

4. Proposed Development and Alternatives

4.1. Introduction

- 4.1.1. Schedule 4 of the 2017 EIA Regulations sets out the information for inclusion in Environmental Statements (ES), which includes Part 1 “a description of the development”.
- 4.1.2. This chapter and the accompanying figures define the Proposed Development and the maximum quantum of development proposed, the means of access proposals and describes the Proposed Development in line with Schedule 4 of the EIA Regulations as far as possible considering the nature of the application. A description of the broad construction methods and processes is presented towards the end of this chapter.
- 4.1.3. The information presented in this chapter alongside the plans submitted for approval form the basis of the EIA and provides the level of detail required to enable the assessment of likely significant environmental effects in line with the EIA Regulations. This Chapter also sets out the main reasonable alternatives that have been considered and the main reasons for selecting the chosen option.

4.2. The Proposed Development

- 4.2.1. The Applicant seeks outline planning permission for the following description of development:

“Outline permission for up to 420 residential dwellings and associated open space and infrastructure.”

- 4.2.2. The description of the Proposed Development in this Chapter together with the accompanying figures forms the basis for the assessments presented in this ES.

Development Parameters

- 4.2.3. For an outline planning application where EIA is required, the description of the Proposed Development must be sufficient to enable the requirements of the EIA Regulations to be fulfilled, and in particular, to enable the potential significant effects of the Proposed Development to be identified. It would not be feasible to make a detailed application at this stage for the whole Site; therefore, to ensure that the Proposed Development evolves with the benefit of further approvals (i.e., reserved matters) ‘Development Parameters’ have been established and assessed within this ES. The Development Parameters detail all the limits necessary to define and fix those aspects of a development capable of having significant environmental effects. This will enable planning conditions to be drawn up and agreed to control the implementation of the Proposed Development.
- 4.2.4. The Parameter Plan shown at **Figure 4.1** is defined by:
- New areas of built form;
 - Maximum building heights across the Site;
 - A vehicular access point into the Site;
 - Illustrative alignment of pedestrian and cycle routing and associated connection; and

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- Landscape elements including retained vegetation, key areas of landscape planting and areas of open space.

4.2.5. The development parameters which have been used within the assessment of environmental effects are presented in **Table 4.1** below.

Table 4.1: Parameter Plans

Planning Application Drawing Title	Drawing Reference
Site Location Plan	Figure 1.1: Site Location Plan
EIA Parameter Plan	Figure 4.1: Parameter Plan

4.2.6. In addition to the Parameter Plans set out in **Table 4.1**, an Illustrative Masterplan forms part of the planning application submission (**Figure 4.2**). The Illustrative Masterplan demonstrates one way in which the Site could be developed based on the stipulated parameters and provides an indication of the likely form and layout allowing informed assumptions to be made within the EIA. The proposed landscape strategy will deliver long-term landscape, biodiversity, recreation and sustainability benefits through the introduction of new habitats, landscape enhancement and the creation of accessible natural green space, contributing to the wider green infrastructure network.

4.2.7. Details of the Proposed Development at this stage are provided below, with further information contained with the Design and Access Statement (DAS) accompanying this planning application.

Land Use

4.2.8. The Proposed Development would provide a mix of land uses which are set out in the following sections. The quantum of each land use proposed is provided in **Table 4.2**.

Table 4.2: Land Use

Land Use	Quantum / Description
Built Form over c. 13.23 ha	Up to 420 residential dwellings with varying heights, With the majority categorised 13m maximum height Above Finished Floor Level (AFFL) and then those dwelling proposed along the southern boundary categorised as 9.5m AFF. The area for built form also includes incidental open space, drainage area, streets, lanes and private drives.
Landscape / Green Infrastructure over c. 5.72 ha.	Open space including retained vegetation, proposed landscaping, public open space, drainage features, pedestrian and cycle links and play spaces. This does not include incidental spaces within the built form parcel such as pocket park areas, and green areas at the entrance and southern boundary.
Access and Movement	Including one vehicular point of access into the Site. The PRoW crossing the Site will be retained and incorporated as part of the Proposed Development. An indicative pedestrian and cycle connection is shown.

