

Toton Fields Local Nature Reserve Management Plan 2017 – 2021



**This plan area incorporates Manor Farm Recreation
Ground and Banks Road Open Space**

May 2017



**Broxtowe
Borough
COUNCIL**



Nottinghamshire

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1. INTRODUCTION

This management plan was produced by Nottinghamshire Wildlife Trust in partnership with Broxtowe Borough Council and Friends of Toton Fields.

Toton Fields was declared as a Local Nature Reserve (LNR) in 2009. It is a well valued local amenity space and wildlife reserve located in Toton and lies near the Nottinghamshire county boundary, close to the Derbyshire market town of Long Eaton. In line with the aims and purposes of LNRs, Toton Fields provides people with ample opportunity to learn about nature, geology, archaeology and local history. The statutory LNR status that applies to the site will continue to help protect the wildlife and other interest of the site and increase local people's awareness and appreciation of it.

It is a key site located within the Erewash Valley wildlife corridor. The River Erewash and Bypass channel, which flow through the LNR in a southerly direction, form part of a complex of interlinking wildlife sites (see figure 2). These sites include:

- Manor Farm, Long Eaton LNR, managed by Erewash Borough Council
- Toton Sidings, former industrial land and wildlife site
- The Erewash Canal, maintained by The Canal and River Trust
- Toton Washlands, which is managed by the Environment Agency.

The previous management plan covered the period 2009 - 13. The management plan aims to achieve the following:

- Maintain and enhance the habitat types and species present
- Combine habitat enhancement and management with education, recreation and access provision
- Encourage public understanding and awareness of issues relating to the site
- Conserve and interpret archaeological and historical elements relating to the site
- Monitor the effects of management on wildlife.

Local volunteering and the support of the local community through the active Friends of Toton Fields group is a valuable resource in terms of caring for and securing the future management of the site. As Broxtowe Borough Council's and other partners' vision for improving the site is continually being developed, the management plan will be reviewed every 5 years and adjusted accordingly.

It is envisaged that a number of partners will work together to take forward this management plan:

- Broxtowe Borough Council
Toton Fields LNR is located entirely within Broxtowe and Broxtowe Borough Council own and manage the land. The council works in partnership with the Friends Group, Nottinghamshire Wildlife Trust and other local environmental groups to manage this site. Broxtowe Borough Council is keen to support partners who can undertake site work (either directly or through developing funded projects) to enhance and create wildlife and habitats, as laid out in the management plan. Where Friends Groups, community, voluntary or business organisations wish to carry out independent events or work on Local Nature Reserves, the Council requires a signed indemnity form which provides proof of Public Liability Insurance and also require a Risk Assessment to be completed for each activity held on the site.

- Natural England
Natural England is an executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs. It is the Government's adviser for the natural environment in England, helping to protect England's nature and landscapes for people to enjoy and for the services they provide. Natural England provides advice on the declaration of LNRs in England and maintains a database of these sites.
<https://www.gov.uk/government/organisations/natural-england>.
http://www.lnr.naturalengland.org.uk/Special/Lnr/Lnr_search.asp
 - Nottinghamshire Wildlife Trust
Nottinghamshire Wildlife Trust cares for over 67 Nature Reserves across the county, engages with the local community through events, education and volunteering opportunities and provides specialist ecological advice and support to partners and its members.
<http://www.nottinghamshirewildlife.org>.
 - Friends of Toton Fields
The friends group was set up to study, make known, conserve, enhance and protect Toton Fields Local Nature Reserve (comprising parts of Manor Farm Recreation Ground, Banks Road Open Space and land adjoining Toton Sidings) as a generally accessible place of natural interest and biodiversity. They achieve this in the following way:
 - Species and habitat monitoring
 - Raising awareness and public support for the LNR, including highlighting what site improvements are most important for local people
 - Hold events and carrying out practical management tasks on site.
- The Friends Group website is <http://www.freewebs.com/friendsoftotonfields/> and they can be contacted via email friendsoftotonfields@googlegmail.com.
- Local Environmental Organisations take a lead role in Broxtowe to improve its environment and habitats through engagement with the Broxtowe Wildlife Forum. The Nottinghamshire Biodiversity Action Group also has an interest in Broxtowe's LNRs as they can contribute to Nottinghamshire's target habitats and species. For more information on Nottinghamshire Biodiversity Action Group please go to www.nottsbag.org.uk. The Nottinghamshire Biological and Geological Record Centre (NBGRC) also has interest in LNRs in the context of their function to map Local Wildlife Sites, update county Phase 1 Habitat survey and maintain protected species records.
 - Local Businesses and Developers are to be invited to contribute to delivery of this management plan. This could include supporting the Friends Group on volunteering days, providing financial support for interpretation or other infrastructure projects, or providing technical or other assistance in enhancing the site for nature conservation
 - Other Partner Organisations comprise Governmental Bodies that operate in Nottinghamshire and adjacent county of Derbyshire, such as the Environment Agency, Erewash Borough Council, Nottinghamshire and Derbyshire County Councils. Other community and naturalist groups that are interested in the LNR include Groundwork Greater Nottingham, Greenwood Community Forest, Long Eaton Naturalists Society (LENS), Practical Conservation Volunteers CIC (formerly BTCV and TCV) and scout / guides, groups etc as well as local schools and universities.

2. SITE INFORMATION

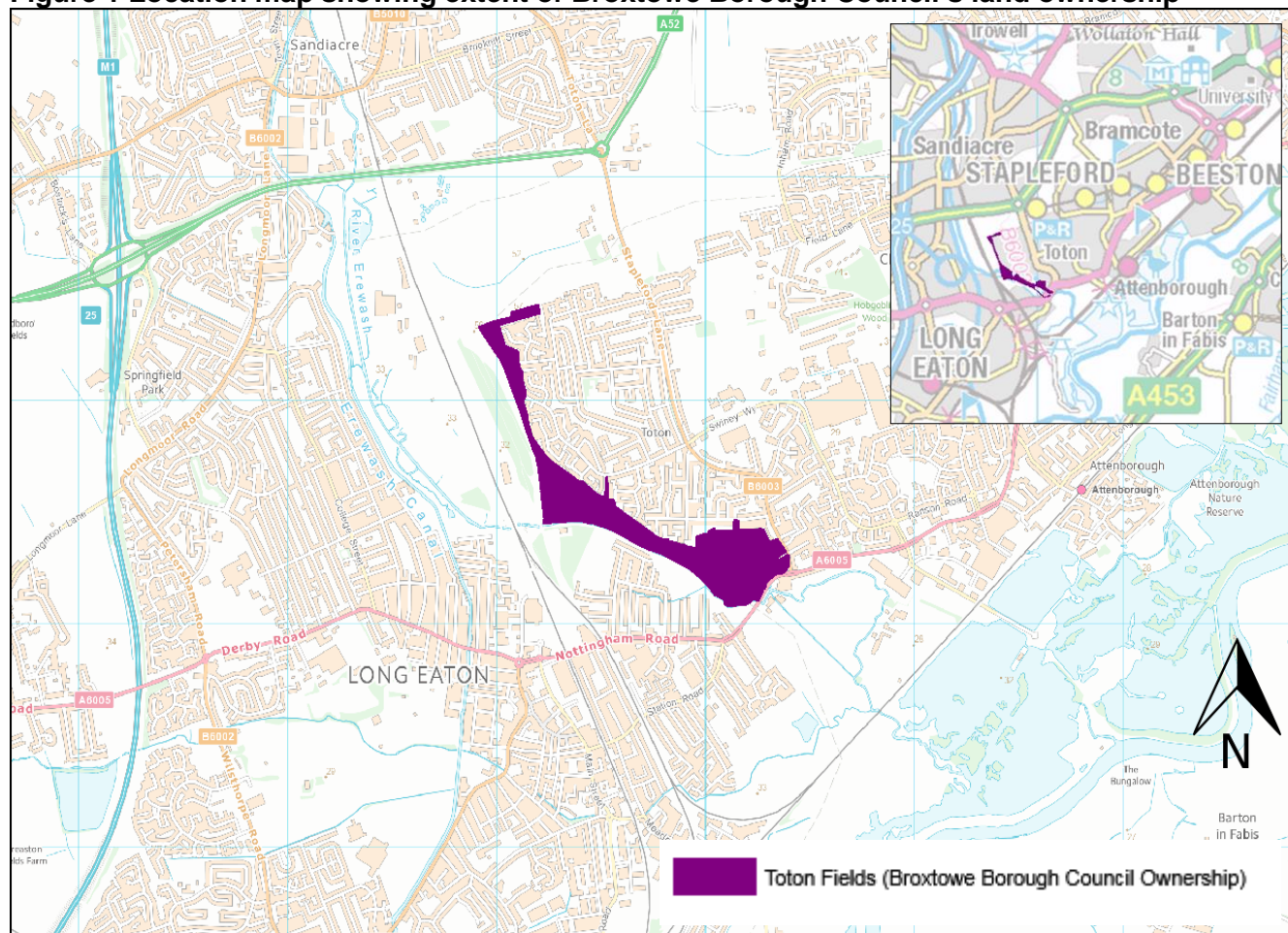
This section provides background information in relation to geography, ownership, designations, access and land use history.

2.1 Location and ownership

Toton Fields Local Nature Reserve is situated to the west of Toton and incorporates Manor Farm Recreation Ground and Banks Road Open Space. The site is situated entirely within the Borough of Broxtowe, County of Nottinghamshire (Vice County 56). The centre of the site is located at Grid reference SK 493 345.

Toton Fields LNR is owned by Broxtowe Borough Council. The extent of Broxtowe Borough Council's ownership is shown on figure 1.

Figure 1 Location map showing extent of Broxtowe Borough Council's land ownership



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2.2. Map Coverage

Ordnance Survey Landranger map no.129 (1:50 000 scale) & Ordnance Survey Explorer map no. 260 (1:25 000 scale).

2.3. Size and connectivity

Toton Fields is approximately 20.75 ha (51 acres). The Local Nature Reserve boundary (see Figure 2) is 16.57ha (40.95ha). Source: www.magic.gov.uk.

It has good habitat connectivity. To the south Toton Fields connects to the River Trent and Attenborough Nature Reserve via the River Erewash and adjacent agricultural land. To the north-west and following the line of the railway, River Erewash and Erewash Canal, a wildlife corridor leads out from Toton Fields and continues along the Erewash Valley to the north.

2.4. Geology and Soils

Soil - The Soilscape Map (Cranfield University) identifies that the site is within Soilscape 20: Loamy and clayey floodplain soils with naturally high groundwater. Texture within the upper 30cm is described as loamy and clayey. The description indicates that the habitats types likely to be present are '*wet flood meadows with wet carr woodlands in old river meanders*', which concurs with what we see on the ground. For further information refer to: <http://www.landis.org.uk/soilscales/soilguide.cfm>.

The soil on the higher slopes to the north of the site and to the west of the housing estate are shallow and coarse over Red Marl with beds of sandstone containing bands of gypsum, (The Soil Survey of England and Wales (1983)) and is typical of soils derived from this material, which tend to be heavy and poorly-draining, supporting typical Nottinghamshire plant communities.

The soil of the flood plain is of a greater depth than the adjoining countryside and is composed of fine alluvial deposits laid down by the over topping of the river and its associated streams during flood conditions in both the Pleistocene period and in more recent times.

Geology - The geology underlying the area has two main rock types these being comprised of Alluvium deposits laid down in the valley, the geology to the north consists of predominately Mercia Mudstone containing beds of sandstone with bands of gypsum, further to the north east of the housing estates the underlying geology of red marl is overlaid with Boulder clay. Information taken from; The Geological survey of England and Wales 1910, Nottingham District Sheet No's 125,126,141,146 and Solid and Drift Geology 1996 Sheet No 126.

The British Geological Society's Geology of Britain Viewer reveals the following information about the site's geology (based on 1:50 000 scale maps).

- The Bedrock geology description for the majority of the site is as follows: Gunthorpe Member - Mudstone. Sedimentary Bedrock formed approximately 229 to 246 million years ago in the Triassic Period. Local environment previously dominated by hot deserts.
- The Bedrock geology description for the northernmost tip of the LNR is as follows: Radcliffe Member - Mudstone And Siltstone. Sedimentary Bedrock formed approximately 237 to 246 million years ago in the Triassic Period. Local environment previously dominated by hot deserts.

The geology descriptions are available at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>.

2.5. Aspect, topography and altitude

The site lies 30 metres above sea level at its lowest point, rising to 55 metres above sea level at its northern boundary. A trigonometrical Point is situated near to the northern boundary (north of Edale Rise at Grid Reference SK494355).

