

# Steeples Renewable Project Land at Sturton le Steeple, Nottinghamshire Preliminary Environmental Information Report: Non Technical Summary

**RES**

January 2025 | P22\_1144 | Prepared by Pegasus Group

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# CONTENTS

1. INTRODUCTION	2
2. EIA METHODOLOGY	7
3. SITE DESCRIPTION, SITE SELECTION AND ITERATIVE DESIGN PROCESS	10
4. THE PROPOSED DEVELOPMENT	18
5. FINDINGS OF THE PEIR	26
6. LANDSCAPE AND VISUAL IMPACT AND RESIDENTIAL AMENITY	28
7. ECOLOGY AND BIODIVERSITY	33
8. HYDROLOGY, HYDROGEOLOGY, FLOOD RISK AND DRAINAGE	40
9. CULTURAL HERITAGE	50
10. SOCIOECONOMICS	54
11. NOISE AND VIBRATION	58
12. CLIMATE CHANGE	62
13. TRANSPORT AND ACCESS	64
14. AIR QUALITY	70
15. LAND USE AND AGRICULTURE	71
16. GLINT AND GLARE	76
17. MISCELLANEOUS ISSUES	78
18. SUMMARY	84
19. APPENDIX	86

# 1. INTRODUCTION

This document provides a Non-Technical Summary (NTS) of the Preliminary Environmental Information Report (PEIR) which has been prepared on behalf of RES (the “Applicant”) for the construction, operation, and decommissioning of a ground mounted solar photovoltaic (PV) electricity generation station with a capacity of over 50MW comprising energy storage and grid connection infrastructure (the “Proposed Development”) on land at Sturton le Steeple, to the south of the existing West Burton Power Station site that is currently being decommissioned.

The Applicant is planning to submit an application for a Development Consent Order (DCO) to the Secretary of State for the Proposed Development.

The boundary of the Site, which gives context as to its location, is shown on **Figure 1**.

## 1.1 OVERVIEW OF THE PROPOSED DEVELOPMENT

The Proposed Development includes the following key components:

- Solar PV modules;
- PV module mounting infrastructure;
- Inverters;
- Transformers;
- Onsite underground cabling;
- Underground cabling to point of connection at existing substation at West Burton Power Station;
- Fencing and security measures;
- Access tracks and construction of new accesses onto the highway;
- Energy storage facility;
- A substation and control building; and
- Equipment facilitating the electrical connection to the existing Substation at West Burton Power Station.

Subject to obtaining the necessary consents, construction is anticipated to commence at the earliest in 2027, and to be completed ready for operation no earlier than 2029, with decommissioning no later than 40 years after the commencement of operation (assumed as 2069).

KEY:

□ SITE BOUNDARY  
(OUTSIDE EDGE OF LINE DEVOTES BOUNDARY)

