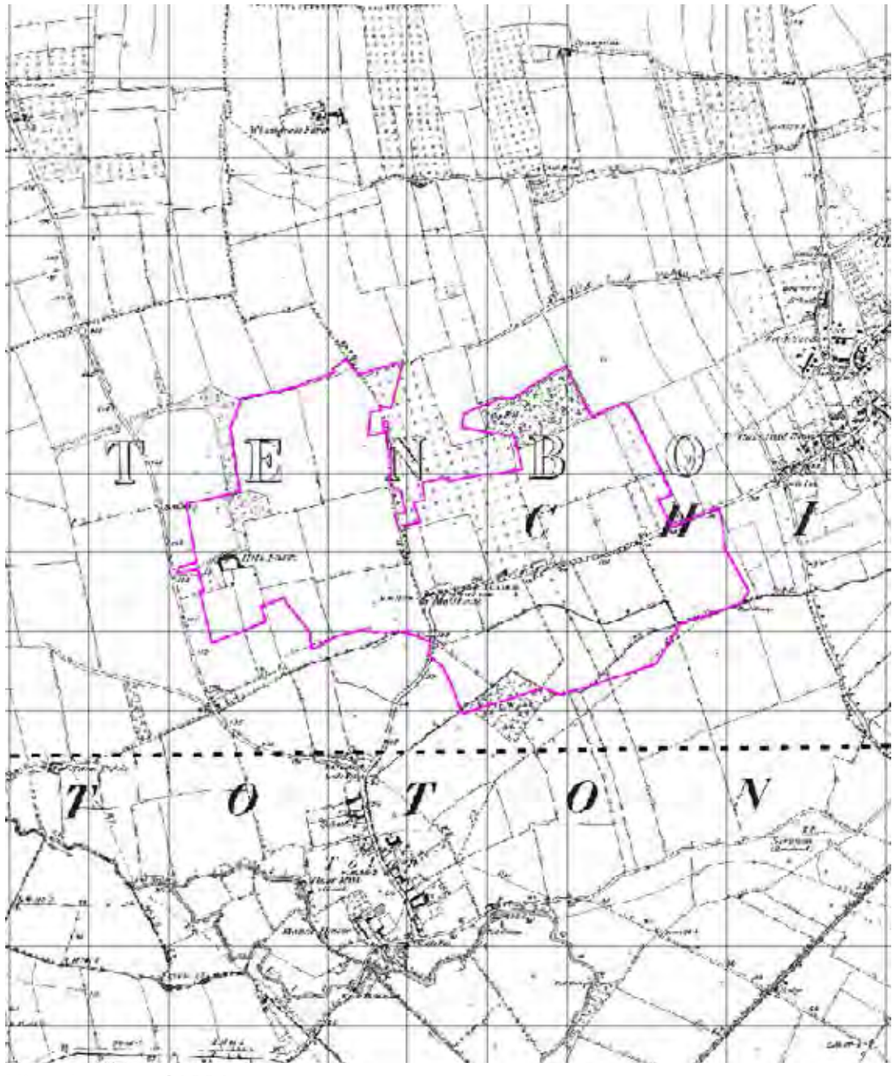
1.3 Site Analysis

1.3.1 Site history (from 1884)

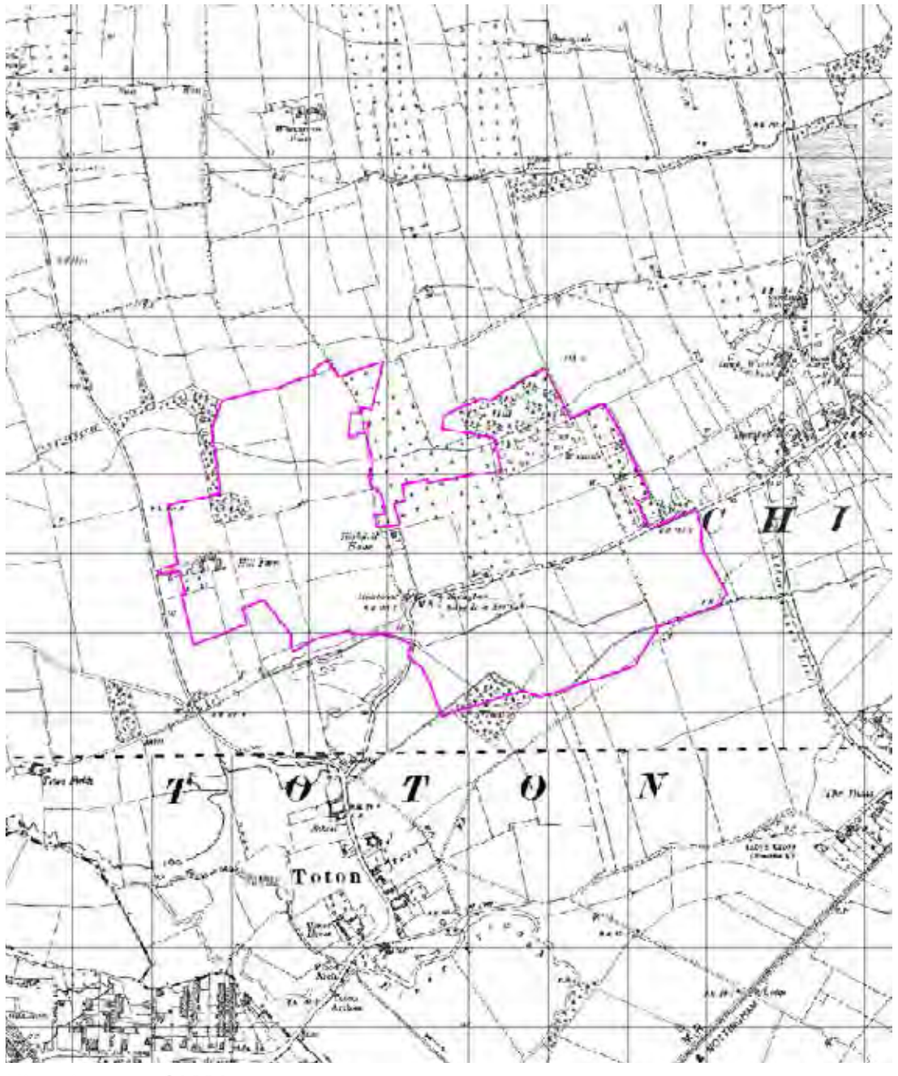
The following build-up of historic maps from the 1880's shows the Site in its historic context and how during the late twentieth century the Site is surrounded by development.

The early plans show the local importance of Chetwynd Road which passes through the centre of the Site. The hedge boundaries also indicate a regular north/south and east/west field structure.

On the opposite page showing mid to late twentieth century development the Site is largely formed with the development seen today. The latter years of the century show significant development around the Site, particularly the establishment of Toton.



Historic map of 1884

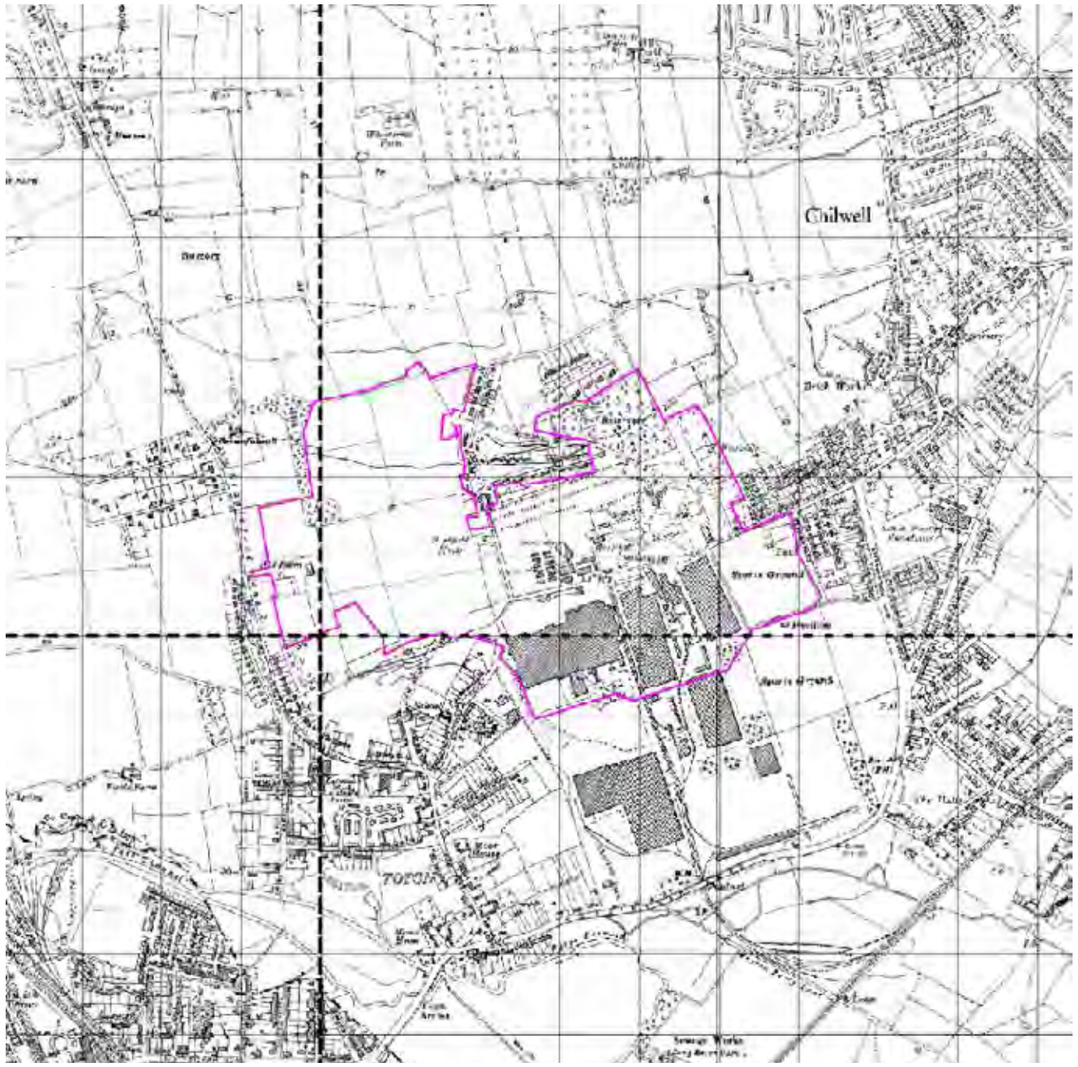


Historic map of 1921

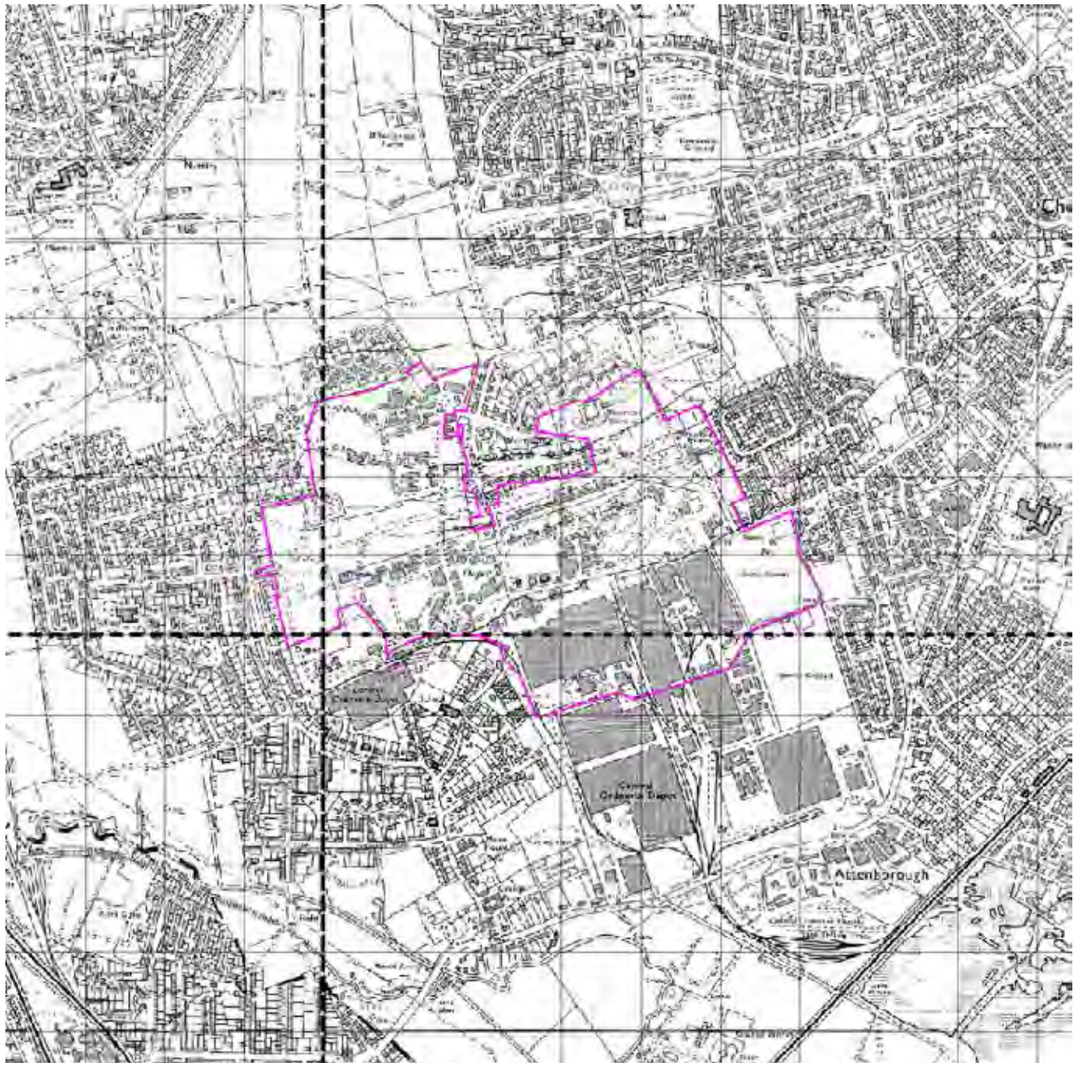
Key

Site boundary

NORTH



Historic map of 1956



Historic map of 1973

1.0 SITE AND CONTEXT ANALYSIS

1.3.2 Built heritage and designations

Due to its history as a military barracks, the Site has several buildings with a degree of heritage interest. Of particular importance is the Grade II listed memorial. A heritage-led approach to the development of this Site will ensure that the memory of its former use is maintained, producing a distinct place identity.

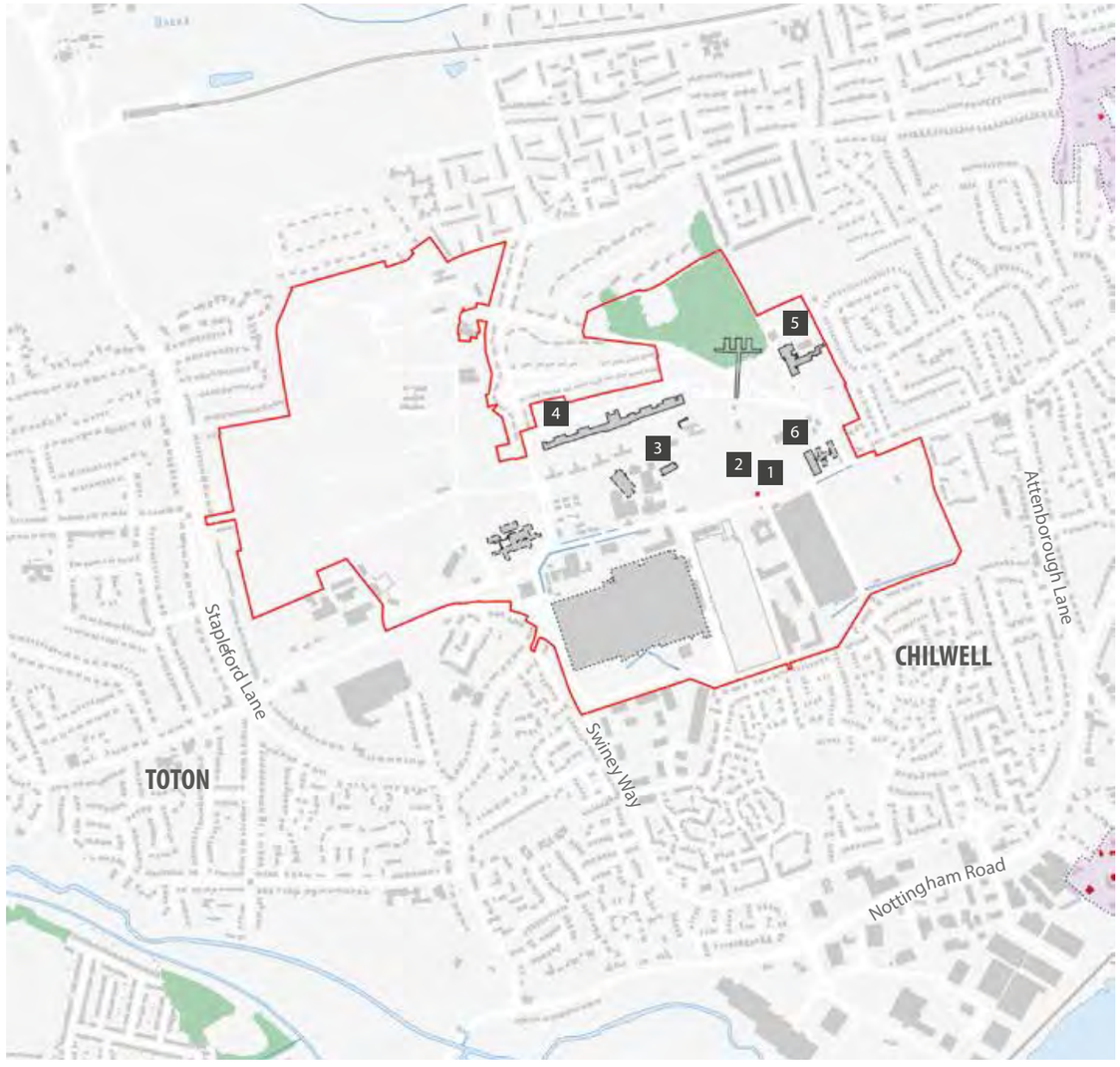
The heritage assessment has identified the following buildings and structures in the Site as holding a degree of significance:

- Grade II listed National Shell Filling Factory Memorial, dating from 1918, is located in the eastern area of the Site. This is a monument to those killed when the ammonium nitrate melthouse exploded.
- Woodside House is an 18th century dwelling that was used as the factory's main offices and Officers' Mess. It is currently still used as the Officers' Mess and an administration centre, retaining its historic use as a high status building since 1916.
- The former Red Cross nurses building is a brick, single storey structure dating from 1916. A notable feature of the building is a red cross device which is picked out in brick on the central tower and end gables.
- Building 125, located adjacent to the eastern entrance to the Site, is a large, single storey building on whose front elevation is a carved stone plaque inscribed "NSFF Chilwell". It holds a level of historic interest as it survived the 1918 explosion.
- Williams Barracks is located on the Site's highest point. It is a 3 storey, brick structure which replaced the Press Houses associated with the original factory site. Its significance primarily derives from its architectural interest: it is 1,000 ft in length and so it is a distinctive landmark from the south and visible in views beyond the Site.

Building 157 is a large, warehouse style building located in the southern area of the Site. It is the former Filled Shell Store and is the largest surviving building on the Site. While possible future uses for the building have been explored (such as for storage), it has been concluded that removing the building may maximise the redevelopment potential of the Site as a whole. There are also two tunnels located in the northeastern area of the Site whose entrances should be left clear. Other buildings on the Site have likewise been assessed for their heritage value but will not be retained.

Key

- Site boundary
- Listed structure
- Building deemed worthy of retention
- Building assessed but not to be retained
- Memory of building to be retained



Built heritage diagram showing those structures holding a degree of historic interest

1. National Shell Filling Factory memorial
2. Current setting of the National Shell Filling Factory memorial
3. Southern elevation of the former Red Cross nurses building
4. Williams Barracks, which replaced the Press Houses associated with the original National Shell Filling Factory
5. Woodside House
6. Building 125
7. National Shell Filling Factory at Chilwell during the First World War

1.0 SITE AND CONTEXT ANALYSIS

1.3.3 Area character

With its location in the urban-suburban fringe, the Site is surrounded by settlements of a range of densities. Having this variety creates distinct character areas within the same settlement through different typologies, streetscapes and public realm features. A study of 4 areas in Chilwell, Toton, and Long Eaton has been conducted to assess how existing settlements create distinct place identities. These identities also determine the appropriate residential density for the area.

Infographics have been used on the following pages to represent the following key dimensions:

- Density (dw/ha)
- Block width (road midpoint-to-midpoint)
- Street (road and footpaths) and road width
- Front-to-front and back-to-back distances
- Average plot dimensions

Key

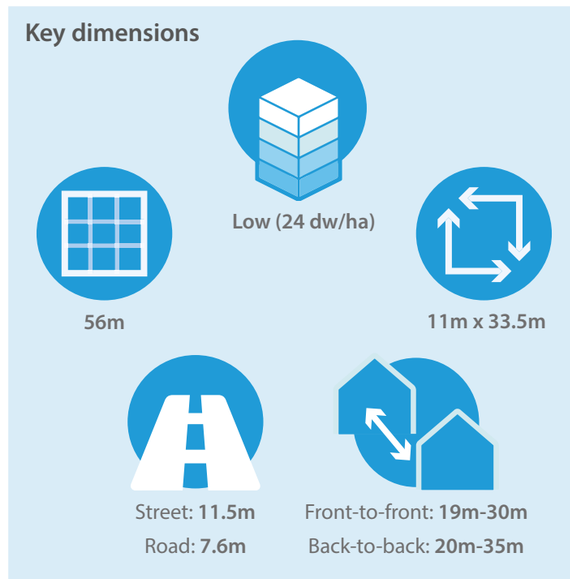
— Site boundary

Location plan of character study areas

1.3.3.1 High Road

Key features of the High Road study area can be summarised as follows:

- Large detached and semi-detached 2 storey houses
- Varied architectural styles with buildings being incrementally delivered from the 1950's through to the present day
- Large front and rear gardens allow for grander plots and a looser block layout
- Road network and housing layout respond to the undulating topography of the area
- Houses are set back from the street with sizable front gardens and driveways
- Dropped curbs along footpath allow easy access to driveways
- Sufficient on-plot parking results in no parking on-street
- Front walls, fences and high hedgerows presents a sense of private separation from neighbours and the activity of the street
- Limited frontage onto the street and no defined building line results in reduced passive surveillance
- Quiet streetscape with little activity or pedestrian movement



1. Large semi-detached house with front gardens
2. Various boundary treatments, including hedges and low walls
3. Quiet streetscape with little activity

Plan of High Road study area

1.3.3.2 Mountbatten Way

Key features of Mountbatten Way are:

- Contemporary residential development of 2.5 and 3 storey townhouses and short terraces
- Traditional building materials with a prominent mock-Georgian style architecture throughout, creating a defined and unified character with variety and a mix of property sizes
- Small front gardens and defensible spaces allow the houses to share a close relationship with the activity of the street. Their classic landscaping creates an attractive, colourful and highly inviting frame to the street
- Small front gardens, rear gardens and overall plot sizes allow for tighter block layouts
- Strong, continued building line defines street and creates a legible geometry, however short, turning roads with cul-de-sacs may lead to some confusion in movement
- Majority of properties allow for two parking spaces through a mix of on-plot and garages, resulting in only a small amount of on-street parking
- Changing road surfaces differentiate conventional highways from more intimate residential streets, encouraging drivers to slow down and pay greater attention to pedestrian movement

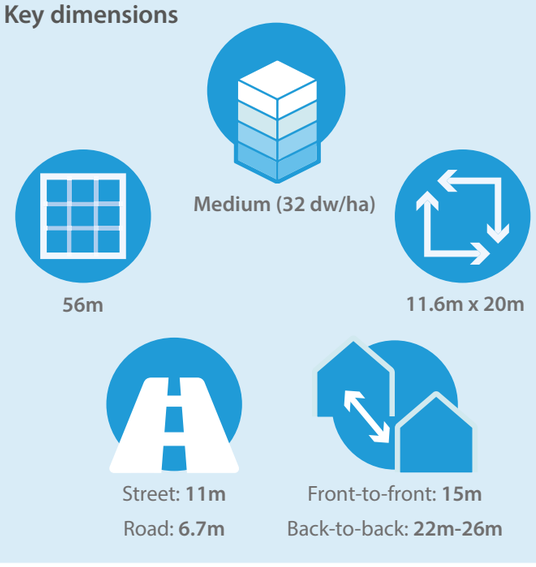

1


2


3

1. 3-storey mock-Georgian semi-detached house
2. Short terrace with defensible space
3. Densely plotted detached properties

Key dimensions



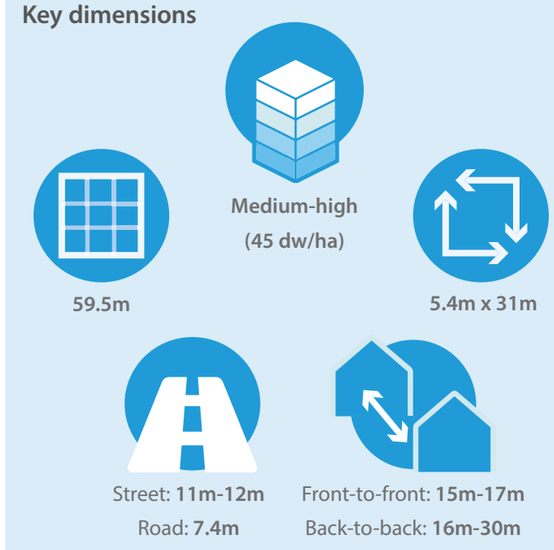
Plan of Mountbatten Way study area

1.3.3.3 William Street

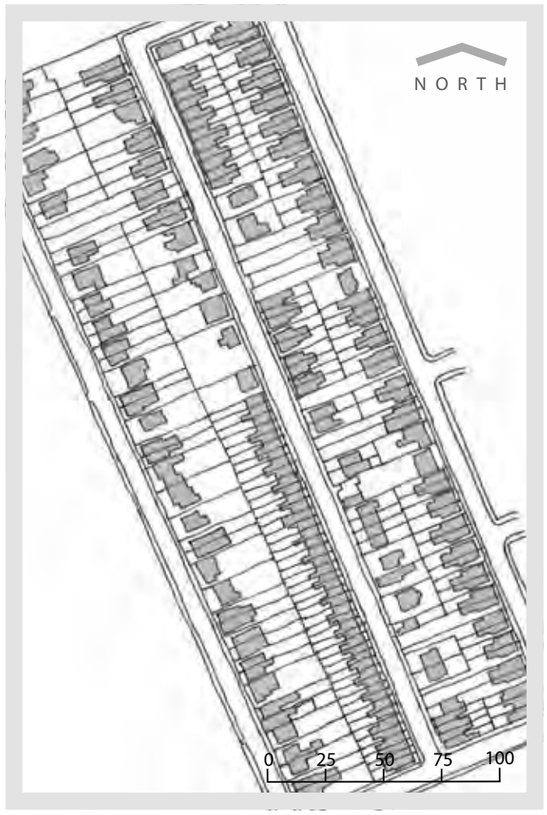
William Street has the following key features:

- Typical inter-war linear street with 2 storey terrace houses with incidental detached and semi-detached houses
- Predominant brick façades and consistent building lines create a highly defined frame to the street
- Modest front and rear gardens allow for a regimented back-to-back block layout
- Only on-street parking leads to a streetscape dominated by parked cars
- Intimate relationship between neighbours and the street, less sense of privacy
- A range of between 15m to 30m back-to-back distances offers sizable rear gardens to the majority of properties
- Due to back-to-back layout, the street's gable ends leave a long stretch of garden fences and a negative frontage onto the street
- Consistent grid layout allows for direct and legible connectivity

Key dimensions



1. Brick façades are the predominant building material
2. Little variation in roofscape
3. Dominance of on-street parking on the public realm



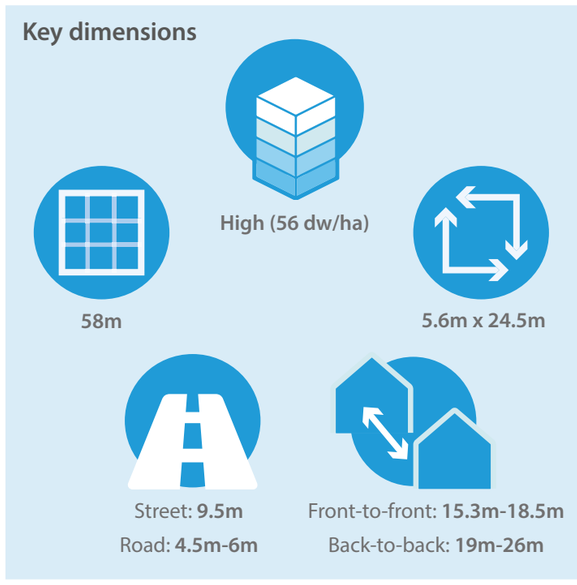
Plan of William Street study area

1.0 SITE AND CONTEXT ANALYSIS

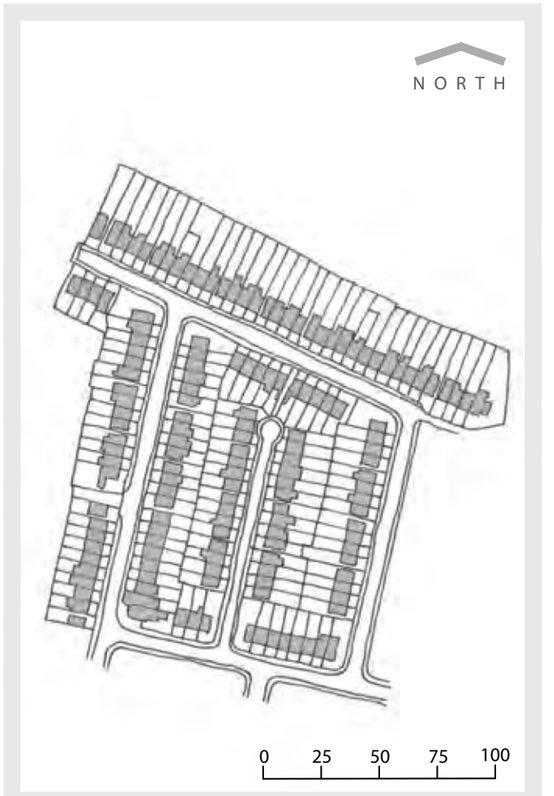
1.3.3.4 Landsdown Grove

Key features that define Landsdown Grove are:

- Common inter-war contained community streets with 2 storey short terrace houses of four properties separated by side alleys
- Repeated building typology creates a consistent frame to the streetscape with variety and individuality introduced my residents
- This regularity offers 15 to 18m street sections and 15 to 24m back-to-back distances allowing for a denser suburban block layout
- Larger front gardens offer for on-plot parking, leaving roads open and free of cars
- Building frontages continued along adjoining streets, limiting the length of gable ends and maintaining a consistent facade, encouraging passive surveillance
- Regular grid layout allows for legible network, however dense arrangement necessitates cul-de-sacs, limiting connectivity



1. 2-storey semi-detached house
2. Ample space for on-plot parking
3. Strong building frontage along the street



Plan of Landsdown Grove study area

1.3.3.5 Conclusions to area character assessment

The analysis illustrates that the settlements surrounding Chetwynd Barracks have a range of residential densities and streetscape typologies. This mix of densities and varying house types helps support a well balanced and diverse community.

It is important to notice that some of these examples perform better than the others in relation to housing mix and typologies. Mountbatten Way and William Street both share a clear mix of property and plot sizes, offering greater diversity and range of property types. This in turn helps to support a more diverse and sustainable community.

These examples offer useful lessons in relation to varying character types and density areas. The most significant features to influence these are setbacks, building line, plot dimensions, regularity and road widths. Each of these elements should be considered when defining the key elements of the new development's distinct density bands and character areas.

	HIGH ROAD	MOUNTBATTEN WAY	WILLIAM STREET	LANDSDOWN GROVE
	Low (24 dw/ha)	Medium (32 dw/ha)	Medium-high (45 dw/ha)	High (56 dw/ha)
	56m	56m	59.5m	58m
	Street: **11.5m** Road: **7.6m**	Street: **11m** Road: **6.7m**	Street: **11m-12m** Road: **7.4m**	Street: **9.5m** Road: **4.5m-6m**
	Front-to-front: **19m-30m** Back-to-back: **20m-35m**	Front-to-front: **15m** Back-to-back: **22m-26m**	Front-to-front: **15m-17m** Back-to-back: **16m-30m**	Front-to-front: **15.3m-18.5m** Back-to-back: **19m-26m**
	11m x 33.5m	11.6m x 20m	5.4m x 31m	5.6m x 24.5m

1.0 SITE AND CONTEXT ANALYSIS

1.3.4 Current contextual urban grain

The urban grain plan clearly shows the growth dates of development around the Site. The Site itself is a clearly separate and unique form of development. To the west and south west the regular pattern of urban form shows an efficient, Victorian response to gently undulating land form.

To the north and northeast, the development is suggestive of more extreme landform with late twentieth century cul-de-sac layouts.

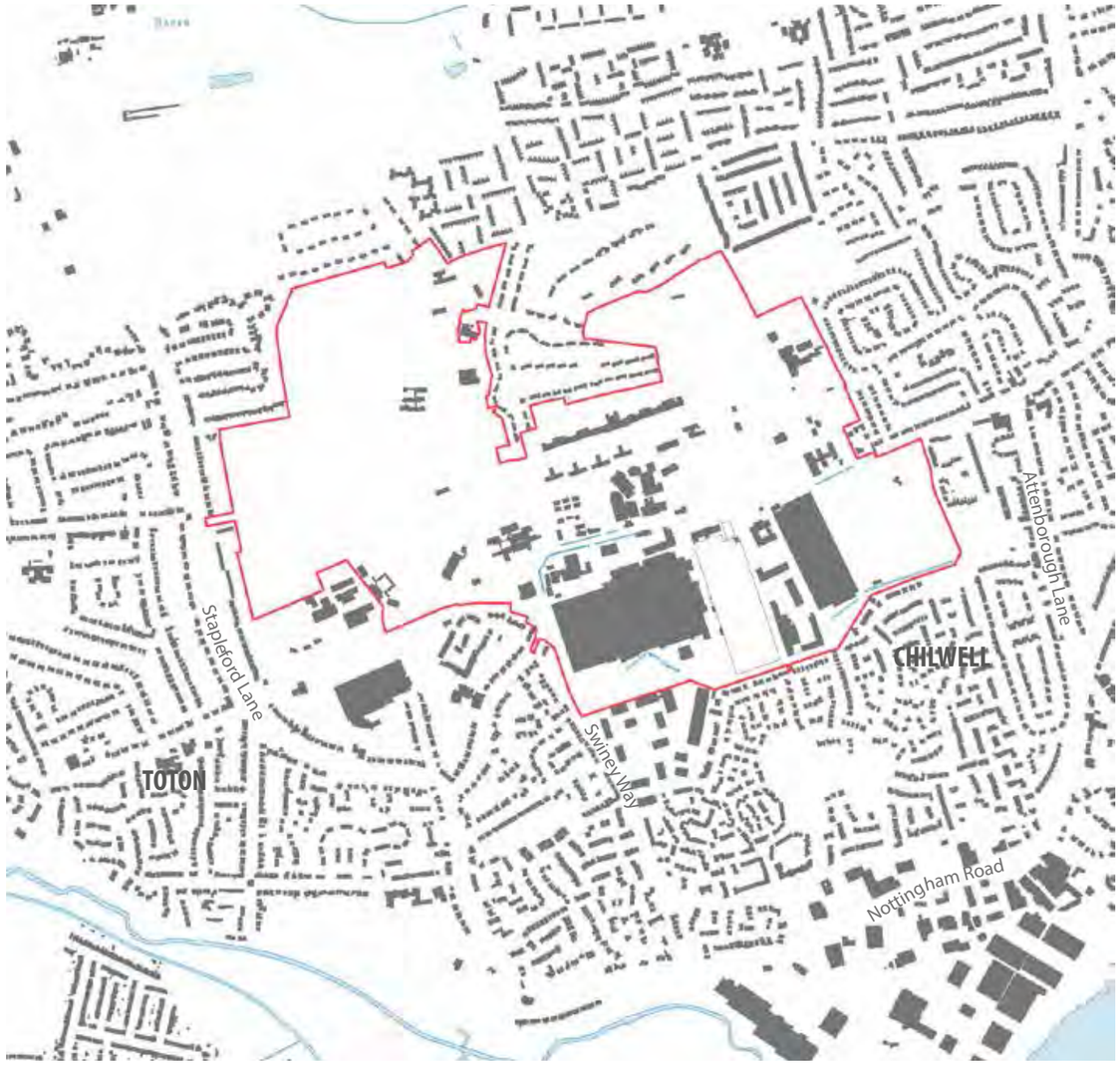
To the south, more recent 90's and 00's development of part of the military site is reflective of the denser contemporary urban grain.