From the north of the site views over the local of the Derbyshire countryside, the Erewash valley and the Vale of Trent can be seen. Looking to the south west, Ratcliffe-on-Soar Power Station can be clearly seen, with Charnwood Forest and other parts of East Staffordshire and North Leicestershire visible in the far distance.

2.6. Surrounding land use

Toton Fields Local Nature Reserve is a linear site running along part of the river Erewash corridor. A railway line with extensive sidings and associated marshalling yards form the western boundary. These were once the largest marshalling yard in Western Europe, distributing the Erewash valley's coal production around the country. It is now an engine storage and maintenance depot.

To the south and east are well maintained sports pitches and housing estates which have screening belts of plantation woodland dominated by ash and hawthorn. To the north are agricultural fields that were once owned by the Gregory family of Chilwell and used to produce the company's famous roses.

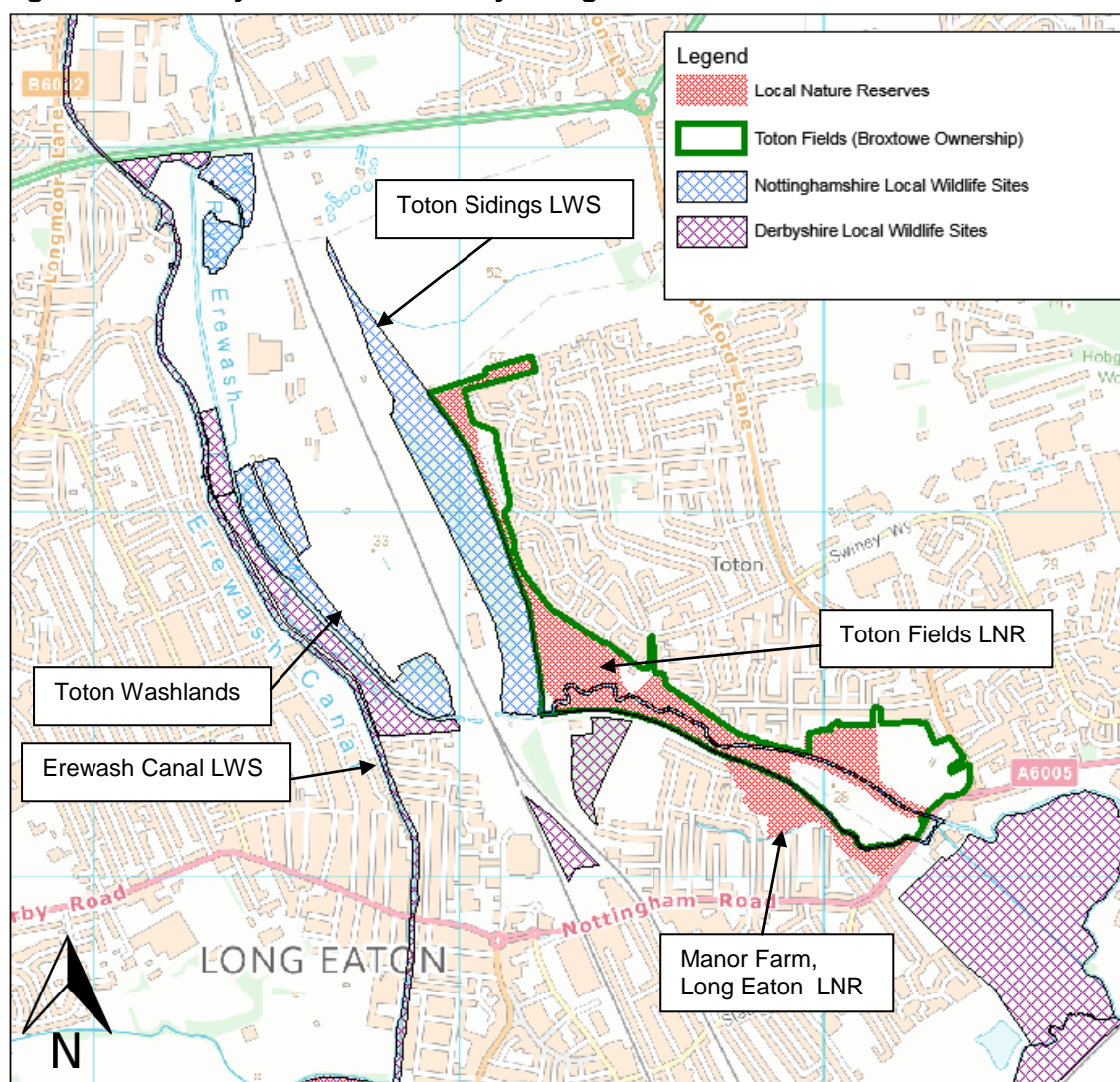
2.7. Statutory Designations

Toton Fields is a Local Nature Reserve (LNR). LNR status applies to land of at least local wildlife or geological interest. South of the River Erewash in the neighbouring Derbyshire Borough of Erewash lies Manor Farm, Long Eaton LNR. See Figure 2.

2.8. Non-statutory Designations

The River Erewash and Bypass Channel, which is located within and forms part of the southern boundary of the LNR, has been identified as a Local Wildlife Site (NBGRC Reference 5/2294). It is known as Toton Erewash Channel and described as 'a river channel with notable aquatic flora'.

The adjacent Toton Sidings is also a botanical Local Wildlife Site (NBGRC reference 5/2210), described as an area of former railway sidings and embankment supporting a rich assemblage of notable plants. Being interconnected, these two sites are mutually supportive in ecological terms.

Figure 2 Statutory and Non Statutory Designations

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2.9. Access

Formal and informal paths

The site is open to the public with numerous access points from the adjoining residential areas. It is used regularly by local residents for both formal and informal recreation, including walking, exercising dogs, running, cycling and horse riding. Broxtowe Borough Council has mapped and classified the extensive networks of paths (see Appendix 2). The following types of paths have been identified:

- designated public rights of way
- mown paths
- informal paths
- potential 'shared walkers/ horse riders' route.

Three car parks are located in the southern part of the site. These are identified on figure 3 and are as follows:

1. Greenwood Community Centre Car Park off Chester Green
2. Manor Farm Recreation Ground – Bowling Green Car Park
3. Manor Farm Recreation Ground – Tennis Court Car Park

Bridges

There are two well maintained bridges crossing the River Erewash. One is located at the end of Carrfield Avenue, Toton and other south of Manor Farm Open Space (see A and B on Figure 3). The bridges allow public access on to the land between the River Erewash and the by-pass channel. There is a third, narrow footbridge (C) in the south west corner of the LNR which crosses the river immediately upstream of where the by-pass channel separates from the main river channel. This bridge is heavily used and needs upgrading. A long-term aim is to secure funds for a project to replace this bridge or realign the path to the west of this crossing point so that the existing wide road bridge can be used for access. A further two bridges (D & E) cross over the Bypass Channel. In addition, there are pedestrian access bridges over the river and bypass channel immediately next to the A6005 Nottingham Road. These are known as 'Toton Arches'.

Horse riding

Bridge D is used by a local riding school which is located to the south east of the LNR. Horse riders cross Toton Fields on route to the Bridleways through Toton Sidings (shown as blue lines on figure 3). There are currently no official Bridleways on site but a permissive Bridleway is available but this is only for local use (see Appendix 2). One of the reasons this is not suitable for more than local use is because it crosses the river at the ford highlighted on Figure 3.

Riders occasionally use the reserve for exercising which has caused conflict with other users in the past. Signs have been installed to restrict use by horses to the permissive Bridleway and this has resolved the access issues. In terms of improving access provision in the long-term, it would be desirable to see a properly surfaced multi-use bridleway with bridge across the river in the approximate location of where the ford is, providing this does not impact on wildlife or water management.

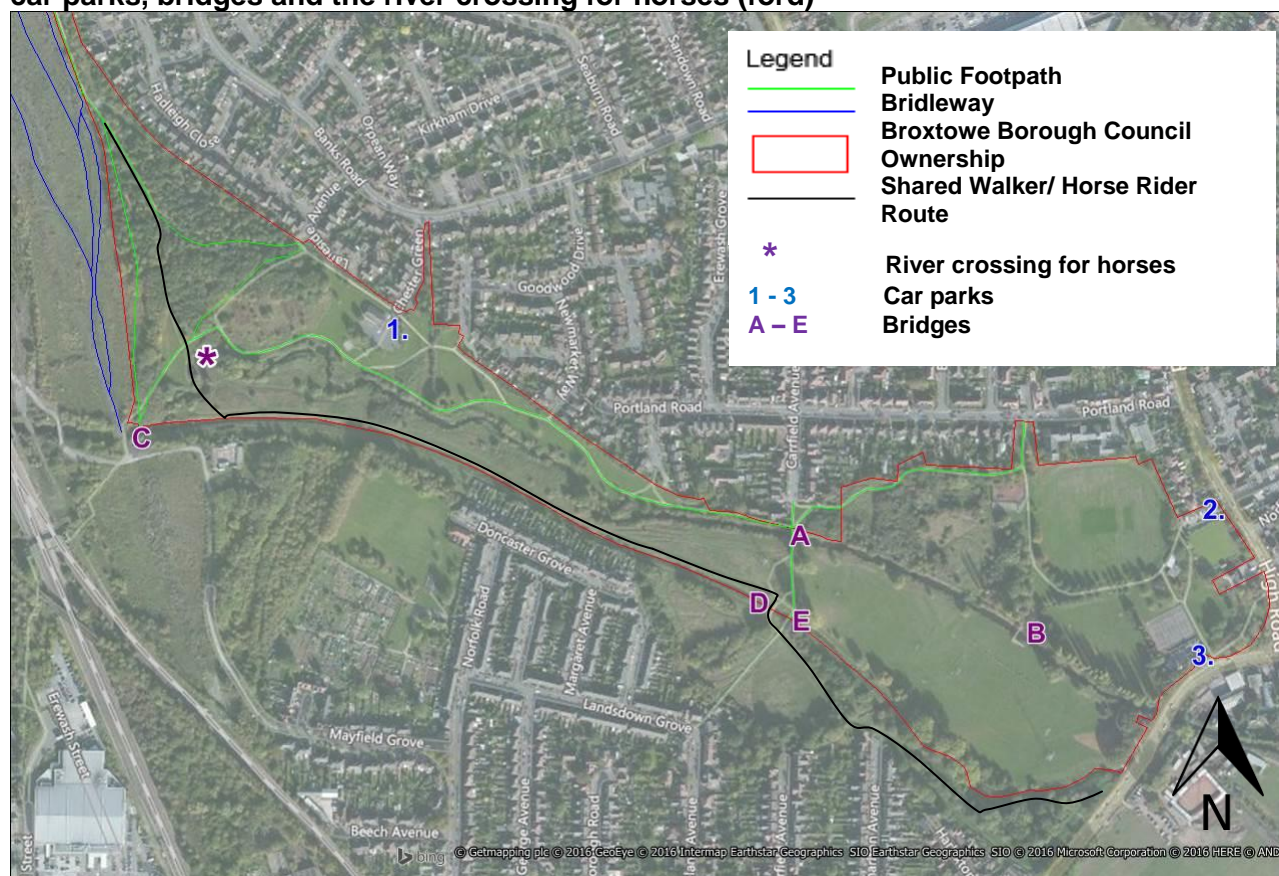
In partnership with Broxtowe Borough Council, The Friends of Toton Fields has created a leaflet. This includes a map showing the infrastructure, access points as well as the layout of the main paths. It also briefly describes the wildlife and history of the site and is used to promote membership.



Toton Fields LNR Leaflet



Figure 3 Southern section of Toton Fields showing public footpaths, designated bridleway, car parks, bridges and the river crossing for horses (ford)



Strategic Footpaths and Trails

Toton Fields is well situated within the strategic footpath and trails network. The following trails/routes can be accessed nearby:

- Erewash Valley Trail - created in 2010 this trail takes in over 30 miles of the River Erewash
- Nutbrook trail - a 10 mile traffic free path for cyclists and pedestrians between Long Eaton, Shipley Country Park and Heanor, following the course of the River Erewash
- National Cycle Route - route 6 passes close to the south of Toton Fields
- Nottingham Express Transit (NET) - new footpaths have been created and existing paths to Bramcote and Chilwell upgraded alongside the route of the recently opened NET Phase 2. These can be accessed from nearby Toton Lane Tram Stop/ park and ride. Toton Fields can be accessed from the NET site by footpath.
- Trent Valley Way - a long distance (166 mile) route from close to its source in Staffordshire to the Humber Estuary.
- Broxtowe Country Trail - this utilises existing routes to produce a long distance trail which roughly follows the boundary between the Broxtowe Borough and Nottingham City.