based on the Parameter Plan at **Figure 4.1.*

Residential

- 4.2.9. The Proposed Development will provide up to 420 residential dwellings across the majority of the Site as shown on **Figure 4.1**. The Proposed Development will provide a mix of dwelling sizes, and up to 126 dwellings will be provided as affordable housing (30%).
- 4.2.10. The majority of the Proposed Development will comprise majority 2-storey dwellings (with a maximum height of 13m AFFL). The development edge along the southern boundary of the Site has a proposed maximum height of 9.5m AFFL and would likely comprise bungalow or 2-storey development. Further information is provided within the DAS that supports the planning application.

Green Infrastructure

- 4.2.11. The Proposed Development includes approximately 5.72ha of 'open space', which will be formed by elements such as proposed landscaping, public open space, drainage areas, an approximate location for a play space, a pedestrian and cycle link, plot access (e.g., shared private drives) and landscaping buffers. The quantum stipulated does not include incidental areas of open space within the built form parcel.
- 4.2.12. The landscape strategy seeks to retain the pattern and structure created by the existing field boundaries around the periphery of, and within, the Site. The public open space comprising the Proposed Development includes a Locally Equipped Area of Play (LEAP), natural play spaces, surface water attenuation, pedestrian and cycle links and structural landscaping.
- 4.2.13. As part of the landscaping strategy, existing structural vegetation including hedgerows and trees along the Site boundary will be retained where possible.

Vehicle Access and Circulation and Pedestrian / Cycleway Provision

- 4.2.14. Vehicular access to the Proposed Development will be provided through provision of a new signal controlled crossroads junction on the B6003 Stapleford Lane. The Site access would form the western arm of the crossroads junction, with the eastern arm providing access to the proposed Toton East development (c.155 dwellings) and the southern section of the proposed Toton and Chetwynd Link Road.
- 4.2.15. The Site access route will include a 3m wide shared foot/cycle route to the north of the carriageway and a 3m segregated cycle route and 2m footway to the south of the carriageway. The Site access junction will provide signal controlled pedestrian and cycle crossings on all arms. **Figure 4.2** illustrates the potential location.
- 4.2.16. Car parking across the Proposed Development will comply with BBC's current parking standards and include on plot spaces.
- 4.2.17. The Proposed Development seeks to retain and enhance the PRow on the Site. Further information on this PRow and how it connects to the wider area is set out in **Appendix 9.1** of this ES.

Surface Water Drainage

- 4.2.18. An outline drainage strategy has been presented which will be refined at the detailed design stages. A drainage basin is proposed in the north-western area of the Site. The basin is located in the lowest area of the Site and will be gravity fed as far as possible, therefore mimicking the

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existing drainage scenario. The runoff will be restricted to the equivalent greenfield runoff rate plus +40% climate change allowance to ensure no increased rate of release to the surface water outfall.

- 4.2.19. Further information regarding the proposed drainage strategy is provided within the Flood Risk Assessment and Drainage Strategy at **Appendix 12.1** of this ES.

Service Infrastructure / Utilities

- 4.2.20. Discussions are currently ongoing with the statutory undertakers in relation to the provision of the necessary services. In order to facilitate these connections, it is envisaged that this will require the laying of pipework / cables within trenches to the relevant point of connections. The overhead powerlines currently located within the Site will be undergrounded to the southern edge of the Site as agreed through discussions with National Grid. Once in position the equipment will not be visible.
- 4.2.21. Details of the outline foul water drainage strategy are discussed in **Chapter 12: Flood Risk and Drainage** of this ES.
- 4.2.22. Consideration to the impacts of provision of these services has been given, where necessary and to the appropriate detail at this stage, within this ES.