The following pages describes the type of housing and general range of densities found locally. These have been prepared to understand how the Site might be developed over time and what level of development density is appropriate.


1


2

1. Harleach Rise, typical of the housing estate grain and aesthetic to the north of the Site
2. Imperial Road, a terraced street in Beeston - presents a dense urban form typical to local and urban centres



Urban grain diagram showing the built form of the Site and its context

Key

Site boundary

Built form


1


2


3


4

5


6

1. Building frontages define the street
2. Warehouse style buildings in the Site
3. Narrow street widths in Long Eaton
4. Irregular street pattern in a new development in Chilwell, create a more varied streetscape and naturally slowing vehicle speeds
5. Chetwynd Business Park, Chilwell, containing large building footprints
6. Denser urban grain in new developments surrounding the Site

1.0 SITE AND CONTEXT ANALYSIS

1.3.5 Local land uses

The Site is generally surrounded by residential neighbourhoods. These areas are interspersed by local centres, employment areas and community facilities such as schools.

There are two local centres near the Site: the recently developed Nottingham Road area south of the Site and a minor centre at the junction of Attenborough Lane and Chetwynd Road to the east. The Nottingham Road centre also caters for significant employment facilities, mainly light industry.

Otherwise, individual land uses are spread through the area. Immediately south of the Site lies the Chetwynd Business Park, providing principally office accommodation. Immediately to the southwest is a school and medium-sized retail facility.

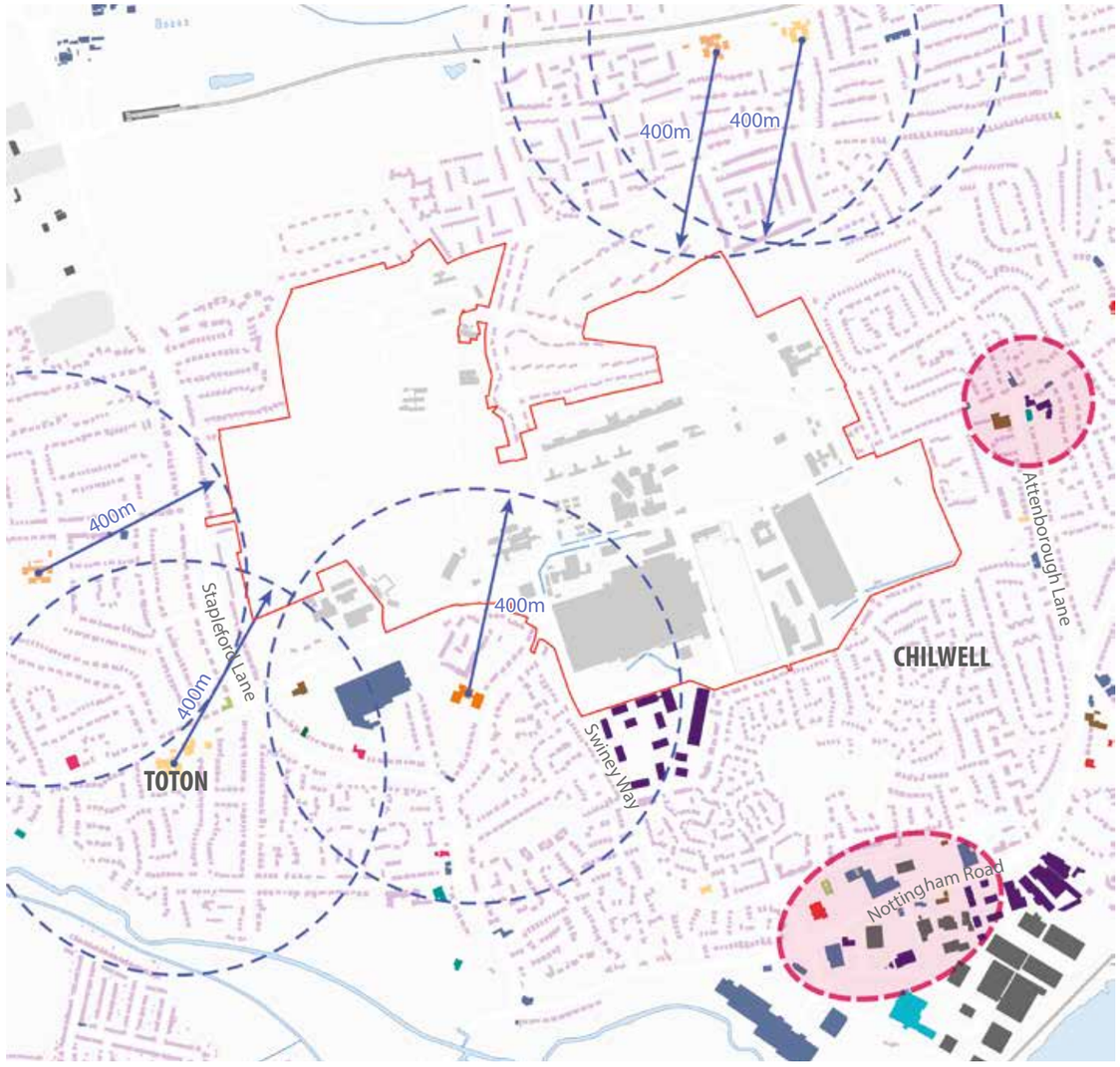
Distributed around the Site are a number of primary schools. These seem to serve the north and western sites of the Site well. The southeast however is comparatively less well served.

Key

- Site boundary
- Military
- Primary school
- Junior school
- Infant school and nursery
- Library
- Community
- Hotel
- Health
- Public house
- Employment
- Religious
- Petrol station/ garage
- Commercial
- Residential
- Light industrial/ infrastructure

1. Military building in the Site
2. Residential properties dominate the surrounding area

- 5-minute walking catchment
- Local centres



Land use plan showing the various land uses in the Site's surrounding area

1.3.6 Built form and height

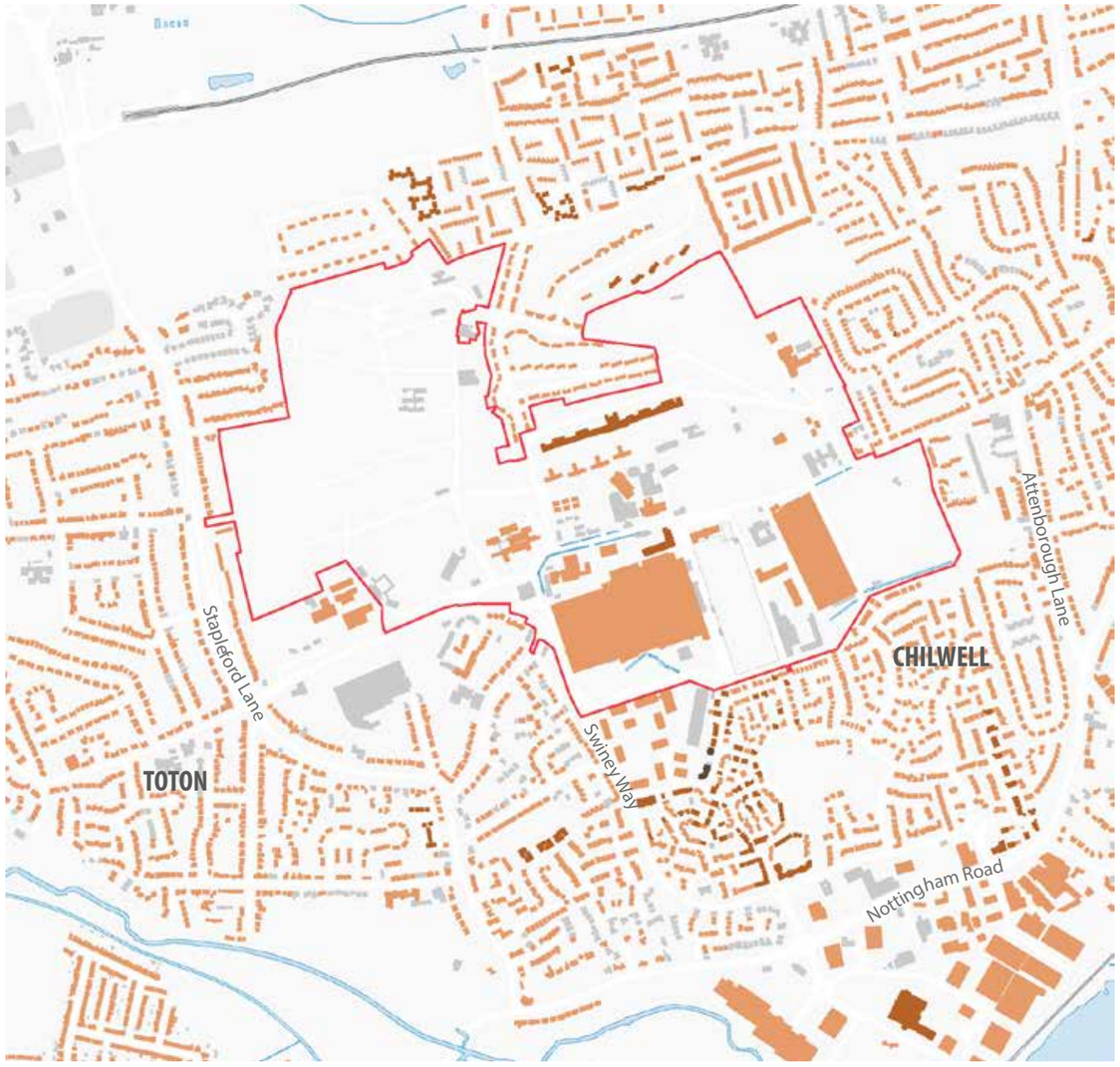
The buildings across the Site and through the area are comprised mainly of 2 storey heights. There are some single and 3 storey buildings and in the newer residential area south of the Site up to 4 storeys.

There are larger footprint buildings on Site. In addition, the single storey buildings have warehouse scale and imposing roof forms so stand at the same height as 2-3 storey residential buildings. Williams Barracks to the north of the Site is a local landmark given its heritage qualities, the form of the land and its height. At 3 storeys it is a dominant feature when viewed from within the Site.


1


2

1. The majority of the buildings surrounding the Site are 2 storeys
2. Recent residential developments contain more 3 storey buildings



Building height diagram shows the spread of heights across the area

1.0 SITE AND CONTEXT ANALYSIS

1.3.7 Landscape and biodiversity

The Site contains some areas of strong landscape character and ecological value, but with a larger proportion without such qualities.

Hobgoblin Wood is found to the northeastern corner of the Site. This woodland is of high landscape quality. South of the woodland an area of high landscape quality is found, leading to the Memorial Garden north of Chetwynd Road.

A large public playing field lies to the southeastern corner. This is well maintained and well used by the local community.

To the west a number of small copses have been established on the Site. These are mostly isolated areas. However, the copse to the northeast corner is of high quality. These copses are surrounded by grassland of little ecological value.

Additionally, the Site contains a number of important mature individual trees as well as some lengths of tree-lined streets which enable a low level of ecological connectivity.

Key

- Site boundary
- Long grass
- Medium grass
- Short grass
- Trees
- Copses/ woodland
- Rose/shrub beds
- Nature trail
- BioSINC
- Allotments
- Deciduous woodland
- Broadleaved woodland
- Grassland
- Open green space
- Maintained by Corp Derby

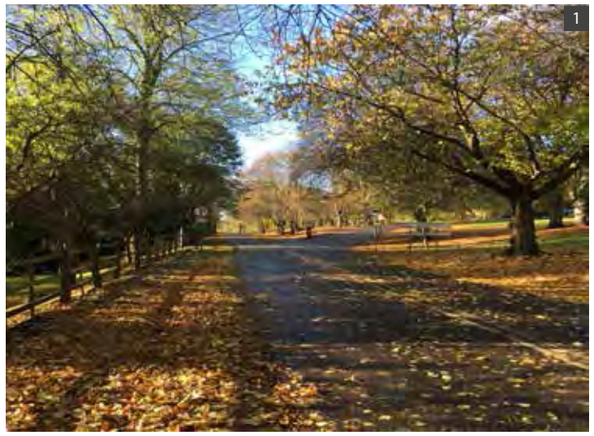
1. Tree lined southern Site boundary
2. Tree copses in the Site

Biodiversity diagram (from 2013) showing various landscape features on Site

1.3.8 Trees

As mentioned in section 1.3.7, there are some significant trees on the Site as well as copses, woodland, and rows of planted trees. Although a tree survey has not been produced for this document, the trees have been considered as an integral part of the quality of the Site.

The plan opposite shows the general location of the majority of trees on Site.



1. Tree lined road in the Site
2. A variety of tree species are found in the Site

Existing tree plan of the Site and its surrounding context, showing approximate tree locations

Key

- Site boundary
- Existing trees and copses
- Woodland areas

1.3.9 Open spaces

Within the Site, there are two open spaces which have restricted access. A Memorial Garden is located in the eastern area of the Site and provides the setting for the Grade II listed memorial. There is also a playing field in the southeastern corner which is identified as a key site for youth football and mini soccer in the Broxtowe Borough Playing Pitch Strategy 2016-2028.

In terms of public open spaces in the surrounding area, there are several open space typologies. They include play areas and outdoor sports facilities (such as football pitches and tennis courts). To the south of the Site there are two large nature reserves: Toton Fields Nature Reserve to the west and Attenborough Nature Reserve to the east. There is also a new amenity space within the new development along the Site's southern boundary. However, there are limited public open spaces to the west and north; the green spaces near to the northwestern corner of the Site are mostly private farmland. The plan opposite shows the walking distance from public open spaces to the Site, as recommended by Broxtowe's Green Spaces Strategy and Fields In Trust.

Key

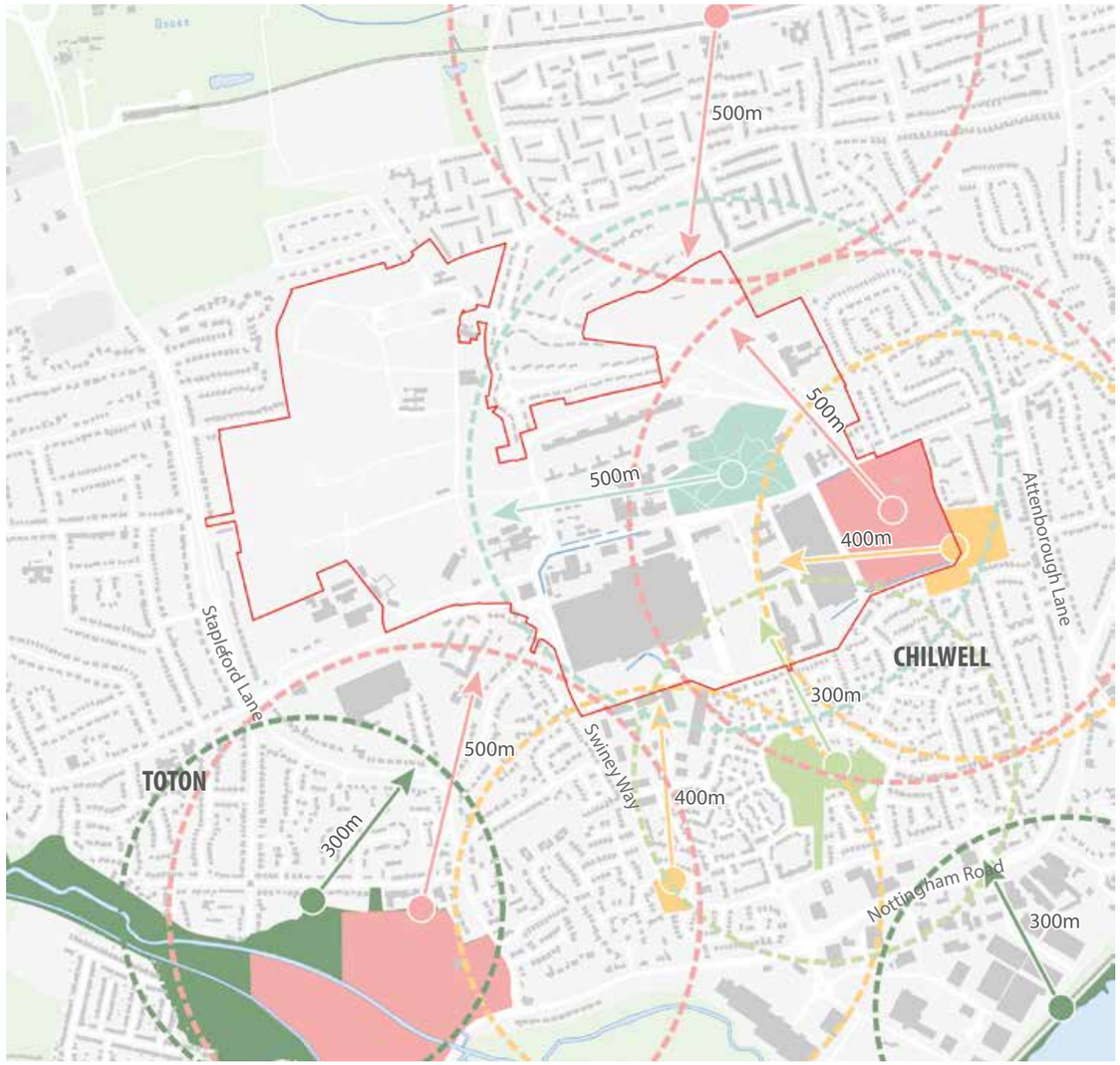
- Site boundary
- Parks and gardens
- Natural/semi-natural
- Outdoor sports area
- Amenity space
- Play area
- Walking distance
  - *Parks and gardens (500m)*
  - *Natural/semi-natural (300m)*
  - *Outdoor sports area (500m)*
  - *Amenity space (300m)*
  - *Play area (400m)*

Broxtowe Green Infrastructure Strategy 2015-2030 for the Site and the surrounding area

Key

- Site boundary
- Parks and gardens
- Natural/semi-natural
- Outdoor sports area
- Amenity space
- Proposed green infrastructure corridors
- Opportunity for enhancement of amenity greenspace
- Buffer area
  - *Parks and gardens (500m)*
  - *Natural/semi-natural (300m)*
  - *Outdoor sports area (500m)*
  - *Amenity space (300m)*

NORTH



Public open spaces surrounding the Site and their associated buffer zones as identified by Broxtowe Council


1


2


3


4


5


6

1. Sherman Drive Open Space, a large amenity space within the recent housing development
2. Attenborough Nature Reserve
3. Northern area of Memorial Garden, with the former Red Cross nurses building in the background
4. Toton Fields Nature Reserve
5. Chetwynd Road Recreation Ground, located along the eastern Site boundary
6. There are limited public open spaces to the north of the Site - the photo shows farmland located near the northeastern corner of the Site

1.0 SITE AND CONTEXT ANALYSIS

1.3.10 Topography

The Site is located on a south facing hillside, overlooking the Trent Valley. The northern boundary is aligned with the ridge line of the hillside. The southern boundary lies in a flatter area which extends almost up to the lakes of the Attenborough Nature Reserve.

The land falls from north to south reasonably consistently to the western half of the Site. This level change is such that it can reasonably accommodate housing at most 1:20.

To the eastern half of the Site, the slopes become more pronounced, creating a more problematic land form for development. This part of the Site is dominated by strong landscape features which will likely mean this area is undevelopable.

Immediately to the south of Williams Barracks the land falls create a landmark of this 3 storey building. Adjacent to this slope the land levels out to allow for significant development up to and beyond Chetwynd Road.

Key

- Site boundary
- Contours every 5m
- Ridge line

1. Gently sloping topography
2. Extreme steps in topography in the eastern area of Site may make it unsuitable for development

Topographical diagram showing the south facing slope of the Site

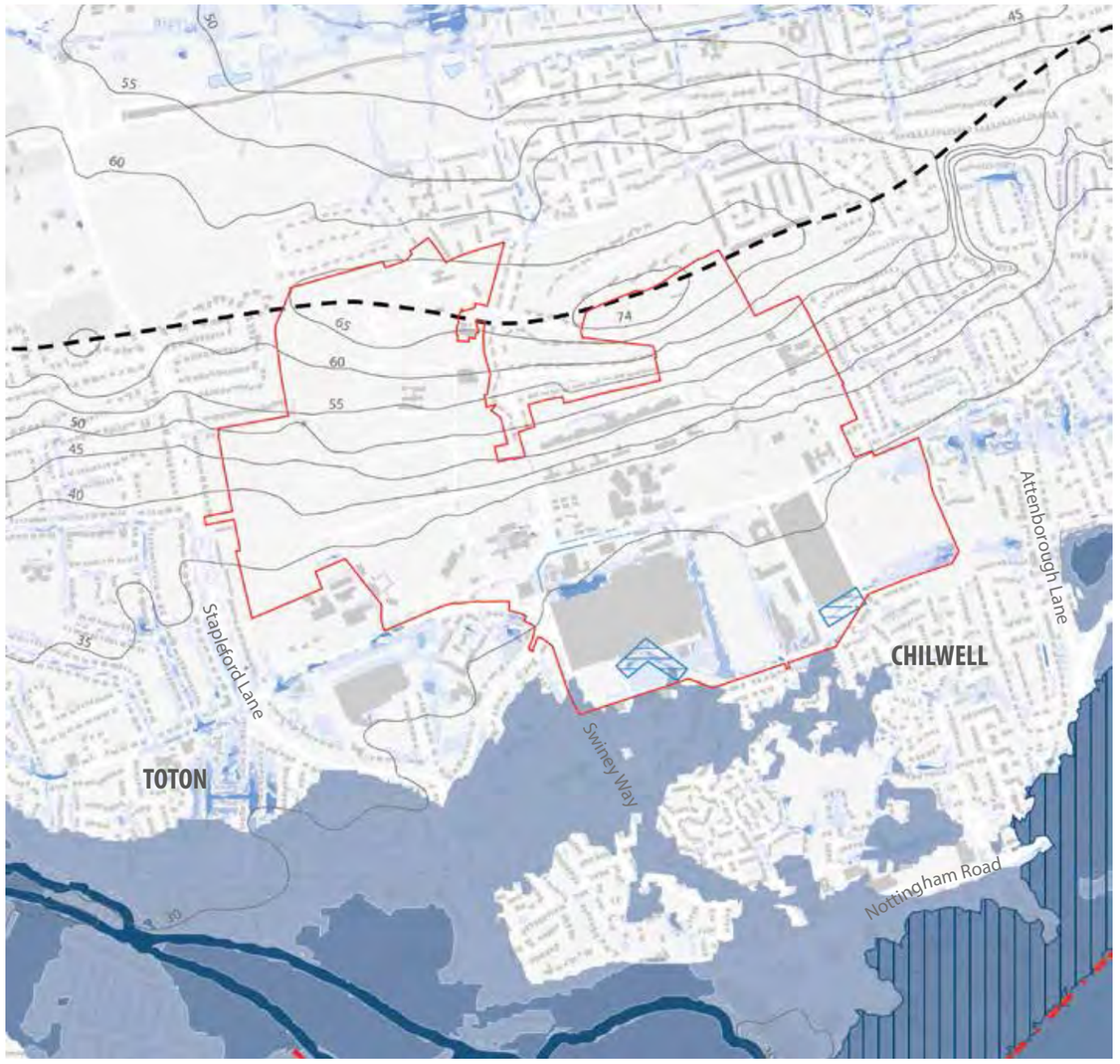
1.3.11 Hydrology

As the Site has a sloping topography, there is little flood risk. Even to the extreme southern boundary the Environment Agency's designated flood risk areas cross nominally into the Site. There appears to be some local surface water flood build-up to the south of the Site, though not serious enough to prohibit development.

There is a drain running parallel to the southern boundary which discharges to the south eastern corner of the Site. It is largely covered, but alongside the playing field opens out to a drainage ditch (or swale).

Key

- Site boundary
- Main river
- Fluvial flood risk
  - *Flood Zone 2*
  - *Flood Zone 3*
- Surface water flood risk (low, medium, high)
- Flood defence
- Areas benefiting from flood defences
- Ridge line
- Contours every 5m
- Possible drain



The drainage and flood diagram shows a significant flood plain outside the southern Site boundary

1.0 SITE AND CONTEXT ANALYSIS

1.3.12 Visibility and visual impact

The visual influence study undertaken for Chetwynd Barracks has revealed several zones of visual sensitivity. Firstly, the zone of high sensitivity is located to the open portion of the Site to the west with views from properties on Stapleford Lane and Swiney Way, and the interface with residential areas in Chilwell to the south. However, the impact is limited due to the influence of existing Site vegetation and the shallow topography associated with the river valley.

Secondly, the zone of medium sensitivity is located within the central eastern portion of the Site in the trough of the valley side, where the degree of visual openness is restricted by existing built form to the east, occasional mature tree avenues and the shallow nature of the topography.

Areas on the upper ridge to the north of the Site have a low visual sensitivity. The mature woodland blocks, hedgerows and boundary vegetation offer significant screening to short and mid-range views from the north, east and west.

The study also indicates several views worthy of specific consideration, which are:

- Open short range views from residential properties to the west boundary on Stapleford Lane, Darley Avenue (to the northwest), and for users of Swiney Way.
- Framed short range views from Chilwell residential area to the southeast boundary
- Framed views towards elevated areas of the Site along primary road corridors from the west (Banks Road), south (Manor Farm, Portland Road and Swiney Way) and east (High Road and Attenborough Lane)

Key

- Site boundary
- SFA Housing boundary
- Visual sensitivity
  - *High*
  - *Medium*
  - *Low*
- Significant vegetation
- blocks
- Existing contours
- Principal inward views (short range)
- Principal views from surrounding area (mid range)

Visual appraisal plan of the Site and its surrounding context


1


2


3


4

1. View west along Swiney Way
2. View east from Stapleford Lane-Swiney Way junction
3. View from public footpath towards northern Site boundary
4. View east from properties on Welbeck Avenue

1.0 SITE AND CONTEXT ANALYSIS

1.3.13 Pedestrian and cycle movement

There is a network of pedestrian and cycle routes in the vicinity of the site which provide connectivity to a number of key locations in the surrounding area, including residential, employment and retails areas, in addition to Toton, Long Eaton and Beeston town centres.

The bridleway to the north of the Site passes near the Toton Lane tram stop. It connects to the Erewash Valley Trail further to the north and a public right of way to the west of Stapleford Lane. National Cycle Route (no.6) extends a short way parallel to the lakes and crosses Nottingham Road into Chilwell.

No public rights of way exist in the Site nor do any routes connect north-south to the east-west routes.

Key

- Site boundary
- Public footpath
- Informal footpath
- National Cycle Route (no.6)
- Erewash Valley Trail (cycle route)
- Bridleway

1

2

1. Entrance to bridleway near Toton Lane tram terminus, which leads to Erewash Valley Trail to the north and an informal footpath to the south
2. Many of the pavements on existing streets in the area are too narrow to accommodate both pedestrians and cyclists

Pedestrian and cycle access diagram showing predominance of existing east-west routes

1.3.14 Public transport

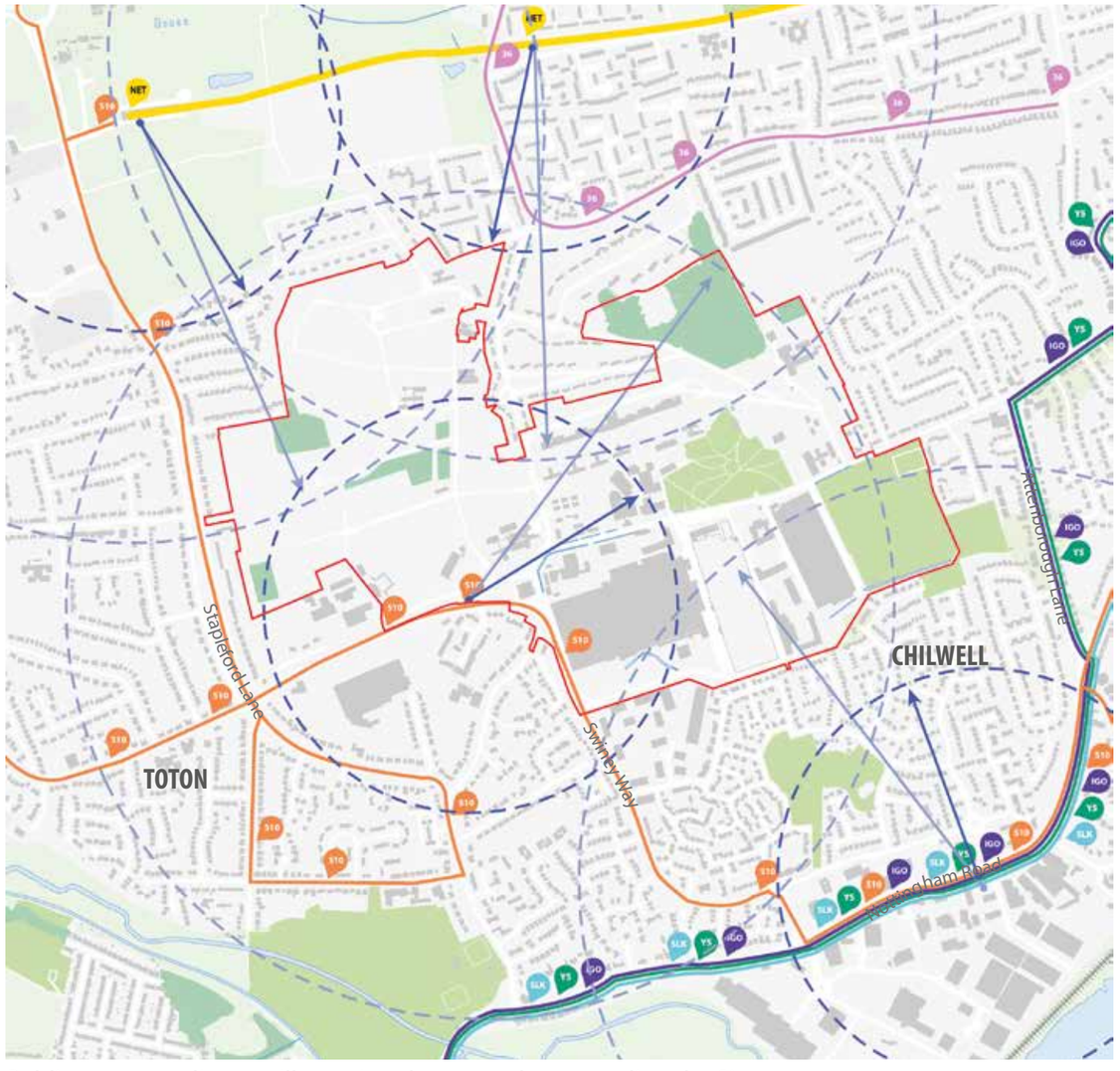
There is a good level of public transport accessibility to and from the Site in terms of both the range and quantum of services. The facilities run to all sides of the Site, mostly within a 10 minute walk from the boundary. Importantly, the Site is close to the Nottingham Express Transit tram link, with walkable access to two stops including the current terminus at Toton Lane. In terms of bus routes, Nottingham Road to the south contains the highest density of services with 4 at the southern end of Swiney Way.

Additionally, Attenborough Station lies a short distance further to the east. It provides services into Nottingham and to neighbouring urban and suburban settlements, as identified in section 1.2.1.


1


2

1. Toton Lane tram terminus with dedicated car park
2. Bus stop in Caldbeck Court, Beeston



Public transport diagram illustrating the network surrounding the Site

Key

- Site boundary
- Tram
- Bus routes
- Railway
- Stops/stations
- 5-minute (400m) walking catchment
- 10-minute (800m) walking catchment

1.0 SITE AND CONTEXT ANALYSIS

1.3.15 Vehicular access

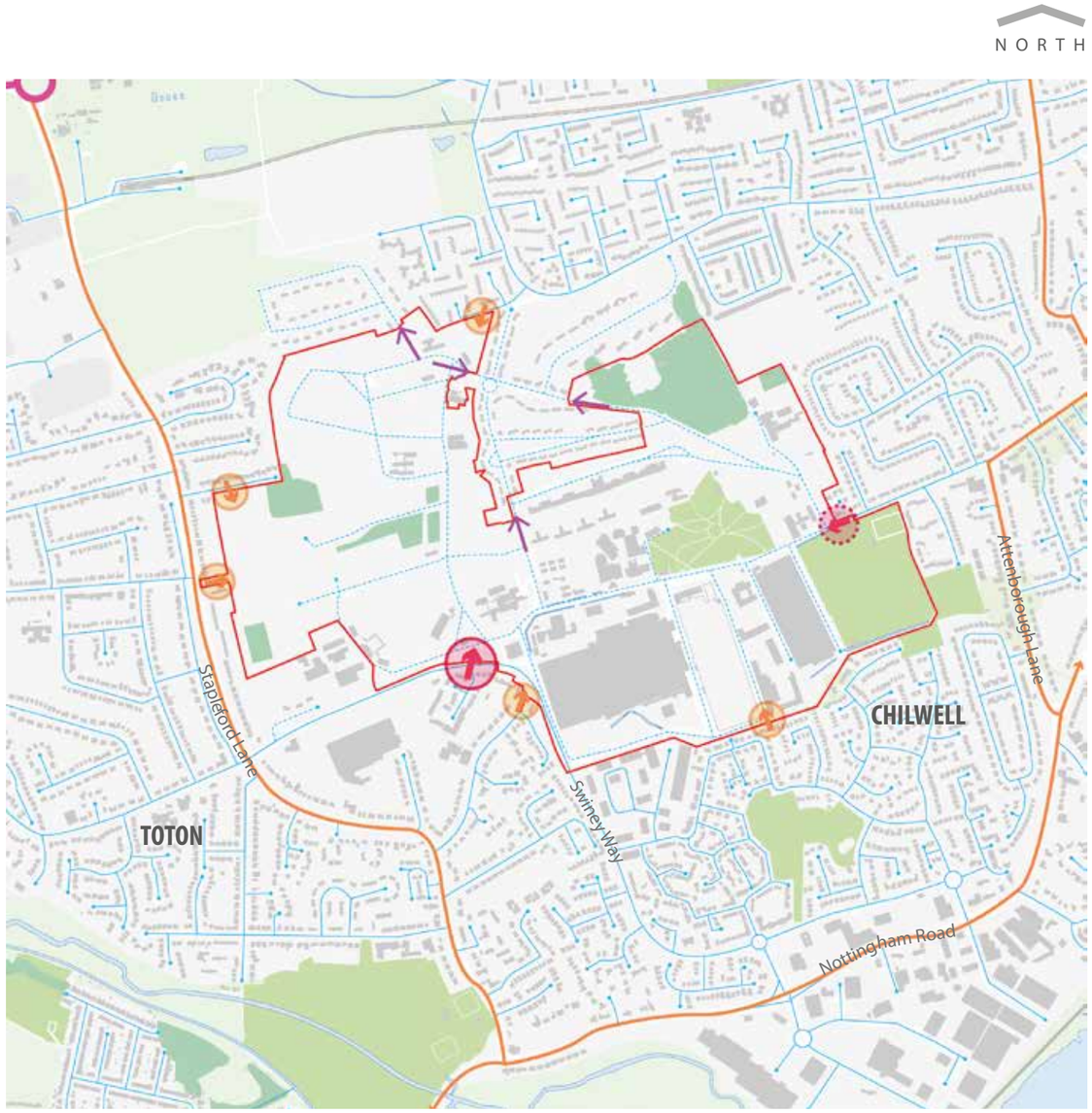
As a secure military installation, the Site is currently accessed via a single point off Swiney Way to the southwest of the Site. This primary point of access leads directly to the centre of the Site, from which the internal road network leads to the north and east. A secondary, emergency access point is located to the east along Chetwynd Road. Historically this was the original access point into the military site. In addition to these two access points, the Site abuts highways land at a number of other points.