The creation of direct access links between Toton Fields and Attenborough Nature Reserve (with the River Trent beyond) would be desirable. Currently, foot and cycle (Cycle Route 6) access is only available along roads following A6005 Nottingham Road and Barton Lane, the main access to Attenborough Nature Reserve. The creation of a new off road route connecting Attenborough Nature Reserve and Toton Fields is a long-term aspiration.

2.10. Land use history and archaeology

The name Erewash comes from the rivers' old English name of "Irre Wiske" meaning winding, marshy stream. This describes the rivers' meandering nature. The LNR contains a portion of this flood plain and, although part of the river through the LNR has been straightened, two sections follow the original course of the river. These are:

- The current River Erewash, between where the Bypass Channel branches off and a line south of Adrian Close
- The current bypass channel, north of Harlaxton Drive (Long Eaton) to the A6005 (Toton Arches) at the south east corner of Toton Fields

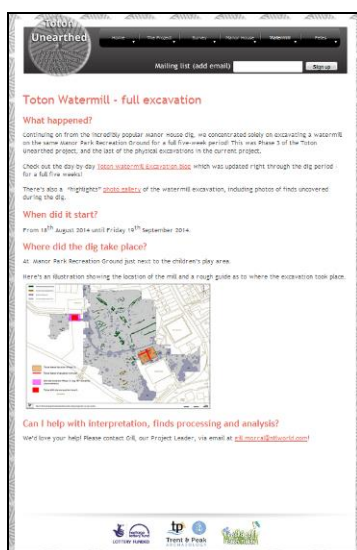
An extract from the Sanderson's Map: Twenty Miles around Mansfield dated 1835 is provided at Figure 4. The landscape at that time would have been agricultural and the river would have been able to meander. Consulting old maps and other research has shown that flood defence works were carried out in 1936 has 'fixed' the River Erewash and bypass channel into its current location.

The history of the site has been researched and a community archaeology project has recently taken place, involving a number of local people and groups, including Friends of Toton Fields, Toton Unearthed and Toton Revealed. The lottery-funded project called 'Toton Unearthed' commenced in summer 2014. It investigated the water mills and Manor House of Toton, which have long been of interest to local historians. The project was a partnership between the Friends of Toton Fields Group and Broxtowe Borough Council, funded by The Heritage Lottery Fund. The excavations were supervised by Trent & Peak Archaeology.

The projects' aims were to:

- Confirm the location of the mills and manor house by carrying out non-intrusive surveys, then digging exploratory trenches, test pits, and excavation over three phases
- Increase knowledge of the heritage of Manor Farm recreation ground by providing information through display onsite and via digital resources
- Inform and involve the local community as much as possible.

The findings are described on the project's website and a two information panels have been installed on site: <http://totonunearthed.org.uk/>. Both panels include QR codes, which link to the projects' website.



Toton Unearthed webiste and Finds and Facts Booklet

Figure 4 Sanderson's Map Extract (1836)



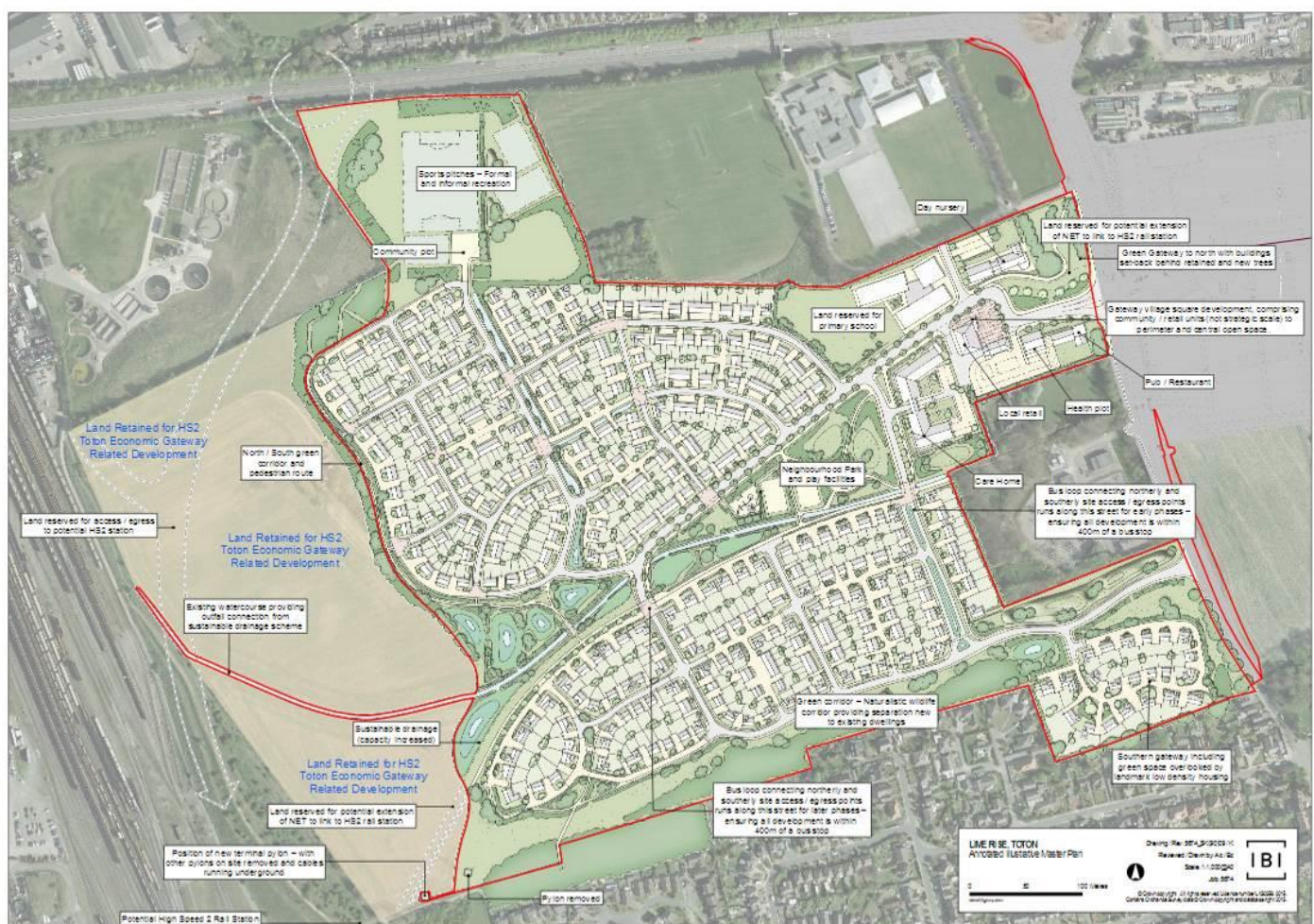
© Nottinghamshire County Council

2.11 Future land use

Due to the location of the site, close to the urban edge of two major East Midlands cities, a number of developments (some already consented and some planned) are proposed in close proximity to Toton Fields LNR. One major infrastructure project, Nottingham Express Transit Phase 2, has already been completed nearby with the construction on the tram terminus and park and ride at Toton Lane. To the north of Toton Fields LNR a large, predominately residential development is proposed. The masterplan for this site, 'Land to the west of Toton Lane', which received conditional planning permission in 2016, is shown at Figure 5. At the time of the writing, the route of the HS2 is proposed to pass through Toton Sidings, with the land being used for a new station and transport hub, with a possible extension of the tram. The current route of the HS2 can be viewed at <https://www.gov.uk/government/organisations/high-speed-two-limited>.

It is important that these developments are carried out sensitively and do not result in adverse harm to the wildlife and amenity value of the LNR. Such developments may also provide opportunities to enhance the site, such as by improving access, footpaths and other infrastructure or by securing the long term future of adjacent land as nature reserve, for instance. It is important to make the most of any such opportunities.

Figure 5 2016 Masterplan for the 'Land to the west of Toton Lane'



© IBI Group

3. EVALUATION

This section provides descriptions of habitats and species based on field work and consultation with local partners, including Friends of Toton Fields, Derbyshire and Nottinghamshire Wildlife Trusts and Nottinghamshire Biological and Geological Records Centre.

The LNR has been divided into 5 management compartments. Detailed descriptions are provided of these, together with habitat maps and management proposals are put forward in this section.

3.1. Habitats

The site is characterised by a number of habitat types (described using phase 1 terminology):

- amenity grassland
- improved, semi-improved and unimproved neutral grassland
- mixed parkland
- scattered trees
- mixed plantation woodland
- dense/ continuous and scattered scrub
- tall herb/ ruderal
- hedgerow
- open running water (includes the main river and bypass channel).

The site supports several habitat types that qualify as 'priority' under both the UK and Local (Nottinghamshire) Biodiversity Action Plan (UK and LBAP). The UK BAP has been archived but the habitats recognised under this framework are now given policy protection in England under the NERC Act (2006) and are known 'Habitats of Principal Importance' under Section 41 of the Act.

These habitats include hedgerows, ponds, rivers, lowland meadow, and lowland mixed deciduous woodland.

3.2. Flora and Fauna

The Friends of Toton Fields keep records of flora and fauna and it is intended that their full records will be published and made available in a separate document. The vegetation, moths, butterflies and birds have been subject to recent surveys. The birds have been subject to long term monitoring over the period from 1963 to the present day.

With People's Trust for Endangered Species funding, a riparian mammal survey of the entire Erewash and its tributaries was carried out in summer 2014. The river section, including the bypass channel, within and along the boundary of the LNR was surveyed and signs of both water vole and otter were found by the surveyor.

The following is a summary of the important (i.e. protected and BAP/ NERC Act Section 41) species known to occur at/ near to the site, together with their status (bold text).

Flora

A variety of native plants are present at the site. Black poplar is found on site, having been planted alongside the river. It is a tree that was once widely planted because of its value for timber and the trees at Toton Fields are valuable in landscape terms. Black poplar is of local biodiversity value, supporting several species of moths which are of conservation interest and a range of other species. **LBAP**

Mammals

- Otter – The 2014 PTES survey found signs of otter on the bypass channel. Otters are highly mobile and a single animal can travel several kilometres in one evening, so it is thought highly likely the signs of otter found at Toton Fields were made by same individual(s) known to occur at nearby Attenborough Nature Reserve. **Wildlife and Countryside Act, Conservation Regulations, Section 41 Species, LBAP**
- Water vole –The 2014 PTES survey recorded water vole on the entire stretch of bypass channel through the LNR. Signs were also recorded upstream of the LNR on the River Erewash and Erewash Canal. **Wildlife and Countryside Act, Section 41 Species, LBAP**
- Water shrew were recorded as present on the river immediately upstream of the LNR (source 2014 PTES survey) **LBAP**
- Brown Hare – one record, 11 years old is presented in the Manor Farm LNR management plan and this is centred on Toton Fields itself. Brown Hare is likely to be still present on nearby farmland. **Section 41 Species, LBAP**
- Mink – whilst not protected, this introduced species is listed because it is a water vole predator and often where it occurs water voles become locally extinct. Fortunately, it appears largely absent from the Toton Fields area at present, with last known records in the period 2001-05 and it was not recorded by the recent 2014 PTES survey.
- Bats – the Nottinghamshire Bat Group has records of the following species at/ near to the LNR: Common pipistrelle, soprano pipistrelle Daubenton's, noctule, brown long-eared and myotis sp. The bats at nearby Attenborough Nature Reserve have been subject to numerous surveys but a dedicated survey is required of Toton Fields to help inform the management plan. **Wildlife and Countryside Act, Conservation Regulations, Section 41 Species, LBAP**

Amphibians and reptiles

- All our most widespread species (common frog, common toad and smooth newt) are known to occur within/ adjacent to the LNR, on the floodplain habitats and also within gardens, especially where householders have dug ponds. All of these 'widespread' amphibian species are protected by Schedule 9(5) **Wildlife and Countryside Act** (protection against sale only). Common Toad is a **Section 41 Species**
- Over recent years there have been reports of great crested newts in the vicinity but none of these records have been verified. **Wildlife and Countryside Act, Conservation Regulations, Section 41 Species, LBAP**
- The most recent grass snake record available to us is presented in the MP for the adjacent Manor Farm LNR and this is dated 2010. It is however thought that grass snake is highly likely to occur within floodplain habitats on Toton Fields. **Wildlife and Countryside Act, Section 41 Species, LBAP**

Birds

- The birds have been subject to long term monitoring and records for the available period (1963 to 2007).
- All birds are fully protected by the **Wildlife and Countryside Act** whilst nesting or building a nest. Ecologists frequently used Birds of Conservation Concern (BTO, RSPB et al) when evaluating the importance of bird communities associated with sites. BOCC assigns species to the Red, Amber or Green lists of conservation concern based on historical decline, trends in population and range, rarity, localised distribution and international importance. BOCC Version 4 was published in December 2015.