Lighting

- 4.2.23. The Lighting Strategy for the Proposed Development will be guided by good practice and is set out in detail within **Appendix 16.1 'Lighting Strategy'** of this ES. The Lighting Strategy outlines a sustainable approach for the proposed lighting for the purpose of safety, security, wayfinding and amenity. **Appendix 16.1** sets out a minimally obtrusive approach to the lighting of the Proposed Development, whilst ensuring it is necessary and considers the sensitivity of nearby human, environmental and ecological receptors.
- 4.2.24. Luminaires will distribute light downwards only, to reduce the potential for light spill onto the boundaries surrounding the buildings and upwards towards the sky.
- 4.2.25. Further detail on the Lighting Strategy for the Proposed Development can be found at **Appendix 16.1 'Lighting Strategy'**.

4.3. Construction

Programme and Phasing

- 4.3.1. Should planning permission be achieved for the Proposed Development, for the purposes of this ES assessment, the construction phase would last approximately 7 years, with a delivery rate of approximately 60 residential units per year. This ES assessment assumes that the Proposed Development, and the potentially cumulative schemes set out in Chapter 2 of this ES would all be complete and operational by 2041. The non-residential elements of the Proposed Development will be built concurrently with the residential elements of the Proposed Development.

Construction Methodology

- 4.3.2. Preliminary works in the form of site set-up, and the implementation of any required ecological protection works would initially be carried out and would be undertaken in accordance with

construction best practice and ecological guidance and/or license as appropriate to the species/habitat.

- 4.3.3. It is anticipated that a Site compound providing site office, welfare facilities, storage cabins and external materials setting down areas, would initially be set up in proximity to the Site's entrances, albeit the Site compound is likely to be relocated throughout the construction programme as appropriate for the works being carried out. It is anticipated that the Site compound would be hard-surfaced, security fenced with CCTV cameras and external temporary lighting for use during hours when illumination falls below safe working levels and for security. The temporary lighting will adhere to best practice guidance outlined in Guidance Notes for the Reduction of Obtrusive Light¹.
- 4.3.4. A Construction Environmental Management Plan (CEMP) will be prepared as to ensure that any likely significant effects that may arise from the construction of the Proposed Development are actively managed and minimised. It is anticipated the CEMP will evolve as the project progresses to ensure its content reflects the current construction programme. An outline CEMP has been submitted separately with the planning application.
- 4.3.5. The CEMP will likely provide information such as:
- Details of the site set-up, site compound facilities and services;
 - The plan of the phasing of the works;
 - Prohibited or restricted operations (location, hours etc.);
 - Details of construction operations highlighting any operations likely to result in disturbance and/or working hours outside the core working period, with an indication of the expected duration of key phases and dates;
 - The details of proposed routes for HGVs travelling to and from the Site;
 - Details of all works involving interference with a public highway, including temporary carriageway/footpath closures, realignment and diversions;
 - Housekeeping procedures and environmental control measures;
 - Procedures for managing environmental risks and responding to environmental incidents;
 - Standard measures to control and mitigate potential for noise, dust, air quality and water pollution;
 - Standard measures for the management of run-off due to construction activities to reduce the risk of pollution and elevated flood risk on and off site;
 - Any requirement for monitoring and record keeping;

¹ Institute of Lighting Professionals (2021) Guidance Note 1 for the Reduction of Obtrusive Light [online] available at: [Guidance Note 1 for the reduction of obtrusive light 2021 | Institution of Lighting Professionals \(theilp.org.uk\)](https://www.theilp.org.uk/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/) [last accessed 30th September 2024].

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- Contact details during normal working hours and emergency details outside working hours;
- The mechanism for the public to register complaints and the procedures for responding to complaints;
- Provision for reporting, public liaison, prior notification etc; and
- Procedures for regular dialogue with the Council's, relevant authorities and the local community.