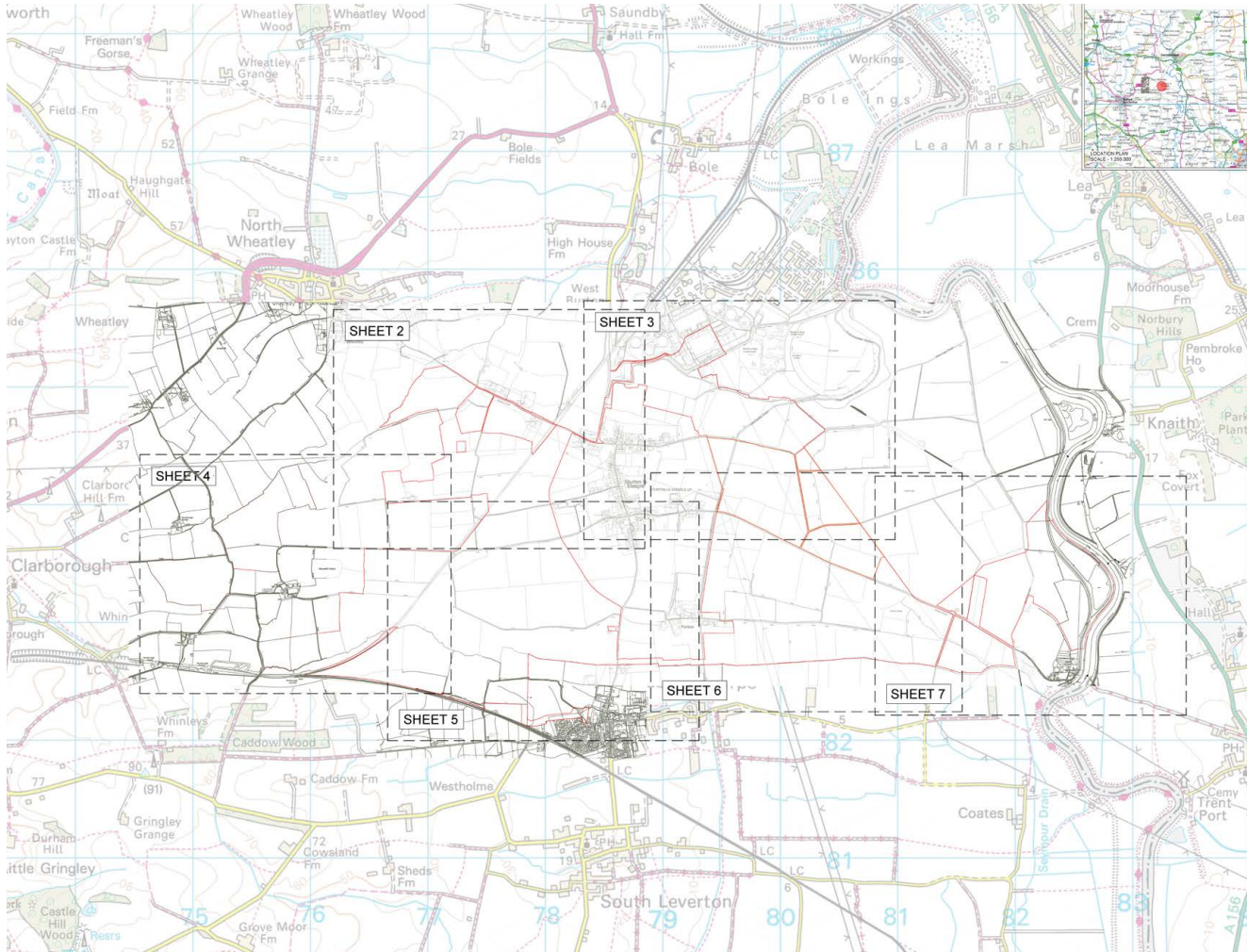


FIGURE 1: SITE LOCATION PLAN (TO SEE FIGURE 1 IN MORE DETAIL SEE APPENDIX)

## 1.2 THE APPLICANT

RES is the world's largest independent renewable energy company and is active in onshore and offshore wind, solar, energy storage, green hydrogen, transmission and distribution. As an industry innovator for over 40 years, RES has delivered more than 23GW of renewable energy projects across the globe and supports an operational asset portfolio exceeding 12GW worldwide for a large client base.

## 1.3 THE EIA CONSULTANT TEAM

The team responsible for the production of the PEIR has been coordinated and managed by Pegasus Group. Pegasus Group is accredited under the Institute of Environmental Management and Assessment 'Quality Mark' scheme which is a mark of excellence in EIA co-ordination and management. Pegasus Group have extensive experience of undertaking EIA work across a range of projects and development types.

Table 1.1: Consultant

TOPIC	CONSULTANT
EIA Coordination	Pegasus Group
Landscape and Visual Impact Assessment	
Residential Visual Amenity	
Cultural Heritage	
Socio-economics	
Transport and Access	
Miscellaneous Issues	
Ecology and Ornithology	BSG Ecology
Hydrology, Hydrogeology, Flood Risk and Drainage	RSK
Noise	RES
Air Quality	Hoare Lea
Land Use and Agriculture	Roberts Environmental
Glint and Glare	Pager Power
Climate Change	LUC
Cumulative Effects and Inter-relationships	EIA Project Team

## 1.4 PURPOSE OF THE PEIR

The PEIR presents the preliminary findings of the EIA process in accordance with Regulation 12 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017, as amended (hereafter referred to as the “EIA Regulations”). Regulation 12 requires an applicant to compile ‘preliminary environmental information’ that allows:

*“consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)”.*

This PEIR provides details of the Proposed Development, together with an overview of the alternatives considered to date. For each environmental topic, details of the approach to assessment, the existing and likely future environmental conditions, and the preliminary findings regarding the likely significant effects of the Proposed Development are set out, based on the information available at this time. Initial details of the measures proposed to avoid, prevent, reduce or offset significant adverse effects (known as mitigation measures) are also provided.