Red list species that have occurred with Toton Fields include Lapwing, Willow Tit, Cuckoo, Skylark, Grasshopper Warbler, Fieldfare, Redwing, Song Thrush, Mistle Thrush, Spotted Flycatcher, House sparrow, Tree Sparrow, Grey Wagtail, Linnet, Lesser Redpoll, Yellowhammer, and Starling.

Butterflies and moths

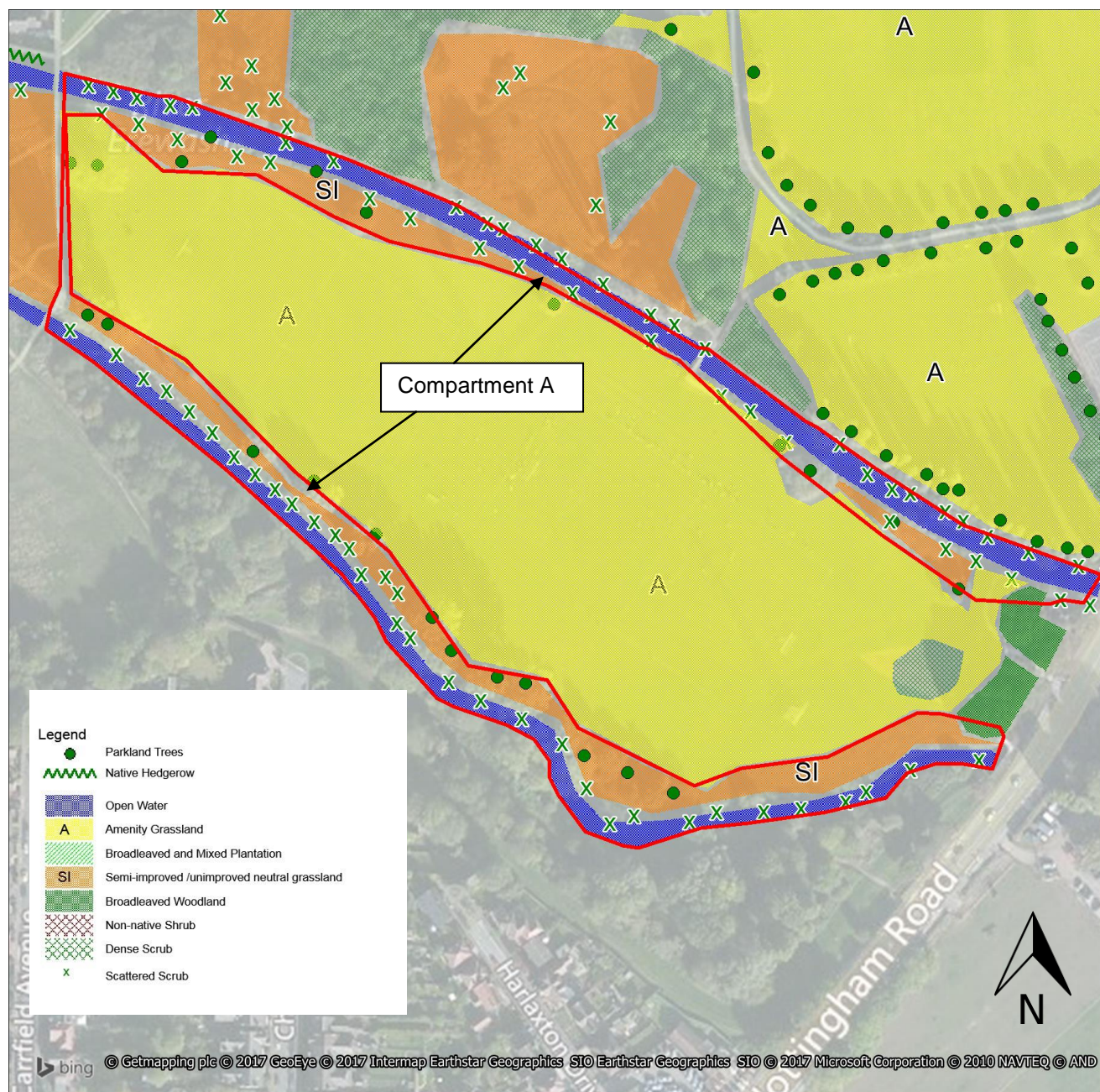
- The Friends, in conjunction with Long Eaton Natural History Society and county moth recorder, Dr Sheila Wright, have carried out a moth trapping sessions. Prior to these surveys it is know that the widespread day-flying Cinnabar moth, the caterpillars of which feed on ragwort is present on the site. It is a **Section 41 Species**.
- A range of widespread butterfly species are associated with the site, including painted lady, small tortoiseshell, comma, speckled wood, small white, gatekeeper, orange-tip, peacock, red admiral, clouded yellow, brimstone, marbled white, green hairstreak and holly blue. It is important that the butterflies are continued to be monitored because many of the once widespread species have declined in recent years.

3.3. Management Compartments

The site has been divided into 5 management compartments, A to E – see Appendix 1. The boundaries have not been changed and remain as presented in the previous management plan. The management compartment descriptions have been updated.

Compartment A: River Erewash, bypass channel and bank habitat south of Carrfield Avenue

Compartment A Habitat map



Compartment A Description

Compartment A is located at the southern end of the LNR. The amenity grasslands (playing fields) are excluded from the LNR and the management plan. The compartment includes the river, bypass channel and a strip of land at the top of the banks, between Carrfield Avenue and A6005 Nottingham Road to the south.

The key features of this compartment are:

- The river, bypass channel and associated riparian flora, including in-channel vegetation, and bankside habitat. The banks support tall herb, rank grassland, scrub and trees. Notable fauna include kingfisher, otter and water vole, little egret and heron
- Alongside the River Erewash and bypass channel, the Borough Council has relaxed the mowing regime to allow corridors of rough grassland, several metres wide in places, to become established. This creates a wildlife rich margin between the sports pitch and river and is of value to wildlife, especially invertebrates and potentially small mammals. Paths are regularly mown through the rough grass areas to provide access for walkers. This also creates a circular loop around the land between the river and bypass channel (east of Carrfield Avenue). In places, this provides close access to the watercourses, which are very important features of the LNR.
- Individual and groups of trees are present along the margins of the river and bypass channel. Species include native black poplars, crack and weeping willow and birch. A number of nest boxes have been put up in these trees. The nest box scheme is an ongoing project maintained by the friends group.

Compartment A management proposals

A1 Further widen the rough grassland corridor along the water courses

If sufficient space is available and it would not encroach on the sports pitches, it would be desirable to widen the rough grassland margins along the water courses further. A width of 10-15m could be achieved in places, keeping the mown paths to provide access, although it could benefit the river if these could meander, so as to create some less disturbed sections of river bank.

A2 Mowing regime

If the rough grassland becomes too rank (i.e. a thatch of dead grass builds up and scrub invades) a winter cut with the removal of the arisings may be required to open up the sward which may allow floral diversity to increase. It is however recommended that not all of the rough grass is managed in this way in any one year as it provides overwintering habitat for many species, particularly insects. If the rough grass is cut and collected, if possible some of the arising should be composted on site to provide habitat for invertebrates and breeding opportunities for grass snake. From the top of the bank to the water (in relation to both the bypass channel and river) should not be cut.



Photograph 1 Showing Rough Grassland between River Erewash Bypass Channel and sports pitches at the South East Corner of the site

A3 Tree management

As with all parks and open spaces regular tree safety surveys are carried out. If any emergency tree works need to be carried out this will be addressed. As both open and more shaded sections of water course are present it is felt that little tree work is required for conservation purposes during the plan period. Careful management of important trees, especially the willows and poplars should be carried out, in consultation with the council's tree officer and qualified arboriculturalists, to maintain good tree health and to prolong life. A bat roost potential survey would need to be carried out ahead of any planned tree works. It might be worth thinking about planting a few new groups of poplar and willow to provide a diversity of tree ages on site. If all trees are of a similar age they are likely to reach the end of their life within the same period, so a diversity of age structure is important.

The trunks of several poplars have been retained near the bypass channel south of the path from Carrfield Avenue. As they are tall, these act as landscape features as well as wildlife habitat. The poplars have been subject to 'coronet cuts', a technique which purposely leaves a ragged finish to mimic storm damage. This tree management technique has proven wildlife value as it creates more standing dead wood habitat than regular cuts, which often heal.

Dead wood is an important wildlife habitat, particularly for invertebrates, fungi and nesting/ roosting for bats and birds. Further opportunities for retaining standing and fallen dead wood should be encouraged. If logs are provided, these should be large enough to make it difficult for them to be removed from site (e.g. for wood burners) or dragged into the water channel. Large logs could also be made into additional seating.



Photograph 2 Showing retained stumps of the poplar trees which have been subject to 'coronet' cuts

The nest box scheme should be maintained and opportunities sought for putting up additional bat boxes on suitable trees.

A4 Water course management

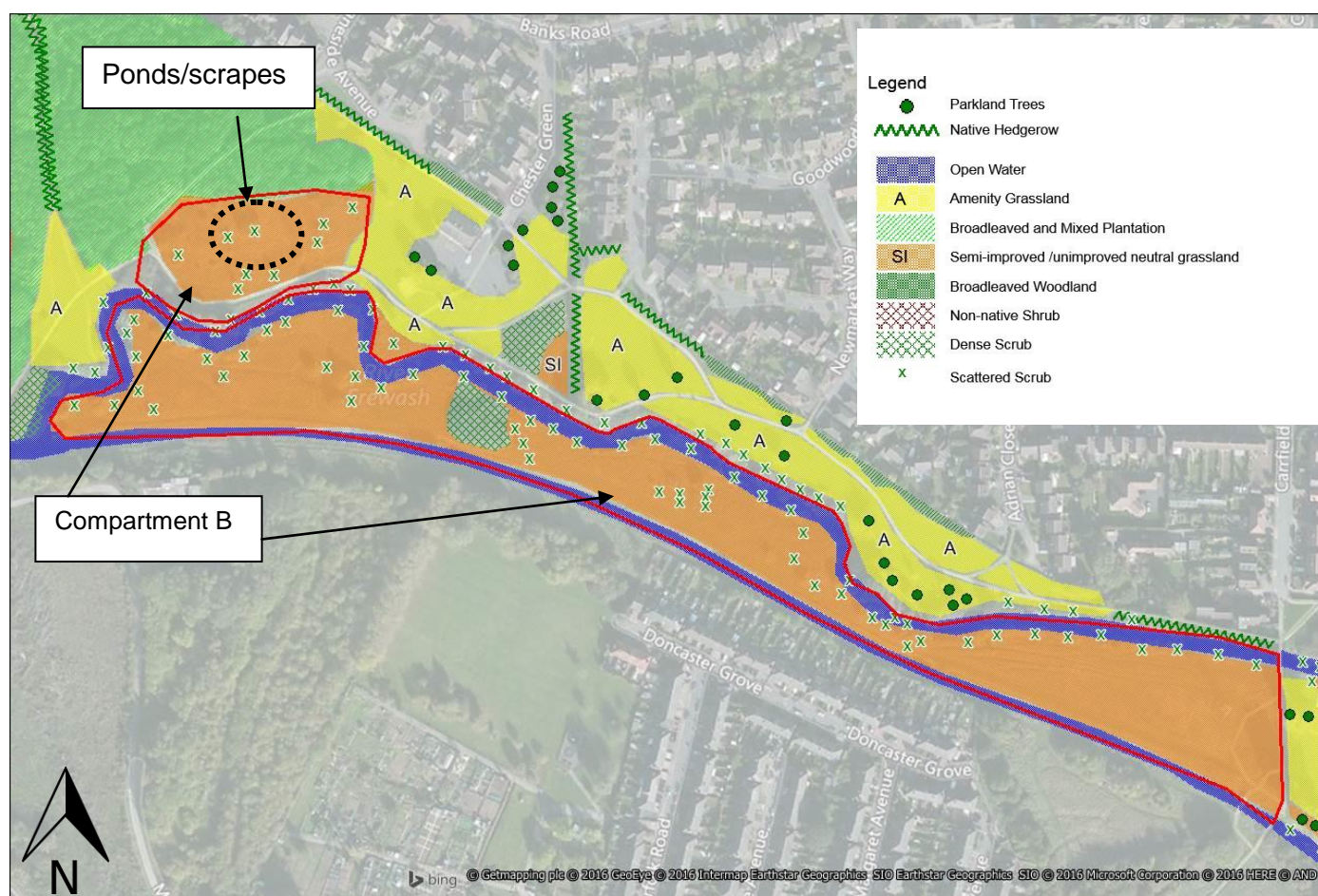
Clean up any litter and other non-natural debris that accumulates in the channel. Continue with Himalayan Balsam monitoring and control, feeding into and working with any local projects such as Notts BAG.