The first surrounds the main access on Swiney Way with an arc of Site bordering the road corridor. This presents the opportunity to create multiple access points if deemed useful. The second is onto Stapleford Lane opposite Woodstock Road in Toton. Just north of here the Site connects to Welbeck Gardens. The third is to the north and onto Airedale Court and onto Field Lane.

In addition there are points at which the Site connects to existing roads or footpaths, notably to the housing areas abutting the Site indicated by purple arrows and also to Mountbatten Way. These multiple access points might not all be suitable for full vehicular access, but may be prioritised with pedestrian, cycle or bus routes.

Key

- Site boundary
- Primary road
- Secondary road
- Tertiary road
- Private road
- Primary access point
- Secondary access point
- Connections to footpaths and bus routes
- Access to SFA Housing



Vehicular access diagram indicating points of connection into the wider neighbourhood


1


2


3


4


5


6

1. Access into the Site is secured by gates
2. Access from the eastern side of the Site is restricted, except for the secondary access point
3. Private road that leads from the Site to the Service Family Accommodation (SFA) housing area to the north
4. Secondary access point into the Site
5. View from within the Site towards the secondary access point
6. Security controlled main access point into the Site on Swiney Way


WILLIAMS BARRACKS

2.0 CONSTRAINTS AND OPPORTUNITIES

2.0 CONSTRAINTS AND OPPORTUNITIES

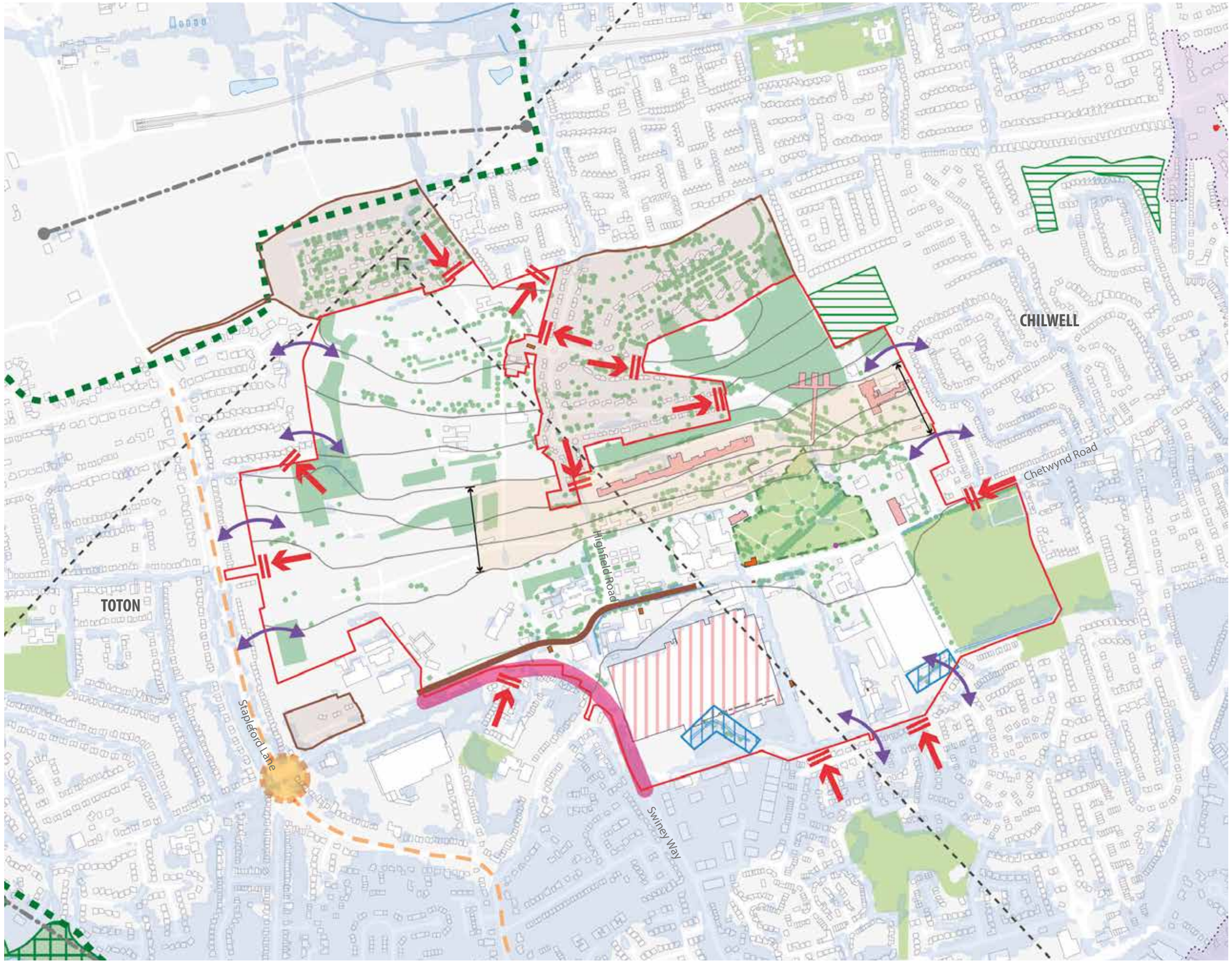
2.1 Site Constraints

The constraints on potential development at Chetwynd Barracks are as follows:

- The Site contains a number of heritage assets that should be retained and refurbished, if at all possible, to make them suitable for residential and community use.
- The listed memorial and its gardens are a key feature of the Site and should be retained and enhanced.
- Building 157, a large warehouse along the southern boundary of the Site, will be removed and its footprint retained. While potential future uses of the building have been explored (such as for storage), the redevelopment potential of the Site will be maximised if this building is removed and redeveloped.
- Swiney Way is a busy route that runs along the southwestern boundary of the Site, providing a link between Stapleford Lane and Nottingham Road. A noise buffer may need to be provided if the levels of noise pollution are deemed to be excessive.
- Stapleford Way to the west of the Site is also a busy route, providing a link between the A52 and Nottingham Road, via Swiney Way. This situation will need to be managed with increasing traffic resulting from the new development.
- Significant wooded areas and tree copses must be protected and provided with a buffer area if they are deemed to be of ecological value.
- The Site has several SSSIs, nature reserves, BioSINCs and conservation areas in its vicinity, which may be impacted on by a large increase in visitor numbers.
- Access into the Site is currently restricted due to its use by the military. As such, many of the adjacent properties back onto the Site. Locations for potential access points into the new development may therefore be limited.
- Likewise, due to its history as a military base, the Site currently faces inwards and is poorly connected to surrounding settlements. Particular care must be taken to ensure that the development does not become an isolated or car-dependent suburb.
- There are currently two areas of military housing to the north of the Site. At present, these are not available for development, which may make creating north-south routes problematic; access is restricted to the tram and A52.
- The sloping topography may make development unfeasible in certain areas, especially in the eastern area of the Site which slopes more steeply.
- Underground tunnels in the area of Hobgoblin Wood need careful surveying to ensure that are safe and not impacted upon.
- The drains near the southern boundary of the Site must either be retained or relocated; if the latter, they will still need to be near the southern boundary due to natural water flows.
- Similarly, the gas mains and electricity sub-stations that run west-east across the Site must be given a buffer area during construction so as not to damage them.

Key

- Site boundary
- Retained heritage buildings and tunnels
- Memory of building to be retained
- Listed monument and associated memorial garden
- Existing trees/woodland on Site
- Access barriers
- Busy/congested road
- Congested road and junctions
- Drains
- Flood risk
- Gas mains
- Overhead cables
- Electricity substations
- Need to restitch the urban fabric
- Contours every 5m
- Steeply sloping topography
- SFA Housing
- Green belt
- SSSI impact risk zone
- Local nature reserve
- BioSINC
- Conservation area
- Listed buildings



Site constraints plan

2.2 Wider Opportunities

The proposed HS2 (Phase 2) route through Long Eaton and Toton could provide the Site with significant economic opportunities in the long term, following its proposed opening in 2033. The incoming investment will provide the area with new retail and commercial services, which will help to support the new population at Chetwynd Barracks. It will also provide more convenient access to various destinations, including London, Birmingham and Leeds. A direct and attractive route should therefore be provided from the Site to the new station, thereby allowing the community to capitalise upon greater employment and business opportunities across the UK.

In addition, the Site should maximise opportunities to create a green infrastructure network across the wider area to raise the area's biodiversity and ecological value. The adjacent settlements of Toton and Chilwell are also in the process of creating their own Neighbourhood Plan, whose objectives should be accommodated by the new development where possible and within reason.

Key

- Site boundary
- Stitching Toton back into wider urban settlement
- New HS2 route and station
- Tram terminus
- New development (external to Chetwynd Barracks)
- Green infrastructure links

Wider opportunities plan

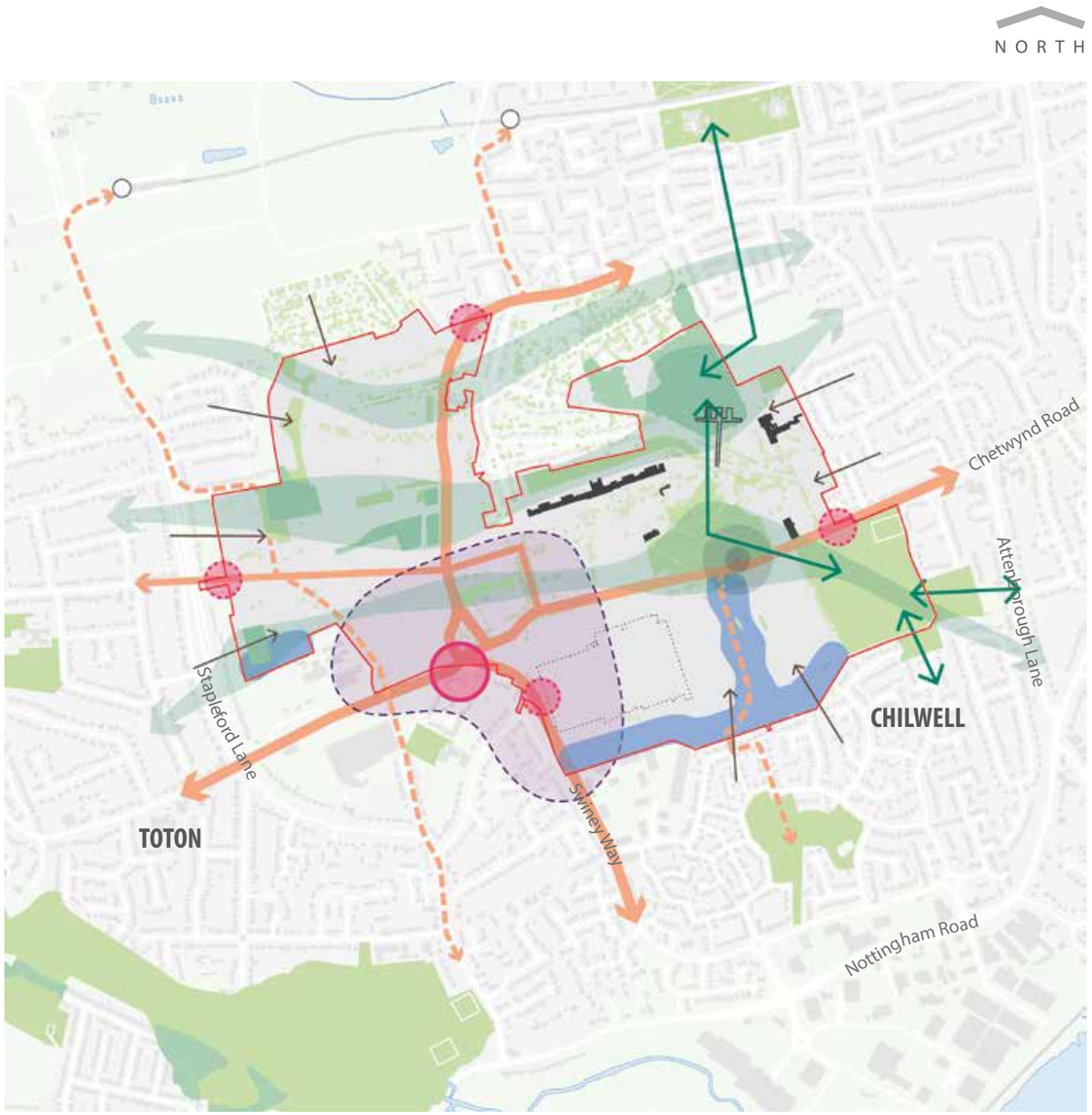
2.3 Site Opportunities

The opportunities available for the new development at Chetwynd Barracks are as follows:

- Retained heritage buildings on Site form the foundation of creating a new development with a rich character, drawing upon its military history.
- New access routes across the Site to stitch the former barracks into its surrounding settlements. Some strong existing routes should also be retained as primary bus/cycle routes, in particular the east-west routes of Chetwynd Road and Hillside Road.
- Access to sustainable transport modes, including walking, cycling, buses and trams, will be prioritised. New entrances/exits will also be provided at strategic points along the Site boundary to connect with Toton and Chilwell.
- New green corridors across the Site and the wider area through tree-lined streets and new planting, thereby creating ecological connections for local wildlife and connecting together local green spaces.
- Sustainable drainage features to control surface water drainage in a way that replicates natural systems. An integrated approach should be taken to ensure that these features are attractive features that contribute to place-making.
- A new local centre at the heart of the development, providing retail and employment opportunities for both new and existing communities in Toton and Chilwell.

Key

- Site boundary
- Retained heritage buildings
- Listed monument and possible impact on setting
- Retained tunnel
- Restitch into urban fabric
- Access routes
- Access to public transport
- Main access point
- Secondary access points
- Green corridors
- Connections to green open spaces
- Sustainable drainage feature
- New local centre



Development opportunities plan

3.0 A VISION FOR CHETWYND BARRACKS

3.0 A VISION FOR CHETWYND BARRACKS

3.1 Vision for Chetwynd

Chetwynd Barracks will be a vibrant new neighbourhood that provides a sustainable mix of housing, retail, employment and leisure opportunities for the local community. By maintaining and enhancing and Site's military heritage, a unique and characterful settlement will help to reconnect Chilwell and Toton. While heritage is at the core of the design, green corridors and public open spaces throughout the development will also deliver amenity and biodiversity benefits for people and wildlife alike.

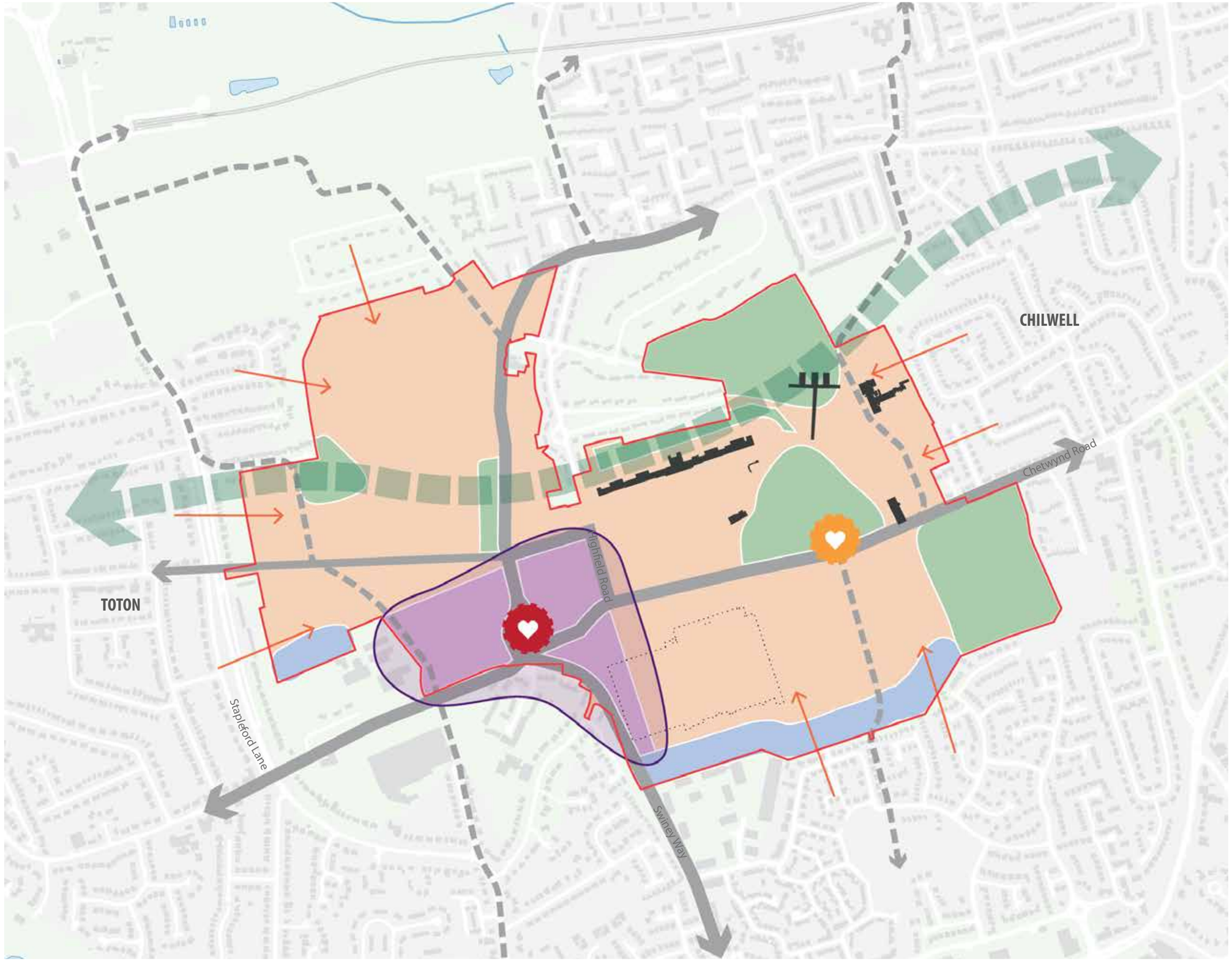
The vision for Chetwynd is to replace the barracks with a vibrant new neighbourhood that stitches the existing urban fabric back together. While the Site will no longer be used for military purposes, its heritage will be fully integrated into the design of the new development through retaining and enhancing buildings and structures of historical value. The Site also has significant landscape features, particularly Hobgoblin Wood in the northeastern corner. To improve the Site and the surrounding area's ecological value, a green infrastructure network will be created through a series of green and blue corridors. These new connections across local green spaces and woodlands will help to enhance the biodiversity of this wider urban area.

The new development at Chetwynd will include:

- Residential development of circa 1,500 homes that can accommodate both homeowners and renters in a variety of types of accommodation.
- Maintaining and enhancing the Site's military heritage through reusing existing buildings and creating new public realm elements to celebrate features of historic value.
- Creating a new local centre with retail and employment opportunities and a community hub to serve new and existing communities.
- Providing social infrastructure, such as a primary school, community centre, and retaining playing fields for public use.
- Protecting existing landscape features and installing new ecological elements to create a development that actively enhances local biodiversity.
- Sustainable drainage infrastructure to protect the Site from potential increases in flood risk due to the new development.

Key

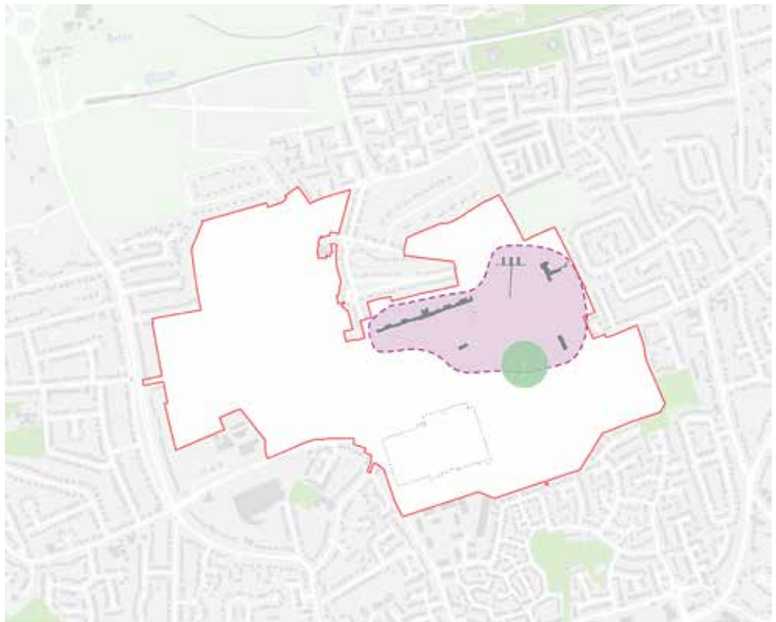
- Site boundary
- Residential area
- Local centre
- Heart of the local centre
- Community hub
- Retained heritage buildings, tunnels and monuments
- Memory of heritage building retained
- Restitching the urban fabric
- Vehicular access routes
- Access to public transport
- Green corridors
- Public open spaces
- Sustainable drainage features



Future vision for Chetwynd Barracks

3.2 Concepts to Deliver the Vision

NORTH



CAPITALISE UPON RICH MILITARY HERITAGE

The Site contains a number of buildings and structures with a degree of heritage interest, including a Grade II listed memorial commemorating the 1918 National Shell Filling Factory explosion. By retaining these heritage assets, a distinct character will be created in the new development. Some of the buildings will be retained and reused as new flats, while others will be kept as they are. In the case of the latter, public realm and landscape features will be used to emphasise their importance to the local area.

RETAIN AND ENHANCE EXISTING TREES AND WOODLANDS

The Site is currently has significant ecological features, including Hobgoblin Wood in the northeastern corner and other wooded areas. In cases where these trees are important habitats for bats, birds and other wildlife, they will be retained and provided with an appropriate buffer area to protect them from any new development. Development proposals should be sensitive to the existing flora and fauna; such as ensuring that external lighting is directed away from trees and other potential wildlife habitats.

CONSOLIDATE THE GREEN NETWORK

As aforementioned, the Site has several important ecological features that should be retained. However, many of these features are disconnected from each other and to other green elements surrounding the Site. Green corridors - comprising of tree-lined streets and green open spaces - should therefore be used to create a coherent green infrastructure network across the Site and the wider area. This should not only have a positive impact on local wildlife, but also deliver drainage, pollution mitigation, and public amenity benefits.

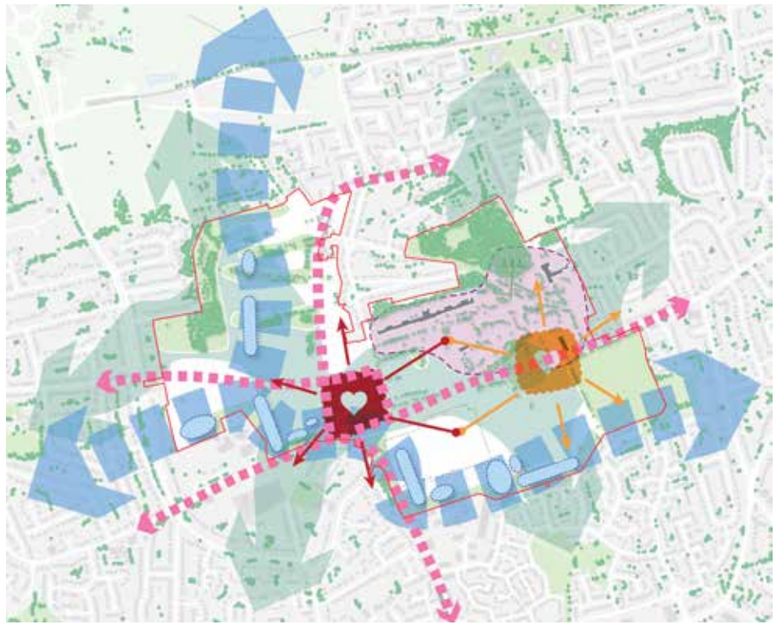
NORTH

SUSTAINABLE DRAINAGE NETWORK

In order to mitigate against any potential increase in flood risk resulting from the new development, a sustainable drainage system (SuDS) will be put in place. Attenuation ponds will be located at strategic points throughout the Site. One such area will be along the southern boundary of the Site, which is where water flow is currently directed. These ponds will also be important amenity and ecological features in their own right.

CREATING NEW ACCESS POINTS AND CONNECTIONS

Due to the Site's history as a military base, it is currently disconnected from the surrounding urban fabric. Existing and new access routes through the Site will be a crucial element in reconnecting the Site with its adjacent settlement. The primary street network will create access points north, south, east and west to ensure maximum accessibility to and from the Site. A grid of secondary routes should further ensure good permeability within the Site.



NEW LOCAL CENTRE AND COMMUNITY HUB FOR EXISTING AND NEW COMMUNITIES

In order to support the increase in population resulting from the development, a local centre will form the heart of this new neighbourhood. It will provide retail and employment opportunities for Beeston, Chilwell and Toton. A new community hub, featuring a primary school and a community centre around the memorial garden and playing fields, will also be created in the eastern area of the Site. These facilities will therefore ensure that the benefits of the development at Chetwynd Barracks are shared amongst both existing and new communities.

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.1 Proposed Development Concept Plan

Chetwynd Barracks will be a sustainable, residential-led mixed use development of up to 1,500 homes, a local centre with retail and 5,000m² of B Class employment, and a community hub with a primary school and associated community uses. It will create new and re-open former access point for all modes of traffic, and will include new public transport linkages with footpaths and cycle routes. There will be extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches. A new park will be created as a natural setting to the Grade II listed National Shell Filling Factory memorial.

Key elements of the proposed development concept plan shown opposite are:

- The layout of the new development blocks will maximise the value of the façades of the retained heritage buildings. Key heritage assets to be retained are:

  National Shell Filling Factory Memorial: to form a central focus in the new community hub. It will be located within a memorial garden to emphasise its historical importance, which will in turn be integrated into the wider green infrastructure network.
  Woodside House: to be retained and converted into flats.
  Red Cross nurses' building: as part of the community hub, it will be retained and converted into a community centre.
  Building 125: see above.
  Williams Barracks/former Press Houses: to be retained and converted into flats.
  Building 157 (munitions depot): retained in memory through keeping the building footprint.
- Chetwynd Road is retained as a primary avenue connecting Chilwell and Toton through a new local centre. Highfield Road will also be retained as it is already a significant road in the Site and has an attractive avenue of trees on both sides. The main access points will be from Swiney Way, alongside secondary access points to Chetwynd Road and Stapleford Lane. Urban avenues and other tertiary streets will lead to the local centre.
- Sustainable transport modes will be promoted by providing connections to bus, pedestrian and cycle routes.
- A new local centre is located at the natural "heart" of the Site: around the junction between Chetwynd Road and Highfield Road, which are the two main roads in the Site. This will include small scale retail, employment, and a health centre.
- A new community hub will be created in the eastern area of the Site, providing services to both new and existing communities. Alongside the new community centres and memorial garden, it will also include a new primary school.
- Medium density areas (45 dw/ha) are concentrated in the middle of the Site around the local centre, as well as along key streets to form a strong building frontage. Low density areas (35 dw/ha) are mainly located along the edges of the Site to ensure a coherent built form with the existing surrounding settlements. A smaller very low density area (20 dw/ha) is found along the northern boundary of the Site.
- Primary green corridor connecting Chilwell Cemetery and Hobgoblin Wood in the northeast through to Woodside Road and the 1918 National Shell Filling Factory memorial gardens in the east of the Site. It will then continue on to the playing pitches in the Site's southeastern corner and Chetwynd Road Recreation Ground.

Summary of development concept plan

Overall land ownership: 75.2 ha
Total infrastructure and amenity: **41.1 ha (55%)**

Green infrastructure and public open space
32.6 ha

Primary road infrastructure
4.9 ha

Local centre
2.7 ha

Retained buildings
0.1 ha

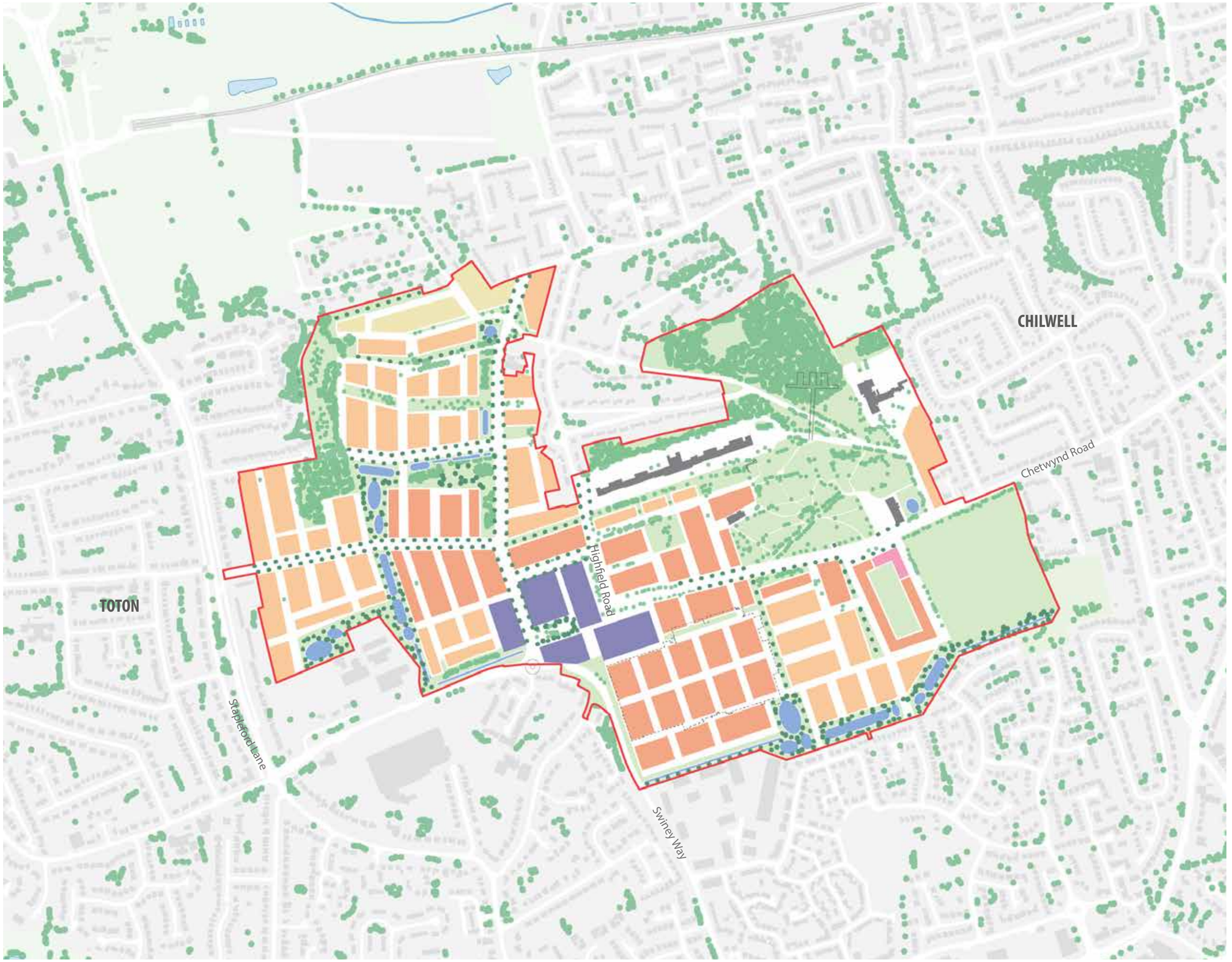
School
0.9 ha

Net residential developable area: **34.1 ha (45%)**
Net development density: **39 dw/ha**

Houses
1264

Flats
252

NORTH



Key

- Site boundary
- Medium density area (45 dw/ha)
- Low density area (35 dw/ha)
- Very low density area (20 dw/ha)
- Local centre
- Primary school
- Retained heritage buildings, tunnels and monuments
- Memory of heritage building retained
- Existing trees/woodland
- Proposed new trees/other planting
- Public open spaces
- Proposed attenuation ponds and drainage channels

Proposed development concept plan for Chetwynd Barracks

4.2 Key Features of the Concept Plan

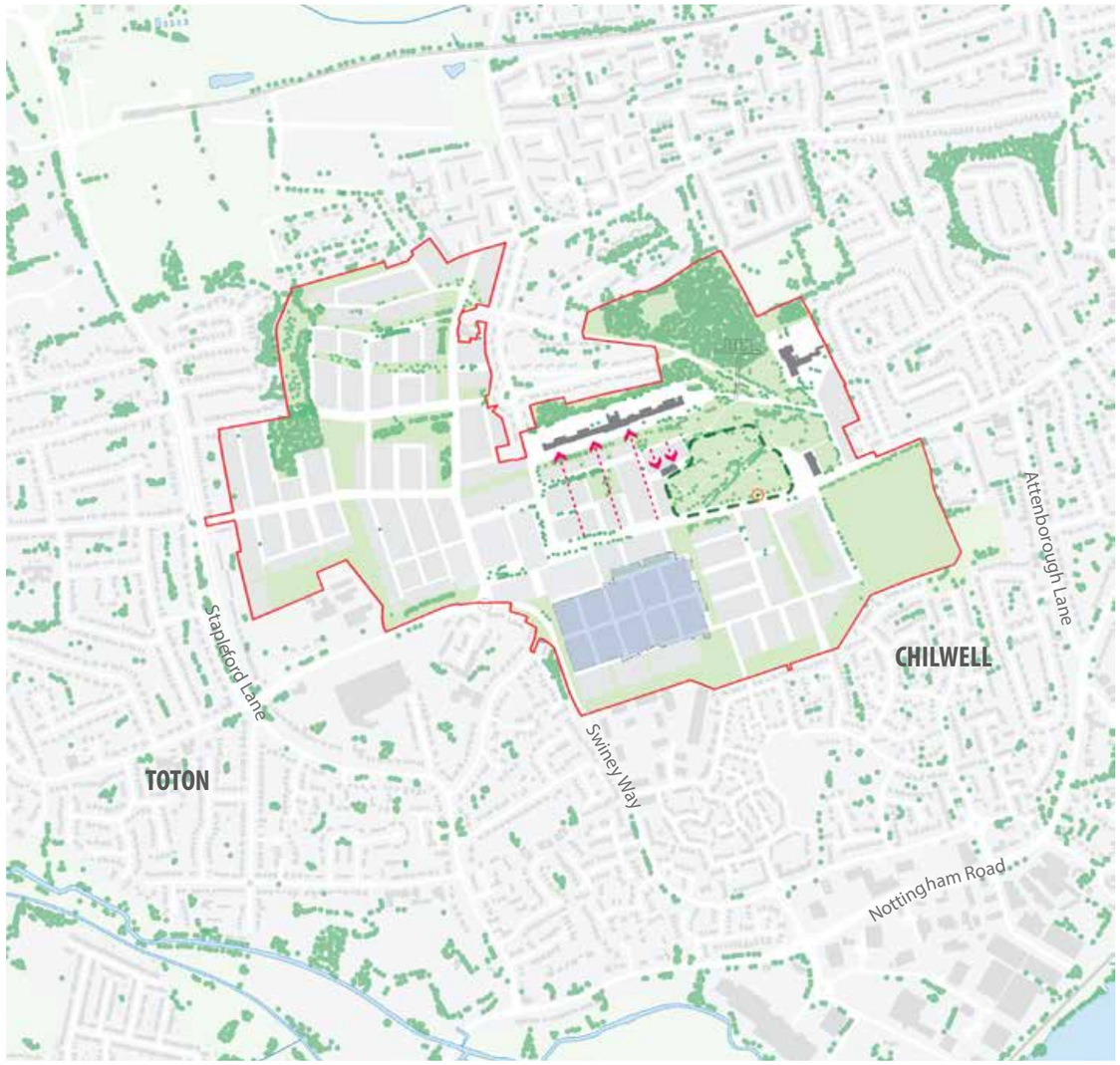
4.2.1 Heritage

Retaining and enhancing the existing military buildings in the Site is a key driver in the design of the future masterplan. By doing so, the Site will be able to draw on its rich history to create a distinct place identity. The buildings which are to be retained have been selected on the basis of their heritage value and the ease with which they can be converted to new uses.