4.3.6. The standard construction best practice measures are likely to include:

- Selection of construction methodologies to minimise generation of noise, vibration and/or dust;
- All vehicles and/or plant to be switched off when not in use and engines would not be left to idle;
- All vehicles and/or plant to be used in accordance with the manufacturer's instructions and subject to regular maintenance;
- The Site compound / storage of materials to be appropriately sited to reduce environmental risk and appropriately secured;
- Stockpiles of soil materials to be appropriately sited to reduce environmental risks, of an appropriate height/batter to avoid slippage, with appropriate surface water management and subject to dust control measures;
- Implementation of surface water drainage traps/attenuation, where required, with appropriate arrangements for discharge and/or collection as appropriate;
- All liquids and solids of potentially hazardous nature (e.g. diesel fuels, oils and solvents) to be stored on surfaced areas with appropriate bunding to reduce the risk of spillage;
- Use of plant that may give rise to nuisance (noise and/or dust) to be adequately screened (where deemed necessary);
- Wheel and/or vehicle body washing facilities to be used to prevent tracking out of mud/dust onto the public highway using wheel wash or wash skip out as appropriate (where deemed necessary);
- Deployment of a road sweeper/road cleaning for use on the public highway (where deemed necessary);
- Programme of cleaning traffic management cones, lights and signs where deployed (as necessary); and
- Vehicles carrying materials to/off-site to be enclosed and/or sheeted as appropriate.

4.3.7. Any proposed departures from the approved CEMP will be submitted to relevant authorities and affected parties in advance.

4.3.8. The construction of the Proposed Development would use standard construction plant and machinery. Likely plant and equipment would include (but not limited to):

- Tracked / wheeled 360-degree excavators;
- Dumpers;
- Mobile cranes;
- Specialist rigs associated with the installation of foundations;
- Power tools including percussion drills, cutting disks and pipe-threads;
- Wheel washing plant;
- Scaffold;
- Mobile access platforms;
- Delivery trucks;
- Skips/ Skip trucks;
- Forklift trucks;
- Ready mix concrete wagons;
- Concrete placing booms and pumps; and
- Road sweepers.

Hours of Work

4.3.9. It is anticipated that the working hours will be as set out below:

- 08:00 – 18:00 Monday to Friday;
- 08.00 – 13.00 Saturday; and
- No working or noisy activities during Sundays and Bank Holidays.

4.3.10. All work outside these hours will be subject to prior agreement, and/or reasonable notice, with BBC, as appropriate, who may impose certain restrictions. Nighttime working, and working on Sundays will be restricted to exceptional circumstances. These working hours will be agreed with the BBC prior to the commencement of the works.

Traffic Management and Vehicle Routing

4.3.11. Construction traffic will include the movements of workers associated with the construction of infrastructure and individual plots along with the movement of material. Detailed Construction Traffic Management Plans (CTMPs) will be agreed with the highway authority prior to commencement of construction activities. This approach will facilitate flexibility and allow the contractor(s) to reflect the nature of their own operations. Notice regarding any planned closures and diversions of roads and footpaths (if required) shall be given by the Applicant or their Contractor(s) to the Highways Authority, the Police, the Fire Brigade and other emergency services sufficiently in advance of the required closure or diversion dates. Further information on the likely broad terms of the CTMP is provided within the Transport Assessment at **Appendix 9.1**.

4.3.12. Construction traffic is likely to access to access the Site via the A52 Brian Clough way and B6003 Stapleford Lane, and it is estimated there will be an average of 50 car / van trips per day associated with construction works and fewer than 20 HGV trips per day. The construction routing detail will be secured via the CTMP, which will form part of the CEMP and will be secured via planning condition.

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- 4.3.13. Construction traffic estimates have been provided by the Applicant, informed by previous experience in developing similar schemes to the Proposed Development based on likely construction materials and construction methodology. A detailed construction programme is not given at this stage, however, estimates of the likely number of vehicles generated for the construction of the Proposed Development, together with potential staff movements have been made. The estimated construction traffic trip generation is set out in **Table 4.3** below.