Angling already takes place and limited responsible angling is tolerated (but not actively promoted) in this compartment, along with Compartment B. This activity is only possible in easily accessible sections of water course, which are few and far between. Any impacts on wildlife from angling (e.g. in relation to disturbance to nesting birds) have been fairly local and at this point in time it is not deemed necessary to prohibit angling from the LNR.

A5 Water course enhancements

It is recommended that projects are instigated in conjunction with the Lead Local Flood Authority and Environment Agency to improve channel flow characteristics to benefit target species. In addition to amending flow rate into the bypass channel, this could include recreating backwaters or shallow areas to encourage fish spawning and nursery areas. The recreation of natural features should also incorporate the reinstatement of riffles to oxygenate the water and seasonal wetland areas either side of the river.

Clearance of bramble scrub from vertical sections of river bank could create additional nesting opportunities for kingfishers. Maintaining occasional tree cover along water courses would be helpful as overhanging branches are required by kingfisher as feeding perches. Feeding perches need to be positioned by clear, slow-moving water, to allow them to feed on fish and aquatic insects. Trees can be managed in such a way to encourage natural perches, or perches can be created by carefully positioning fallen branches.

Compartment B: Semi-natural grasslands and scrub between the river and bypass channelCompartment B Habitat MapCompartment B Description

This compartment includes the river and bypass channel together with the extensive low lying area between the river Erewash and the by-pass channel. The key features of this compartment are:

- The overflow channel which becomes more open in character, supporting grassy banks which provides excellent habitat for water vole
- The natural, meandering stretch of the River Erewash with its associated bankside herbaceous vegetation (rank grassland and tall herb), scrub and trees.
- The land between the river and by-pass channel, which comprises rough grassland and scrub, (mainly hawthorn, blackthorn and willows). As a result of its wet and rank nature and limited opportunities for access (it is only easily accessible from the Carrfield Avenue footpath and there are no bridges across the watercourses) the land is fairly undisturbed which is of huge benefit to wildlife. The area would have once being regularly flooded by the river but is now dry due to the canalisation and the lowering of the river bed. An interpretation panel has been installed just off the footpath to explain the importance of this Erewash floodplain meadow and to explain that the site is a part of a complex of important remnant grasslands in the Erewash Valley.
- A further area of land on the eastern side of the River Erewash, north-west of the Greenwood Community Centre comprises similar rank grassland and scrub habitats. This area also includes a number of scrapes.

- As part of a flood defence system, outside of the LNR boundary just beyond the western tip of this compartment is a weir. This is where the bypass channel branches from the main river. The flow of water down the bypass channel has the effect of reducing the flow of water into the main river, which is especially pronounced during periods of low rainfall such as over the summer months. It has been thought that the low-flow rate could be detrimental to the river and its wildlife. Ideally, the flow through the bypass channel should only be a sweetening flow over the weir during most of the year and rising at times of peak river flow to prevent the main river channel from flooding the surrounding area. A possible project, to benefit fish, would be installation of a fish pass at the weir.
- A number of seasonal wetland scrapes have been created within the grassland area north of the Erewash (marked on habitat map B (black dash circle). These are fed mainly by precipitation and this habitat enhances the suitability of this area for wetland plants, amphibians, and aquatic invertebrates such as dragonflies and foraging habitat for resident waterfowl and wintering wetland birds.

Compartment B Management Proposals

B1 Grassland and scrub

This is the large tract of semi-natural and largely unmodified habitat situated between the bypass channel and main river, with a second area to west of the Greenwood Centre. These habitats require minimal intervention in terms of management but if scrub becomes too dominant (especially willow and bramble) and / or uniform in structure some localised scrub clearance work would be beneficial.

Although the land between the River and Bypass channel is occasionally accessed, especially by horse riders, in ecological terms it is best not to improve access to this area.

B2 Ponds and wetland

Should they become scrubbed up, the existing scrapes may, in time, require management such as scrub clearance or re-excavation.

The previous management plan suggested creating an education pond in the rank grass/ scrub habitat east of the Erewash/ north of the Greenwood Centre. This proposal could be revisited but as this area is considered high value habitat it is recommended any new educational pond is placed in the amenity grassland area near to the Greenwood Centre in compartment C.

B3. Water course management

Clean up any litter and other non-natural debris that accumulates in the channel. Continue with Himalayan Balsam monitoring and control, feeding into and working with any local projects such as Notts BAG.

Angling already takes place and limited responsible angling is tolerated (but not actively promoted) in this compartment, along with Compartment A. This activity is only possible in easily accessible sections of water course, which are few and far between. Any impacts on wildlife from angling (e.g. in relation to disturbance to nesting birds) have been fairly local and at this point in time it is not deemed necessary to prohibit angling from the LNR.

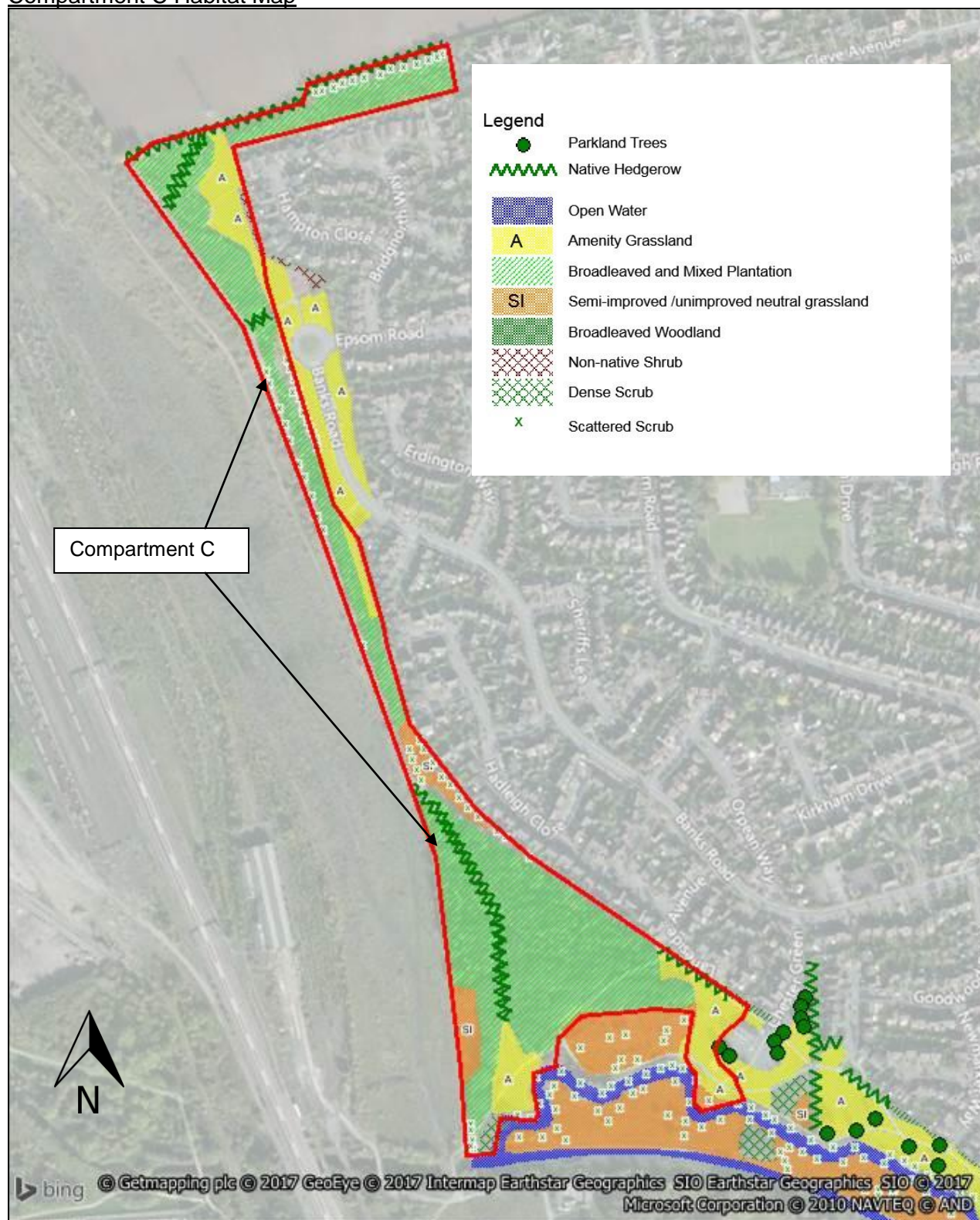
B4. Water course enhancements

It is recommended that projects are instigated in conjunction with the Lead Local Flood Authority and Environment Agency to improve channel flow characteristics to benefit target species. In addition to amending flow rate into the bypass channel, this could include recreating backwaters or shallow areas to encourage fish spawning and nursery areas. The recreation of natural features should also incorporate the reinstatement of riffles to oxygenate the water and seasonal wetland areas either side of the river.

Clearance of bramble scrub from vertical sections of river bank could create additional nesting opportunities for kingfishers. Maintaining occasional tree cover along water courses would be helpful as overhanging branches are required by kingfisher as feeding perches. Feeding perches need to be positioned by clear, slow-moving water, to allow them to feed on fish and aquatic insects. Trees can be managed in such a way to encourage natural perches, or perches can be created by carefully positioning fallen branches.

Compartment C: Mixed woodland plantation and linear walkway, incorporating Banks Road Open Space

Compartment C Habitat Map



Compartment C Description

Compartment C comprises the large plantation and the linear, northernmost sections of the site, adjacent to Toton Sidings. The compartment also includes Banks Road Open Space.

The key features of this compartment are:

- Amenity grassland and play area outside the LNR at the Banks Road end.
- A triangle of Amenity grassland south of the main woodland and a further area of amenity grassland close to the Greenwood Community Centre.
- There is one large main area of mixed plantation and two linear sections: one is located to the east of the north-south running public footpath (dressed with crushed stone) and the other forms the northern boundary of the site, between the farmland and Hampton Close/ Bridgnorth Way. The plantations are predominately ash with rowan, cherry, pine and oak. Field maple, hawthorn and hazel are understorey species.
- The large plantations are bisected by several footpaths and two sets of overhead powerlines. The powerlines run through Compartment C, with the larger metal pylons (132,000 volt cables) positioned close to the eastern boundary of the compartment and then continuing to run close to the northern boundary of Compartment D. The 33,000 volt cables on wooden poles run east to west over the northern part of Compartment D, then run over the western boundary of Compartment C and continue above part of Compartment B.
- In close association with the plantations, native species rich hedges have been planted along the main public footpaths and some of the secondary paths, which are establishing well. The establishment of hedges, in addition to providing wildlife habitat is used to help control/ channel visitor movements (i.e. stop shortcuts being established).
- On the northern boundary, adjacent to the plantation, is a nice corridor of scrub habitat situated beneath the powerlines. It forms a nice soft edge to the woodland and is valuable in ecological terms, especially for butterflies and other invertebrates.

Compartment C Management Proposals

C1. Woodland management –general approach

The more heavily shaded parts of the main plantation are in need of thinning or coppicing of suitable understorey species (e.g. hazel, hawthorn etc) to improve woodland structure and allow more light to penetrate to the woodland floor, encouraging the understorey and ground flora. Such management work would also allow the better individual trees to mature. In any areas where existing understorey is lacking it may be desirable to improve woodland structure by planting suitable species of shrubs such as holly, field maple and hazel. This will provide better foraging habitat and more nesting opportunities for birds, invertebrates and small mammals. Some small glades could be created and some of the existing paths widened, to create woodland 'ride' type habitat.

Continue leaving some of the logs and brash as piles and dead hedging. This will provide dead wood habitat which will be of value to dead wood invertebrates, cover for nesting birds and small mammals, including hedgehogs. Care will be needed in sighting dead wood habitat to minimise the risk of theft (for wood burners etc) or vandalism, particularly setting of fires etc.

Be vigilant in relation to tree diseases and biosecurity and follow current best practice guidance (published by Forestry Commission England) in relation to disease precautions and management. As ash is one of the main species planted, *Chalara* (ash dieback) is a threat at Toton Fields, especially as younger trees are particularly susceptible to infection. The current approach to managing the site with *Chalara* in mind is to concentrate any thinning work on selecting young ash, in preference over other species. Tree diseases are discussed further in section 4.2.