The future masterplan will be driven by a strong heritage narrative of retaining and reusing heritage buildings, or preserving their memory through the layout of new development parcels. The defining features are:

- Retaining 4 heritage buildings, 2 tunnels and the National Shell Filling Factory Memorial
- Memorial Gardens retained and integrated into wider green corridor, creating a more significant setting for the memorial
- Layout of new development blocks adjacent to the retained buildings will maximise the value of their façades
- Building 157 (munitions depot) retained in memory through new built form on the footprint of the building

For a list of the retained buildings and their historical significance, please see section 1.3.2 (p.12). For a description of these buildings' future uses, please see section 4.1 (p.50).



Key heritage features to be retained in the Site

4.2.1.1 Potential Memorial Square arrangement

The Grade II listed National Filling Shell Factory memorial is the only designated heritage asset on the Site. It is currently located with a Memorial Garden containing a large green space and tree clusters. To enhance the setting of this memorial, a more formalised Memorial Square will be created with enhanced landscape features. Strong frontages to the Square will be provided by Building 125 to the east, the existing Memorial Garden to the north and west, and the new school to the south. This will allow the square to be comfortably contained within the built form. The square itself will be shared surface to allow efficient movement through the Site along Chetwynd Road. There will be a slight street "turn" at this point to prevent high vehicular speeds, thereby creating a more pleasant public space.

A community focus will be given to the square. To the east of the square, Building 125 will be reused as a community centre. To the south, the entrance to the primary school will be located.

Key

- Site boundary
- Enhanced listed memorial
- Proposed Memorial Square
- Key frontages
- Proposed trees
- New primary school
- Retained community building (Building 125)
- Key vistas to square

Potential Memorial Square arrangement

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.2.2 Landscape, public open spaces and sustainable drainage systems

In line with the vision set out in Broxtowe's Green Spaces Strategy, the Site will deliver a sustainable network of high quality green spaces for a variety of users from both new and existing communities. These spaces are intended to both improve people's quality of life and the biodiversity of the wider area.

New green spaces will be provided in line with the increasing population and will aim to exceed the guideline quantum provided by Fields In Trust. As shown opposite, the development will meet or exceed these standards. A range of public open space typologies will be provided to ensure that these spaces are appropriate for a range of needs. Many of these will be flexible in use: for example, parks and gardens and semi-natural spaces can be used for "natural play" by children. Large open spaces in the eastern area of the Site are retained and enhanced. These are within a 10-minute walking time of the western area of the development, so will help to provide for the relative lack of green space in this area.

Key

- Site boundary
- Existing trees/woodland
- Proposed new trees/other planting
- Public open spaces
- Proposed attenuation ponds and drainage channels

	Fields In Trust guidance (per 1,000 population)	Chetwynd Barracks
Parks and gardens	0.8 ha For Chetwynd (population 4,000): **3.2 ha**	**3.4 ha**
Natural/semi-natural	1.8 ha For Chetwynd: **7.2 ha**	**11.6 ha**
Outdoor play	1.85 ha For Chetwynd: **7.4 ha**	**7.4 ha**
Amenity	0.6 ha For Chetwynd: **2.4 ha**	**10.2 ha**
TOTAL	**25 ha**	**32.6 ha**

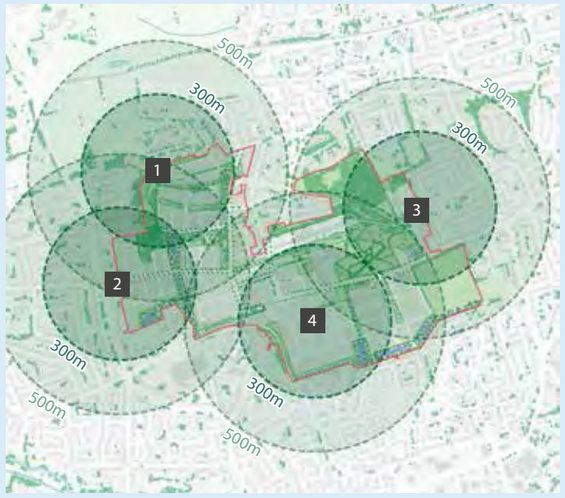
Landscape, public open spaces, and sustainable drainage features

Where possible, existing trees and woodland areas will be retained in order to protect wildlife habitats for birds, bats and other fauna. While there are many green and/or ecological features on the Site, these are largely disconnected from each other and from other features in the wider area. As such, new vegetation will be planted to create green corridors across the Site and beyond.

In addition, sustainable drainage features will help to manage the local flood risk. This is particularly important as part of the development will involve building on areas which are currently undeveloped. These drainage features will follow natural water flow patterns to maximise their effectiveness. These features will also be public amenities through careful management of the public realm around them.

Broxtowe Borough Council has set out standards for the maximum distance that any household should be from each green space typology, and the minimum size of these green spaces. These figures are shown below, and the breakdown of these standards in the new development is explained opposite.

	Parks and gardens	Natural/ semi-natural	Outdoor play	Amenity
Max. distance from household	500m	300m	500m	300m
Minimum size	1 ha	2 ha	1 ha	0.25 ha



300m and 500m isochrones from 4 sample points in the development

	Parks and gardens	Natural/ semi-natural	Outdoor play	Amenity*
Sample point 1	0 ha	2.15 ha	1.38 ha	1.25~ ha
Sample point 2	0 ha	2.66 ha	1.32 ha	0.25~ ha
Sample point 3	3.35 ha	2.05 ha	5.91 ha	0.67~ ha
Sample point 4	3.35 ha	1.45 ha	2.98 ha	1.27~ ha

* The figures given indicate the quantum of amenity space that is not located within a development parcel. Therefore, the total amenity space area is likely to be greater than these figures.

In Broxtowe's Green Spaces Strategy 2009-2019, Section 5.4 sets out the proposed access catchments for each green space typology. The new development at Chetwynd Barracks has sought to meet these standards where possible. The infographics below left show the area of each green space type provided by the new development from 4 sample points within the maximum distances set by the Broxtowe Green Space Standard. The figures in green show those types which meet the Standard, and in red those which do not.

Though the majority of the standards for each typology are met by the 4 sample points - chosen due to their distance from proposed new open spaces - there is some shortfall in provision:

- **Parks and gardens in sample points 1 and 2:** as the Memorial Garden is located within walking distance (800m, or a 10 minute walk) of these points, it is assumed that this will compensate for the shortfall in these specific areas. Furthermore, in sample points 3 and 4 the quantum of parks and gardens available far exceeds Broxtowe's Green Space Standard.
- **Natural/semi-natural space in sample point 4:** sample point 4 is located in the most densely built area of the Site. As such the area of natural/semi-natural space is limited. However, this space has been provided along the Site's southern boundary in line with the ecologist's recommendations. Tree lined avenues and the significant area of amenity space provided across the development should also generate ecological benefits for the Site and the wider area.

In summary, in order to achieve a coherent and integrated masterplan the new development may not necessarily meet all the recommended standards set by Broxtowe Borough Council. However, the new development will provide a significant increase in amenity and leisure facilities within a comfortable walking distance of both new and existing communities. The significant quantum of amenity space provided in numerous locations across the Site can also be used flexibly by a range of users and also local wildlife. Furthermore, by reconnecting green spaces across the wider area through new spaces and landscape features, the development will bring forward important green infrastructure benefits. The spirit of the Council's green infrastructure and greenspace strategy has therefore been met by the masterplan for Chetwynd Barracks.

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

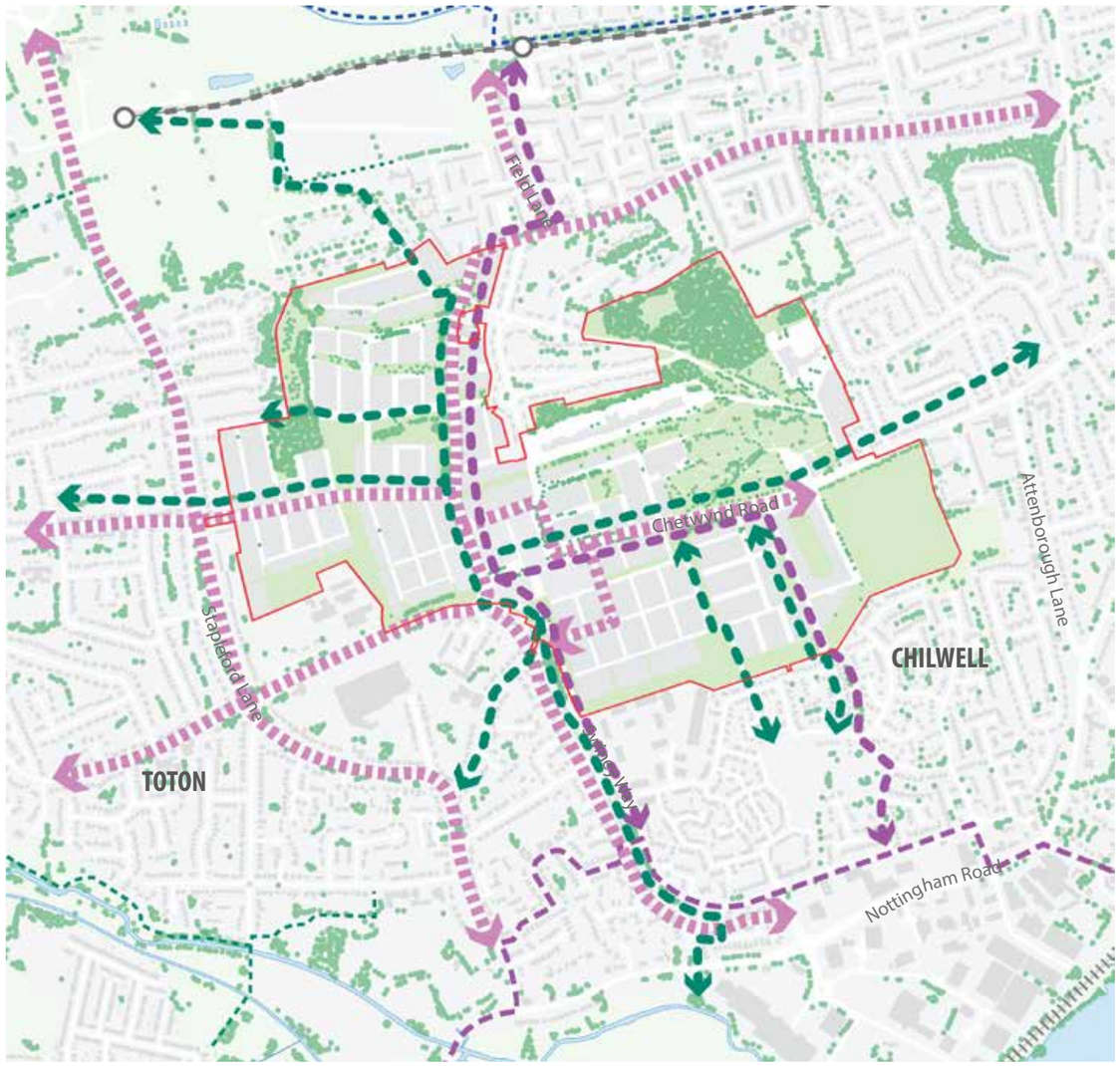
4.2.3 Improving connections to sustainable transport networks

The Site will capitalise upon its location between several sustainable transport networks. New bus routes will have access into the development via the primary street network and pass through the local centre and the community hub. These routes will also connect to other settlements in the local area, such as via Chetwynd Road in the east and Swiney Way in the southwest. These new routes will also provide access to nearby tram and railway stations, if feasible.

Walking and cycling will be prioritised in the development through the use of public realm treatments; including designated cycle paths, wide pavements, and shared surface street treatments. Connections will also be provided from the Site to the public rights of way located in its surrounding context. Of particular importance will be pedestrian and cycling routes connecting to the tram stations in the north and to the nature reserves and public open spaces in the south.

Key

- Site boundary
- Potential new bus routes
- Public footpaths
- Informal footpaths
- National Cycle Route
- Erewash Valley Trail
- New connections to public rights of way (walking and cycling routes)
- Tram line and stations
- Railway line



Improved access to public transport and walking and cycling routes

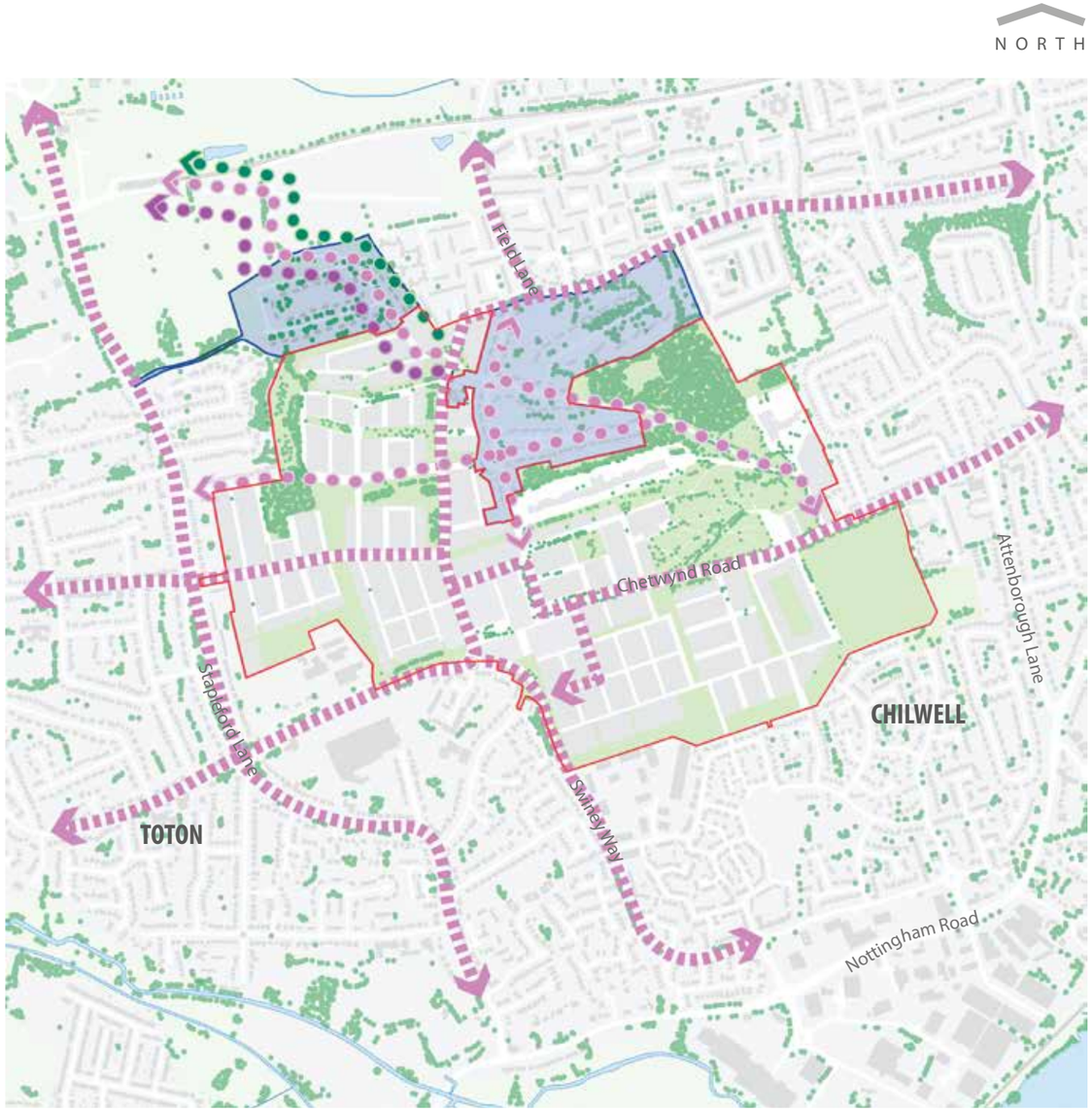
4.2.4 Future access through military housing

At present, the area of Service Family Accommodation (SFA) Housing is not within the current Site boundaries. In future, this could be made available for residential redevelopment. In such an event, provisions should therefore be made for an additional bus route to be created once this area becomes available. By providing access through the SFA Housing area, it will redirect bus traffic more efficiently onto Field Lane, rather than through quieter residential streets.

By releasing the land available in the smaller SFA Housing plot to the northwest, a more direct route can also be provided to Toton Lane tram terminus. This will make access for pedestrians, cyclists and buses more convenient from the north of the Site.

Key

- Site boundary
- SFA Housing
- Potential new bus routes
- New bus route through SFA Housing
- New pedestrian route through SFA Housing
- New cycling route through SFA Housing



Improved bus connections through the Site with the potential future inclusion of SFA Housing

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

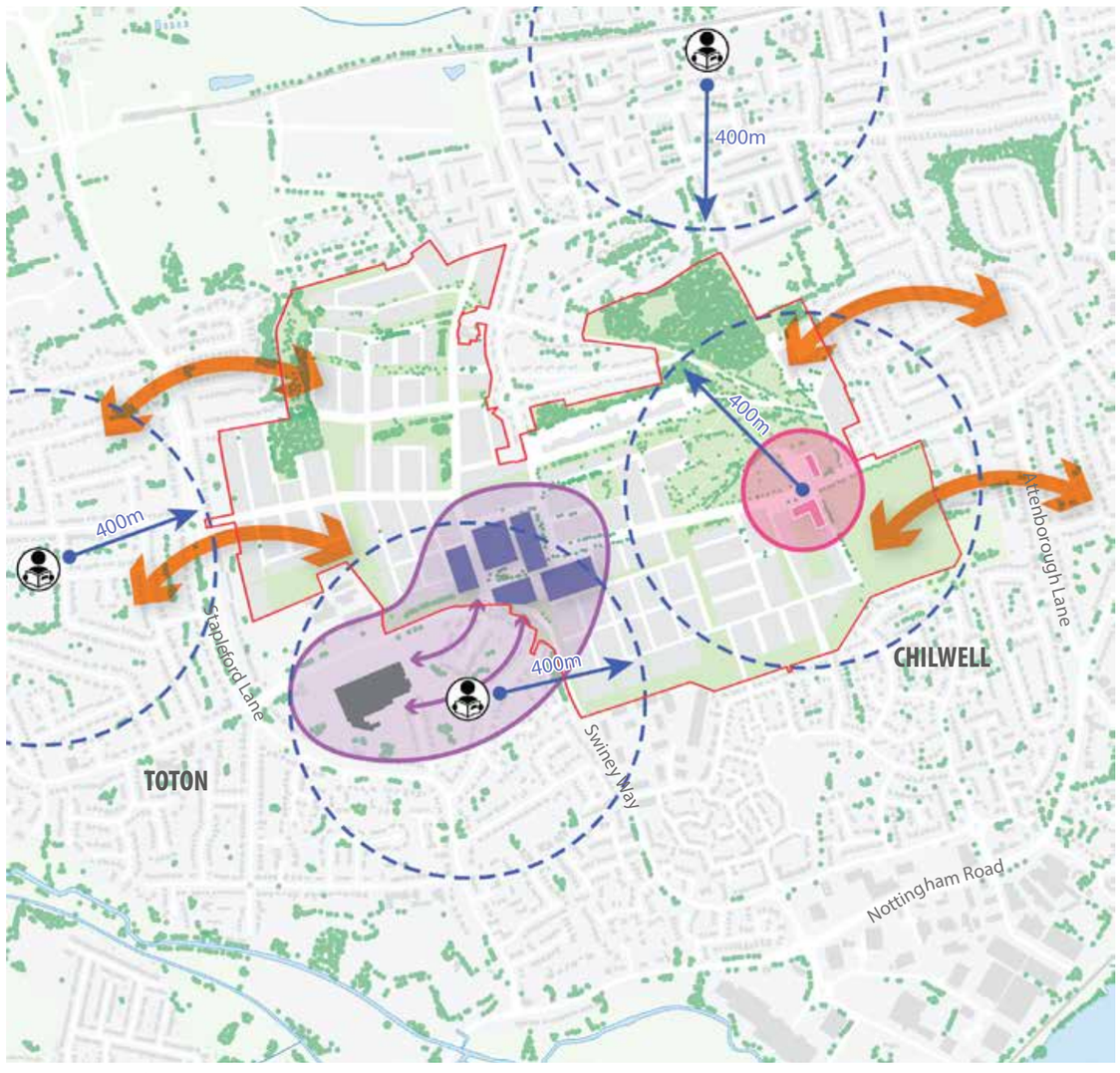
4.2.5 Providing new community facilities

The redevelopment of Chetwynd Barracks could deliver in the region of 1,500 homes. In order that this population influx does not put unsustainable pressure on existing community facilities, new services will be provided within the development. This includes retail and employment opportunities in the local centre, and a community hub with a primary school and community centre in the eastern area of the Site. The Site is also within a comfortable walking distance of 3 local schools and a Tesco Express. With regards to the latter, it is important to note that the new local centre will seek to complement, rather than compete with, the supermarket by offering different retail opportunities.

There is currently a Neighbourhood Plan being prepared for the wards of Toton and Chilwell, which the Site falls in the centre of (see p.6). The objectives of this Neighbourhood Plan should be respected by the new development at Chetwynd Barracks. Where possible, the Site should seek to complement the Neighbourhood Plan in order to meet its targets.

Key

- Site boundary
- New development to complement Toton and Chilwell Neighbourhood Plan
- Community hub: community centres and new school
- Local centre
- New local centre to complement Tesco Extra Chilwell
- Existing schools (all primary)
- 5-minute walking catchment



Community facilities within and surrounding the Site

4.2.6 Phasing strategy

Given the scale of the proposed redevelopment at Chetwynd Barracks, the development will be phased over several years. The first phase (to be completed by 2028) could cover the western area of the Site. This is in order to create a strong connection between the adjacent settlement of Toton and the new development. It will go up to the primary street that runs north-south across the Site to ensure that the development has the appropriate infrastructure in place before it continues eastwards.

Phase 1 is expected to provide the following:

Gross development area: 25.5 ha
Total infrastructure: **3.08 ha**
Landscape, woodland, and SuDS: **7.18 ha**

Net developable area: 15.2 ha
Local centre: **0.40 ha**

Capacity: up to 522 dwellings
Net development density: **34.3 dw/ha**

Key

- Site boundary
- Medium density area (45 dw/ha)
- Low density area (35 dw/ha)
- Very low density area (20 dw/ha)
- Local centre

Phase 1 of the Chetwynd Barracks redevelopment

4.3 Densities

4.3.1 Introduction

As shown in the Site Constraints plan (p.38), the new development at Chetwynd must operate within certain parameters. Of particular importance are the existing trees, woodland and drainage channels that must be retained as far as is feasible and be given a protective buffer.

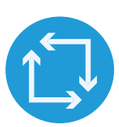
In order to successfully integrate with the surrounding context and deliver such diverse communities, it is important that the new Chetwynd Barracks development is structured upon density bands and character areas similar to those found in the wider area. From detailed analysis of the surrounding area, three density areas have been set for the new residential development at Chetwynd Barracks. These are consistent with the densities found in nearby settlement, and allow the development to comfortably achieve 1,500 homes with large areas of public open space. The local centre will also have a net development density of 80 dw/ha, which accommodates the need for residential, retail and commercial uses.

Key

- Site boundary
- Medium density area (45 dw/ha)
- Low density area (35 dw/ha)
- Very low density area (20 dw/ha)
- Local centre (80 dw/ha)

The following pages provide a 1 hectare sample of each density area, including the local centre. They illustrate examples of building, street and parking layouts. The infographics below represent key dimensions for each density area:

Gross external area of house/flat/flat-over-garage (FOG)



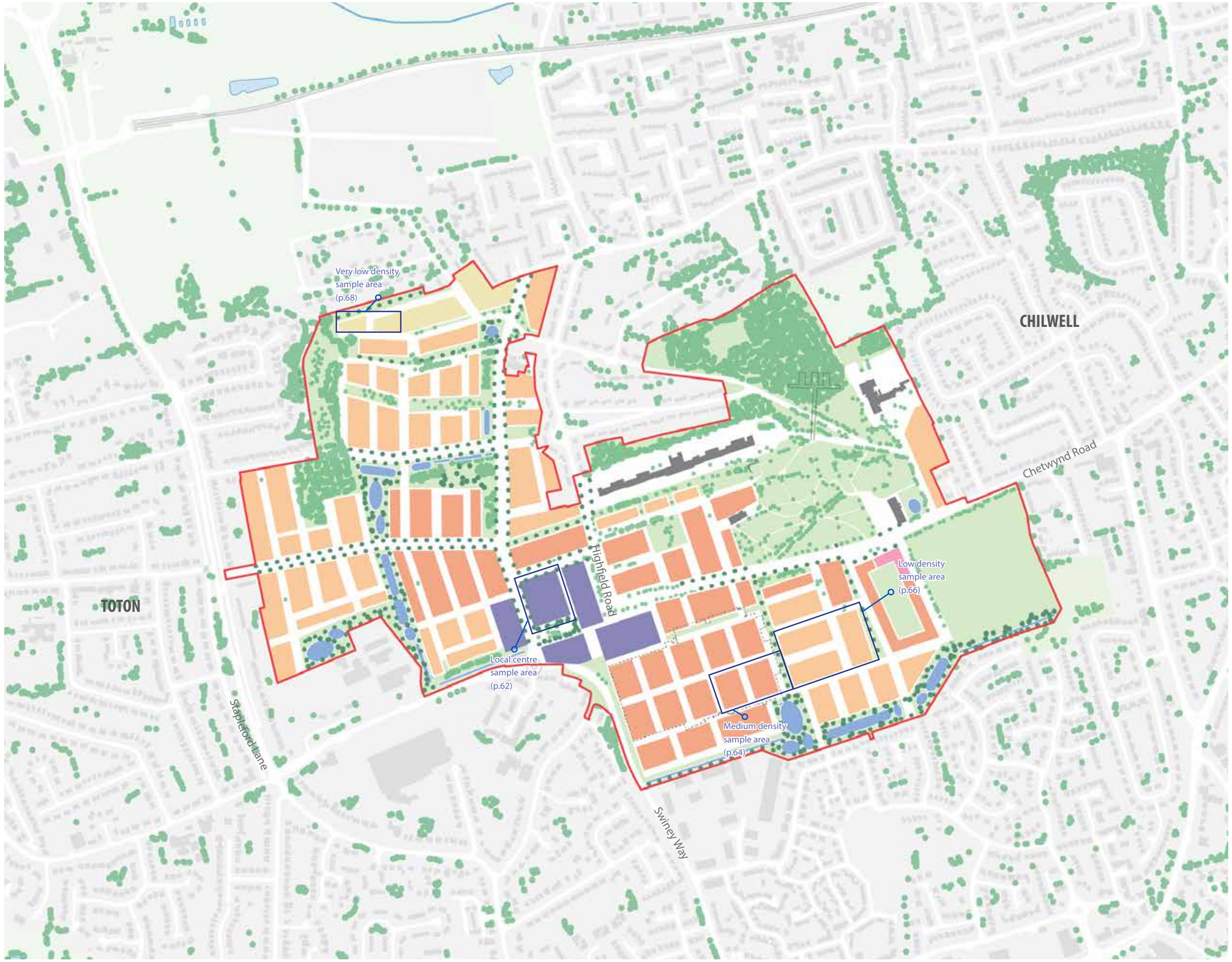
Average plot dimensions

Front-to-front and back-to-back distances

Car park dimensions

Footpath width

Road width



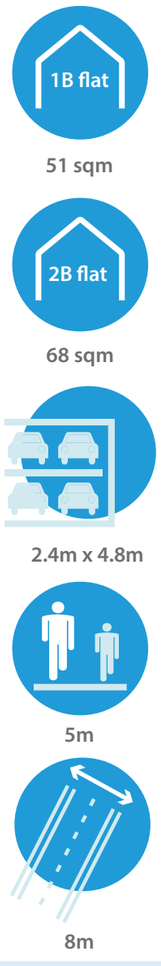
Proposed development concept plan for Chetwynd Barracks, highlighting different density areas

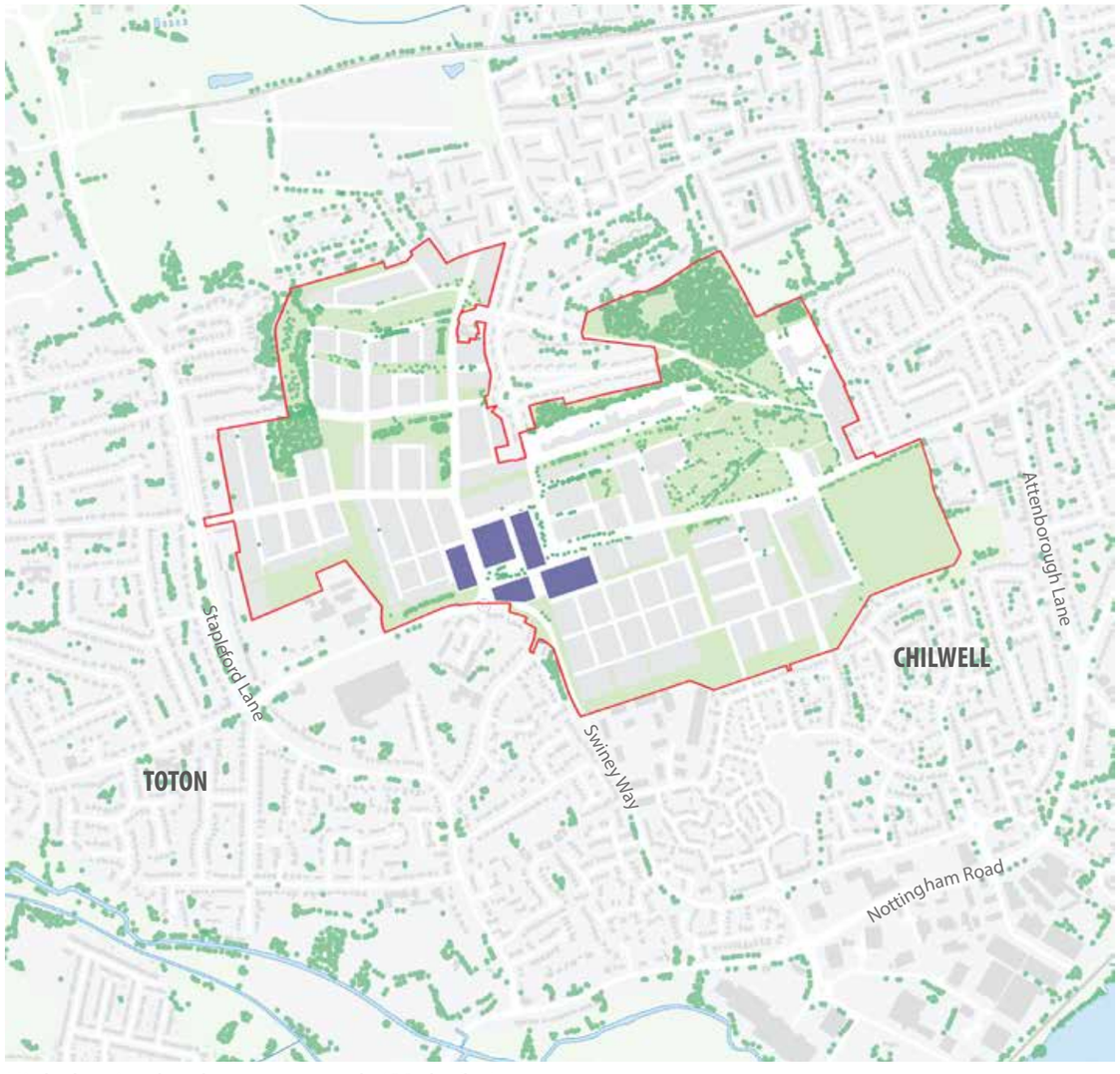
4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.3.2 Local centre

The local centre will have the highest density on the Site, at an average net residential density of 80 dw/ha. This area will therefore comprise mainly, if not entirely, of flats. Concentrating density in the central area will allow the Site to achieve 1,500 homes while having sufficient area available for large public open spaces.

Key dimensions





High density development parcels (80 dw/ha)

Key

- Site boundary
- High density area/Local centre (80 dw/ha)

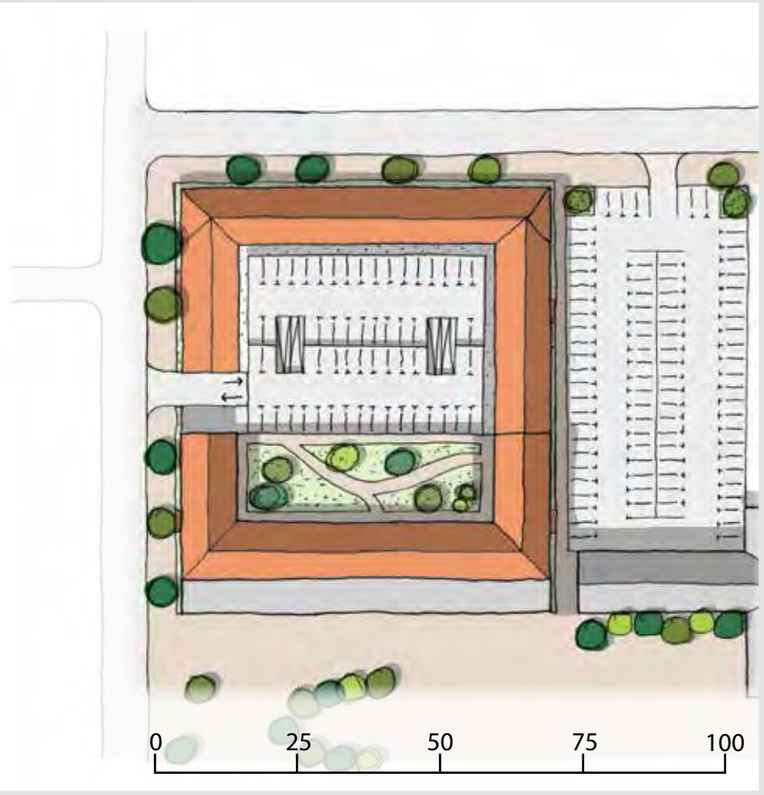
The design approach for the local centre can be summarised as:

- To create a dense local centre development that maximises land use at the heart of the community
- Maintaining a defined and highly active street frontage onto footpaths and public open space
- Frame and define a central square with active non-residential uses on the ground floor
- Encourage activity throughout the day by putting residential properties on upper floors
- Create a dense and concealed parking facility to limit its area requirements and offer a more active and attractive environment

The 1 hectare sample sketch of the local centre opposite can be broken down as follows:

LOCAL CENTRE: 1 HA SAMPLE AREA		
2 bedroom	0	**TOTAL:** 82 units
3 bedroom	0	
4 bedroom	0	
Flats	82	
Parking	261	

1. Dickens Heath Market Square, Solihull
2. South Broadbridge Heath, Sussex



Sketch of local centre sample area, showing building, street and parking layouts

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.3.3 Medium density area

Medium density development parcels (45 dw/ha) will be concentrated around the central core of the Site and along primary streets. This will clearly signify places of importance for the new neighbourhood, in particular the local centre and the community hub.