Table 4.3: Estimated Daily Construction Traffic

Vehicle Type	Average Trips Per Day
Heavy Goods Vehicles (HGVs)	Less than 20
Cars and Light Goods Vehicles	50

- 4.3.14. All vehicle unloading will take place within the Site and will not affect public highways or adjacent occupiers.
- 4.3.15. On-site parking will be managed to ensure that site staff and visitors do not park along or obstruct the access and circulation roads. The site will be set up to:
- Designate an area on site for site personnel and visitor parking;
 - Prevent delivery vehicles from queuing outside the site boundary; and
 - Make delivery drivers aware of traffic restrictions on and around the site.
- 4.3.16. Construction workers would be encouraged to access the Site by sustainable means of travel. Information would be provided on convenient walking and cycling routes together with the local bus and rail services to ensure workers are aware of the choices available to them. Workers who choose to drive to the Site will be encouraged to car share, where practical.
- 4.3.17. The contractor(s) would co-ordinate all deliveries and collections to and from the Site, ensuring that as far as possible:
- All delivery and collection vehicles are aware of the proposed routing;
 - Larger vehicle movements would be scheduled to avoid peak hours on the local road network if possible;
 - The relevant highway authorities will be advised in advance of any large or abnormal construction traffic and appropriate routing agreed; and
 - If an alternative construction traffic route is required, this would first be agreed with the highway authority.
- 4.3.18. All management of construction traffic and access will be carried out in accordance with the CTMP as set out below:
- Planning and managing both vehicle and pedestrian routes;
 - The elimination of reversing, where possible;

- Safe driving and working practices;
- Protection to the public;
- Adequate visibility splays and sight lines;
- Provision of signs and barriers; and
- Adequate parking for off-loading storage areas.

4.3.19. Most materials will be ordered in bulk and will be delivered to the Site as required by the construction programme. The arrangements for deliveries and traffic routes will be communicated to all suppliers and sub-contractors.

4.3.20. Construction plant deliveries will be managed in coordination with traffic police who may need to escort abnormal loads. The timing and route of all such deliveries will be arranged at times when disruption can be minimised.

4.3.21. A detailed traffic plan will be produced prior to commencement of construction clearly stating the routes to be used and identifying any local site rules and directional requirements. Contractors will be required to share this with staff and operatives during the Site induction process and include it within supply chain sub-contracts to ensure that it will be enforced.

4.3.22. Pedestrian routes through the Site for the workforce will be segregated from vehicle routes using barriers and crossing points will be clearly defined in appropriate locations with good visibility of approaching traffic.

Construction Materials and Resources Use

4.3.23. Materials and resources used during construction of the Proposed Development would be sourced from sustainable and/or local sources where practicable.

4.3.24. Where possible, materials arising from the breaking out of any hard surfaced areas would be recycled and reused on-site or transferred to an appropriately licensed recycling facility.

Waste Management, Recycling and Disposal

4.3.25. The off-site re-use, recycling or recovery of construction and excavation waste would be maximised, where possible.

4.3.26. Waste arisings from construction are expected to comprise packaging materials, plastics, timber, brick, metals, inter-materials, and concrete among others. Opportunities to reduce waste through careful management and procurement will be set out in the CEMP and secured through planning conditions.

Prior Notice

4.3.27. In the event of unusual activities or events, these will be notified to BBC, as appropriate, and relevant property owners or occupiers in advance. The relevant activities will be agreed with BBC, as appropriate, once the detailed programme of construction is defined. This will include:

- Necessary night-time, weekend or evening working (outside core areas) of a type which may affect properties; and

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- Road or footpath closures/diversions and movements of wide loads (unlikely to be required).