C2. Woodland Management –below the powerlines

Two overhead power lines exist at Toton Fields. The cable on the larger metal pylons run at 132,00 volts and feeds electricity from Ratcliffe on Soar power station. The other line is on wooden poles at 33,000 volts and runs from Toton to Long Eaton to help distribute electricity within the local area. Tree management work is carried out in line with the Electricity Act 1989 to ensure that the lines are maintained in a safe and reliable condition by ensuring the trees are prevented from growing too close to the lines and either causing an unsafe situation or loss of power supply. Trees are also cut to prevent loss of power supply due to adverse weather conditions, in line with the Electricity, Safety, Quality, and Continuity Regulations 2002 by preventing trees from contacting the lines due to strong winds.

In general, clearances are achieved and maintained by felling, coppicing, pollarding and pruning trees in proximity to the lines. At Toton Fields, trees adjacent to the wooden poles were substantially cleared back from the overhead power lines for resilience to storm conditions in 2014, by removing trees within falling distance of the overhead lines. Healthy trees further back in north section Compartment C that only represented a collective low risk to the network (mostly common ash) were retained to maintain tree cover based on the sensitivity of the site.

The lines are typically placed under 5 year cycles, however, due to sensitivity towards this site, the trees are currently subject to revisits on a 3 year cycle. Revisits are scheduled to maintain the current clearances by cutting back regrowth of trees previously cut by further pruning, re-pollarding and re-coppicing trees close to the lines throughout the site. The following approach is to be applied:

- Scots pine and larch will be reduced in height.
- Fast growing birch, willows and cherry will be coppiced.
- Common ash and English oak will be pollarded if they are located to the side of the lines, or coppiced if under or close to the lines.
- Field maples will be pruned for a height reduction or pollarded.
- Corsican pines will be felled as necessary.

Trees still within falling distance towards the north section of compartment 'C' will be re-inspected to ensure that the health and condition still only represents a low risk to the network. Those trees that represent an unreasonable risk will be subject to pollarding.

Trees adjacent to the pylons are subject to revisits to maintain a safe distance from the lines and are done based on maintaining clearances based on the relative growth of the trees present, including crown reducing individual trees, reducing the height of pines and larch and coppicing and pollarding groups of broadleaved species.

C3. Hedgerow management

The hedges are currently in good condition. They will require trimming during the plan period to keep them in good structural form (aim for 'A' shape). In time, but expected to be beyond the life of this plan, hedges may need to be laid, some for the first time.

The most recently planted hedges, such as the one between the footpath and the Banks Road Play area will need tree guards removing in the next five years, or earlier



Photograph 3 showing recently planted hedges west of Banks Road play area

C4. Boundaries with adjoining gardens

Many gardens adjoin this compartment to the east which can cause conflicts of interest. Rubbish, especially tipping of garden waste can be an issue on sites like this.

Where possible it is desirable to improve boundaries and perhaps create more robust boundaries that are of ecological value (such as hedge or linear shrub planting) to replace degrading fencing.

Local residents, including those that have gardens adjoining the LNR should be encourage to have positive input in the management of the LNR by joining the friends group.

C5. Boundaries to the west

Apart from the concrete posts (remains of an old fence line) and scattered hawthorn bushes, there is currently no boundary to the former industrial land to the west of the footpath. Whilst this is fine at present, if this land becomes developed in the future sensitive treatment of the boundary is required. Ideally some of this land could be acquired to form an extension to the LNR.



Photograph 4 showing boundary between the LNR and Former industrial land (Toton Sidings)

C6. Grassland enhancement opportunities

The mowing of some areas at the margin of the existing amenity grassland could be relaxed. This has been done in some areas, e.g. near to the pylon (pictured below) but, if space allows, this sort of boundary could be extended further north to provide a rough grassland/ scrub edge to the woodland.

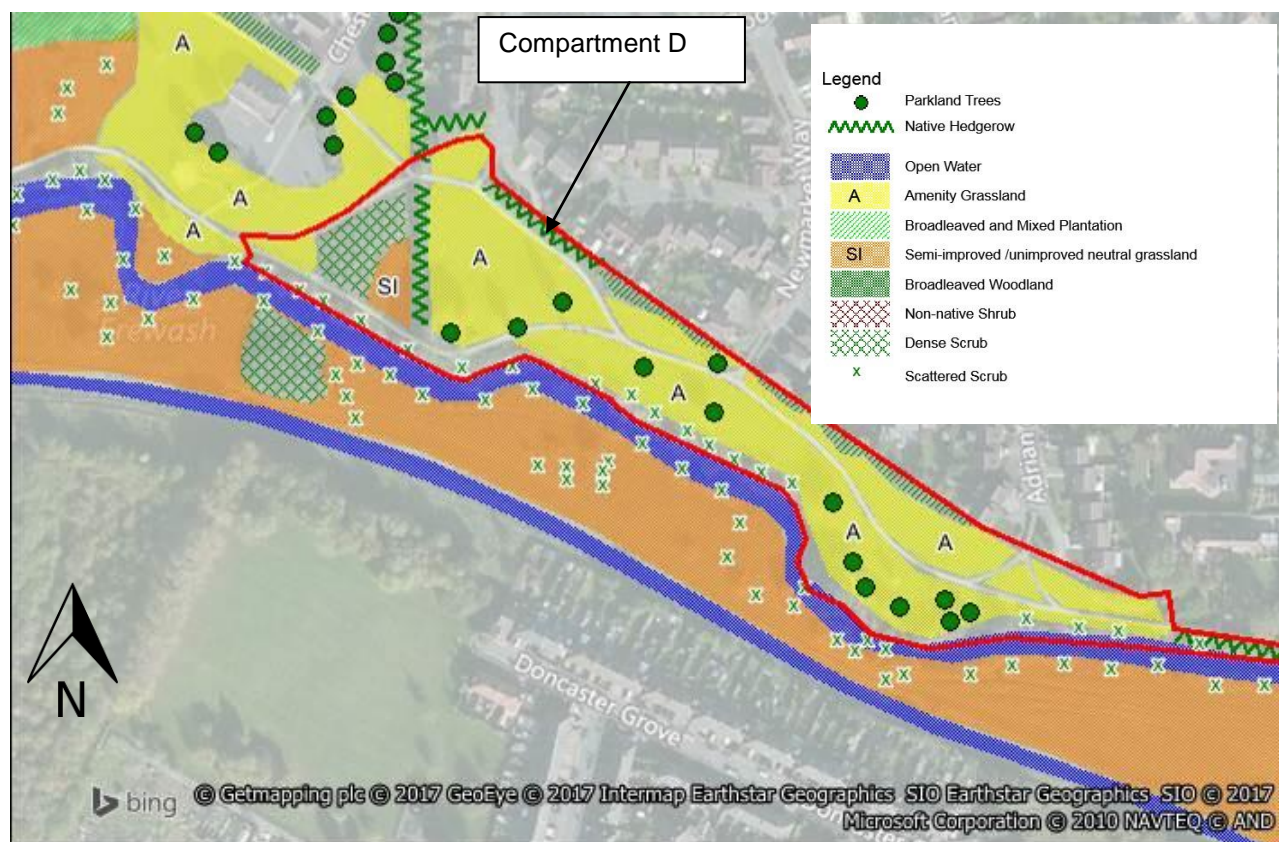
An additional proposal, which has commenced at the time of writing (April 2017), is to establish some wild flower meadow plots in the Banks Road area. A long season grass/ wild flower seed mix, with an annual cut and remove in the autumn is the recommended form of management. The triangle of land south of the plantation and near the river (where multiple paths meet) could also be suitable for this treatment.



Photograph 5 showing bramble scrub and rank grassland at the Banks Road end of the site

C7. Creation of an education pond

It is suggested that a more formal education pond (separate and in addition to the more natural scrapes) could be dug within the amenity area north of the Greenwood Centre. This should be fenced for safety and to restrict access for dogs, which may disturb the pond, making the water turbid. This could provide good additional habitat for dragonflies and other invertebrates and amphibians, as well as being a valuable education resource, possibly used by local schools and after school groups.

Compartment D Parkland between Greenwood Centre and Carrfield AvenueCompartment D habitat mapCompartment D description

This compartment comprises an area of land north of the River Erewash. Largely formal in nature, there are some more semi-natural features, such as an old hedge line, an area of bramble scrub/ rough grassland and scrub/ rough grassland on top of the river bank.

The main features are:

- amenity grassland
- formal shrub and tree planting, with wide boundary of shrub screening adjacent to residential properties
- A small triangle of bramble scrub/ rough grassland to the south east of the community centre, which is bordered on its eastern edge by a mature hawthorn hedge
- The old hedge line which runs north to south
- A section of the River Erewash forms the southern boundary of this compartment and a margin of scrub/ rough grassland and trees are present at the top of the river bank.

Compartment D Management proposalsD1 Parkland

The mown grass and ornamental planting will continue to be managed. Little intervention is required in relation to the scrub south of the greenwood centre. Some knocking back of bramble may be desirable to keep it clear of paths and to maintain some open rank grassland in this area.

D2 Old hedge

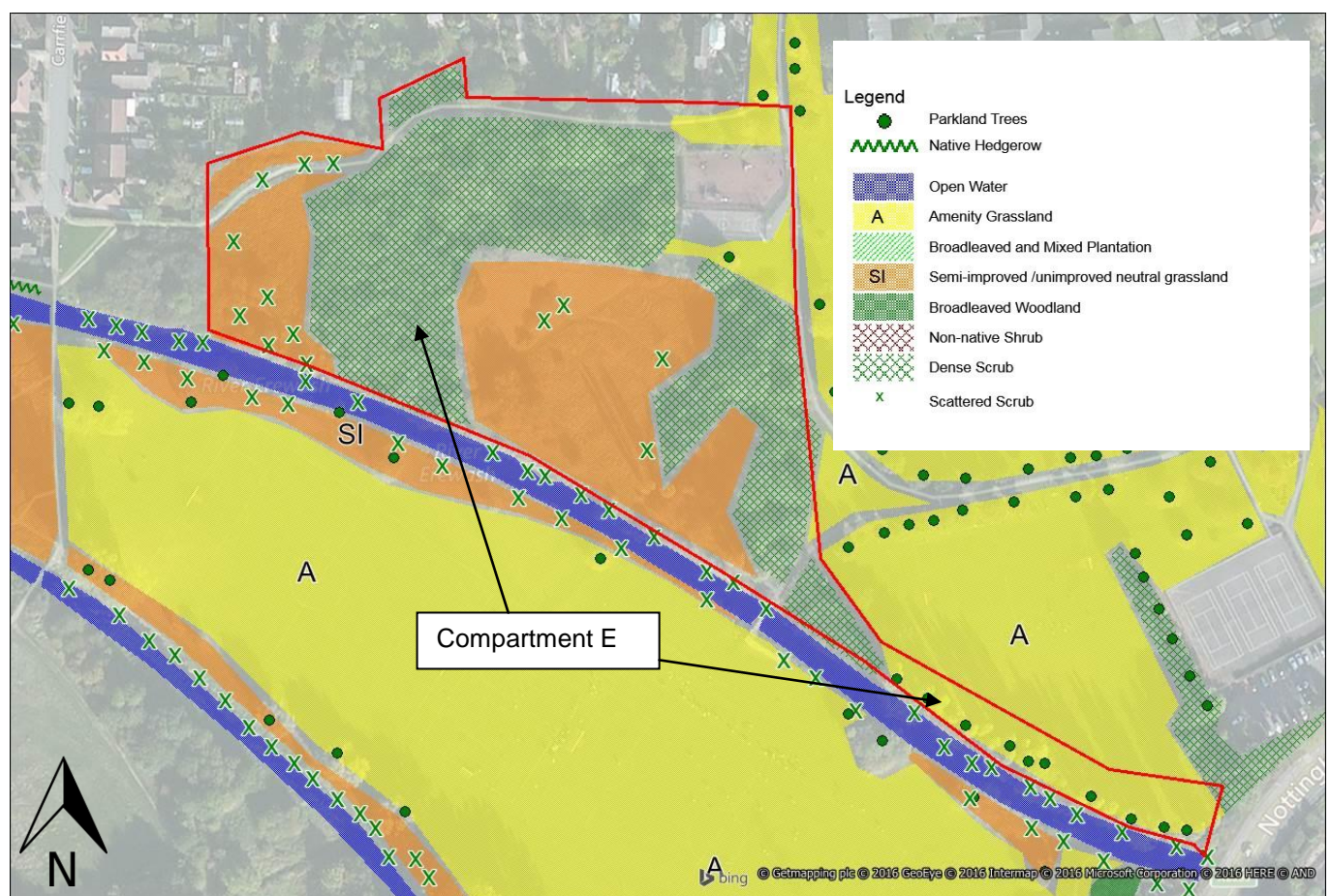
The previous plan proposed to lay the old hedge and replant the gaps with indigenous flowering and fruiting species of shrub. It is considered that the hedge is too overgrown to respond well to laying. Therefore, minimal management is recommended but it may be desirable to plant up some of the gaps.