Key dimensions

81 sqm

Front-to-front: **11m-19m**

Back-to-back: **21.5m**

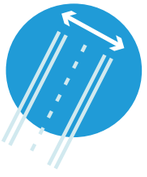
90 sqm

2.4m x 4.8m

150 sqm

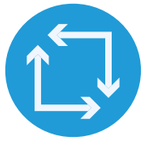
2-7m

84 sqm



Residential street: **4.5m**

Connecting street: **6m**

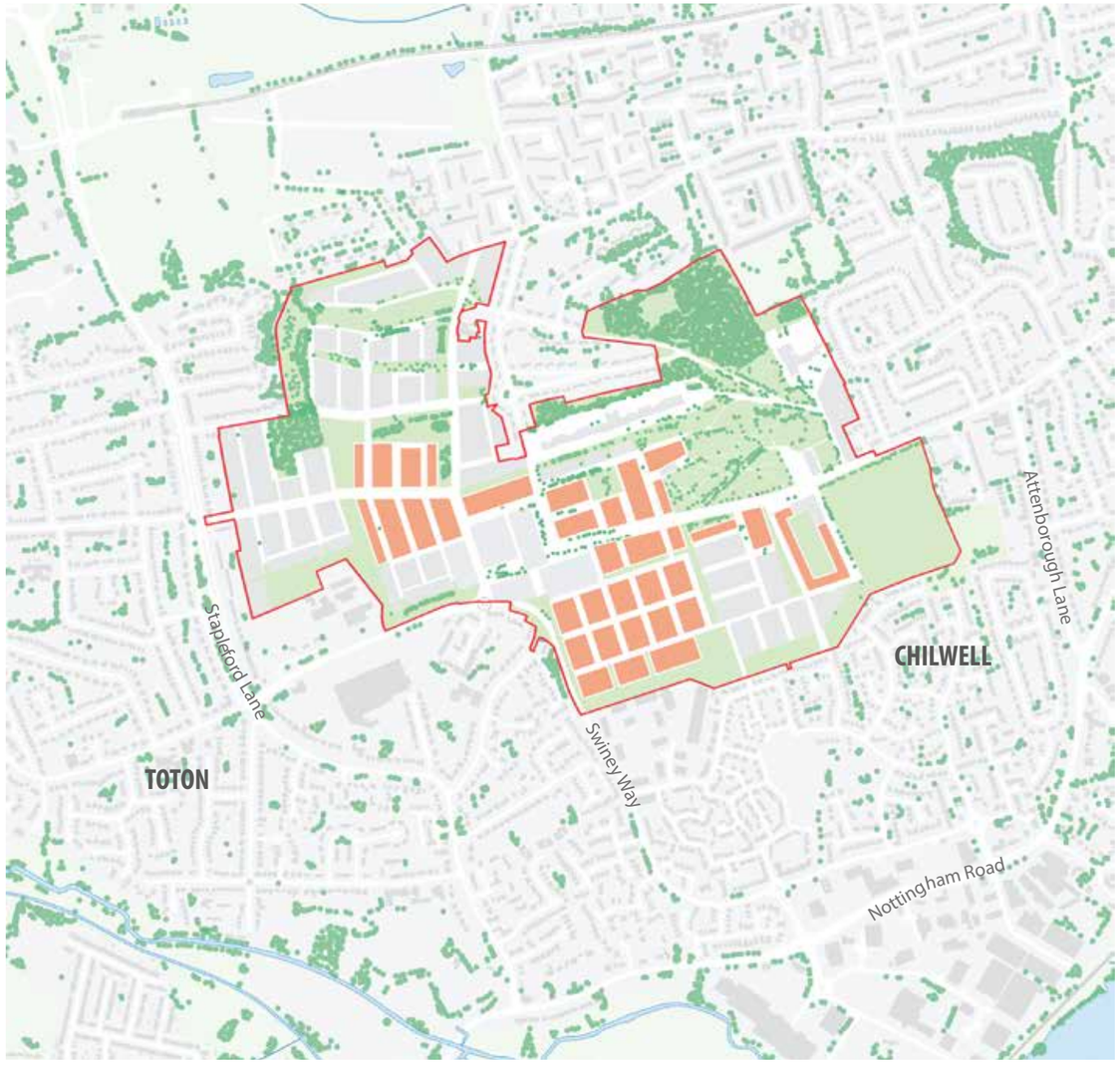


9m x 20m

Key

- Site boundary
- Medium density area (45 dw/ha)

NORTH



Medium density development parcels (45 dw/ha)

The design approach for the medium density area can be summarised as:

- Stepped building lines to create interest along each street, allowing for ample car parking without cars dominating the streetscape
- A hierarchy of streets identifies wider key movement routes separately to narrower, more intimate, residential roads
- Small runs of terrace houses with narrow plots allow for higher density without creating a monotonous streetscape
- Larger detached corner plots offer gateways to quieter streets, helping loosen the block's formation

The 1 hectare sample sketch of the medium density area opposite can be broken down as follows:

MEDIUM DENSITY: 1 HA SAMPLE AREA		
2 bedroom	20	**TOTAL:** 50 units
3 bedroom	16	
4 bedroom	12	
Flats	2	
Parking	122	

1. Ninewells, Cambridgeshire
2. Greggswood, Tunbridge Wells

Sketch of medium density sample area, showing building, street and parking layouts

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.3.4 Low density area

The majority of the new development will have a low density of 35 dw/ha to complement the surrounding suburban character. Areas of low density will be concentrated around Site entrance points and around public open spaces. This is to create strong frontages while preventing an excessive feeling of enclosure.

Key dimensions

80 sqm

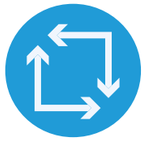
Front-to-front: **17m**
Back-to-back: **20m**

99 sqm

2.4m x 4.8m

136 sqm

1.5-2m



11m x 21.5m

Residential street: **6m**
Connecting street: **6m**

Low density development parcels (35 dw/ha)

Key

Site boundary

Low density area (35 dw/ha)

The design approach for the low density area can be summarised as:

- To deliver a range of housing types on legible and well defined streets, maintaining a feeling of space
- Strong links and maximum outlook onto valuable areas of green space
- Maximum frontage onto streets to encourage passive surveillance
- Tree lined streets of green, formal character

The 1 hectare sample sketch of the low density area opposite can be broken down as follows:

LOW DENSITY: 1 HA SAMPLE AREA		
2 bedroom	6	**TOTAL:** 38 units
3 bedroom	24	
4 bedroom	8	
Flats	0	
Parking	76	

1. Letchworth Garden City, Hertfordshire
2. Kilnfields, Hertfordshire

Sketch of low density sample area, showing building, street and parking layouts

4.0 PROPOSED DEVELOPMENT CONCEPT PLAN

4.2.5 Very low density area

The area to the north of the Site will have a density of 20 dw/ha. This complements the existing settlement surrounding this area, and also prevents any undue impacts on the greenfield land just north of the Site.

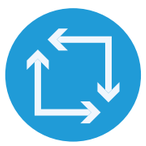
Key dimensions

108 sqm

2.4m x 4.8m

150 sqm

2m



11m x 21m

Rural street: **6m**

Connecting street: **7m**

Front-to-front: **15-18m**

Back-to-back: **20-31m**

Very low density development parcels (20 dw/ha)

Key

Site boundary

Very low density area (20 dw/ha)

The design approach for the very low density area can be summarised as:

- Create a green and quiet low density community of large, predominantly detached homes
- Strong connections to surrounding open space
- Tree lined streets
- Integration of rural cul-de-sacs offering attractive and high value properties around social shared surfaces
- Wide, colourful and quiet streets
- Maintain a building line along the street to improve legibility and offer a sense of unity along the streetscape

The 1 hectare sample sketch of the very low density area opposite can be broken down as follows:

VERY LOW DENSITY: 1 HA SAMPLE AREA		
2 bedroom	0	**TOTAL:** 22 units
3 bedroom	5	
4 bedroom	17	
Flats	0	
Parking	44	

1

2

Sketch of very low density sample area, showing building, street and parking layouts

1. South Broadbridge Heath, Sussex
2. St. Ebba's, Epsom


20

5.0 CONCLUSION

5.0 CONCLUSION

The redevelopment of Chetwynd Barracks will create a vibrant new neighbourhood in place of the military uses that currently occupy the Site. It could deliver in the region of 1,500 new dwellings and substantial amounts of public open spaces that far exceed the standard set out by Broxtowe Borough Council. By also including a new local centre and community hub, the Site will stitch the existing urban fabric back together to create a coherent urban-suburban fringe.

The Site's military heritage is a key driver of the design of the masterplan: buildings and structures of historical value will be retained, enhanced and refurbished to ensure that they are actively used in the new development. The built character will be heavily informed by the density ranges, typologies and streetscapes found in the surrounding area, thereby creating a natural extension to existing settlements.

The design approach to Chetwynd Barracks has been informed by a number of stakeholders. Of particular importance has been the workshop run by OPUN, a architecture and built environment centre for the East Midlands, in September 2016. The new Chetwynd Barracks development concept plan aims to meet the following recommended actions:

- To ensure the new development recognises the importance of existing heritage assets and its historic character

  The vision for Chetwynd Barracks clearly sets out the strong heritage narrative. 3 buildings will be retained and reused as flats and community facilities. The layout of the development blocks adjacent to these buildings will help to maximise the value of their façades. The Grade II listed memorial will be set in an improved public green space. In addition, the munitions depot's memory will be retained through its layout.

- To provide a robust vision for how the Site will form part of a wider masterplan for Toton and to maximise opportunities to connect to new public transport infrastructure

  The concept recognises the significant socio-economic opportunities that are provided by the proposed new HS2 route through Long Eaton and Toton. The Site will have easy access to this public transport hub by maintaining and enhancing Chetwynd Road which runs east-west through the Site.

- To ensure the development does not become an isolated or car-dependent suburb

  New bus routes will be created to serve new and existing communities in the area. These routes will have access into the Site via the primary street network and connect to other settlements via Chetwynd Road in the east and Swiney Way in the southwest. Pedestrian and cycling routes will also be created along Welbeck Gardens, Field Lane and to the tram stop along Northfield Crescent. The potential inclusion of the military housing development in future will further enhance public transport connectivity by providing more direct access to the tram stops to the north of the Site.

- To protect and enhance important existing landscape features, as well as identifying additional green routes

  Significant landscape and ecological features, in particular Hobgoblin Wood, will be maintained and provided with a minimum 5m buffer from any development. Tree lined avenues and copses will also be maintained where possible. Wider green connectivity will be provide through green corridors and public open spaces connecting Hobgoblin Wood with the memorial garden and the playing pitches in the southeastern corner of the Site.

- To establish an integrated approach with SuDS as accessible, attractive features that contribute to place-making and the maintenance of these features

  SuDS features are located in strategic points throughout the Site where natural drainage flows have been identified. This includes along the southern boundary of the Site, which will replace the existing culvert which runs east-west nearer to the centre of the Site.

- To pursue a community hub that combines the

local centre with the primary school which is conveniently located for new and existing residents

A local centre will be provided in the "heart" of the new development. It will provide small scale retail, employment, and health care facilities. In terms of shops, it will aim complement the existing Tesco Express on Swiney Way by providing a different retail offer. Towards the eastern Site boundary a new community hub will be provided. This will include the conversion of 2 heritage buildings into community centres, and a new primary school. The latter will be located on Chetwynd Road, a primary road in the new development, in order for it to be easily accessible for new and existing communities. It will also provide a strong frontage to the street and to the


1


2


3


4

1. Existing tree lined footpath in the Site
2. Williams Barracks, also known as the former Press Houses. To be retained and reused as flats in the new development.
3. Short terrace on Mountbatten Way - part of a new development to the south of the Site
4. Grade I listed St Mary's Church and Attenborough Nature Reserve, Attenborough

Jones Lang LaSalle Incorporated

Non-Technical Sustainability Appraisal and Development Delivery Statement

DIO

Chetwynd Barracks, Chilwell, Nottingham

November 2017

Contents

1. Introduction

1.1. This report provides a summary to the technical work undertaken by Defence Infrastructure Organisation (DIO) to demonstrate the suitability, capacity and deliverability of residential led mixed use development at the Chetwynd Barracks (the Site) following its programmed closure in 2021.

1.2. This report, and the associated annexes, supports the allocation of part of the site for 500 houses, as well as small scale retail and employment, in the Broxtowe Local Plan Part 2 Site Allocations.

1.3. In addition, the report considers the potential of the full development of the Site, looking beyond the end of the plan period to the Site Allocations of 2028.

1.4. The technical work is covered principally in Sections 4 and 5. These sections address the technical assessments and development concept planning undertaken respectively. Sections 2 and 3 provide some background information and context in terms of consultation undertaken to date and the principal land use and market considerations.

2. Consultation

2.1. The Secretary of State for Defence announced in March 2016 the closure of a number of operational facilities in the UK. This announcement included the Site. The Ministerial Statement referred to the potential of 800 dwellings, although this was not supported by any evidence of the Site's capacity for development.

2.2. Broxtowe Borough Council reacted by including the Site as one of three sites in the Site Allocations Potential Additional Sites, which was published for consultation in August 2016. This referred to the potential for 800 houses and associated development, including reference to employment, retail, significant provision of green infrastructure, and the retention and enhancement of wildlife corridors.

2.3. In November 2017, the MOD issued a further statement on the closure programme of operational sites. This confirmed that the Site would cease operations in 2021 and would be available for development from then on.

2.4. In November, JLL was appointed by DIO to manage the promotion of the site through the remainder of the development plan making process, with specific reference to the Site Allocations. To support this process, JLL appointed PRP as master planners and Peter Brett Associates (PBA) as principal environmental advisors.

2.5. Since November, the consultant team has been commissioned by DIO to produce an evidence base and development concept to support and underpin the allocation of the Site. Through this process, DIO, JLL and the principal consultant team have fully engaged with officers of Broxtowe Borough Council, Nottinghamshire County Council (as highways authority) and other statutory consultees. This has included:-

- Attendance at a site specific workshop – 17 October 2016
- Preliminary inception meeting with officers of Broxtowe Borough Council – 14 November 2016
- Workshop meeting with officers of Broxtowe Borough Council – 19 December 2016
- Second workshop meeting with officers of Broxtowe Borough Council – 3 February 2017
- Meeting with Highways England – 13 February 2017
- Meeting with officers of Broxtowe Borough Council and Nottinghamshire County Council (Highways) – 21 February 20176
- Attendance and participation at the Site Allocations Infrastructure Workshop, hosted by Broxtowe Borough Council – 17 March 2017.
- Production and submission of draft development concept and associated evidence base of technical studies (see Section 4) to support proposed allocation – 13 April 2017.
- Meeting with officers of Broxtowe Borough Council to review the above draft submission – 28 April 2017.
- Meeting with officers of Nottinghamshire County Council (Highways) to review the draft Transport and Movement Strategy – 20 June 2017.

- Meeting with offices of Broxtowe Borough Council to review the proposed approach and wording to Policy 3.1 – 21 September 2017.

2.6. This process has greatly assisted the production of the technical assessments and the accompanying Vision for Development, a development concept for the Site. In addition, PRP, in producing the Vision for Development, have drawn specific reference to the OPUN review carried out in Autumn 2016, the assessment of relevant issues and points made by officers in their report to the Jobs & Economy Committee for its meeting on 26 January 2017 in respect of the proposed allocation of the Site (pages 37 and 38 of the report), and the summary of comments made in respect of Potential Additional Sites consultation by statutory consultees and others and referred to in the same report (pages 67-74).

2.7. The officers' report to the 26 January 2017 Jobs & Economy Committee refers to a potential for 800 plus houses, with 500 houses developable during the plan period (2028). The Committee resolved as recommended and endorsed the allocation of 500 houses at the Site during the plan period. A minute of the meeting was provided in the agenda to the next Jobs & Economy Committee, which met on 23 February 2017. Reference was made to the Site as follows:-

"The importance of the Chetwynd Barracks site was noted, though the land would not be released for development in time to be included in the five year land supply. A neighbourhood forum was emerging in the area to represent local needs and concerns, but it was stated that there was broad support from the local community."

2.8. Final consideration of the draft Plan, prior to consultation of the Publication Plan, was given by the Jobs and Economy Committee on 6 July 2017. In Appendix 4 (page 39 of the report), reference was drawn to the key development requirements for the Toton Sidings/HS2 Strategic Location for Growth that go beyond the plan period. Part of the rationale of this approach was justified by the close relationship of this strategic site and links with Chetwynd Barracks.

2.9. Finally, it is the intention of DIO to engage fully with the newly created Neighbourhood Forum, in order to consult fully on the comprehensive development of the whole site. For this reason, the technical evidence and master planning process has looked at the Site's development beyond the plan period. This process has started with a guided tour of the Site for the Neighbourhood Plan Forum Panel taking place on 3 July 2017 and a subsequent meeting with Panel members on 19 October 2017 to review the initial development concept for the Site.

3. Land Use and Market Considerations

3.1. The Site takes in a large area of 75.44 hectares. A plan showing the Site's boundaries in red is provided in **Appendix 1**.

3.2. The plan shows also land owned by Annington Homes in green in two separate parts to the north of the Site. This land is occupied by MOD personnel and is not separated physically from the other operational land. However, DIO has no control over this land. There is potential for this land to become integrated into the wider Site's development. However, this cannot be a requirement as DIO cannot guarantee its delivery.

3.3. The Site is located in a well established suburban area of Nottingham. In addition, it is extremely well connected to the location's wider amenities and communications through its accessibility to the strategic road network, rail, tram and bus networks. In addition, the new HS2 station at Toton (scheduled to be operational in 2033) will improve the sub-region's communications.

3.4. In market terms, the Site is located in one of the stronger residential areas of the Borough. This is confirmed by Table 5 to the Borough Council's Strategic Housing Land Availability Assessment (SHLAA) 2014/2015. This grades the wards most relevant to the Site (Attenborough, Chilwell East, Chilwell West and Toton and Chilwell Meadows) all as "strong" in market terms.

3.5. The SHLAA provides also evidence on building rates. This refers to developers building one dwelling per week (i.e. circa 50 per annum), although the number of developers on each site may increase to two on sites greater than 150 dwellings. JLL would concur with this assessment.

3.6. Table 8 to the SHLAA provides some useful data on completions on large sites since 2007. The largest site in this table is the development of 383 houses directly south of the Site, which was previously part of the Barracks. This development was built out over five years from the early to mid-2000s at an average build rate of 76.6 houses per annum. However, it is notable that the first three years of this development (which preceded 2007) was completed at a much higher rate of just over 100 houses per annum.

3.7. JLL considers that the strong market location of the site and the potential scale of the proposed development will enable this higher rate (i.e. 100 houses per annum) to be hit reasonably quickly after the commencement of development and maintained thereafter. Moreover, there is sufficient time to secure outline planning permission and to procure a developer in order to commence on site once the Site becomes available (in 2021). JLL foresees also that the first phase of 500 houses will see two developers building out at the same time.

3.8. JLL has advised DIO on the mix and type of houses that are most likely to be in demand at this location. JLL considers the Site is well suited for family accommodation (i.e. 3 and 4 bed houses), with a particular preference for 3 bed houses. There is more limited scope for flats, with this type of accommodation more suited to higher density development in and around the local centre and through conversion of retained buildings (e.g. the former Press House).

3.9. With regards to employment, JLL has advised that there is a limited market with much stronger locations sub-regionally for offices (in the city centre or at established bespoke business parks), and industry and

warehousing (close to motorway junctions and with direct access to the strategic road network). Instead, the Site is likely to have only a local catchment.

3.10. JLL consider that 5,000 sq m is relatively realistic in market terms, for the capacity of the Site for employment development. In terms of type, this would be principally made up of industrial/business park units for small and medium enterprises (SMEs), ranging from 500 to 2,000 sq m, and a small office courtyard scheme if market conditions improve.

3.11. JLL has been commissioned by DIO to produce a Retail Needs Study to investigate the potential capacity for retail floor space at the Site. This study forms **Annex No.1**.

3.12. The Retail Needs Study considers specifically how much convenience and comparison retail floor space the residential development of the Site can support. The principal conclusions are summarised below:-

- The proposed allocation could generate enough expenditure to support a small supermarket of circa 1,400 sq m net as part of the proposed local centre.
- 700 sq m net of comparison and food and drink uses could be supported as part of this allocation.
- This could lead to a local centre of circa 2,100 sq m net or 3,000 sq m gross floor space.

3.13. The Retail Needs Study considers also the possible impact of this proposed scale of retail floor space on local centres. It concludes:-

- This allocation will not have an adverse effect on existing centres in Broxtowe or Erewash.
- Retail studies show existing food stores in centres have a higher retention rate of expenditure and are healthy and performing well. A store of the size proposed will not alter the shopping patterns.
- There is capacity for existing centres to grow and expand as well as the provision of new stores as part of the larger housing allocations. Therefore, there will be no impact on investment in these centres.

3.14. JLL's advice on the market for residential, employment and retail has been taken fully into account by PRP in producing its Vision for Development for the Site. It has also been taken into account by the various technical assessments considered in the next section.

4. Technical Assessment

4.1. PBA have produced the following assessments:-

- Transportation and Movement Strategy (**Annex No.2**)
- Flood Risk and Surface Water Drainage (**Annex No.3**)
- Ecology Technical Appraisal (**Annex No.4**)
- Air Quality Constraints (**Annex No.5**)
- Ground Conditions Desk Study (**Annex No.6**)
- Utility Infrastructure Appraisal (**Annex No.7**).

4.2. In addition, JLL has produced a Heritage Assessment. This forms **Annex No.8**.

4.3. The principal conclusions to each assessment is set out briefly below in turn. In each case, the assessment has tested the following description of development:

"A sustainable residential led mixed use development of up to 1,600 houses, a local centre, including some retail, 5,000 sq m of B Class employment, a primary school, associated community uses, the creation of new and reopening of former access points for all modes of traffic, new public transport linkages with footpaths and cycle routes, and extensive areas of public open space, including the retention of Hobgoblin Wood and the existing sports pitches and the creation of a new park as a natural setting to the National Shell Filling Factory Memorial."

4.4. In addition, consideration has been given to a first phase of 600 houses, which coincides broadly with the development proposed by the Site Allocations in the period before 2028.

Transportation and Movement Strategy

4.5. Allocation of Chetwynd Barracks for development will directly address transport issues raised in the context of national and local policies, due to the Site's proximity to a variety of public transport links and a range of community facilities and services. This has the potential to reduce the need to travel by private car and encourage the use of sustainable transport alternatives alongside the delivery of housing to meet much needed demand.

4.6. The situation of the Site within an existing residential area, and surrounded by established streets and urban form, enables integration within an established community on all sides. Access for the Site to the wider area will be significantly enhanced by proposed connections to existing pedestrian, cycle and bus provision.

4.7. In addition to the potential to operate bus services through the heart of the site, it also lies within a recommended walk distance to existing bus stops that provide access to local destinations and to destinations further afield, such as Nottingham and Beeston. Attenborough Rail Station and tram services to the north of the Site mean that public transport can easily be accessed from Chetwynd Barracks, by walk, cycle or bus, and can, therefore, be considered to provide a viable alternative to the private car for local and more distant journeys, particularly when taking into account the frequency of these services.

4.8. In summary, the Site is clearly well connected by all modes of travel. Opportunities exist to access local community facilities and services by modes of travel other than the private car which, in line with the NPPF, enhances the sustainability credentials of the Site. It also means that any enhancements proposed by the scheme will be more sustainable in the longer term, given that they would strengthen existing facilities rather than seek to introduce and sustain new services.

4.9. Phase 1 will have a capacity for 600 dwellings, to be developed in the western part of the Site. It is envisaged that access to this phase could be achieved via the existing access to the Site off Swiney Way and the opening of a new access to connect through the western edge of the Site boundary through the existing emergency access gate to the B6003 Stapleford Lane. As the development capacity of the Site increases, access options could then utilise other existing accesses, with alternative pedestrian and cycle connections also being created around the Site.

4.10. The assessment has considered development scenarios of 600 and 1,600 dwellings (incorporating the first phase of 600 dwellings) plus employment during 2028. This is in order to future-proof the Site and to ensure a robust strategy is developed.

4.11. In the initial phases, the vehicle trips generated by development of the Site should be offset by current trip generation of Chetwynd Barracks. This "netting off" of trips against those that pre-exist is helpful in the initial stage of 600 dwellings. As the scheme progresses above 600 dwellings, the number of access options and opportunities to travel by alternative modes will increase as a result of increased exposure to bus, pedestrian and cycle connections and a reducing rate of car trip generation per dwelling could be anticipated in this case, based on the scale of development and infrastructure provided to support it.

4.12. It is clear that with development of this potential scale, large percentage changes in traffic flows are expected to occur as a result of development. However, as the access and transport movement strategy suggests, development of the Site represents a real opportunity for enhancing an already well connected sustainable transport network, thereby improving connectivity to local community facilities and services by credible alternatives to the private car.

4.13. Some of this benefit will be felt by the existing community, who will have new facilities made available in the development, with better access to walk, cycle and local bus routes. This better access will also be able to be configured through the site, and so more direct, and hence convenient and attractive routes and services will become available to the existing communities around the site.

4.14. Mitigation measures will be required to the local road network. However, these are likely to be only fairly minimal to serve the first phase. This is set out in more detail in the separate Technical Note produced by PBA that forms **Appendix 2**. In addition, the provision of a new access via Stapleford Lane will enable pressure to be taken off the main access off Swiney Way and off the Banks Road/Swiney Way/B6003 Stapleford Lane junction. A more permeable road network is created, that provides greater opportunities to positively manage the busy traffic flows in the area.

4.15. Post 2028, access options could utilise the existing main access to the site off Swiney Way, upgraded as necessary, and alternative pedestrian, cycle and bus service connections elsewhere. These include the opening up of the existing access in the eastern part of the Site to Chetwynd Road. A bus gate could be located here with the potential of another route through the Site for a number of existing bus services.

4.16. As the Site becomes established, there will be an opportunity for internal linkage of the principal accesses (for all modes) to provide through routing and permeability. Also, significant trip internalisation is also likely to occur as the demand for services is met on site. Moreover, there are the wider opportunities presented by the proposed HS2 station at Toton (due to open in 2032) of tying in the development into the wider area.

4.17. Given that housing demand needs to be addressed through the Site Allocations, the assessment demonstrates that the location of Chetwynd Barracks offers the best opportunity to manage the situation with the greatest likelihood that modes other than the car will be readily available and likely to be the mode of choice for a significant number of journeys during the plan period and beyond.

Flood Risk and Surface Water Drainage

4.18. Overall, the risk of flooding from all sources on site is low. Online EA mapping does not represent the risk of flooding from the ordinary water course flowing through the Site due to its small catchment area. It is recommended that a topographic survey of the Site and channel survey of the water course is obtained in order to assess flood risk from this water course.

4.19. New development of the Site would be located entirely within Flood Zone 1, following the sequential approach, by steering new development into areas with the lowest probability of flooding. All vulnerability classifications are considered to be acceptable in Flood Zone 1. Therefore, the sequential test and exceptional test would not be required.

4.20. A high level review of potential attenuation requirements has been undertaken. The Site has been split into six sub-catchments and indicative surface water storage requirements have been calculated for each. A full flood risk assessment will be needed in the future to support any planning application. However, at this stage, there is no reason to suggest why the Site should not be allocated from a flood risk/surface water drainage perspective. No significant constraints have been identified.

Ecological Technical Appraisal

4.21. An ecological desk study and extended Phase 1 habitat survey have been completed to establish a high level ecological baseline. An assessment of key ecological features, including designated areas, habitat and protected species, and consideration of the Vision for Development have jointly informed an ecological appraisal of the suitability of the Site for redevelopment. The appraisal concluded:-

4.22. No European designated sites are likely to be adversely affected by redevelopment of the Site

4.23. Effects on Attenborough Gravel Pits SSSI and Toton Fields LNR can reasonably be expected to be avoided or mitigated through surface water management and drainage design.

4.24. Retention within the master plan of Hobgoblin Wood, at the north eastern corner of the site, and appropriate construction etiquette will enable the avoidance of construction related pollution effects on the SINC that adjoins the site boundary directly to the east of Hobgoblin Wood. Specification of measures at the detailed design stage will also enable the avoidance or mitigation of impacts on the SINC resulting from recreational pressure.

4.25. Woodland parcels, hedgerows, and mature scattered trees comprise the most important ecological features on the Site. These are largely retained, and losses of less valued habitat areas can be mitigated

by the creation of a robust, ecologically functional network comprising new hedgerows, tree planting and sympathetic inclusion of SUDS features.

4.26. Protected and notable species, including bats, reptiles, breeding birds and badger, can reasonably be expected to be present. The Site may also support dormice and great crested newt if these species are present in the local area. The Vision for Development addresses impacts on the habitats and the potential to support these species through provision of an extensive and coherent habitat network across the Site and into the wider area.

4.27. A number of high level objectives have been identified to guide development of a policy compliant scheme for the Site. These objectives are met by the master plan, which retains key ecological features, enhancing their value by creating a coherent network of habitat relevant to species likely to be present. As such, there is no reason relating to ecological matters that prevent allocation of the Site for redevelopment.

Air Quality Constraints

4.28. The proposed development is expected to increase the traffic flows on the local road network. However, measured NO2 and background concentrations are well below national objectives in the immediate vicinity of the Site and, therefore, traffic from the development will not have a significant impact on local air quality.

4.29. The impact of development traffic on the A52 Bramcote Island will need to be assessed, but assuming that NOX submissions are reduced as anticipated, then the impact will not be significant. The impacts on the Long Eaton Local Nature Reserve should be considered if the traffic flows along Nottingham Road surpass the 1,000 vehicles a day threshold, but are unlikely to have a significant effect given the air quality of the area.

4.30. The Site is considered suitable for residential development without the need for mitigation against poor air quality. Overall, it is concluded that air quality will not pose a constraint to the proposed development.

Ground Conditions Desk Study

4.31. The study site is occupied by a military base that was previously the site of an artillery shell filling factory, maintenance workshops and an ordnance depot. There was a major explosion at the shell filling factory in 1918.

4.32. A UXO threat assessment report found that there is a very high probability of UXO encounter at the Site due to the former use of the Site. The report recommends that a detailed UXO threat and risk assessment be carried out as part of any planning application. However, JLL understands that this is a routine requirement for former military sites and it is not anticipated that this will pose a significant constraint to development.

4.33. A number of ground stability risks have been identified. However, it is considered that none of these should preclude development of the Site because they can be successfully minimised or eliminated by the application of routine mitigation measures during design and construction work.

4.34. A number of site potential sources of contamination with pollutant linkages to the study site have been identified associated with the historical and current usage of the Site. Most of these are located on the southern part of the Site. No significant off site potential sources of contamination have been identified.

4.35. Potential pollutant linkages have been identified using the information on potential sources, receptors and exposure pathways. The estimated risks for the identified pollutant linkages that still exist locally on the Site are:-

4.36. The risks to current site users are assessed as Very Low because contaminants in the ground and ground water on the higher risk parts of the Site are generally sealed beneath hardstanding.

4.37. During the construction phase there is an enhanced short term risk to construction workers from contact with the soil, which is assessed as Moderate/Low.

4.38. In the long term, post-construction, there are theoretical risks to future occupiers of the Site that are assessed as Low to Moderate, to offsite residential properties as Very Low to Low, to buildings, services and property on the Site and ecological systems off site that are assessed as Very Low, and to ground water and surface waters that range from Low to Moderate/Low.

4.39. These estimated risks should be reduced to Very Low with the adoption of mitigation measures. Prior to construction, such measures will be expected to include further intrusive geo-environmental investigation and risk assessment and, if necessary, remediation of identified contamination.

Utility Infrastructure Appraisal

4.40. National Grid has confirmed that there is sufficient capacity on its network to serve all phases of the proposed development, via a medium pressure main in proximity to the Site.

4.41. Western Power Distribution has confirmed that there is sufficient capacity in their electricity network to provide a significant proportion of the required supply for the development's initial phase of 600 houses and sufficient time to plan for subsequent phases which would require additional provision.

4.42. Severn Trent have confirmed that there is sufficient capacity within their potable water network to provide a supply to an estimated 1,000 dwellings. To supply the remaining development, STW have identified that reinforcing work will be required and have provided a cost estimate for this. A Water Cycle Strategy would be undertaken to balance the water demand and supply coupled with any water company assessments.

4.43. Severn Trent Water have confirmed that they believe the culverted watercourse within the Site should provide sufficient for all surface water discharge from the development. Discharge to the watercourse will require an agreement with the appropriate authority.

4.44. Severn Trent Water have stated that, due to the potential scale of development, a Sewer Capacity Assessment will be required to determine the impact that development will have on the area's existing foul network. The time frame for completion of a Sewer Capacity Assessment is 6 – 11 working weeks. Results from this modelling will advise as to whether foul sewer reinforcing will be required.

4.45. From the responses received, there is no reason to suggest that the proposed development, both in terms of the first phase of 600 houses and the fuller development of 1,600 houses, should not be allocated from a

utilities' perspective. Each received response from statutory consultees has indicated that utility capacity can be supplied by either existing infrastructure or through reinforcing local infrastructure.

Heritage Assessment

4.46. The Heritage Assessment sets out a heritage led strategy associated with the redevelopment of the Site based on the significance of the associated structures and buildings. It also demonstrates how the heritage potential of the Site can be unlocked as part of the redevelopment plans.

4.47. The key heritage issues in the development of the Site are the impact on the significance (including any contribution made by their setting) of the designated and non-designated heritage assets. These are:

- Designated heritage asset

4.48. National Shell Filling Factory Memorial – Listed as Grade II

4.49. Non-designated heritage assets

- Building 101 – Woodside House (Officers' Mess)
- Building 125
- Building 137- former Red Cross Nurses' Building
- Building 157 – large warehouse (former Filled Shell Store).

4.50. The impending vacation of the Site provides an opportunity for redevelopment that is steered by a design rationale that acknowledges and documents its significance, whilst also enhancing its character through high quality design. Furthermore, the location and subsequent redevelopment will open a locally important site to members of the public for the first time, providing opportunities for public engagement and dissemination of a shared understanding.

4.51. The most important structure located within the Site is the designated War Memorial, which should be retained as part of the redevelopment and its setting preserved or, where possible, enhanced. Redevelopment of the Site should seek to ensure that the Memorial is accessible and is visible from key routes through the Site, better revealing its significance. In order to achieve this, new development should seek to maintain the current extent of the Memorial Park.

4.52. Redevelopment of the Site offers the opportunity to enhance the appreciation of any retained non-designated heritage assets. Inevitably, these buildings will prove complex and difficult for conversion, especially when addressing the current position and configuration of the buildings of interest, within any redevelopment scheme.