4.3.28. The community will be kept informed during the construction phase, as appropriate.

Management of Contracts

4.3.29. Individual contracts (e.g., waste removal) will incorporate relevant requirements in respect of environmental control, based largely on the standard of 'good working practice' as well as statutory requirements. Any sub-contractors (where used) will be required to demonstrate how they will achieve best practice, how targets will be met and how potential effects will be minimised.

Public Liaison

4.3.30. There will be a designated Construction Liaison Officer who will deal with public and other complaints and enquiries. This nominated individual will be identified to BBC prior to the start of works on the Site, and whenever a change of responsibility occurs.

Responses to Complaints

4.3.31. Any complaints will be logged on Site, where necessary. The procedures will specify the roles and responsibilities of the Construction Liaison Officer and BBC in respect of breaches and complaints from the public. The required actions will be different in each specific case, depending on the operation, equipment or location or applying additional controls.

Decommissioning

4.3.32. Given the design life of the Proposed Development, decommissioning has been scoped out of this EIA (as agreed at the Scoping stage).

4.4. Alternatives

4.4.1. The EIA Regulations (Schedule 4, paragraph 2) require for inclusion in an ES:

"A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects".

4.4.2. The main alternatives to the Proposed Development which the Applicant has considered include:

- The 'No Development' Alternative;
- Alternative Locations for the Proposed Development;
- Alternative Uses for the Site; and
- Alternative designs.

The 'No Development' Alternative, and Alternative Locations and Uses

- 4.4.3. The 'No Development' alternative evaluates the likely environmental conditions at the Site in the absence of implementing the Proposed Development. Schedule 4 of the EIA Regulations states that the assessment of alternatives provides *"an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed"*. A description of the baseline scenario is set out in Chapter 3: The Site.
- 4.4.4. The 'No Development' alternative means leaving the Site in its current use as arable agricultural land. The beneficial and adverse effects outlined in this ES would not occur. There is no indication that in the absence of the Proposed Development, the use of the Site would alter and therefore the environmental conditions of the Site would remain at its baseline level as described in Chapter 3: The Site.
- 4.4.5. The Proposed Development seeks to provide up to 420 residential dwellings contributing to local housing provision. As such, the 'No Development' option was not considered by the Applicant. Further, as the Applicant can deliver the Proposed Development on the Site, and the Site is well placed for the development proposed, no alternative locations or uses were considered.

Alternative Designs

- 4.4.6. As part of the iterative EIA and design process, the design of the Proposed Development has evolved to take account of various environmental constraints and opportunities. In this respect, environmental desktop reviews, interim assessments of the emerging Proposed Development and relevant knowledge gained from environmental baseline surveys and consultation with consultees, have influenced the evolution of the proposals at an early stage in the design process. In adopting this iterative design process has enabled the early identification of mitigation measures which have then become inherent in the design.
- 4.4.7. The Design and Access Statement (DAS) that accompanies the planning application describes the design evolution and concepts. However, in essence, over the period of the development of the masterplan and the associated environmental work, the early design of the Proposed Development has been influenced by the key constraints and opportunities, which in turn have helped refine and structure the scheme. The key opportunities and constraints at the Site were identified as:
- The Proximity to the B6003 to the east of The Site;
 - The Site's existing topography;
 - Proximity to the existing residential dwellings to the south;
 - Existing network of PRoW;
 - Proximity to the Toton Freight Yard to the west;
 - Potential development site to the north of the Site;
 - Existing power line running from the south-west corner through the centre of the Site;
 - Existing watercourse along the northern boundary;
 - Water Treatment Plant located beyond the northern boundary;

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- Sensitively respond to noise constraints from the B6003;
- Integrate a sustainable urban drainage strategy to improve the existing watercourse;
- The Site's proximity to the existing tram stations; and
- Deliver a variety of play opportunities including equipped play spaces and trim trails.

4.4.8. The preferred option which forms the Proposed Development conforms to the Development Parameters that have been subject to environmental impact assessment, as reported in this ES.