The EIA process is currently ongoing, with further work being carried out to enhance the understanding of existing environmental conditions and to provide further detail of the likely significant environmental effects. Feedback provided during the consultation process will be considered in refining the design of the Proposed Development, during the ongoing assessment work and during the development of further mitigation measures where necessary. The results of this further work will be set out within the Environmental Statement (ES) that will accompany the application for Development Consent.

The purpose of this NTS is to describe the Proposed Development and provide a summary of the findings of the PEIR in non-technical language.

## 1.5 EIA REGULATIONS AND EIA SCOPING

EIA is the process of identifying and assessing the significant effects (beneficial or adverse) likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions during/following the construction, operational and decommissioning phases of a development should it proceed.

For Nationally Significant Infrastructure Projects (NSIPs)<sup>1</sup> in England, the legislative requirements for EIA are set by the EIA Regulations).

EIA is not required for all developments. Schedule 1 of the EIA Regulations identifies development types that always require EIA. Schedule 2 identifies development types that require EIA if they are likely to lead to significant effects on the environment by virtue of factors such as their nature, size or location.

The Proposed Development would fall under Schedule 2, under Paragraph 3(a) of Schedule 2 of the EIA Regulations as it constitutes 'industrial installations for the production of electricity, steam and hot water'. Taking into account the nature and scale of the development proposed, EIA is being undertaken for the Proposed Development.

On 23rd April 2024, the Applicant submitted a Scoping Report to the Planning Inspectorate (PINS), which described the scope and methodology for the technical studies being undertaken to provide an assessment of any likely significant effects and, where necessary, to determine suitable mitigation measures for the construction, operation, and decommissioning phases of the Proposed Development. It also described those topics or sub-topics which are proposed to be scoped out of the EIA and provided justification as to why the Proposed Development would not have the potential to give rise to significant environmental effects.

PINS reviewed and consulted on the Scoping Report and published an EIA Scoping Opinion on 3rd June 2024. All issues raised in the Scoping Opinion have been considered during the EIA process and are discussed further in detail in the technical chapters.

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1. A Nationally Significant Infrastructure Project (NSIP) is a large construction project that is important for the whole country. NSIPs include power stations, major roads, railways, airports, and water facilities. As NSIPs hold importance for the country, they need Government approval instead of going down normal 'planning' routes. The goal of an NSIP is to ensure that the project benefits the country as a whole, whilst balancing environmental and community concerns.



## 2. EIA METHODOLOGY

### 2.1 GENERAL ASSESSMENT APPROACH

This PEIR provides the preliminary findings of the environmental assessment undertaken to date. It does not constitute a draft ES; an ES will be produced to support the DCO application, but the PEIR follows the same EIA methodology approach. The general assessment approach of the PEIR is in line with the EIA Regulations.

The EIA considers impacts during the construction, operation and decommissioning of the project.

The content of the PEIR is based on the following:

- Review of the baseline situation through existing information, including data, reports, site surveys and desktop studies;
- Consideration of the relevant local, regional and national planning policies, guidelines and legislation relevant to the EIA such as the National Policy Statements (EN-1, EN-3 and EN-5), and the statutory extant and emerging development plan policies;
- Consideration of potential sensitive receptors;
- Identification of potential significant environmental effects and an evaluation of their duration and magnitude;
- Expert opinion;
- Modelling and calculations;
- Use of relevant technical and good practice guidance; and
- Specific consultations with appropriate bodies.

Individual topic chapters are generally laid out in the following way:

**Introduction** – to introduce the topic under consideration, state the purpose of undertaking the assessment and set out those aspects of the Proposed Development material to the topic assessment;

**Assessment Approach** – to describe the method and scope of the assessment undertaken and responses to consultation in relation to method and scope in each case pertinent to the topic under consideration;

**Baseline Conditions** – a description of the baseline conditions pertinent to the topic under consideration including baseline survey information;

**Assessment of Likely Significant Effects** – identifying the likely effects, evaluation of those effects and assessment of their significance, considering construction, operational and decommissioning phases and direct and indirect effects;

**Mitigation and Enhancement** – describing the mitigation strategies for the significant effects identified and noting any residual effects of the proposals;

**Cumulative and In-combination Effects** – consideration of potential cumulative and in-combination effects with those of other developments; and

**Summary** – a non-technical summary of the chapter, including baseline conditions, likely significant effects, mitigation and conclusion.