4.53. There will be a presumption in favour of retaining the non-designated heritage assets, due to their historic and architectural interest and any demolition will require justification of the loss. This does not preclude loss, but does require justification to be made. This specifically relates to Building 157, which due to its extensive footprint would limit its reuse and hamper the ability to maximise the potential development of the Site.

4.54. The redevelopment of the Site offers the opportunity to provide a scheme which makes a more efficient use of the Site through high quality design and increased density – realising the potential of the Site – and achieving the maximum return for the public purse as well as making the best possible use of

the Site. There will, inevitably, be a balancing effect of the loss of any non-designated heritage assets against the wider planning and heritage benefits which would be delivered, which will need to be identified as part of the planning process.

5. Vision for Development

5.1. PRP has produced a Vision for Development - a development concept for the Site. It provides an informed basis for future public consultation on the extent and type of the site, and the supporting infrastructure, and its principal elements can be used to engage with the newly formed Neighbourhood Forum. This document forms **Annex No. 9**.

5.2. The production of this document has been an iterative process. It has taken into account preliminary advice on both market and technical considerations referred to in the two previous sections and then refined the Vision for Development as more detailed and prescriptive advice on the Site's constraints and potential mitigation measures have been received from the technical team. This process will continue as the Vision for Development, and the technical advice that underpins it, is exposed to critical assessment by statutory consultees, consultation to a wider audience, and engagement with the Neighbourhood Forum.

5.3. The Vision for Development provides a site and context analysis as its basis. This takes into account the following:

- Area connectivity
- Local designations
- Site history
- Built heritage and designations
- Area character
- Current contextual urban grain
- Local land uses
- Built form and height
- Landscape and biodiversity
- Trees
- Open spaces
- Topography
- Hydrology
- Visibility and visual impact
- Pedestrian and cycle movement
- Public transport
- Vehicular access.

5.4. It then assesses the principal site constraints and wider and site opportunities. The former is mapped out on a Site Constraints Plan and this is provided in **Appendix 3** for ease of reference.

5.5. The latter refers to:-

- Proposed HS2 station at Toton
- Green infrastructure links to wider area
- Retention of heritage buildings and features on Site
- New access routes across the Site to stitch the Site into its surrounding settlement
- Accessibility to all sustainable modes of transport
- New green corridors across the Site creating ecological connections for local wildlife
- Sustainable drainage
- A new local centre providing retail and employment.

5.6. PRP have provided a vision for the Site's development. It is:

"Chetwynd Barracks will be a vibrant new neighbourhood that provides a sustainable mix of housing, retail, employment and leisure opportunities for the local community. By maintaining and enhancing the Site's military heritage, a unique and characterful settlement will help to reconnect Chilwell and Toton. While heritage is at the core of the design, green corridors and public open spaces throughout the development will also deliver amenity and biodiversity benefits for people and wildlife alike."

5.7. It refers also to a number of development concepts to deliver this vision. These are:-

- Capitalise upon rich military heritage
- Maintain and enhance existing trees and woodlands
- Consolidate the green network
- Sustainable drainage network
- Creating new access points and connections
- A new local centre and community hub for existing and new communities.

5.8. The Proposed Development Concept Plan is detailed in Section 4 of the Vision for Development. A copy is provided is **Appendix 4**. The resulting land use budget is summarised below in Table 1:

Table 1 - Development Concept Plan Land Use Budget

	Area (Hectares)	Area as a % of Total
Green Infrastructure and Public Open Space	32.6	43.4
Primary Road Infrastructure	4.9	6.5
Retained Buildings	0.1	0.1
School	0.9	1.2
Local Centre	2.7	3.6

New Residential Area	34.1	45.3
Total	75.3	100

5.9. Well over two fifths of the site will be retained or created as public open space. This will include parks and gardens, natural/semi natural landscape, outdoor play and amenity. Particular features are the retention of Hobgoblin Wood, the playing field in the south east corner of the site and the parkland area that creates a natural setting for the Grade II Listed National Shell Filling Factory Memorial.

5.10. In order to achieve a coherent and integrated Development Concept, the new development may not necessarily meet all the recommended standards set by Broxtowe Borough Council for the maximum distances that any household should be from each typology of green space. However, the new development will provide a significant increase in amenity and leisure facilities within a comfortable walking distance of both new and existing communities and exceed significantly the Fields in Trust guidance.

5.11. The significant quantum of amenity space provided in numerous locations across the Site can also be used flexibly by a range of uses and local wildlife. Furthermore, by reconnecting green spaces to the wider area through new spaces and landscape features, the development will bring forward important green infrastructure benefits. The spirit of the Council's Green Infrastructure and Green Space Strategy has therefore been met by the master plan.

5.12. A key feature of the Development Concept is improving connections to sustainable transport routes. This covers all forms of transport, including bus and tram networks, and looks to open up the Site to the north, east and west as well as the current access from the south. In addition, thought has been given to future access through the military housing controlled by Annington Homes if this land becomes available.

5.13. The development will have a strong community focus. This will be represented by a local centre, which will include the retail and employment elements of the development, the health centre, and be the focus for more densely developed residential accommodation.

5.14. In addition, the proposed Development Concept Plan places a primary school and a community centre in the eastern part of the site. These two elements could form part of a potential memorial square to help formalise the setting of the National Shell Filling Factory Memorial.

5.15. Heritage is a key driver to the Development Concept Plan. The scheme currently proposes the retention of four buildings (Woodside House, Red Cross Nurses' Building, Building No. 125 and the Williams Barracks/Former Press House) all to be converted either for residential or community uses, two tunnels, the National Shell Filling Factory Memorial, and its associated gardens. The layout of new development blocks adjacent to retained buildings could maximise the value of their façades and the memory of Building No. 157 could be retained through new built form on the footprint of this building.

5.16. A range of densities have been employed over the residential development area. These range from very low density at the northernmost end of the Site (20 dwellings per developable hectare), to low density in the western, northern and eastern parts of the Site (35 dwellings per developable hectare), to medium

density towards the centre of the site (45 dwellings per developable hectare), to high density in the local centre (up to 80 dwellings per developable hectare).

5.17. The current master plan identifies capacity for 1,264 houses and 252 flats, giving a total of 1,516 dwellings. These yield an average site density of 39 dwellings per developable hectare (excluding green infrastructure and primary roads).

5.18. The Development Concept Plan also addresses phasing. The first phase could cover the western area of the Site. This takes in the least operationally busy part of the Site and would create a strong connection between the adjacent settlement of Toton and the new development. It can be accessed from both Stapleford Lane and Swiney Way. A Phase 1 Development Concept Plan is provided in **Appendix 5**.

5.19. The first phase has a gross development area of 25.5 hectares. Once total infrastructure (3.08 hectares) and landscape, woodland and SUDS (7.18 hectares) has been allowed for, there will be a net developable area of 15.2 hectares. At a low to medium density (of 34.3 dwellings per developable hectare) the first phase has a capacity of up to 522 dwellings. This will include the first phase of the local centre.

5.20. As referred to in Section 2, the desired approach has been informed by a number of stakeholders. This has included the OPUN workshop held in September 2016. The new Chetwynd Barracks Development Concept Plan has responded to meet the principal actions recommended by OPUN as follows:-

- To ensure the new development recognises the importance of existing heritage assets and its historic character
- To provide a robust vision of how the Site will form part of a wider master plan for Toton and to maximise opportunities to connect to new public transport infrastructure
- To ensure the development does not become an isolated or car dependent suburb
- Protect and enhance important existing landscape features, as well as identifying additional green routes
- To establish an integrated approach with SUDS as accessible, attractive features that contribute to place making and the maintenance of these features
- To pursue a community hub that combines the local centre with the primary school which is conveniently located for new and existing residents.

5.21. The next stage will be to consult publicly and engage fully with the Neighbourhood Forum and other interest groups. This will lead to production of a master plan for the Site's development on a comprehensive basis.

Appendix 1 – Site Plan

CHILWELL STATION

CTWY

Defence Infrastructure Organisation

ESTABLISHMENT RED LINE PLAN

NOTTINGHAM

CTWY

Site Area - 75.45ha

SFA sites

Scale 1:6,000

IMPORTANT NOTE ABOUT SCALE

The scale ratio stated is accurate when reproduced at A3 size by Geospatial Services. Any other reproduction by conventional or electronic means, e.g. printing from a PDF, may alter the scale of the map. Please check the dimensions of the grid to confirm any change in scale before taking measurements.

PRODUCTION REFERENCE

PLEASE ENSURE THAT THE MAP REFERENCE AND VERSION NUMBER ARE QUOTED IN ALL WRITTEN & VERBAL CORRESPONDENCE

Map reference:
Transactional\2016\20160229_5106
UK red line boundary plans v1

Version Number:
1

Production Date:
01.03.2016

Drawn By:
JL

Checked By:

GEOSPATIAL SERVICES

[redacted]

E-MAIL: DIO Data-Geo Svcs@mod.uk

Appendix 2 – Technical Note by PBA on Transport and Movement

TECHNICAL NOTE

Job Name: Chetwynd Barracks

Job No: 37782

Note No: TN001

Date: 2 November 2017

Prepared By: Marc Rennie

Subject: **Transport & Movement**

Item	Subject
1.	Plan period (2021-2028) The infrastructure required to deliver 600 dwellings during the plan period is minimal. The existing access to the Site off Swiney Way, for pedestrians, cycles and vehicles, is already established and it is envisaged that access to this phase could also be achieved via a new access off the B6003 Stapleford Lane, connecting through the western edge of the Site boundary via the emergency access gate. This new access arrangement could take the form of a signalised crossroads with the B6003 Stapleford Lane and Woodstock Road and would supersede the measures proposed in the Stapleford Lane Improvement Strategy that accompanied the planning application for development on Land to the West of Toton Lane; a scheme that has conditional permission. The Stapleford Lane Improvement Strategy included: • The provision of a puffin crossing on Stapleford Lane to improve pedestrian safety and also provide breaks in traffic flow to aid vehicular access to priority junctions. • A central hatched area to provide the opportunity for some right turning vehicles to wait off-line. • An increase in footway width to allow for better crossing provision. One of the key benefits of an access at this location is that it would enable development traffic travelling north to bypass the Banks Road/Swiney Way/Stapleford Lane junction, thereby reducing pressure on the junction. A more permeable road network is created as a result, providing greater opportunities to positively manage the busy traffic flows in the area. Opening up an access at this location would also enable safe and secure crossing provision for pedestrians and cyclists, improve the local area through the creation of improved pedestrian links along key routes adjacent to schools and for future connectivity with the proposed East Midlands HS2 Growth Hub. The new junction

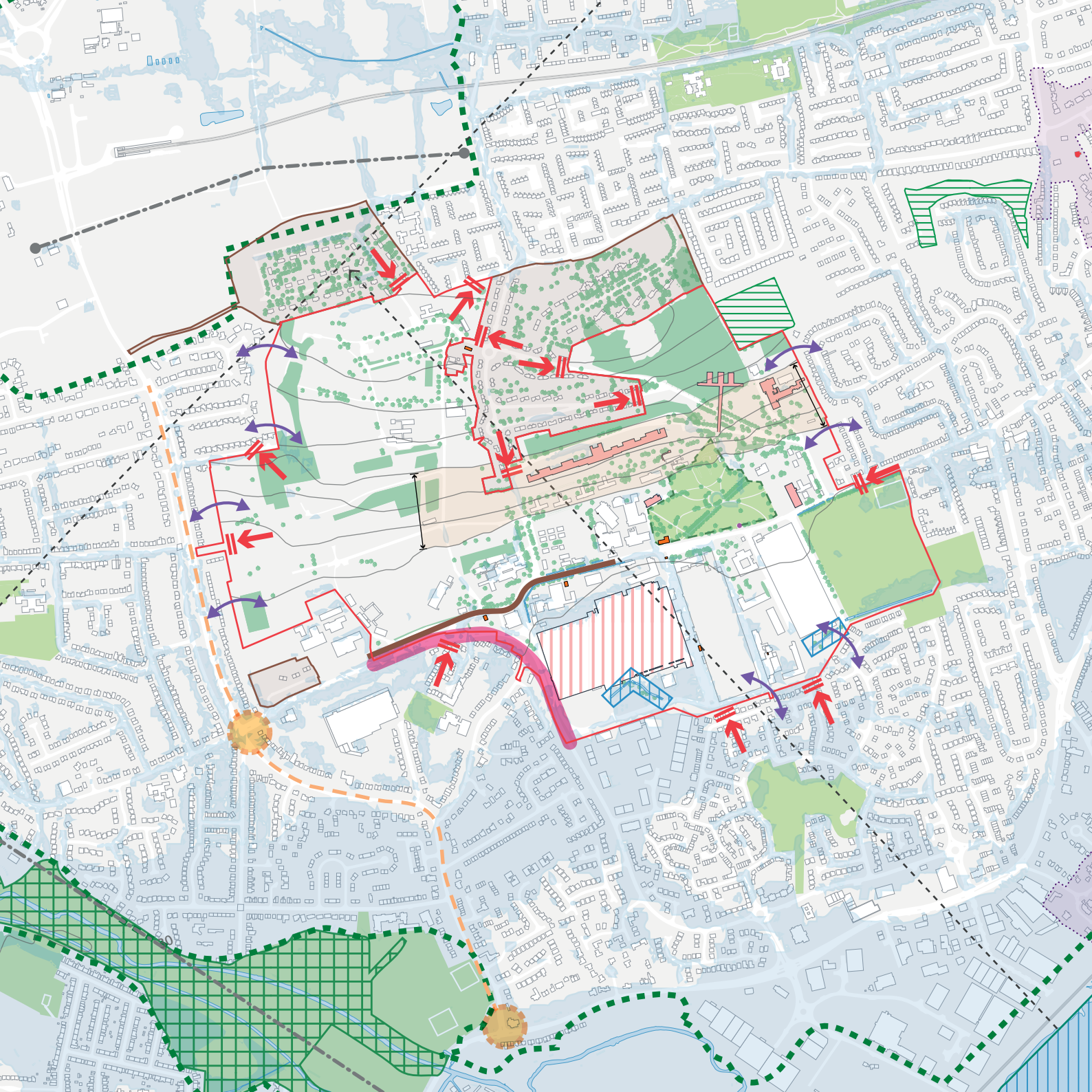
DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
37782/5501/TN001	-	16.10.17	MR	MR	MR	TA
37782/5501/TN001	A	1.11.17	MR	MR	MR	TA
37782/5501/TN001	B	2.11.17	MR	MR	MR	TA

Peter Brett Associates LLP Waterloo House Victoria Square Birmingham B2 5TB

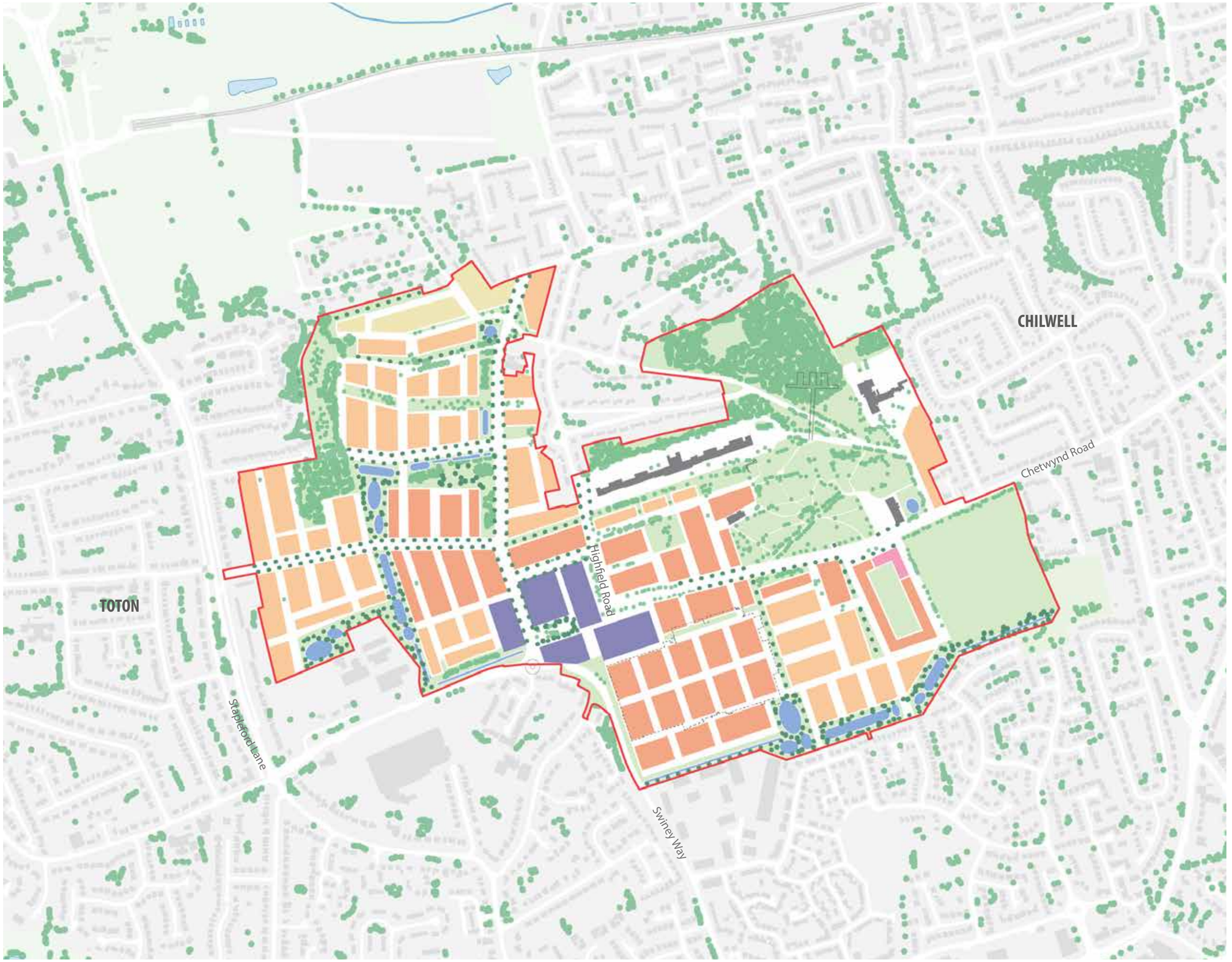
Item	Subject
	arrangement could also facilitate access to bus route 510 that operates along the B6003 Stapleford Lane. Routes would not be diverted with the scale of development proposed during the plan period, unless the operator would want to do so. As the Site becomes established, the feasibility of providing additional routes through the Site and to other points of access around the Site boundary would be investigated; further maximising the options for connectivity and enhancing the sustainability credentials of the Site. Furthermore, in the initial phases, the vehicle trips generated by development of the Site should be offset by the current trip generation of Chetwynd Barracks. This "netting off" of trips against those that pre-exist will provide a net level of change that represents a more realistic indication of the trips that will arise as a result of development of the Site.
2.	Post 2028 Strategy As the development capacity of the Site increases Post 2028, additional north/south and east/west routes through the Site could be provided to other points of access around the Site boundary, e.g. via Airedale Court; further maximising the options for connectivity and enhancing the sustainability credentials of the Site. As the Site becomes established, there will be an opportunity for internal linkage of the principal accesses (for all modes) to provide through routing and permeability. Following discussions with the highway authority, a bus gate could be located in the eastern part of the Site for vehicles accessing via Chetwynd Road. This route has the potential to be utilised by redirected 510, Indigo, Orange, Skylink and Y5 bus routes. The Site will then begin to be stitched into the fabric of the existing settlement with a number of east/west and north/south bus, pedestrian and cycle connections being made. The concept masterplan also facilitates the potential future use of the land immediately to the north of the Site, in order to maximise the potential for north/south pedestrian and cycle movements, should this land be made available in the future. Significant trip internalisation is also likely to occur as the demand for services is met on Site. This will also likely result in a shift towards travel by more sustainable modes as the need to travel outside of the Site is reduced, particularly given the proposed exposure to improved and well-connected public transport, pedestrian and cycle provision. Therefore, it would be counterproductive to over provide on highways infrastructure. As the scheme progresses post 2028, and the number of access options and opportunities for travel by alternative modes increases, a reduction in the rate of vehicle trips generated per dwelling could be anticipated in this case, based on the scale of development and infrastructure provided to support it. Although the Site should be substantially, or completely, constructed by the time the HS2 station opens in 2032, it is important to note that the East Midlands HS2 Growth Hub DIF Study includes Chetwynd Barracks in its projections for future growth and development in the area and, therefore, there is a real opportunity for the Site to tie-in with the holistic approach taken to delivering a well-connected area.

Appendix 3 – Site Constraints Plan



Appendix 4 – Proposed Development Concept Plan

NORTH



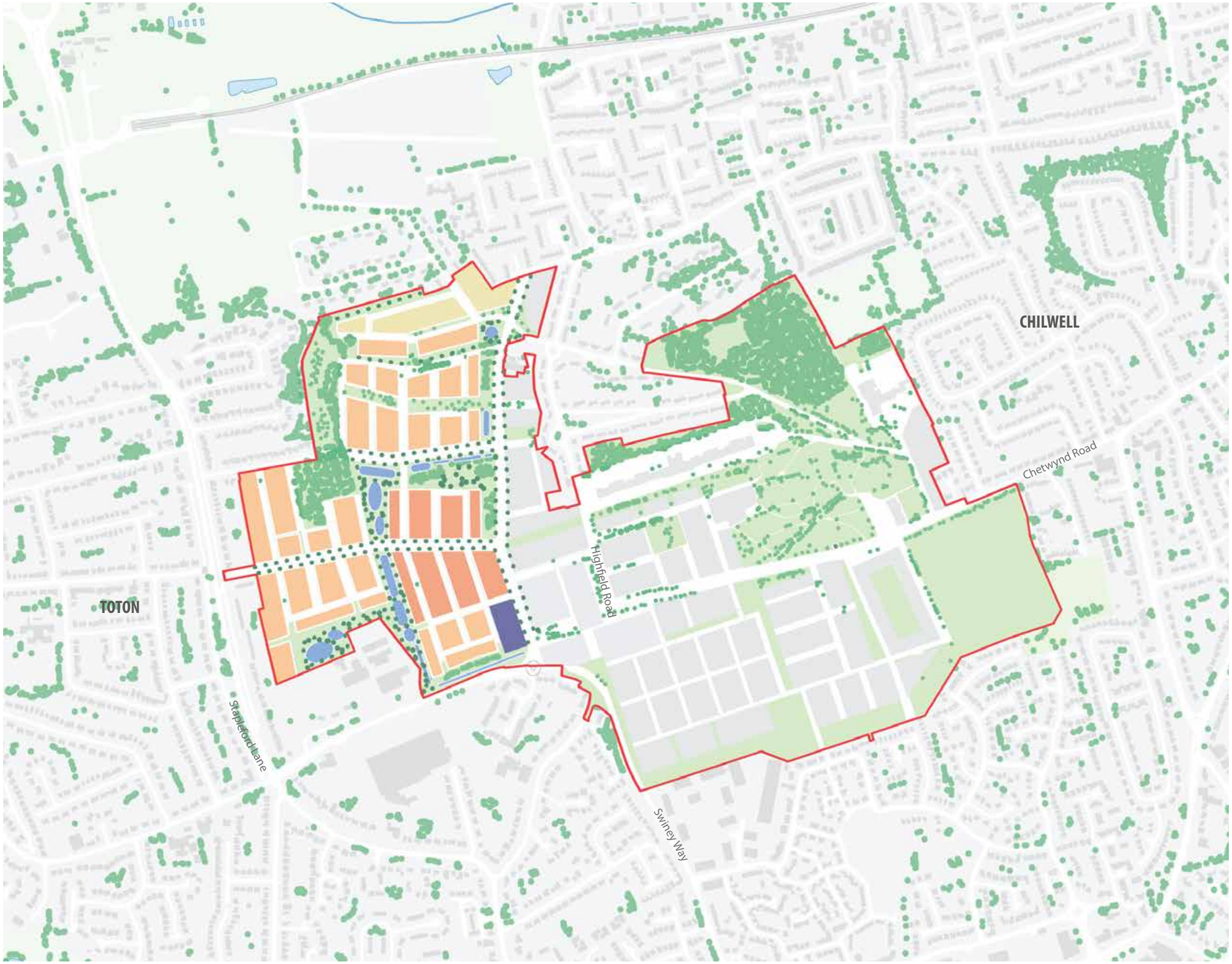
Key

- Site boundary
- Medium density area (45 dw/ha)
- Low density area (35 dw/ha)
- Very low density area (20 dw/ha)
- Local centre
- Primary school
- Retained heritage buildings, tunnels and monuments
- Memory of heritage building retained
- Existing trees/woodland
- Proposed new trees/other planting
- Public open spaces
- Proposed attenuation ponds and drainage channels

Proposed development concept plan for Chetwynd Barracks

Appendix 5 - Phase 1 Development Concept Plan

NORTH



Key

- Site boundary
- Medium density area (45 dw/ha)
- Low density area (35 dw/ha)
- Very low density area (20 dw/ha)
- Local centre
- Existing trees/woodland
- Proposed new trees/other planting
- Public open spaces
- Proposed attenuation ponds and drainage channels

Potential phase 1 area development concept plan for Chetwynd Barracks

Annexes – Not incorporated but forming separate documents

JLL

[redacted]

Peter Leaver
Director

[redacted]

About JLL

JLL (NYSE: JLL) is a leading professional services firm that specializes in real estate and investment management. AFortune 500 company, JLL helps real estate owners, occupiers and investors achieve their business ambitions. In 2016, JLL had revenue of $6.8 billion and fee revenue of $5.8 billion and, on behalf of clients, managed 4.4 billion square feet, or 409 million square meters, and completed sales acquisitions and finance transactions of approximately $136 billion. At year-end 2016, JLL had nearly 300 corporate off ices, operations in over 80 countries and a global workforce of more than 77,000. As of December 31, 2016, LaSalle Investment Management has $60.1 billion of real estate under asset management. JLL is the brand name, and a registered trademark, of Jones Lang LaSalle Incorporated.

About JLL Research

JLL's research team delivers intelligence, analysis and insight through market-leading reports and services that illuminate today's commercial real estate dynamics and identify tomorrow's challenges and opportunities. Our more than 400 global research professionals track and analyze economic and property trends and forecast future conditions in over 60 countries, producing unrivalled local and global perspectives. Our research and expertise, fueled by real-time information and innovative thinking around the world, creates a competitive advantage for our clients and drives successful strategies and optimal real estate decisions.

www.jll.com

Jones Lang LaSalle

Featherstones

PLANNING ▪ DESIGN ▪ DEVELOPMENT

BROXTOWE LOCAL PLAN PART 2: PUBLICATION VERSION

Representations by FEATHERSTONES

on behalf of Mrs D Viitanen

October 2017

1. These representations have been prepared on behalf of Mrs D Viitanen who has land interest in the site at Gilt Hill Farm, Kimberley (see attached Plan). Mrs Viitanen has serious concerns about the soundness of the Plan, particularly in relation to the approach to housing delivery. These concerns are set out below.

2. As presented the Broxtowe Plan is unsound because it fails to demonstrate how delivery of allocated sites will be guaranteed; it fails to incorporate sufficient flexibility to respond to any failure of delivery and it fails to provide a mechanism for the release of developable 'reserve sites' equivalent to 20% of the total housing requirement (as recommended by the Local Plans Expert Group in its Report to Government of March 2016).

3. Additional housing sites, therefore, need to be identified in order to meet the NPPF's requirement to ensure the delivery of the minimum housing provision and also to ensure that there is an appropriate 5 year land supply in accordance with paragraph 47 of the Framework.

4. Policy 2 of the Plan fails the challenge of housing supply. Table 4 confirms a significant housing supply short fall and a persistent history of under delivery.

5. There is demonstrably no certainty of future housing delivery.

6. The Plan relies on housing sites which have been allocated in previous Plans for up to (and beyond) 15 years. There are clearly strong reasons why these sites have not come forward. Sites include:

    - Beeston Maltings
    - Land at Awsworth with planning permission
    - Land at Eastwood with planning permission
    - Walker Street, Eastwood
    - Eastwood Road, Kimberley (x2).

    Each of these sites were allocated in the 2004 Plan.

    In addition, the allocation at Kimberley Depot is a refuse depot and tip, where inherent contamination could preclude or limit development.

7. Uncertainty of housing delivery also exists at strategic sites:

    - Boots
    - Severn Trent Sewage Treatment Works (contamination)
    - Chetwynd Barracks (no commitment to land release)
    - Toton/HS2 Hub (confused aspirations)

8. There are a range of sites and locations where additional, sustainable development can take place. Land at Gilt Hill Farm, Gilt Hill, Kimberley (identified on the Plan attached) is well related to the Kimberley Urban area, including local shops, employment and schools. It sits on

the edge of the settlement where there is no gap to distinguish it visually, physically or functionally from the urban area.

9. Releasing the site from the Green Belt and allocating it for housing development will provide the opportunity to improve the visual appearance of the site by replacing buildings in a poor condition with attractive and sustainable new buildings. It would remove a use that is non-conforming with adjacent residential and education land uses and provides an opportunity to introduce high quality landscaping and biodiversity features to ensure that the openness of the Green Belt is safeguarded. Crucially, the site is deliverable within the next five years so will help to off-set slow delivery on other sites, address immediate land supply issues and provide the certainty of delivery necessary to make the Plan sound.

Site Location Plan

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	Mrs D Viitanen

Your Details

Title	Mr Mrs Miss Ms Other:
Name	[redacted]
Organisation (if responding on behalf of the organisation)	Featherstones
Address	[redacted]
Postcode	[redacted]
Tel. Number	[redacted]
E-mail address	[redacted]

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: [redacted]

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	Policy 1: Flood Risk		
	Policy 2: Site Allocations		Policy 2
	Policy 3: Main Built up Area Site Allocations		Policy 3
	Policy 4: Awsworth Site Allocation		Policy 4
	Policy 5: Brinsley Site Allocation		Policy 5
	Policy 6: Eastwood Site Allocation		Policy 6
	Policy 7: Kimberley Site Allocations		Policy 7
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)	Yes, exclusion of sites.		

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant		
2.2	Compliant with the duty to co-operate		
2.3	Sound		√

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	√
It is not effective	√
It is not positively prepared	√
It is not consistent with national policy	√

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.
See attached Statement

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

See attached Statement

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary

We wish to participate at public examination to explore fully the concerns we have with the soundness of the Plan.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

Featherstones

PLANNING ▪ DESIGN ▪ DEVELOPMENT

BROXTOWE LOCAL PLAN PART 2: PUBLICATION VERSION

Representations by FEATHERSTONES

on behalf of Mrs M Barnes

October 2017

1. These representations have been prepared on behalf of Mrs M Barnes who has land interest in the site at Land off Back Lane, Nuthall (see attached Plan). Mrs Barnes has serious concerns about the soundness of the Plan, particularly in relation to the approach to housing delivery. These concerns are set out below.

2. As presented the Broxtowe Plan is unsound because it fails to demonstrate how delivery of allocated sites will be guaranteed; it fails to incorporate sufficient flexibility to respond to any failure of delivery and it fails to provide a mechanism for the release of developable 'reserve sites' equivalent to 20% of the total housing requirement (as recommended by the Local Plans Expert Group in its Report to Government of March 2016).

3. Additional housing sites, therefore, need to be identified in order to meet the NPPF's requirement to ensure the delivery of the minimum housing provision and also to ensure that there is an appropriate 5 year land supply in accordance with paragraph 47 of the Framework.

4. Policy 2 of the Plan fails the challenge of housing supply. Table 4 confirms a significant housing supply short fall and a persistent history of under delivery.

5. There is demonstrably no certainty of future housing delivery.

6. The Plan relies on housing sites which have been allocated in previous Plans for up to (and beyond) 15 years. There are clearly strong reasons why these sites have not come forward. Sites include:

    - Beeston Maltings
    - Land at Awsworth with planning permission
    - Land at Eastwood with planning permission
    - Walker Street, Eastwood
    - Eastwood Road, Kimberley (x2).

    Each of these sites were allocated in the 2004 Plan.

    In addition, the allocation at Kimberley Depot is a refuse depot and tip, where inherent contamination could preclude or limit development.

7. Uncertainty of housing delivery also exists at strategic sites:

    - Boots
    - Severn Trent Sewage Treatment Works (contamination)
    - Chetwynd Barracks (no commitment to land release)
    - Toton/HS2 Hub (confused aspirations)

8. There are a range of sites and locations where additional, sustainable development can take place. Land off Back Lane, Nuthall (identified on the Site Plan attached) is currently used for equestrian purposes with stables, livery and associated activity together with residential property. The site is within the defined Green Belt, however this designation no longer

satisfies the purpose or function of Green Belt land as defined within Paragraph 80 of the NPPF.

9. The removal of the Back Lane site from the Green Belt would facilitate the redevelopment of the site for up to 40 new dwellings as well as delivering improved screening and buffering from the M1 motorway to the wider benefit of existing residents.

10. Housing development on this site would assist in providing additional flexibility regarding the delivery of new housing in the Borough, helping to off-set slow delivery rates on other sites. The site is in single ownership where the intention is to progress towards a planning application as soon as possible and to bring the site to the housing market at the earliest opportunity.

Site Location Plan – Land off Back Lane, Nuthall

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	Mrs Marjorie Barnes

Your Details

Title	Mr Mrs Miss Ms Other:
Name	[redacted]
Organisation (if responding on behalf of the organisation)	Featherstones
Address	[redacted]
Postcode	[redacted]
Tel. Number	[redacted]
E-mail address	[redacted]

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: [redacted]

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	Policy 1: Flood Risk		
	Policy 2: Site Allocations		Policy 2
	Policy 3: Main Built up Area Site Allocations		Policy 3
	Policy 4: Awsworth Site Allocation		Policy 4
	Policy 5: Brinsley Site Allocation		Policy 5
	Policy 6: Eastwood Site Allocation		Policy 6
	Policy 7: Kimberley Site Allocations		Policy 7
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)	Yes, exclusion of sites.		

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant		
2.2	Compliant with the duty to co-operate		
2.3	Sound		√

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	√
It is not effective	√
It is not positively prepared	√
It is not consistent with national policy	√

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.
See attached Statement

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

See attached Statement

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary

We wish to participate at public examination to explore fully the concerns we have with the soundness of the Plan.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

BROXTOWE LOCAL PLAN PART 2: PUBLICATION VERSION
Representations by FEATHERSTONES on behalf of RICHARD TAYLOR

1. This submission is made on behalf of Richard Taylor, who is the owner of land identified on the attached plan 1. Part of that land (plan 2) we contend, is suitable for housing development.

2. As presented the Broxtowe Plan is unsound because it fails to demonstrate how delivery of allocated sites will be guaranteed; it fails to incorporate sufficient flexibility to respond to any failure of delivery and it fails to provide a mechanism for the release of developable 'reserve sites' equivalent to 20% of the total housing requirement (as recommended by the Local Plans Expert Group in its Report to Government of March 2016).

3. Additional housing sites, therefore, need to be identified in order to meet the NPPF's requirement to ensure the delivery of the minimum housing provision and to ensure that there is an appropriate 5 year land supply in accordance with paragraph 47 of the Framework.

4. Policy 2 of the Plan fails the challenge of housing supply. Table 4 confirms a significant housing supply short fall and a persistent history of under delivery.

5. There is demonstrably no certainty of future housing delivery.

6. The Plan relies on housing sites which have been allocated in previous Plans for up to (and beyond) 15 years. There are clearly strong reasons why these sites have not come forward. Sites include:

    - Beeston Maltings
    - Land at Awsworth with planning permission
    - Land at Eastwood with planning permission
    - Walker Street, Eastwood
    - Eastwood Road, Kimberley (x2).

    Each of these sites were allocated in the 2004 Plan.