D3 River bank

The tops of the river bank have established well with tall herb, rank grassland and scrub. As recommended for compartment A, if land is available it would be desirable to widen this bank top habitat.

If scrub at the top of the bank becomes too dense/ woody, it may be appropriate to occasionally manage it in small sections (i.e. cut a few bays / notches into it but not flail the entire bank in any one year). This would create more varied habitat in structural terms. Ideally, a matrix of scrub (of varying age), grassland and tall herb vegetated should be established along the top of the river bank.

Compartment E: Rough grassland and scrub west of Manor Farm, incorporating the northern bank of the River Erewash

Compartment E habitat map

Compartment E description

This compartment comprises a variety of habitats, including mature scrub which is in parts dominated by blackthorn, a grassland area and habitat on the northern bank of the River Erewash.

The main features are:

- The grassland which is rank in nature and is currently unmanaged, or very infrequently mown. A grassland for wildlife interpretation panel has been installed at the edge of the main open area of grassland, south of the play area.
- The central area of the scrub is dominated by a fairly even age stand of blackthorn but other species are represented and some mature scrub /trees are present.
- Access to the river bank is very limited south of the scrub /grassland, where sections of the bank are dominated by scrub and tall herb such as bindweed. The northern bank of the river to the east of bridge E supports much woody vegetation, including a line of poplar trees which may become dangerous.

Compartment E management proposals

E1 Scrub management work

Anti-social behaviour has been a problem in the scrub area, particularly in the blackthorn dominated vegetation, where the height of many of the bushes allows local youths to gain access to set up camps etc. Coppicing of (say 1 in 5 bushes) will reinvigorate them by encouraging a spurt of new growth from the coppiced stumps, improving age diversity so providing greater opportunities for invertebrates, nesting / roosting birds etc. An additional benefit will be that the new growth will be thorny so will discourage access under the taller older bushes, hopefully reducing any anti-social behaviour in this location.

E2 Mowing regime

The grasslands have a reasonable diversity but would benefit from being brought into a regular management regime to prevent the coarser vegetation and scrub from encroaching. An annual cut of one third of the grassland each year is recommended, ideally with the removal of cuttings. Opening up the area will also help to safeguard the features of local archaeological and heritage importance which are present at this location.

E3 Phased replacement of black poplar trees

As many of the black poplar trees are very mature, it is advisable to have a replacement planting plan. Black poplar is of interest as it is a Nottinghamshire LBAP species and the species action plan aims to maintain it's current distribution and increase the number of trees by 10%.

4. MANAGEMENT OBJECTIVES AND WORK PLAN

This section defines the management objectives and identifies factors influencing management. The background information in section 2 and management proposals in Section 3 have then been utilised in drawing up the management objectives and 5-year work programme for the site.

4.1 Management Objectives

Eight broad management objectives are presented below. The compartments to which the objective relates is identified along with the management proposal reference from section 3.

Finally, it is identified in bold type next to the management proposal who is likely to action the project:

- Broxtowe Borough Council **BBC**
- Contractor **C**
- Volunteers (Friends of Toton Fields and other groups, e.g. Practical Conservation Volunteers) **Vol**
- Environmental organisations and other local partners, including Nottinghamshire Wildlife Trust **Partners**

Objective 1: Maintain and enhance the grassland habitat types present

1.1 Alter mowing regimes, where appropriate, to enhance grasslands by establishing additional area (or wider margins of) low-maintenance (rough) grassland Compartments A, C, D and E (proposals A1, A2, C6, D3, E2) **BBC**

1.2 Establish new wild flower areas, if funding allows, at the Banks Road end and within the triangular-shaped woodland clearing Compartment C (proposal C6) **BBC, C, Vol**

1.3 Manage scrub to limit its encroachment into the conservation grassland area Compartments B & E (proposal B1, E1) **BBC, C, Vol**

Objective 2: Maintain and enhance the woodland, hedges and trees

2.1 Enhance plantations by implementing a programme of woodland management work (coppicing, thinning, pollarding, pruning) and retain dead wood as wildlife habitat Compartment C (proposals C1 and C2) **BBC, C, Vol**

2.2 Manage hedgerows (i.e. trim) to maintain a good structure Compartment C (proposal C3) **BBC, C, Vol**

2.3 Enhance woodland understorey and hedges, where appropriate, by planting native species Compartments C and D (proposals C1 and D2) **BBC, C, Vol**

Objective 3: Maintain and enhance the river and wetland habitat types present

3.1 Manage existing scrapes (if appropriate during the plan period) and create additional wetland features, such as an education pond in appropriate location(s). Compartments B and C (proposals B2 and C7) **BBC, C, Vol**

3.2 Manage water courses as appropriate, including keeping them free of litter and debris, carrying out Himalayan balsam control etc. Compartments A and B (proposals A4 and B3) **BBC, C, Vol**

3.3 Enhance water courses e.g. in-channel enhancement projects All Compartments (proposals A5, B4). **Partners**

Objective 4: Maintain and enhance the species present

4.1 Carry out targeted habitat creation / influence management to benefit particular species (e.g. black poplar, otter, water vole and kingfisher) and focal taxonomic groups (e.g. butterflies, moths, bats, odonata, amphibians and reptiles etc). All compartments **BBC, Partners, Vol**

4.2 Maintain the existing nest boxes and seek opportunities for installing additional bat boxes All compartments **Partners, Vol**

Objective 5: Combine habitat enhancement and management with education, recreation and access provision

5.1 Create a safe environment for users of the site by carrying out health and safety checks and respond to reports of safety hazards from the public All compartments **BBC, Vol**

5.2 Keep the site clear of litter and fly-tipping. Volunteers could be involved with litter picks and the council maintains the many litter bins on site All compartments **BBC, Vol**

5.3 Maintain mown grass paths. There is a network of mown grass paths through the conservation grassland areas in compartment A that is maintained by the Borough Council during the growing season Compartment A **BBC**

5.4 Maintain existing infrastructure and seek opportunities for enhancement:

- a. maintain existing benches and bins
- b. maintain existing path network
- c. establish new access links, such as to Attenborough Nature Centre and the River Trent
- d. Formalise the proposed shared walkers route, if feasible/ appropriate

Please note that external funding will be required to maintain the existing infrastructure and to pay for any future improvements to, or development of, the path network. Future nearby developments may provide opportunities in terms of possible financial contribution to infrastructure improvements All compartments **BBC, C, Partners, Vol**

5.5 Maintain the installed signage and interpretation materials in relation to the archaeology and conservation grassland areas. Improve signage and provide additional interpretation (e.g. provide more informative signs, footpath markers etc) where required. All compartments **BBC, Vol**

5.6 Monitor any conflicts of uses in relation to recreation and access and find solutions if problems arise in relation to:

- a. angling All Compartments (proposals A4 and B3) **BBC, Partners, Vol**
- b. horse-riding All compartments **BBC, Partners, Vol**

Objective 6: Encourage public involvement, understanding and awareness of issues relating to the site

6.1 Involve local communities in the management, use and care of the site by:

- a. encouraging local people to join the Friends of Toton Fields (refer to proposal C4)
- b. involve local schools and young person's groups in education projects or habitat work
- c. promoting responsible dog exercising
- d. promoting solutions to antisocial behaviour

e. tackling boundary issues, for instance with some properties bordering Compartment C, and improving the boundary between the site and adjacent sidings C3, C4

f. developing links with local businesses.

All compartments **BBC, Partners, Vol**

6.2 The friends groups and other to help raise external funding for projects and site improvements

All compartments **BBC, Partners, Vol**

6.3 Keep notice boards (e.g. at the Greenwood Centre) and the Friends Group's website updated with information relating to the site. This should highlight any current issues that people need to be aware of and be encouraged to report (e.g. poaching and illegal shooting) as well as information on any management work taking place. The Friends of Toton Fields issue a regular newsletter to members and pdf copies are made available on their website All compartments **BBC, Vol**

Objective 7: Conserve and interpret archaeological and historical elements relating to the site

7.1 Continue the legacy following the successful Toton Unearthed Project by developing further project focusing on the history and archaeology of Toton Fields All compartments **BBC, Partners, Vol**

Objective 8: Wildlife recording and monitoring

8.1 Monitor the effects of management and review the management plan accordingly. A number of baseline surveys have been carried out but future monitoring is important to record any changes in populations, which may be a response to management or other external factors such as climate change or land use changes nearby. Groups to be surveyed should include plants, birds, amphibians and reptiles, bats, moths and other invertebrates (terrestrial and aquatic). The Phase 1 survey could be updated as the current survey was a broad survey (not all of the remnant hedges were recorded) and updating will be required to map changes as habitats mature All compartments **BBC, Partners, Vol**

8.2 Maintain species records and feed relevant information to appropriate organisations e.g. NBGRC, Broxtowe Borough Council and Notts Biodiversity Action Group. All compartments **BBC, Partners, Vol**

4.2 Factors Influencing Management

- Timescale – the need to do things gradually to ensure that the visual appeal of the site is not lost during management and restoration
- Safety - the entire site is accessible at all times, therefore in the interest of public safety, all possible measures should be taken to ensure public safety whilst work is being carried out, including closing paths
- Community involvement - the local community and volunteer groups, in particular Friends of Toton Fields, are involved in the practical and strategic management of the site and this type of work needs to be supported and encouraged.

- Practical management – much of the practical work will be carried out by Broxtowe Borough Council, Practical Conservation Volunteers and members of the Friends of Group but there will be limitations to time availability and funding.
- Legal obligations –
 - work likely to cause disturbance to breeding birds i.e. felling and scrub clearance cannot be undertaken during the bird breeding season (March to September). Therefore all felling and scrub clearance must be undertaken during the autumn and winter as it is an offence to disturb any wild bird (with the exception of pest species) while it is tending a nest containing eggs or chicks, until the chicks have successfully fledged. To do so would be a criminal offence under The Wildlife & Countryside Act 1981 as amended.
 - Water voles are fully protected under the Wildlife and Countryside Act 1981 (as amended) from killing or taking by certain prohibited methods. Their breeding and resting places are fully protected from damage, destruction or obstruction. It is also an offence to disturb them in these places.
 - Mature trees identified for felling or pollarding that provide roosting opportunities for bats should be surveyed by a licensed bat worker prior to felling. All species of British bat plus their roosting sites are protected by The Wildlife & Countryside Act 1981, the CROW Act 2000 and The Conservation of Habitats and Species Regulations 2010.
 - Control non-native and alien plant species for example Japanese Knotweed, Himalayan Balsam etc.
- The need to accommodate and where possible/appropriate, enhance the amenity/recreational value of the site.
- Officer meetings regarding the management of the site are required to identify work programme and schedule of works. Meetings should involve Broxtowe Borough Council, Nottinghamshire Wildlife Trust, Friends of Toton Fields, Practical Conservation Volunteers, contractors and anyone else likely to carry out work on site.
- Ensure that all contractors / volunteers are covered by adequate insurance, meet Broxtowe Borough Council's child protection policy (Disclosure and Barring Service, DBS checks) and provide relevant Personal Protective Equipment, PPE, to all workers, all tools are well maintained and that risk assessments and method statements are produced.
- A number of potential hazards should be taken into account during any activity/ event and included on the risk assessment. These include:
 - risk of injury or drowning posed by the River Erewash and its by-pass channel
 - trips and falls
 - falling from the bridges
 - conflicts between different users, e.g. collisions between pedestrians and horse-riders, cyclists etc
 - accidents in relation to the power lines and their associated infrastructure, which could involve kite flying, fly fishing, use of model aircraft and drones etc
- Ongoing funding for the management identified cannot be guaranteed for the full term of the plan. It may therefore be necessary for some tasks to be rolled over into subsequent years, to be completed when funding becomes available.
- Tree disease/ biosecurity. At 2017 there is an increasing focus on detection, prevention (e.g. implementation of biosecurity) and managing the impact of any disease outbreaks. The diseases/ pathogens that pose the highest risks at this site are:

- *Chalara* dieback of Ash – it is a fungal disease which has the potential to cause significant damage to ash in the UK, having already caused widespread damage in Europe. Young trees, like those planted on site, are particularly susceptible to dieback, whereas mature trees can resist infection, often succumbing to a secondary infection. Some evidence of resistance has been noted in UK native ash trees.
 - *Phytophthora ramorum* - The pathogen can be spread on footwear, vehicle tyres, tools and equipment. Whilst most of Nottinghamshire is in Zone 3 (least risk-area) Toton Fields is on the edge of zones 1 and 2 at the time of writing. The disease can affect larch and oak species, along with beech, sweet chestnut and horse chestnut.
 - Acute Oak Decline - It is widespread in Britain, including the midlands, and is affecting several thousand oak trees. Various species of bacteria and a buprestid beetle, usually found in lesions caused by the disease, is thought to be associated with AOD
 - Oak Processionary Moth, this non-native moth has been accidentally introduced to south east England but vigilance is needed because there have been isolated cases elsewhere, including the neighbouring county of Yorkshire.
- There are several others pest and diseases to be vigilant of, including:
 - *Xylella fastidiosa*, which is not currently known in the UK but has potential to infect several species of broadleaved tree.
 - Sweet chestnut blight is not known to be established in the UK although isolated cases have been reported. It has caused significant losses of sweet chestnut in Europe and America and can affect some species of oak.
 - The latest guidance on tree pests and disease is available from the Forestry Commission's Pests and Diseases website:
<http://www.forestry.gov.uk/pestsanddiseases>

4.2 Five Year Work Programme 2017 – 2021

Objective/ project	Compartments	Years				
		2017	2018	2019	2020	2021
		1	2	3	4	5
Objective 1 Grassland Habitats						
1.1 Establish additional rough grasslands	A, C, D, E					
1.2 Establish additional wild flower areas	C					
1.3 Manage scrub	B, E					
Objective 2 Woodland Habitats						
2.1 Carry out woodland management work in mixed plantations	C					
2.2 Trim hedges	C					
2.3 Plant woodland understorey and gap up hedges	C, D					
Objective 3 Wetland Habitats						
3.1 Manage scrapes and create new wetland features, such as new ponds	B, C					
3.2 Keep water courses free of debris and carryout balsam control	A, B					
3.3 In-channel enhancement projects	A, B, C					
Objective 4 Species focused projects						
4.1 Instigate projects to benefit particular species	All					
4.2 Maintain nest box scheme/ install additional bat boxes	All					
Objective 5 Education, recreation and access						
5.1 Carry out general site checks	All					
5.2 Litter picking	All					
5.3 Maintain mown paths	A					
5.4 Maintain and improve infrastructure; seek funding and opportunities through new developments	All					

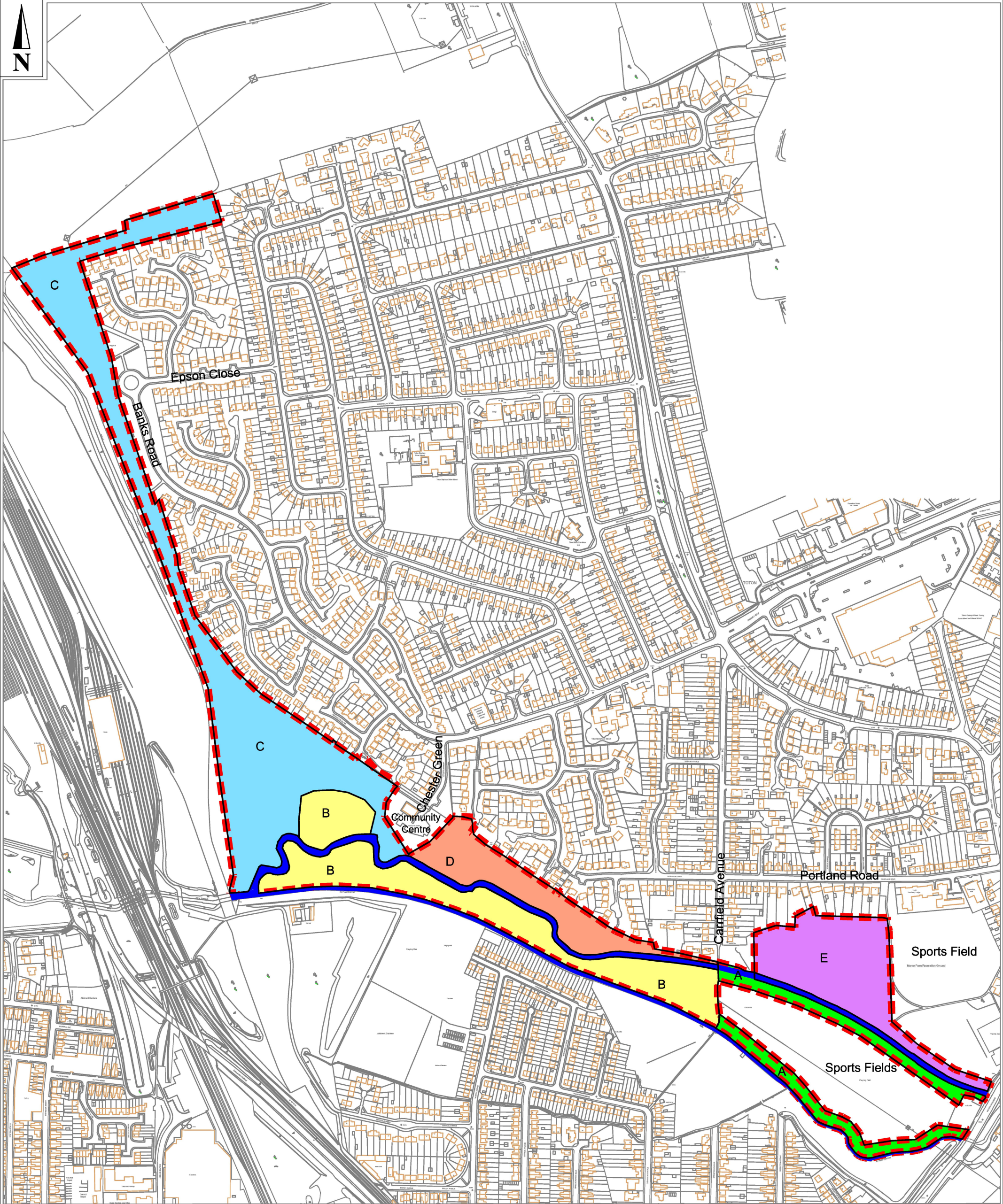
Objective/ project	Compartments	1	2	3	4	5
5.5 Maintain interpretation in relation to wildlife and archology	All					
5.6 Monitor any conflicts in relation to recreation and access and find solutions (e.g. angling and horse-riding)	All					
Objective 6 Public involvement						
6.1 Involve local community (Friends Group membership, links with local schools, solutions to anti-social behaviour, develop links with businesses etc)	All					
6.2 Public and Friends Group to help with fundraising for projects and site improvements	All					
6.3 Update notice boards/ Friends Group website and newsletter	N/A					
Objective 7 History and archaeology						
7.1 Toton Unearthed legacy projects	All					
Objective 8 Wildlife Recording and monitoring						
8.1 Wildlife monitoring	All					
8.2 Maintain wildlife records/ database and share with relevant partners	All					

4.4 Timing of Annual Work Programme

2017 – 2021	MONTH											
Objective	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
1.1 Establish additional rough grasslands												
1.2 Establish additional wild flower areas												
1.3 Manage scrub												
2.1 Carry out woodland management work in mixed plantations												
2.2 Trim hedges												
2.3 Plant woodland understorey and gap up hedges												
3.1 Manage scrapes and create additional wetland features, such as new ponds						Project Phase						
3.2 Keep water courses free of debris (all year round) and carryout balsam control (seasonally constrained)		Balsam Control										
3.3 In-channel enhancement projects							Project Phase					
4.1 Instigate projects to benefit particular species												
4.2 Maintain nest box scheme/ install additional bat boxes												
5.1 Carry out general site checks												
5.2 Litter picking												
5.3 Maintain mown paths												
5.4 Maintain and improve infrastructure; seek funding and opportunities through new developments												


2017 – 2021	MONTH											
Objective	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
5.5 Maintain interpretation in relation to wildlife and archology	All these projects have no specific monthly restriction and can be carried out at any time in the year. The only exception is when there are specific funding deadlines for individual projects											
5.6 Monitor any conflicts in relation to recreation and access and find solutions (e.g. angling and horse-riding)												
6.1 Involve local community (Friends Group membership, links with local schools, solutions to anti-social behaviour, develop links with businesses etc)												
6.2 Public and Friends Group to help with fundraising for projects and site improvements												
6.3 Update notice boards/ Friends Group website and newsletter												
7.1 Toton Unearthed legacy projects												
8.1 Wildlife monitoring												
8.2 Maintain wildlife records/ database and share with relevant partners												

Appendices



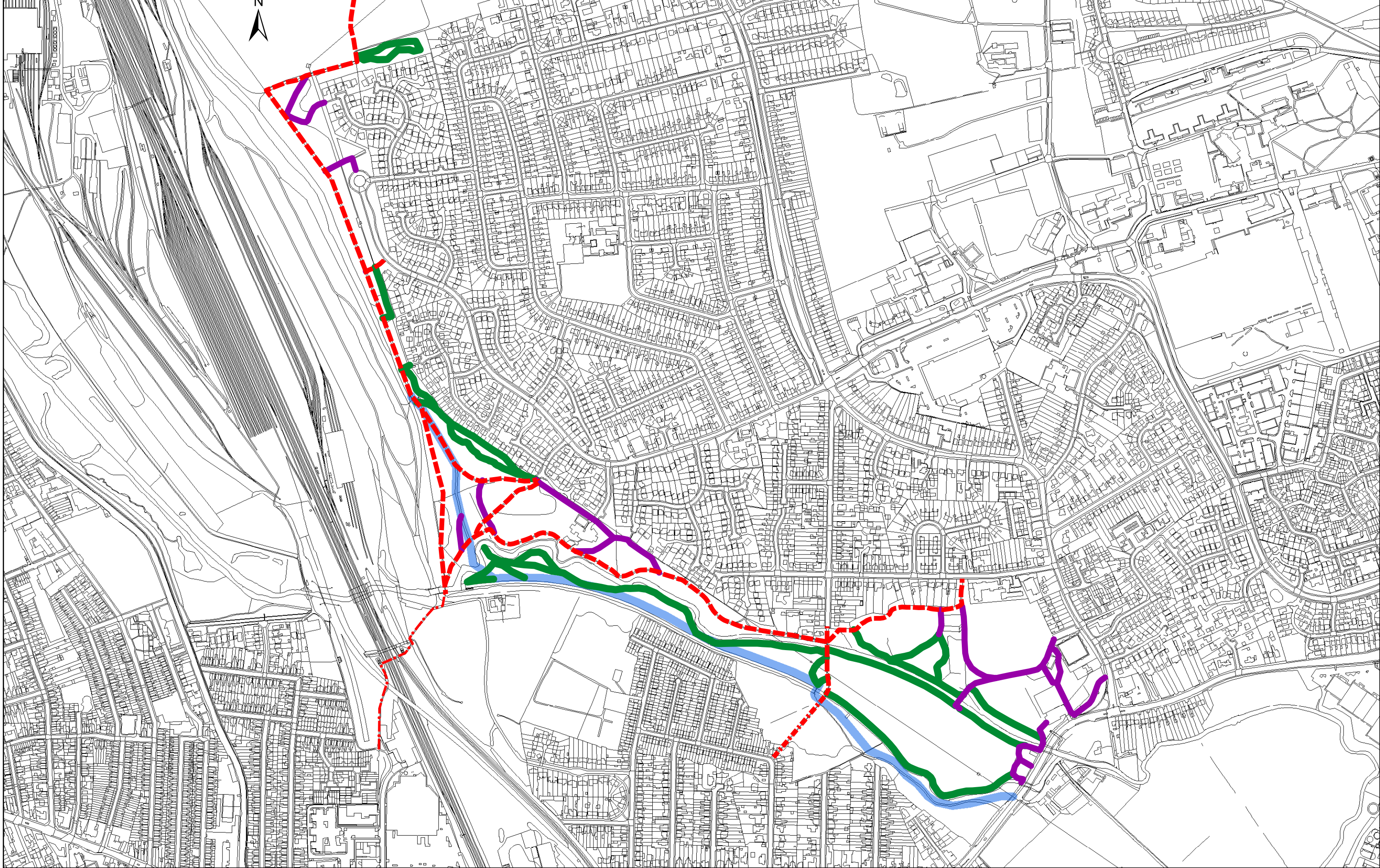
Local Nature Reserve Site Boundary

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Project		Toton Fields Appendix 1	
Title			
Local Nature Reserve Site Boundary and Habitat Compartments			
Scale	1:5000	Dwg No.	ENV/TF/01
Drawn by	WJA	Date	April 08
Do not scale dimensions - if in doubt, please ask!			



Project	Toton Fields	Dwg No.	ENV/TF/ROW/01
Title	Path Network Plan		
	1:6,000		
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- Key
-  Informal path
 -  PRW Footpath
 -  Mown paths
 -  Shared walker / horseriders route