To enable comparison between technical topics and to aid understanding of the PEIR findings, standard terms are used wherever possible to describe the relative significance of effects throughout the PEIR (i.e. 'major', 'moderate', 'minor' and 'negligible'). The effects are also described as being adverse or beneficial. Where the quality standards for each technical discipline result in deviations in the standard assessment methodology, these are described in the relevant chapters as applicable within PEIR Volume 1: Main Text and Figures.

Each of the technical chapters within PEIR provides further description and definition of the significance criteria relevant to each topic. Where possible, this has been based upon quantitative and accepted criteria (for example, noise assessment guidelines), together with the use of value judgement and expert interpretation to establish to what extent an effect is significant.

Typically, effects that are considered to be negligible or minor are judged to be 'not significant', whereas those that are moderate or major are 'significant'. Where the EIA predicts a significant adverse effect on one or more receptors, proposed mitigation measures are identified to avoid or reduce the effect, or to reduce the likelihood of it happening. The use of such mitigation will be secured through the DCO, should it be granted.

As the design of the Proposed Development has evolved to date, the Applicant has worked with the environmental specialists to ensure the design avoids or reduces environmental effects on receptors where possible through the use of 'designed-in mitigation measures' forming part of the Proposed Development (meaning measures that form part of the design or methods for construction or operation). These measures are taken into account in the EIA and assessment of the residual effects of the Proposed Development.

## 2.2 CUMULATIVE EFFECTS

Within EIA, cumulative effects are generally considered to arise from the combination of effects from the Proposed Development and from other proposed or permitted schemes in the vicinity, acting together to generate elevated levels of effects. The cumulative effects assessment will consider two types of relationships:

- 1) Cumulative (sometimes called 'Inter-relationship effects': several developments with insignificant impacts individually but which together represent a significant cumulative effect; and
- 2) In-combination effects (sometimes called 'Intra-project effects'): are the combination of single effects arising from an individual development project – for example, noise, dust and visual effects on one particular receptor.

A short-list of cumulative developments and the methodology is considered in detail in Chapter 2- EIA Methodology of the PEIR. A long-list and short-list will be kept under review and if further planning applications are submitted or further information becomes available prior to the submission of the DCO Application, this will be considered within the subsequent ES.

The location of these cumulative sites in relation to the Proposed Development can be seen on **Figure 2**.

- |  |   |   |
|--|---|---|
|  Site Boundary                           |  One Earth Solar (ENOI0159)                       |  21/0147/FUL - Land North and South of Tuxford Road                                  |
|  15km Buffer                            |  West Burton Solar Project (ENOI0132)            |  22/00358/FUL - Land to the East of Bumble Bee Farm - Granted permission July 2022. |
|  Cottam Solar Project (ENOI0133)        |  Great North Road Solar Park (ENOI0182)          |  23/00485/DEM - West Burton Power Station   |
|  North Humber to High Marnam (ENO20034) |  22/01713/FUL - Land East of Gainsborough Road   |  1/46/11/00002/R - Land to North and East of Sturton le Steeple                     |
|  West Burton C Power Station (ENOI0098) |  20/00177/FUL - Application Approved August 2020 |   |
|  Gate Burton Energy Park (ENOI0131)     |  20/0405/FUL - Tilt Farm Land Tilt Lane          |   |
|  Tiltbridge Solar Project (ENOI0142)    |   |   |