    In addition, the allocation at Kimberley Depot is a refuse depot and tip, where inherent contamination could preclude or limit development.

7. Uncertainty of housing delivery also exists at strategic sites:

    - Boots
    - Severn Trent Sewage Treatment Works (contamination)
    - Chetwynd Barracks (no commitment to land release)
    - Toton/HS2 Hub (confused aspirations)

8. In order to help to minimise the (likely) continued non-delivery of sites for housing, additional land should be identified (for housing) in the plan; specifically, land at Stapleford, as identified on plan 2. Four parcels of land here could be developed for housing without adversely impacting on land important to the visual significance of Windmill Hill (part of the Bramcote Ridge). Similarly, the role of that Ridge as a public footpath would not be threatened, long distance views would be maintained, landscaping would be enhanced and properly managed.

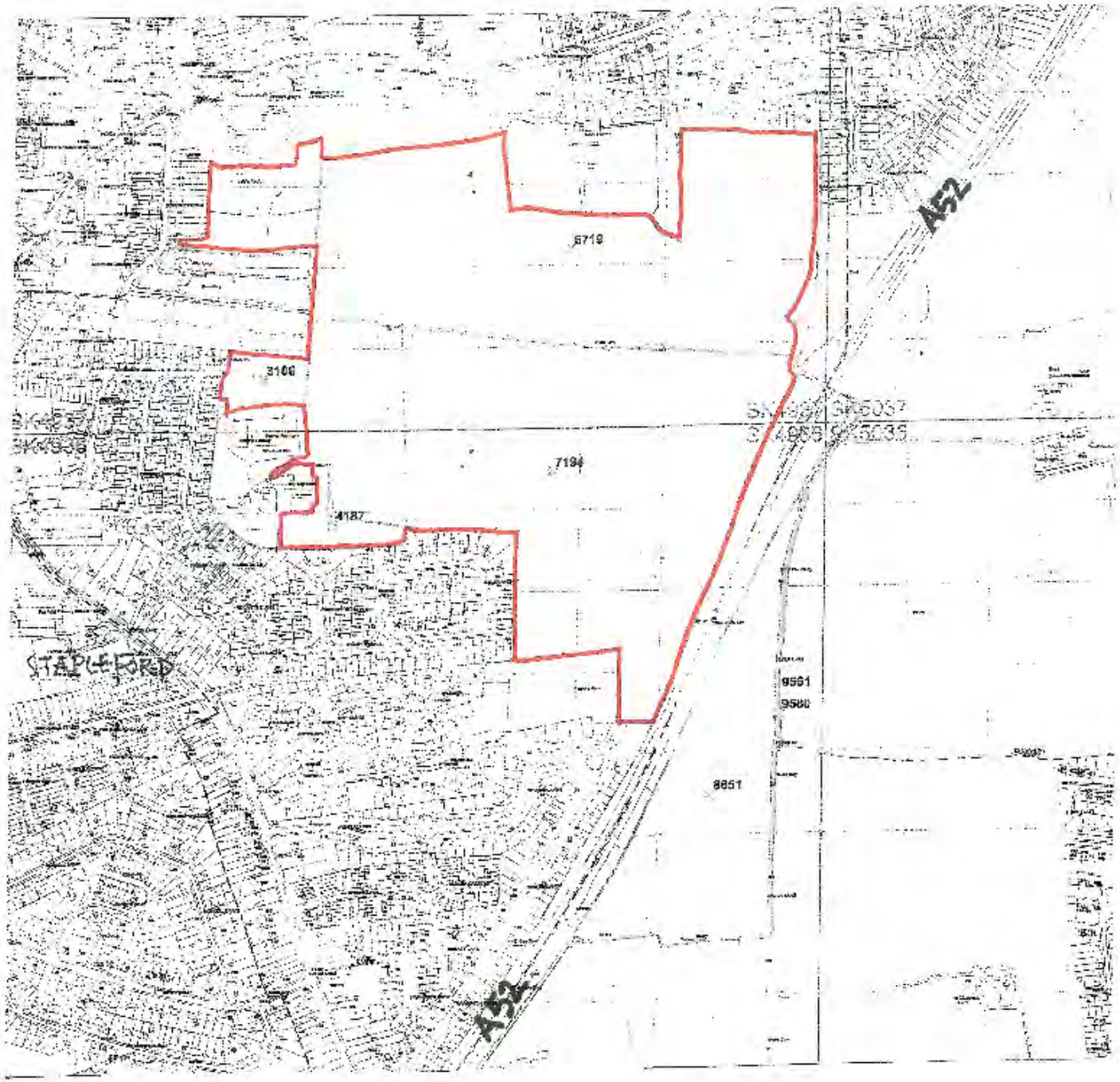
9. In turn, the four parcels could accommodate:

    - Sisley Avenue - 80 dwellings
    - Baulk Lane - 75 dwellings

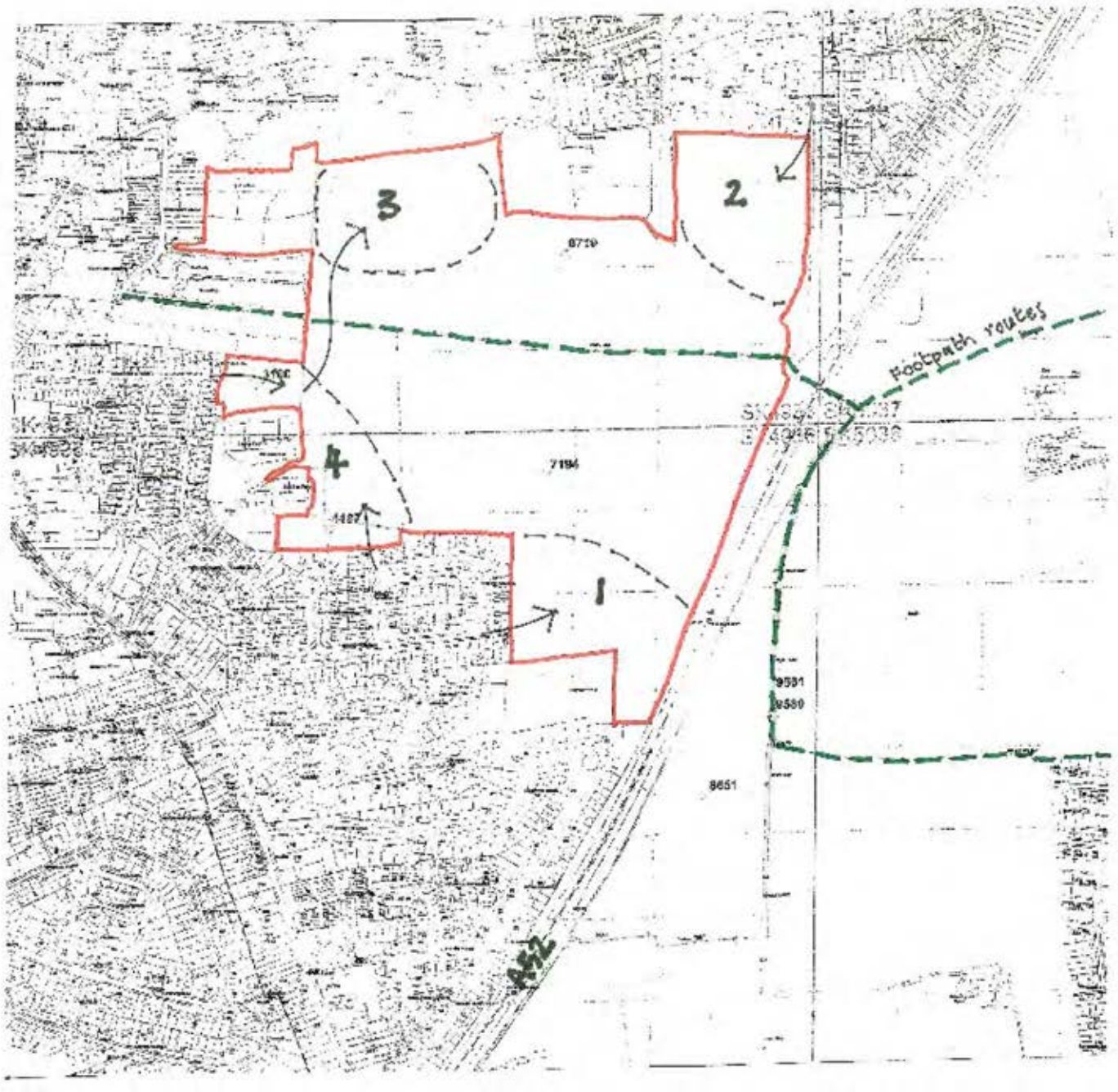
- North West Hill Top - 80 dwellings
- Hill Top Farm - 30 dwellings

10. Consequently, it is estimated that (about) 265 new dwellings could be delivered on the site. This would be in a manner which would acknowledge, respect and enhance the context and the wider environment.

11. The land is in one ownership. There are no technical, access or commercial impediments to immediate delivery and the allocation would help the Plan to achieve soundness.



PLAN 1
OWNERSHIP



PLAN 2
OPPORTUNITY

1. SISLEY AVENUE
2. BAULK LANE
3. NORTH WEST HILL TOP
4. HILL TOP FARM

LOCATION


M1
DFB Sound & Light Warehouse Ltd.
Seven Oaks Road
Fitness Solutions
Golf Club Road
Quarry Hill
Erewash Valley Golf Club
Moorbridge Lane
Stanton Gate
Albany Infant And Nursery School
Albany Junior School
Copeland Avenue
Nottingham Road
Ilkeston Road
The Bramcote School
Bramcote Leisure Centre
A52
Stanley Drive
Park Road
Central Avenue
Derby Road
The Fireplace Studio
Maple Avenue
Elm Avenue
Beech Avenue
Church Drive
Stanton Road
Spencer Avenue
Kings Road
Dionysus Bars
Oakfield Road
The Horse And Jockey
Windsor Street
Domino's Pizza
Hollis Road
Brookhill Street
Midland Avenue
Brian Clough Way
Common Lane
Coventry Lane
Boots
Windsor Road
Holiday Inn Derby Nottingham M1
George Spencer Academy
Beeston Road
Valley Road
Field Lane

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	Richard Taylor

Your Details

Title	Mr Mrs Miss Ms Other:
Name	[redacted]
Organisation (if responding on behalf of the organisation)	Featherstones
Address	[redacted]
Postcode	[redacted]
Tel. Number	[redacted]
E-mail address	[redacted]

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: [redacted]

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	Policy 1: Flood Risk		
	Policy 2: Site Allocations		Policy 2
	Policy 3: Main Built up Area Site Allocations		Policy 3
	Policy 4: Awsworth Site Allocation		Policy 4
	Policy 5: Brinsley Site Allocation		Policy 5
	Policy 6: Eastwood Site Allocation		Policy 6
	Policy 7: Kimberley Site Allocations		Policy 7
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)	Yes, exclusion of sites.		

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant		
2.2	Compliant with the duty to co-operate		
2.3	Sound		√

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	√
It is not effective	√
It is not positively prepared	√
It is not consistent with national policy	√

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.
See attached Statement

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

See attached Statement

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary

We wish to participate at public examination to explore fully the concerns we have with the soundness of the Plan.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

BROXTOWE LOCAL PLAN PART 2: PUBLICATION VERSION

Representations by OXALIS PLANNING on behalf of W.WESTERMAN LTD

October 2017

1.1 These representations have been prepared on behalf of W. Westerman Ltd who have a number of land interests in Broxtowe. W. Westerman Ltd have serious concerns about the soundness of the Plan, particularly in relation to the approach to housing delivery. These concerns are set out below.

1.2 The NPPF requires Local Planning Authorities to plan positively to ensure the delivery of the area's 'minimum' housing requirements and to ensure that there is an appropriate 5 year land supply in accordance with paragraph 47 of the NPPF.

1.3 It is unclear from Policy 2 of the proposed Plan how the Government's requirements regarding housing delivery will be met. It can be seen from the Housing Trajectory at Table 4 of the Plan that Broxtowe has a significant housing supply shortfall and a persistent history of under delivery. Within this context it is essential that the Council are able to provide certainty regarding the delivery of housing. For the reasons set out below it is considered that the Plan fails to do this and is therefore unsound.

1.4 The need for flexibility or the identification of 'reserve sites' is not unusual but is particularly pertinent to Broxtowe because of its historical under performance, the number of sites carried forward from the 2004 Local Plan and the uncertainty regarding the key strategic sites. It is W.Westerman's view that a number of the sites proposed to be allocated by the Council will fail to be delivered and others are likely to be delayed such that the numbers assumed to be delivered will not be met. Individually a number of sites should not be counted towards delivery targets given their uncertainty. However the collective impact of so many complex and uncertain sites must also be addressed through the allocation of additional land.

1.5 In terms of strategic sites this uncertainty includes:

a. Land at Boots, which although the site has permission continues to be complex with significant delivery uncertainties.

b. Severn Trent land which is a former sewage treatment works with associated complexities of decontamination and remediation. Housing delivery on the site is therefore highly uncertain.

c. Chetwynd Barracks: A current and active Ministry of Defence site. Whilst the MOD have indicated that the site may become available for redevelopment, no firm committed dates are set out and the timing of any closure is subject to change. There remains a potential for a significant delay to the closure of the site or a cancellation. Delivery is highly uncertain therefore.

d. Toton: Whilst planning permission exists on part of this site, that permission conflicts with the vision for the site as set out in Policy 3.2. The supporting text to this Policy is confusing and ill-conceived. It is based largely on the East Midlands HS2 Growth Strategy Document published in September 2017. It includes the statement in relation to the vision for the Toton that

'It will also require higher densities than those currently subject of an extant Outline Planning Consent for the site and this will need careful consideration by Broxtowe Borough Council as the Local Planning Authority.' (Page 20).

Whilst this implies the potential for greater housing numbers in the long term it brings onto question the deliverability of the extant consent and housing delivery in the short to medium term.

1.6 In terms of other allocations or 'committed' sites:

a. Land at Beeston Maltings – Policy 3.6, has been allocated since 2004. It remains a difficult and complex site and delivery is highly uncertain.
b. Land in Awsworth includes land allocated since 2004 and although there is extant permission, delivery is not certain.
c. Two sites in Eastwood were allocated in the 2004 Local Plan and delivery remains uncertain notwithstanding extant planning permission.
d. Land at Walker Street, Eastwood – Policy 6.1. This forms part of a school and recreation facility. Aside from its individual merits as an allocation, the site has been allocated (although a different part of the overall school site) since 2004 with no development progressing. Given the status of the site and wider uncertainty regarding school places and the quality and quantity of sports and recreation space, the delivery of the site is highly uncertain.
e. Land south of Kimberley including Kimberley Depot - Policy 7.1. The site is currently a refuse depot with refuse tip. It is unclear if new facilities have been found to facilitate relocation. Notwithstanding, the site will contain areas of contamination which could preclude or limit development. Delivery on the site is therefore uncertain.
f. Land South of Eastwood Road, Kimberley – Policy 7.2. This site has been allocated since 2004. Development of the site remains complex and delivery highly uncertain.
g. Builders Yard, Eastwood Road, Kimberley – Policy 7.3. This site has been allocated since 2004. Development on the site remains uncertain.

1.7 The uncertainty in Broxtowe stems principally from the sheer number of complex sites where the level of certainty regarding delivery is extremely low. In these circumstances there is not a sufficiently reasonable prospect that the minimum housing numbers will be achieved and the Plan is therefore unsound. The circumstances in Broxtowe are the very circumstances that have led the Local Plan Experts Group to recommend the introduction of appropriate lapse rates and a 20% reserve site allowance. To adopt the Plan in its current form would perpetuate the current and historic role the planning system has played in creating a crisis in housing through the lack of delivery of new homes.

1.8 The Government recognises that more needs to be done to ensure that the right numbers of houses are built. It's White Paper – Fixing Our Broken Housing Market (February 2017) is aimed at just that. The White Paper draws on and makes reference to the work undertaken by the Local Plan Experts Group (LPEG). As well as proposing a new approach to calculating housing needs, the LPEG made recommendations as to how Local Plans should be approached not only to demonstrate a five year land supply but to ensure plans deliver over the whole plan period.

1.9 In their Report to Government (March 2016) the LPEG state that:

'there needs to be a clearer and more effective mechanism for maintaining a five year land supply, at the same time as ensuring plans consider delivery over the whole plan period and incorporate sufficient flexibility to respond to rapid change' (Paragraph 11.3).

And they recommend that plans:

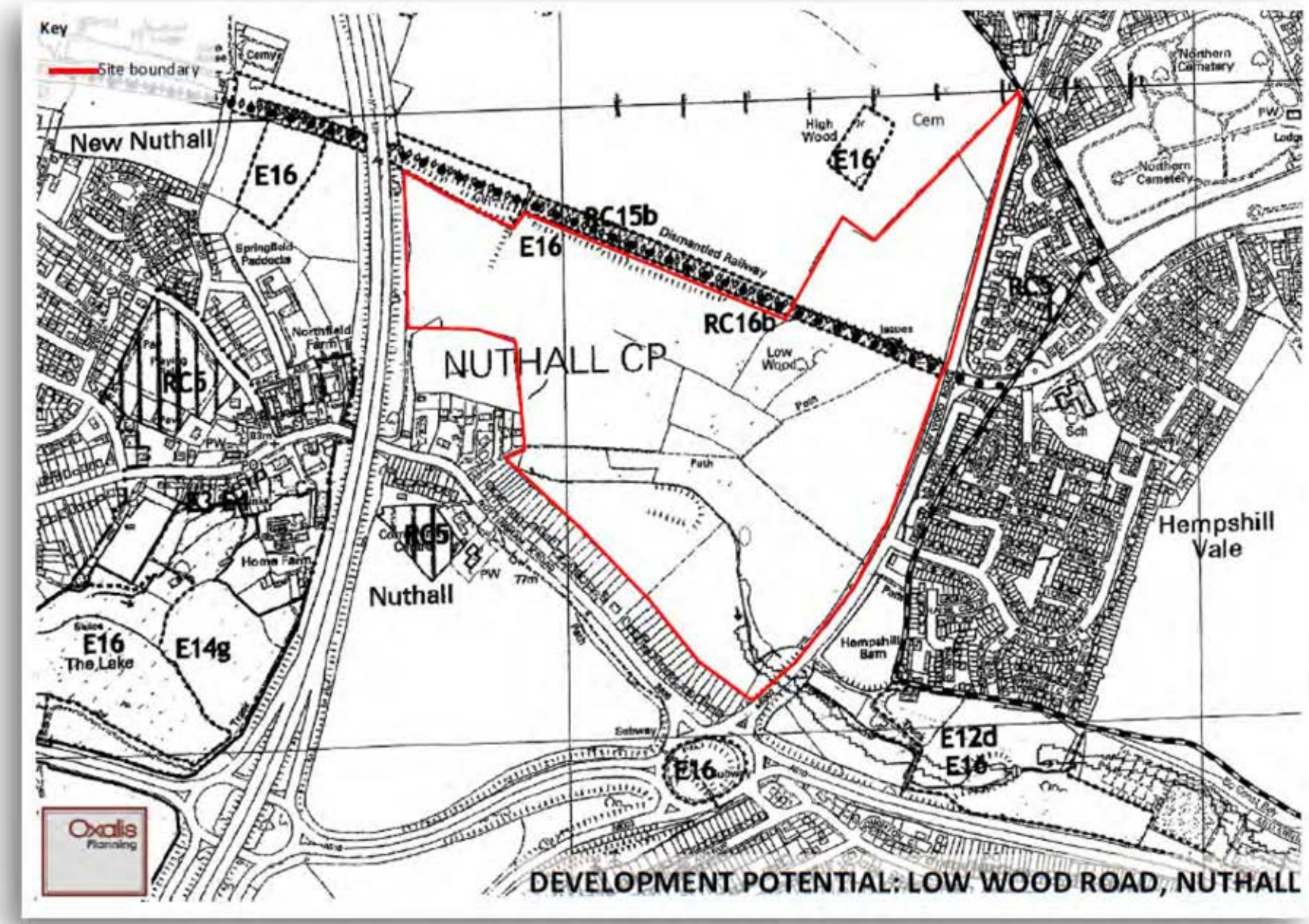
'focus on ensuring a more effective supply of developable land for the medium to long term (over the whole plan period), plus make provision for, and provide a mechanism for the release of, developable Reserve Sites equivalent to 20% of their housing requirement' (Paragraph 11.4).

1.10 Because of its existing delivery problems, the scale of its shortfall and the uncertainties regarding delivery in the future, it is important that this 'sufficient Flexibility' is adopted by Broxtowe in its Local Plan Part 2. The Local Plan must be flexible enough to guarantee the delivery of the minimum number of new homes in the Plan period.

1.11 In simple terms this means planning for more houses so that there is sufficient flexibility now, to take account of inevitable delays to delivery on some sites and lapsed permission or non-implementation on others.

1.12 Furthermore in terms of a 5 year land supply the Plan does not set out how an appropriate land supply should be calculated and how this will then be met by the Plan. It is essential that the Plan, or supporting evidence, contains appropriate information to confirm that the Plan provides a 5 year land supply calculation from adoption of the Plan. The Plan will be unsound unless it can be demonstrated, based on appropriate assumptions, that it will bring about a 5 year land supply position.

1.13 There are a range of sites and locations where additional, sustainable development can take place. Land at Low Wood Road, Nuthall (identified on the Plan attached) is well related to the Urban area and extremely well related to the transport network, including the Tram. There is potential for the Tram to be extended into the site and for new and improved park and ride facilities to be provided, helping to address existing congestion and capacity issues. As a minimum it is considered that the site should be removed from the Green Belt so that it is available for development in the longer term or if delivery on other identified sites stall.


Key
Site boundary
New Nuthall
E16
RC15b
Dismantled Railway
E16
High Wood
E16
Cem
Northern Cemetery
Northern Cemetery
RC16b
NUTHALL CP
RC5
RC5
RC5
Nuthall
Hempshill Vale
E16
The Lake
E14g
E16
E12d
E16
DEVELOPMENT POTENTIAL: LOW WOOD ROAD, NUTHALL

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	W.WESTERMAN

Your Details

Title	Mr (Mrs / Miss / Ms / Other:)
Name	[redacted]
Organisation (if responding on behalf of the organisation)	Oxalis Planning Ltd
Address	[redacted]
Postcode	[redacted]
Tel. Number	[redacted]
E-mail address	[redacted]

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: [redacted]

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	Policy 1: Flood Risk		
	Policy 2: Site Allocations		Policy 2
	Policy 3: Main Built up Area Site Allocations		Policy 3
	Policy 4: Awsworth Site Allocation		Policy 4
	Policy 5: Brinsley Site Allocation		Policy 5
	Policy 6: Eastwood Site Allocation		Policy 6
	Policy 7: Kimberley Site Allocations		Policy 7
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)	Yes, exclusion of sites.		

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant		
2.2	Compliant with the duty to co-operate		
2.3	Sound		√

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	√
It is not effective	√
It is not positively prepared	√
It is not consistent with national policy	√

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.
See attached Statement

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

See attached Statement

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary

We wish to participate at public examination to explore fully the concerns we have with the soundness of the Plan.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

BROXTOWE LOCAL PLAN PART 2: PUBLICATION VERSION

Representations by OXALIS PLANNING on behalf of BLOOR HOMES

October 2017

Contents

1.0 Introduction

1.1 These representations have been prepared on behalf of Bloor Homes who have a number of land interests in Broxtowe. Bloor Homes have serious concerns about the soundness of the Plan, particularly in relation to the approach to housing and the allocation at Toton. Details of their concerns are set out in the statement below, with reference to particular policies and paragraph numbers where relevant. The statement also sets out the modifications to the Plan that are considered necessary to make it sound.

2.0 Housing Delivery

2.1 The NPPF requires Local Planning Authorities to plan positively to ensure the delivery of the area's 'minimum' housing requirements and to ensure that there is an appropriate 5 year land supply in accordance with paragraph 47 of the NPPF.

2.2 It is unclear from Policy 2 of the proposed Plan how the Government's requirements regarding housing delivery will be met. It can be seen from the Housing Trajectory at Table 4 of the Plan that Broxtowe has a significant housing supply shortfall and a persistent history of under delivery. Within this context it is essential that the Council are able to provide certainty regarding the delivery of housing. For the reasons set out below it is considered that the Plan fails to do this and is therefore unsound.

2.3 In terms of a 5 year land supply the Plan does not set out how an appropriate land supply should be calculated and how this will then be met by the Plan. It is essential that the Plan, or supporting evidence, contains appropriate information to confirm that the Plan provides a 5 year land supply calculation from adoption of the Plan. The Plan will be unsound unless it can be demonstrated, based on appropriate assumptions that it will bring about a 5 year land supply position.

2.4 The Trajectory at Table 4 indicates that the Borough will have sufficient sites to deliver the housing requirement. Indeed it suggests a buffer exists. However Bloor Homes has significant concerns about the assumptions used to inform these figures and the cumulative effect of the uncertainty regarding the delivery of a large number of sites. Within this context Bloor Homes do not consider that the approach is sound, both because of the unrealistic assumptions on individual sites but, most importantly because of the lack of certainty regarding delivery overall.

2.5 The Government recognises that more needs to be done to ensure that the right numbers of houses are built. It's White Paper – Fixing Our Broken Housing Market (February 2017) is aimed at just that. The White Paper draws on and makes reference to the work undertaken by the Local Plan Experts Group (LPEG). As well as proposing a new approach to calculating housing needs, the LPEG made recommendations as to how Local Plans should be approached not only to demonstrate a five year land supply but to ensure plans deliver over the whole plan period.

2.6 In their Report to Government (March 2016) the LPEG state that:

'there needs to be a clearer and more effective mechanism for maintaining a five year land supply, at the same time as ensuring plans consider delivery over the whole plan period and incorporate sufficient flexibility to respond to rapid change' (Paragraph 11.3).

And they recommend that plans:

'focus on ensuring a more effective supply of developable land for the medium to long term (over the whole plan period), plus make provision for, and provide a mechanism for the release of, developable Reserve Sites equivalent to 20% of their housing requirement' (Paragraph 11.4).

2.7 Because of its existing delivery problems, the scale of its shortfall and the uncertainties regarding delivery in the future, it is important that this 'sufficient Flexibility' is adopted by Broxtowe in its Local Plan Part 2. The Local Plan must be flexible enough to guarantee the delivery of the minimum number of new homes in the Plan period.

2.8 In simple terms this means planning for more houses so that there is sufficient flexibility now, to take account of inevitable delays to delivery on some sites and lapsed permission or non-implementation on others.

2.9 A 20% flexibility allowance or 20% reserve sites as suggested by the LPEG would mean Broxtowe planning for around 7380 dwellings over the Plan period, as opposed to the minimum requirement of 6250 dwellings or the current approach which indicates a potential delivery of 6747 dwellings. This additional flexibility would be some 600 or so more than the Council are currently planning for (7380 – 6747 =600). Such flexibility is the minimum that is required for the delivery of appropriate levels of housing in Broxtowe is to be secured.

2.10 There is a range of sites and locations where additional, sustainable development can take place. For example land at Nether Green, east of Mansfield Road, Eastwood (SHLAA ref 203) has been identified as a suitable location for growth by the Council, but the Council has concluded that the site is not needed at the present time. The land at Nether Green is well related to the urban area. It is well contained by the line of the now disused railway, which could also provide a new permanent and defensible Green Belt boundary. The site has the potential to deliver around 200 new homes together with new open space, children's play areas and areas for biodiversity enhancement. The site location together with an illustrative masterplan are shown at Appendix One.

2.11 The need for flexibility or the identification of 'reserve sites' is not unusual but is particularly pertinent to Broxtowe because of its historical under performance, the number of sites carried forward from the 2004 Local Plan and the uncertainty regarding the key strategic sites

2.12 In terms of strategic sites this uncertainty includes:

a. Land at Boots, which although the site has permission continues to be complex with significant delivery uncertainties.

b. Severn Trent land which is a former sewage treatment works with associated complexities of decontamination and remediation. Housing delivery on the site is therefore highly uncertain.

c. Chetwynd Barracks: A current and active Ministry of Defence site. Whilst the MOD have indicated that the site may become available for redevelopment, no firm committed dates are set out and the timing of any closure is subject to change. There remains a potential for a significant delay to the closure of the site or a cancellation. Delivery is highly uncertain therefore.

d. Toton: Whilst planning permission exists on part of this site, that permission conflicts with the vision for the site as set out in Policy 3.2. The supporting text to this Policy is confusing and ill-conceived. It is based largely on the East Midlands HS2 Growth

Strategy Document published in September 2017. It includes the statement in relation to the vision for the Toton that

'It will also require higher densities than those currently subject of an extant Outline Planning Consent for the site and this will need careful consideration by Broxtowe Borough Council as the Local Planning Authority.' (Page 20).

Whilst this implies the potential for greater housing numbers in the long term it brings onto question the deliverability of the extant consent and housing delivery in the short to medium term.

2.13 In terms of other allocations or 'committed' sites:

a. Land at Beeston Maltings – Policy 3.6, has been allocated since 2004. It remains a difficult and complex site and delivery is highly uncertain.
b. Land in Awsworth includes land allocated since 2004 and although there is extant permission, delivery is not certain.
c. Two sites in Eastwood were allocated in the 2004 Local Plan and delivery remains uncertain notwithstanding extant planning permission.
d. Land at Walker Street, Eastwood – Policy 6.1. This forms part of a school and recreation facility. Aside from its individual merits as an allocation, the site has been allocated (although a different part of the overall school site) since 2004 with no development progressing. Given the status of the site and wider uncertainty regarding school places and the quality and quantity of sports and recreation space, the delivery of the site is highly uncertain.
e. Land south of Kimberley including Kimberley Depot - Policy 7.1. The site is currently a refuse depot with refuse tip. It is unclear if new facilities have been found to facilitate relocation. Notwithstanding, the site will contain areas of contamination which could preclude or limit development. Delivery on the site is therefore uncertain.
f. Land South of Eastwood Road, Kimberley – Policy 7.2. This site has been allocated since 2004. Development of the site remains complex and delivery highly uncertain.
g. Builders Yard, Eastwood Road, Kimberley – Policy 7.3. This site has been allocated since 2004. Development on the site remains uncertain.

2.14 The uncertainty in Broxtowe stems principally from the sheer number of complex sites where the level of certainty regarding delivery is extremely low. In these circumstances there is not a sufficiently reasonable prospect that the minimum housing numbers will be achieved and the Plan is therefore unsound. The circumstances in Broxtowe are the very circumstances that have led the Local Plan Experts Group to recommend the introduction of appropriate lapse rates and a 20% reserve site allowance. To adopt the Plan in its current form would perpetuate the current and historic role the planning system has played in creating a crisis in housing through the lack of delivery of new homes.

2.15 The Plan needs to be modified to address the problems set out above. This should include:

- A critical review of the reliance on particular sites to deliver new homes;
- A significant increase in the number of new homes planned for (to at least 7380 over the Plan period) through the allocation of additional land;
- The inclusion of a five year land supply calculation and demonstration that, on adoption, the Plan will provide a suitable land supply (and the allocation of additional land to address 5 year land supply issues if necessary);

- The allocation of land at Mansfield Road, Eastwood, for around 200 dwellings together with the removal of the land from the Green Belt (as shown at Appendix One);
- The allocation and removal of additional land from the Green Belt at Toton, see Appendix Two. Together with a complete re-appraisal of the approach to the development of land at Toton as set out below and shown in the vision documents at Appendices 3, 4 and 5.

3.0 Land in the vicinity of the HS2 Station at Toton – Policy 3.2

3.1 The Council's approach to the planning of the Toton area in response to the unique opportunity presented by HS2, the tram and the strategic highway connections, is confused and fundamentally flawed.

3.2 It is currently unclear from the Policy how it is envisaged that development within the Plan period (the provision of 500 houses) fits with and will not prejudice the delivery of the wider aspirations for the site set out as *'key development requirements beyond the Plan period'.* Furthermore it is unclear whether the supporting text relates to the plan period requirement or beyond plan period or both.

3.3 Crucially the Plan ignores the Peveril Homes Housing scheme which was recently granted consent by the Council on the majority of land west of Toton lane. It is inconceivable how the delivery of this permitted scheme is compatible with the Policy aspirations for the site set out in the Plan. It is clear that the Policy aspirations as set out in the supporting text are linked with the vision for the site set out in the East Midlands HS2 Growth Strategy (September 2017). This strategy envisages an 'innovation village' on the site, but this is located on land where there is already planning permission for a 500 unit suburban residential scheme.

3.4 Oxalis Planning on behalf of Bloor Homes have consistently advocated a more comprehensive and forward thinking approach to the land at Toton, including strongly opposing the consenting of the Peveril Scheme which would clearly prejudice the delivery of a more comprehensive and innovative response to the opportunity presented by HS2. These concerns were ignored and it is now clear that the approved Peveril scheme is incompatible with the vision for the site now being set out. A fundamental re-think of the Policy is required. A different response will be required depending on whether the Peveril scheme is implemented, but changes will be required to make the Plan sound in any event.

- If the Peveril scheme is not implemented, for example in order for the vision set out by the East Midlands HS2 Growth Strategy to be progressed; the Plan will need to be amended because additional land will be needed so that new homes can be delivered in the short term. The aspirations set out in the Growth Strategy in relation to the innovation village will necessarily take many years to work up given that the mix and scale is unlikely to be commercially appropriate or viable prior to the delivery of HS2. Land to the east of Toton Lane will be needed, to help to deliver new homes quickly. This land, as set out in the Oxalis vision documents can deliver homes on a more conventional basis and allow for land adjacent to the HS2 hub, west of Toton Lane, to be retained for future development more directly associated with HS2.

  Or

- If the Peveril scheme is implemented, a new masterplan approach and revised vision for land at Toton would be required to take account of the committed scheme. The

committed scheme is fundamentally at odds with the Growth Strategy and it would prejudice its delivery. The strategy for the site would need to change. Additional land to the east of Toton Lane, would need to be introduced to help deliver the overarching aspirations for the site as set out in the East Midlands HS2 Growth Strategy.

3.5 Unless these compatibility issues can be resolved the Plan will be unsound.

3.6 Oxalis planning on behalf of Bloor Homes have consistently advocated a more ambitious approach to the Planning of the area around HS2, including, importantly, the inclusion within a comprehensive scheme of land to the east of Toton Lane. The constrained approach to the allocation both limits the appropriate planning of the area and ignores the context provided by existing built form, landscape and other features on the ground. The tram line is not an appropriate Green Belt or development boundary. An allocation which reflects the opportunities for development on land east of Toton Lane and north of the tram line should be made – as shown by the Plan at Appendix Two.

3.7 Oxalis Planning on behalf of Bloor Homes have over past 5 or so years, prepared a number of masterplan documents illustrating ways in which land at Toton could be developed. These include a 'Broxtowe Gateway vision' Document produced in April 2013 (Appendix Three); a 'Broxtowe - Gateway to the East Midlands' vision document produced in March 2014 (Appendix Four) and a 'Toton – Strategic Location for Growth' document produced in December 2015 (see Appendix Five). These three documents are appended to this submission for ease of reference and to provide details of the approach advocated by Oxalis on behalf of Bloor Homes. These documents should be read in conjunction with these representations. The fundamental principle of the vision advocated consistently by Oxalis Planning are:

a. To produce a masterplan for the site which is focussed on the need to deliver an appropriate commercial response to the opportunities presented by HS2. The economic opportunities should be maximised and a specific response to HS2 planed;
b. Whilst the precise nature of the commercial development can only be determined by future market demand, the planning of the site should not, in any way, constrain the potential;
c. This would mean delivering housing to meet the plan period requirement on land to the east of Toton lane and reserving land to the west of Toton Lane for development directly associated with HS2.

3.8 The Oxalis documents include a highway solution that has been largely mirrored in the East Midlands HS2 Growth Strategy (Page 30). Fundamental to this highway strategy is a new junction onto the A52 to the north east of Bardills Island and a partial 'bypass' of the Bardills Junction. Such an approach is however incompatible with Policy 3.2 as currently set out. Policy 3.2 retains as Green Belt, land north and east of Bardills garden centre, land which would be essential for this new infrastructure. Furthermore if this new infrastructure were to be put in place the context of land to the east and west of it would change greatly and become even more appropriate for development.

3.9 Policy 3.2 is therefore fundamentally flawed because the area of land to be removed from the Green Belt should include land east of Toton Lane and north of the Tram line. The inclusion of this area would facilitate appropriate infrastructure works and enable a more comprehensive approach to the masterplanning of the area.

3.10 The Plan has not, in relation to the opportunity presented by HS2, been positively prepared or justified having regard to the evidence base and considering reasonable alternatives.

3.11 There are other aspects of the supporting text to Policy 3.2 which are flawed and inconsistent with national policy. The vision sets out ambitions for relocation of existing facilities and the delivery of extensive new community and leisure facilities. However these aspirations have not been discussed with underlying landowners and its remains wholly unclear how these components can be delivered in terms of viability and land assembly or how they would be funded.

4.0 Approach to self-build and custom-build housing – Policy 15

4.1 Bloor Homes object to bullet point 8 of Policy 15 which requires 5% of large sites to be delivered as self / custom build Homes. The delivery of self / custom build Homes as part of a large site creates complex delivery, design, Health and Safety and site management issues. On some sites it will also create uncertainty regarding delivery and viability. It is unclear how this requirement would be manged and delivered on the ground alongside the delivery of dwellings constructed by Bloor Homes.

4.2 Government Policy supports the provision of self and custom build homes. A key emphasis is on the benefit of this form of housing delivery in boosting the supply of new homes. The blunt requirement set out in Policy 15 will in no way help to boost supply, indeed for the reasons set out it may well delay or restrict supply.

4.3 It is considered that a more appropriate response to the Government's requirement would be to identify specific small sites which are capable of delivery as self / custom build homes and to encourage the promotion of small scale windfall site for such purposes. This could then act to help boost the delivery of new homes.

5.0 Policy 17: Place – Making, Design and Amenity

5.1 Some of the criteria within this design policy are misplaced and should be removed. Criteria 1b and 1c are both spatial policies concerned with the location of development as opposed to its form. These criteria should be deleted.

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	Bloor Homes Ltd

Your Details

Title	Mr (Mrs / Miss / Ms / Other:)
Name	[redacted]
Organisation (if responding on behalf of the organisation)	Oxalis Planning Ltd
Address	[redacted]
Postcode	[redacted]
Tel. Number	[redacted]
E-mail address	[redacted]

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: [redacted]

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	Policy 1: Flood Risk		
	Policy 2: Site Allocations		Policy 2
	Policy 3: Main Built up Area Site Allocations		Policy 3
	Policy 4: Awsworth Site Allocation		Policy 4
	Policy 5: Brinsley Site Allocation		Policy 5
	Policy 6: Eastwood Site Allocation		Policy 6
	Policy 7: Kimberley Site Allocations		Policy 7
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)	Yes, exclusion of sites and approach to Toton allocation.		

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant		
2.2	Compliant with the duty to co-operate		
2.3	Sound		√

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	√
It is not effective	√
It is not positively prepared	√
It is not consistent with national policy	√

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.
See attached Statement

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.

See attached Statement

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	

If you wish to participate at the public examination, please outline why you consider this to be necessary

We wish to participate at public examination to explore fully the concerns we have with the soundness of the Plan.

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

Broxtowe Part 2 Local Plan

Broxtowe Borough COUNCIL

Agent

Please provide your client's name	TAYLOR & BURROWS PROPERTY

Your Details

Title	~~Mr~~	Mrs	~~Miss~~	~~Ms~~	~~Other:~~
Name	[redacted]				
Organisation (if responding on behalf of the organisation)	Phoenix Planning (UK) Limited				
Address	[redacted]				
Postcode	[redacted]				
Tel. Number	[redacted]				
E-mail address	[redacted]				

Comments should be received by 5.00pm on Friday 3rd November 2017

If you wish to comment on several policies, paragraphs, or sites, please use a separate form for each representation.

If you would like to be contacted by the Planning Policy Team regarding future consultations.

Please tick here √

Please help us save money and the environment by providing an e-mail address that correspondence can be sent to: As above

For more information including an **online response** form please visit:

www.broxtowe.gov.uk/part2localplan

Data Protection - The comment(s) you submit on the Local Development Framework (LDF) will be used in the plan process and may be in use for the lifetime of the LDF in accordance with the Data Protection Act 1998. The information will be analysed and the Council will consider issues raised. Please note that comments cannot be treated as confidential and will be made available for public inspection. All representations can be viewed at the Council Offices.

Please return completed forms to:

Planning Policy, Legal and Planning Services, Foster Avenue, Beeston, Nottingham NG9 1AB

For more information: Tel: 0115 917 3452, 3448, 3468 or 3015 E-mail: policy@broxtowe.gov.uk

Question 1: What does your comment relate to? Please specify exactly

Document	Policy number	Page number	Policy text/ Paragraph number
Part 2 Local Plan	**Policy 1**: Flood Risk		
	Policy 2: Site Allocations		
	Policy 3: Main Built up Area Site Allocations	Page 24 - 46	Policy 3 as a whole
	Policy 4: Awsworth Site Allocation		
	Policy 5: Brinsley Site Allocation		
	Policy 6: Eastwood Site Allocation		
	Policy 7: Kimberley Site Allocations		
	Policy 8: Development in the Green Belt		
	Policy 9: Retention of good quality existing employment sites		
	Policy 10: Town Centre and District Centre Uses		
	Policy 11: The Square, Beeston		
	Policy 12: Edge-of-Centre A1 Retail in Eastwood		
	Policy 13: Proposals for main town centre uses in edge-of-centre and out-of-centre locations		
	Policy 14: Centre of Neighbourhood Importance (Chilwell Road / High Road)		
	Policy 15: Housing size, mix and choice		
	Policy 16: Gypsies and Travellers		
	Policy 17: Place-making, design and amenity		
	Policy 18: Shopfronts, signage and security measures		
	Policy 19: Pollution, Hazardous Substances and Ground Conditions		
	Policy 20: Air Quality		
	Policy 21: Unstable land		
	Policy 22: Minerals		
	Policy 23: Proposals affecting designated and non-designated heritage assets		
	Policy 24: The health impacts of development		
	Policy 25: Culture, Tourism and Sport		
	Policy 26: Travel Plans		
	Policy 27: Local Green Space		
	Policy 28: Green Infrastructure Assets		
	Policy 29: Cemetery Extensions		
	Policy 30: Landscape		
	Policy 31: Biodiversity Assets		
	Policy 32: Developer Contributions		
Policies Map			
Sustainability Appraisal			
Other (e.g. omission, evidence document etc.)			

Please use a separate sheet of paper if required. Please use one form per representation.

Question 2: What is the issue with the Local Plan?

Do you consider this paragraph or policy of the Local Plan to be: *(please refer to the guidance note at for an explanation of these terms)*		Yes	No
2.1	Legally compliant		
2.2	Compliant with the duty to co-operate		
2.3	Sound		X

Question 3: Why is the Local Plan unsound? Please **only** answer this question if you answered '**No' to 2.3** above

If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	X
It is not effective	X
It is not positively prepared	X
It is not consistent with national policy	X

Your comments

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details. Please be as precise as possible. Continue on an extra sheet if necessary.

The Plan seeks to reduce the housing requirement as set out within the Adopted Core Strategy for Eastwood and allocate more housing within the main urban area. Objection is raised towards this approach. It is considered essential that Eastwood maintains a continual supply of housing and ensure that viable sites are released that can provide appropriate market and affordable housing to meet the needs of the area. Eastwood is a highly sustainable location which requires growth in order to sustain and improve local facilities including a deteriorating town centre badly in need of the investment new residential areas around the town can bring. The release of appropriate green field sites to meet the needs identified within the Adopted Core Strategy will bring forward much needed housing for Eastwood and enable the provision of contributions towards local infrastructure.

It is noted that Eastwood is classified as a low market area which reduces viability and the opportunities for securing appropriate S106 contributions. However, sites such as the Wades Printers site, are located within a higher market area than the remainder of Eastwood and as will be demonstrated within our submission regarding policy 6, our site can bring forward substantial local community benefits including the provision of a significant area of public open space.

Policy 3 identifies 8 sites proposed to be allocated for housing purposes within the main urban area. Concerns are raised with regards to the deliverability of a number of these sites within the plan period. The table below identifies my clients concerns and key constraints on each of the sites which may affect deliverability.

SITE	*NUMBER OF DWELLINGS*	*ISSUES*
Chetwynd Barracks	500	- A Listed building and memorial garden is present on site which may impact upon land availability. - The site holds historical importance with regards to the military. This issue needs further consideration prior to redeveloping the site. - Previous industrial uses present and therefore potential for contamination within the site. - Significant level changes across the site which may impact upon density. - Detailed masterplan required to show that the constraints have been taken into consideration and that this site can accommodate 500 dwellings. - It is noted that the SHLAA identifies the delivery of 500 dwellings within the 11-15year period. It is considered ambitious to expect 500 dwellings to be completed within a 5-year period. With the constraints identified and the military processes that would have to be undertaken before the land could be released to a developer, it is considered that this allocation will be delivered over a longer period than the current plan period.
Toton (Strategic Location for Growth)	500 dwellings	This site consists of a Strategic Location for Growth. The allocation proposes a mixed-use development which will expand beyond the plan period. The wider allocation includes the provision of 500 dwellings plus retail, business use, open space, transport improvements and community facilities. Concern is raised regarding the deliverability of the housing proposed within the plan period. Within the SHLAA 300 dwelling are projected to be delivered between 2018-2023. This is considered to be extremely doubtful given the uncertainties that still surround this major infrastructure project. Question is raised as to the deliverability within these time frames with lead in times for infrastructure etc.
Bramcote (East of Coventry Lane)	300	- This is a green belt site and the proposal will have a significant landscape impact. It is considered that there are less sensitive sites available in Eastwood which would enable a distribution more in line with the with Adopted Core Strategy. - Significant local objection to the release of this green belt site including the Bramcote Neighbourhood Forum. - The site lies adjacent to a landfill site. Potential for contamination issue that does not appear to have been fully evaluated. - SA identifies land ownership issues as a constraint. Question is raised with regards to deliverability within the plan period. The requirement for no dwellings to be occupied before the replacement school is completed, creates a difficult scenario for builders who need to see cash flowing in as well as out . This is likely to impact upon deliverability within the plan period.
Stapleford (West of Coventry Lane)	240	- This is a green belt site and its release in conjunction with Fields Farm and the Bramcote (East of Coventry Lane) will cumulatively have a significant detrimental impact upon the purposes of the green belt and should not be supported. There are less sensitive

		green belt sites available within Eastwood that would align with the Core Strategy and should be released before this site. - Question is raised with regards to the sites sustainability with residents having to rely heavily upon the car to access the key services and facilities.
Severn Trent (Lilac Grove)	150	- Ecological impacts of development upon Beeston Canal Wildlife Site. - Potential contamination issues from the land fill site. This issue does not seem to have been fully considered
Beeston Maltings	56	- The site formed part of a housing allocation within the 2004 Adopted Local Plan and site has been cleared and demolished since 2012. Question is raised with regards to the deliverability of this site within the plan period as this site has not come forward to date. - Development could result in potential harm to an area including non-designated heritage assets in Dovecote Lane area. - The SHLAA identifies that there are on-going discussions with Network Rail about bringing this site forward and that there are some legal issues over this site. It is understood that some freight operators have objected to the proposal and Network Rail are working to resolve this. It is considered that there is uncertainty about the delivery of this site and should not be included within the land supply for the plan period.
Beeston Cement Depot	21	- Potential contamination issues which may impact upon deliverability

It is clear that whilst that Local Plan seeks to provide more housing within the main urban area than identified within the Core Strategy, there are constraints to a number of the sites allocated which could preclude the sites from coming forward and delivering the full housing needs for the Borough. It is another example of the Council relying on old ideas and not fully engaging in the adoption of a new positive approach to identifying housing land.

The Council's approach seems to be to turn its back more on the needs of Eastwood even though that may mean releasing more sensitive green belt sites in Bramcote

It is clear from viewing the Local Plan Publications Version and the accompanying Site Selection Document that the justification for release more housing within the main urban area than within Eastwood is that the areas such as Toton, Bramcote and parts of Stapleford are higher marketing areas and accordingly will enable the LPA to secure more S106 benefits. Objection is raised to this approach as the S106 provisions secured will benefit the already affluent and well provided for areas of Bramcote and Toton. By failing to release more land within Eastwood, leads to a reduction in the ability to secure funding for the more deprived settlement of Eastwood and build capacity for this area.

There are also a number of sites included within the housing land supply calculation as identified by the SHLAA. Our comments on these are as follows:

SITE	NUMBER OF DWELLING	ISSUES
Works, Bailey Street, Stapleford	15 dwellings	- Outline consent approved in 2012 which has now lapsed and has not been renewed. No certainty that this site will come forward for development. - Contamination issues and adjacent existing uses may impact upon the marketability of this site and therefore question is raised with regards to its deliverability. - Site should be removed from housing supply
Wadsworth Road, Stapleford	11 dwellings	- School site is now occupied by the Haven Group and unlikely to come forward for housing for several years, if at all. This site should be removed from the SHLAA as the site is not deliverable.

It is clear that there are significant issues with a number of the sites both within the allocations and within the SHLAA that may affect deliverability within the plan period. In this regards, it is considered necessary to release additional land within the Borough in order to ensure that the housing requirement is met in full.

As this and other objections will show, there is considerable concern that the policies reflect the situation as the Council would like to see it viewed in terms of site delivery, rather than as it will be. Therefore, the Plan fails the tests of soundness as:

1. Positively Prepared: To meet the test the plan must be able to show it is based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, in a manner consistent with achieving sustainable development. The sites selected, and the many previously permitted, do not show a positive approach to achieve the delivery claimed within the next 5 years let alone the immense step change that the Trajectory in Table 4 is suggesting will occur. The Council appear to be relying on sites that have failed in the past which indicates that the Plan is not positively prepared.

2. Justified: The sites highlighted above are not fully evaluated and the belief that they will deliver in the manner suggested is not justified.

3. Effective: The fact that the issues raised above, that sites will not deliver as forecast, means that the Plan will fail to be effective and deliver the growth required.

4. Consistent with national policy: The NPPF (Para 14) requires local planning authorities should positively seek opportunities to meet the development needs of their area. It goes on to seek to "boost significantly the supply of housing" (para 47) . However, as this and other objections will show, that is not the approach the council is talking, relying instead on sites where deliverability is questionable.

Question 4: Modifications sought

Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. Continue on an extra sheet if necessary.
The council should take a fresh look at potential new sites where deliverability has not already failed and consider sites that do not have the deliverability and viability issues that some of the current sites face. It is considered that additional housing should be released within Eastwood in order to provide a plan that is more in compliance with the Adopted Core Strategy and to ensure that sufficient developable and deliverable sites are allocated to meet the full housing needs for the plan period. It should focus on the more marketable areas of Eastwood and support this areas growth and regeneration in a more positive fashion.

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested modification, as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage. **After this stage, further submissions will be only at the request of the Inspector, based on the matters and issues he/she identifies for examination.**

Question 5: Public Examination Attendance

If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	
Yes, I wish to participate at the public examination	√
No, I do not wish to participate at the public examination	
If you wish to participate at the public examination, please outline why you consider this to be necessary	
There are issues of how far the Plan still aligns with the Core strategy that it claims to rely on, although it's approach appears at odds with that document. The growth and regeneration of Eastwood is a matter which would benefit from a roundtable debate on the merits of various sites and alternatives.	

Please note the Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate at the public examination.

Details

Agent	
Please provide your client's name	
Your Details	
Title	Mr
Name	Keith Trussell
Organisation (If responding on behalf of an organisation)	
Address	[redacted]
Telephone Number	
Email Address	[redacted]
Would you like to be contacted regarding future planning policy consultations?	Yes
If you wish to comment on more than one issue you will need to submit a form for each representation.	

Policy relates to

Please specify what your comment relates to					
Policy number	**Page number**	**Policy text/ Paragraph number**	**Policies Map**	**Sustainability Appraisal**	**Other (e.g. omission, evidence document etc.)**
26: Travel Plans					

Question 1: What does your comment relate to? Please specify exactly

Question 2

Question 2: What is the issue with the Local Plan?	
Do you consider this paragraph or policy of the Local Plan to be:	
2.1 Legally compliant	Yes
2.2 Compliant with the duty to co-operate	Yes
2.3 Sound	No

Question 3

Question 3: Why is the Local Plan unsound? Please only answer this question if you answered 'No' to 2.3 above	
If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	No
It is not effective	Yes
It is not positively prepared	Yes
It is not consistent with national policy	No

Additional details

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details.	The Local Plan delineates that all relevant developments require a Travel Plan to be submitted with their application. This is to ensure a comprehensive public transport network is developed to serve each of the developments. Specifically the Opun case study for Chetwynd Barracks sets out the need for a comprehensive development of transport links for bus, cycle and tram travel not only through the development site but also to interlink and improve the same in Toton around Banks Road with the need to connect to the future HS2 Hub. From the foregoing it may well be that Travel Plans will be developed piecemeal rather than as an overall comprehensive strategy for the wider area covering Stapleford (South) and Toton. Without such an overall strategy the proposals for Chetwynd Barracks aims to improve transport links within the development and in Toton. By excluding Stapleford (South) in such proposals yet again this part of Broxtowe Borough will be ignored to the detriment of the population within its boundaries. One such effect will be with regard to the current basic public transport bus service which in all likelihood will be withdrawn from Stapleford (South) if public transport is improved in Toton as the Service 510 operated by Nottinghamshire County Council Social Services serves both Stapleford (South) and Toton. It is the only daytime hourly service Monday to Saturday that passes through Stapleford (South) and Toton, with no service in the evenings or on Sunday and Bank Holidays. Considering that the NCC will not need to provide the Service 510 in Toton in the event of improved public transport in that locality it will not be a viable operation if it only serves Stapleford (South) and therefore the whole service will be withdrawn. In this scenario Stapleford (South) will be become a totally car dependant location. The western part of Broxtowe South is a centre for local, regional and national development. In the locality there is the largest capacity Park & Ride tram terminus facility for the NET network. Although located close to Bardills Island on the A52 Truck Road allowing for easy personal transport access it is the only point on the NET network not to have a frequent full time bus service to or near to the site. The only bus service is the subsidised Service 510 described above so that bus travel from the wider area including Long Eaton, and surrounding villages is not possible. A local bus service network connecting these locations would need, in part, to pass through Stapleford (South) and thus give the residents a reasonable opportunity to travel by bus out of the area as well as better connection with the tram network. Stapleford (South) cannot support a daytime and evening 7 day bus service in isolation, such a service can only be viable if it serves many other locations along its route. As an example the Trent Barton Service 20/21 travels between Heanor and Nottingham serving communities of Shipley, Ilkeston, Kirk Hallam, Trowell, Stapleford (North) and Bramcote (part). In considering the overall traffic plan for Chetwynd Barracks and Toton this plan should also incorporate Stapleford (South). In my previous submissions I have pressed for changes to Banks Road to improve traffic flow through the area and enable a comprehensive road network suitable for bus services to be created. At present Banks Road is a long cul-de-sac and does not allow for proper use of the roadway for the benefit of the wider community. I have proposed that Banks Road should be extended into the proposed residential development area west of Stapleford Lane to be developed by Peveril Homes. The fact that Banks Road may currently be considered only as a road to serve the existing housing along its length and not a thoroughfare can no longer be a valid stance given that the Opun case study envisages Banks Road to be one of the main accesses to the HS2 Hub and associated proposed commercial developments. The HS2 Hub will be a regional facility where large numbers of persons will travel to from the wider East Midlands area including Nottingham and Derby. A comprehensive network of public transport will be created to supplement personal transport by way of the extension of the tram network into the hub together with new bus routes. However with regard to the latter direct access to HS2 will be available by new access roads directly from a new junction on the A52 as well as a route via Bessell Lane on the edge of Stapleford. There will be no need for the bus services to pass through Stapleford (South) and therefore the residents of this

	area will not benefit from these improvements in public transport. However a precedence for a long distance major hub bus service to provide a local service along its length is set by the Trent Barton Skylink bus route from Nottingham to East Midlands Airport running 24 hours 7 days a week which does provide a local service along its route. For example this service provides a local service for communities along Queens Road and Queens Road West, Beeston and By Pass Road, Chilwell and is also advertised as a 'fast link' service between Nottingham and Long Eaton. The presence of the tram service, the proposed development of the HS2 Hub together with associated commercial developments and proposed housing on Chetwynd Barracks, Chilwell, west of Stapleford Lane, Toton and Fields Farm, Stapleford create a perfect scenario for an area wide overarching transport policy within the districts of Toton, Stapleford, Bramcote (part) and Trowell together with ancillary projects to enhance and improve the whole standing of the areas and provide a public transport system that benefits all the communities to the best advantage on the back of the regional and national infrastructure developments that these locations will host. It is of paramount importance that local improvements be planned for as a result of the vast advantages created otherwise Stapleford will loose out and continue to deteriorate in the shadow of the infrastructure developments that the location will host.

Question 4

Question 4: Modifications sought	
Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound.	An overall Travel Plan policy for the whole of the western part of Broxtowe South is vital for comprehensive and available public transport to be available to all communities to benefit rather than the envisiaged piecemeal approach of locations in isolation. Only such an overall plan will make the Local Plan sound.

Question 5

Question 5: Public Examination Attendance	
If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	No
If you wish to participate at the public examination, please outline why you consider this to be necessary	

Details

Agent	
Please provide your client's name	
Your Details	
Title	Mr
Name	Mike Hill
Organisation (If responding on behalf of an organisation)	
Address	[redacted]
Telephone Number	
Email Address	[redacted]
Would you like to be contacted regarding future planning policy consultations?	Yes
If you wish to comment on more than one issue you will need to submit a form for each representation.	

Policy relates to

Please specify what your comment relates to					
Policy number	**Page number**	**Policy text/ Paragraph number**	**Policies Map**	**Sustainability Appraisal**	**Other (e.g. omission, evidence document etc.)**
3: Main Built up Area Site Allocations	76	Policy: 3.2 Land in the vicinity of the HS2 Station at Toton (Strategic Location for Growth)			

Question 1: What does your comment relate to? Please specify exactly

Question 2

Question 2: What is the issue with the Local Plan?	
Do you consider this paragraph or policy of the Local Plan to be:	
2.1 Legally compliant	Yes
2.2 Compliant with the duty to co-operate	Yes
2.3 Sound	No

Question 3

Question 3: Why is the Local Plan unsound? Please only answer this question if you answered 'No' to 2.3 above	
If you think this paragraph or policy of the Plan is not sound, is this because:	
It is not justified	Yes
It is not effective	Yes
It is not positively prepared	No

It is not consistent with national policy	No

Additional details

Please give details of why you consider this part of the Local Plan is not legally compliant, is unsound or does not comply with the duty to co-operate. Alternatively, if you wish to support any of these aspects please provide details.	HS2 at Toton. Summary. Neither Broxtowe Borough Council nor East Midlands Councils have justified their support of HS2 or of their development at Toton Sidings & Toton Lane/Stapleford Lane. Neither HS2 Ltd nor the councils have offered mitigation to Toton residents against the noise & nuisance of HS2. 1. Economic Impact of HS2. Studies of existing high speed railways in Europe & Japan show that high speed rail does not create new economic activity. Instead, existing economic activity migrates along the line, from smaller cities to larger cities. Businesses in similar sectors cluster together to benefit from the agglomeration efficiencies of sharing workforces. Reducing transport costs, i.e. travel time, encourages this. Regional offices in the smaller cities can be closed. Companies from the larger cities, better resourced & more competitive, can compete with local companies for local customers. HS2 Ltd acknowledges this in its business case; the 'wider economic benefits' are due to agglomeration efficiencies. The journey time savings offered by HS2 are not expected to be large enough to have significant effect. If they did, Nottingham would lose service sector jobs, e.g. financial services to London or Leeds, and medical research to Europe's largest medical research lab, the Francis Crick Institute near Euston. Through poor regional transport or through churn, local industry may migrate to a new cluster formed as part of the development associated with a high speed rail station, drawn by the new development rather than by the station. This is not expected to be significant for Toton, since the region's industry is already located in Nottingham & Derby cities, and classic rail shuttles will run between Toton and Nottingham & Derby. High speed rail stations do not attract company headquarters or R&D centres. Historically, R&D centres are located in the countryside, away from noisy railway stations. Currently, headquarter & R&D functions are sited in large city centres, to attract the youthful workforce that enjoys the city culture. Back office functions relocate from cities to other countries to benefit from lower wage costs, or to other regions with high unemployment to receive grants. Companies moving from London skip the midlands to relocate in the north. When back office functions are relocated, there is no concern to keep them near headquarters. There is no synergy between high speed rail and existing railway companies in the region. High speed rail trains are designed & built abroad. Generally, HS2 will not be built by local constructors. The local HS2 maintenance depot will be at Stavely, Derbyshire, and will employ about 100 people. A high speed rail station and the associated development do not regenerate deindustrialised regions of high unemployment, e.g. Lille or Lyon. Nor do they create new economic activity, e.g. Ebbsfleet in Kent. 1.1. Estimates of Job Creation. HS2 Ltd, using a methodology which it acknowledges is applicable to an urban rather than an undeveloped site, and which ignores industry migration along the line, estimates that the Toton station will support 1,500 jobs (including local migration) and 150 houses, requiring only a few hectares. This is an overestimate, but will still only have a marginal effect on employment & housing. KPMG once estimated that HS2 would cost the East Midlands jobs. Its methodology

has been criticised by experts as being without statistical foundation. Volterra were unable to confirm that HS2 would create new economic activity at Toton, and ignored the empirical evidence descr bed above.

Long Eaton has excellent transport connections with the motorway, airport and railway, yet is not an economic power house.

1.2. Impact of HS2 on Commuting.
With an electrified railway or modern diesel engines, London-Nottingham is expected to take less than 90 minutes. HS2 offer London-Nottingham in about 70 minutes, a saving of only 20 minutes. For comparison, Long Eaton has a London service that currently takes about 90 minutes, running every hour, reducing to around 75 minutes on an electrified line.

While commuters may travel to London on HS2, as they can currently commute from Long Eaton or Nottingham, a mass influx of commuters into the area is not expected.

Commuting range is determined by rail fare, not by travel time. As house prices continue to rise above wages, commuting range will remain capped by wages, rather than increasing with house prices. A London-Nottingham season ticket costs about £10k, plus the 20-30% premium for high speed rail, as charged on HS1 and in Europe. The outer boundary of the London commuter zone is of the order of half of this. As compensation, London wages are higher by an average of around £5k/year, so it will cost most people to work in London rather than locally.

HS2 is not expected to raise house prices in Toton. From HS1, Crossrail and in general, house prices are not raised by a new rail station itself, but by the provision of new amenities as part of the associated development. No new amenities are planned for Toton. However, the noise & nuisance of HS2, during its construction & operation, may cause property blight. The view of many Toton residents is that, if the noise & nuisance become too great, they will have to move away. But, even with compensation, this move may not be affordable.

If Toton does become part of the London commuter zone, both industry and amenities will disappear from the area.

1.3. Loss of Rail Services.
HS2 will not address congestion or add useful capacity. Congestion is on London commuter lines, extending only a few miles out, but all around the city. Lack of capacity is often due to train operators increasing profits and can be reduced by simpler & more effective schemes than HS2.

To encourage the transfer of passengers to HS2, half the current London-Nottingham services will be cancelled, leaving slower trains with less stops. The railways are heavily subsidised and this cost saving is already included in HS2's budget. Unfortunately, these trains are used by local commuters, who are the majority of passengers, and the cancellations do not seem readily replaceable by alternative passenger or freight services.

If Nottingham were to lose some of its commuting workforce, its economy would be reduced. Local councils may have to fund these services.

2. Mitigation of HS2 Noise & Nuisance.
From the sound recordings accompanying the HS2 roadshow, with full noise mitigation, HS2 trains can be clearly heard 300m away, corresponding with Banks Road. Noise generated in the sidings can be clearly heard on Banks Road & beyond. (The area is quiet because there is little activity at the sidings.)

People choose to live in Toton for its peace & quiet. To preserve this tranquillity,

specialist noise mitigation will be needed to silence the station, high speed trains and classic rail trains. HS2 Ltd do not intend to supply this. Trees will be insufficient. A specialist barrier(s) is necessary, which may obscure view of & access to the sidings. To assist, a noise specialist should be consulted and ambient noise readings should be taken around the neighbouring estate, independently of HS2 Ltd. HS2 Ltd are delaying in producing detailed noise level estimates for the area.

An environmental assessment of the area in advance of that of HS2 Ltd may also be useful.

If there is pedestrian access to the station from Banks Road, motorists will transport rail passengers along Banks Road and drop them off, then reverse direction around the roundabout at the end of the road. Unfortunately, Banks Road was designed for residential access only, winds with blind corners and serves 2 schools. Motorists late for their train will behave selfishly and may cause accidents. There is also a rumour that the road will be modified to directly access the station. The station should not be accessible from the residential access roads.

To prevent rail passengers from parking in the residential streets, a residents' parking scheme has been proposed. However, while poss bly necessary, the scheme has not been welcomed by residents who object to a loss of freedom and potentially having to pay. The scheme requires enforcement and may collapse if residents opt out. There needs to be a solution that does not require a parking scheme.

The 3 requirements described above should be added to the station's specification immediately.

The prospect of HS2 has caused residents living near the sidings considerable distress. These residents have had no representation from their councillors, the MP, Broxtowe BC, or the neighbourhood forum.

3. Toton Development Zone.
The real business case for HS2 is property development next to the HS2 stations. In 2011, Broxtowe BC unanimously agreed to open up all of Toton's green belt for development if HS2 sited the East Midlands station at Toton. This was after Rushcliffe BC refused to open up their green belt to development in return for an HS2 station at East Parkway. This development is not required to fill any need created by the station.

The Toton development zone was not needed for either the core strategy or HS2. Neither was it mandated by the planning inspector. It was created for the political reason of bringing HS2 to Toton. The zone later absorbed the 5% buffer on the 5-year land supply, together with housing moved from elsewhere in Broxtowe. The buffer housing requirement could have been obviated by taking advantage of a lower than expected census, trading with a neighbour in surplus, arguing that the forecasted need was due entirely to in-migration, or by moving the plan's start date.

Broxtowe currently has a surplus of employment sites, with under used sites being converted to housing. The core strategy requires that office space be increased in proportion to the population, an increase which can be absorbed by the Boots development zone. Industrial land usage is expected to reduce with time. So new employment land at Toton is surplus to demand. Most of the development west of Toton Lane/Stapleford Lane has already gone to housing. If offices are built, over time, they may become occupied by local companies through churn.

Broxtowe had an excellent employment site in Beeston Rylands, hosting technology companies, startup units and a train station. Workers there shopped in Beeston town centre. Unfortunately, the site was neglected for decades and eventually converted to housing. At the end, an attempt to retain the site for employment failed over the section 108 agreement. Even the train station was maintained by a historical society, rather than by Broxtowe BC. So Broxtowe & other local councils have no interest in technology development sites.

	The most useful aids for startups are probably finance & low rent offices. 3.1. Sidings. The sidings are not suitable for housing because of the train noise. HS2 will be the loudest train in the world. Buildings in the sidings will need specialist noise insulation, with non-opening windows facing the trains. High rise buildings may find train noise directed upwards at them. There are conservation areas and a flood protection device on the west side of the sidings. These need to be protected from development. Currently, Toton residents near the sidings are at no risk of flooding and this asset must be preserved. With an access road to the A52, land south of the station (and perhaps north of the floodplain) will be opened up for development. In fact, this area may be the most likely to be developed and should be marked as such on maps of the zone. Mayfield Grove may be opened to through traffic. 3.2. West of Toton Lane/Stapleford Lane. In consultation response to the outline planning application, it was suggested to match housing (500 houses @25 houses/ha) plus employment plus community infrastructure in a 1:1 ratio with open space, over both sides of Toton Lane/Stapleford Lane. The full 30% of affordable housing should be built. Money should not be allocated in lieu. 3.3. East of Toton Lane/Stapleford Lane. The core strategy should have already allocated sufficient resources & space to the housing estate and school at Toton Lane/Stapleford Lane, covering schooling, medical, shopping & leisure. No justification has been given for further school expansion. Since the school has sufficient space for local pupils, then takes pupils from outside its catchment area to fill to capacity, further expansion is simply expansion for its own sake. Further development or redevelopment east of Toton Lane/Stapleford Lane should be considered in the next core strategy, together with the fate of the green belt land there running through to Bramcote. Any leisure centre should be kept separate from the school, since academies are conducive to corruption. 4. Chetwynd Barracks. In the 2015 Government Spending Review, the Treasury ordered the Ministry of Defence to sell off land for housing. Not needed by the core strategy, this site is (presumably) absorbing housing allocated elsewhere in Broxtowe. In consultation response LP1128752, it was suggested to keep the site's degree of development roughly the same as it is now. Housing (800 houses @25 houses/ha) plus employment plus community infrastructure in a 1:1 ratio with open space. (This assumes all existing buildings are demolished.) 5. Miscellany. Toton residents are likely to use classic rail stations, e.g. Long Eaton & Nottingham, over HS2 to avoid paying the high speed premium. Living with the noise & nuisance of HS2 will be constant. So mitigation against HS2 should be prioritised over access to HS2, and access to other stations should be prioritised over access to HS2. The Toton-Nottingham tram needs to be evaluated against its objective of significantly

	reducing road congestion. If most of its passengers have transferred from buses, the tram has failed. Additional park & ride stops need to be added at each major roundabout the tram passes. A congestion charge may have to be introduced. The tram's economic impact is as expected. It has not increased footfall in Beeston, but has encouraged the migration of jobs from Beeston to Nottingham. In this, the tram is analogous to HS2. Connecting East Parkway station to the airport and to the (south of Trent) tram is more important than connecting the airport to HS2. An adhoc survey of Bardills Island was conducted just after the completion of the roundabout's improvements for the tram park & ride. No congestion was present during morning or evening rush hours over a 5-day working week.

Question 4

Question 4: Modifications sought	
Please set out what modification(s) you consider necessary to make the Local Plan legally compliant or sound. You will need to say why this modification will make the Local Plan legally compliant or sound.	Stop support for HS2 and cancel Toton Development Zone.

Question 5

Question 5: Public Examination Attendance	
If your representation is seeking a modification, do you consider it necessary to participate at the public examination?	No
If you wish to participate at the public examination, please outline why you consider this to be necessary	

[redacted]

From: Daniel Sellers [redacted]
Sent: 30 October 2017 16:39
To: Policy
Subject: Dan Sellers 2017-10-30

Dear relevant department,

Local Plan feedback

I fully support the **New Local Plan** consultation document.
I feel it is important that Brownfield sites are redeveloped (such as the barracks in the Chilwell / Attenborough area, the former Boots factory & cement works in Beeston) and also that Listed Buildings are used & maintained to stop them becoming derelict.
It is also important that the proposed development to the east of Toton railway yard maintains the green gap between the railway line and Toton village.
With regard to the Bennerley opencast site, as this is in the Green Belt I feel it should be remediated and retained to green land with restoration of the disused railway viaduct.
I would support residential conversion of the disused farm buildings opposite Trowell Church, between the A6007 and the railway line.
Finally, good to see that work on the residential conversion / development at Kimberley Brewery has now started.

Regards,
Dan.