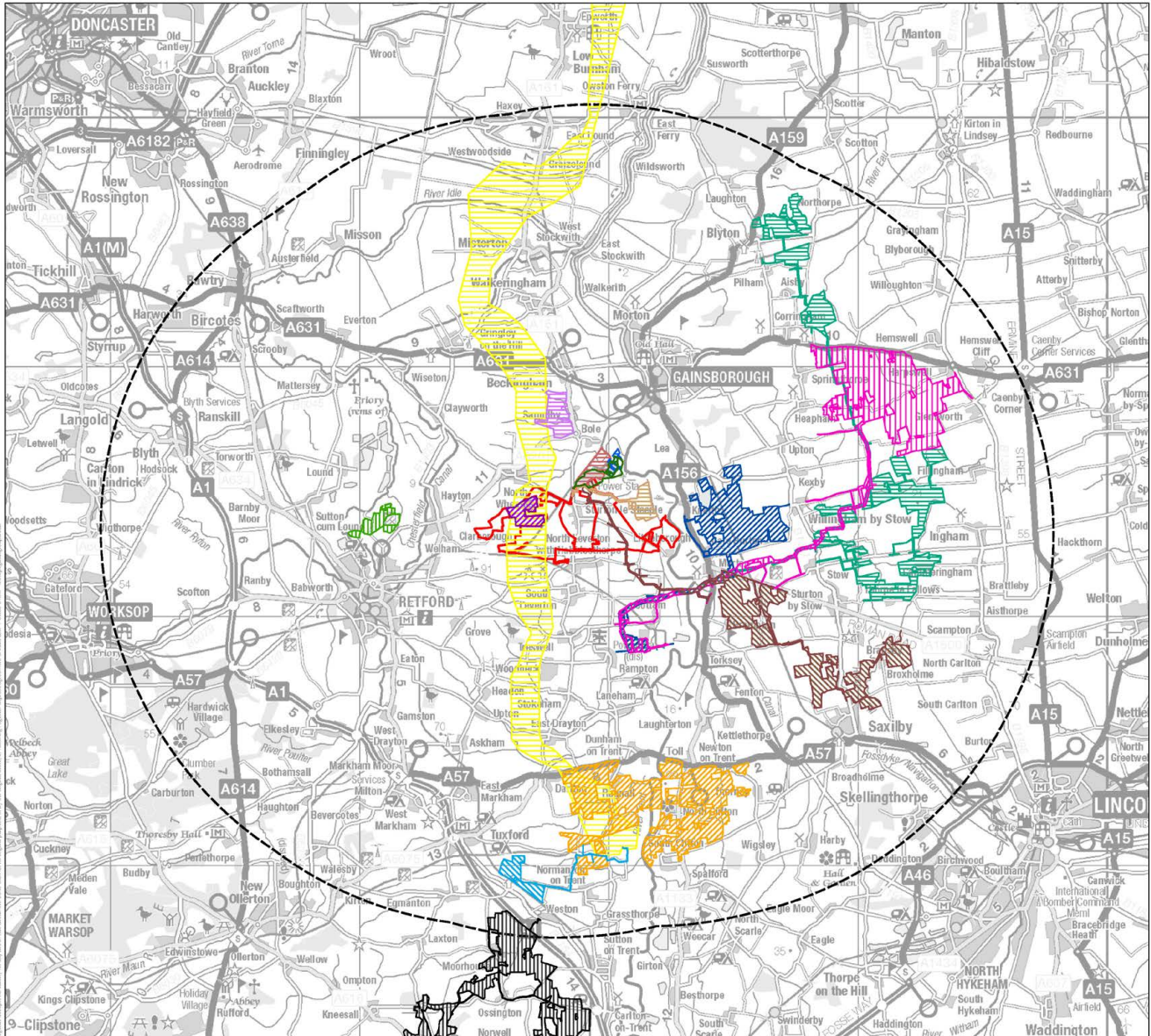


FIGURE 2: CUMULATIVE SCHEMES PLAN

## 3. SITE DESCRIPTION, SITE SELECTION AND ITERATIVE DESIGN PROCESS

This section of the NTS includes the following sections:

- **Site Description** – a description of the existing conditions within the Proposed Development and the surrounding areas and the key receptors that will be assessed in detail within the technical topic chapters;
- **Site Selection** – an overview of the Site selection process undertaken for the Proposed Development; and
- **Iterative Design Process** – a description of the iterative design process undertaken and a description of the main alternatives to the Proposed Development and the selection of the as the preferred option.

### 3.1 SITE DESCRIPTION

The Site extends to 898 ha and primarily comprises multiple agricultural fields defined by hedgerow and individual trees. The Site also includes part of the existing West Burton Power Station site covering the area around the existing 400kV substation, and a number of local roads:

- Sections of Wheatley Road; Station Road; Gainsborough Road, and Wood Lane in the north-western portion of the Site; and
- Littleborough Road, and Common Lane, in the eastern portion of the Site.

The nearest settlement to the Site is Sturton le Steeple. There is a network of roads located both within the Site and adjacent to the boundary. The River Trent lies adjacent to the eastern boundary of the Site.

Within the wider surrounding area there are the following settlements including Knaith approximately 250m east on the opposite side of the River Trent, North Leverton with Habbleshthorpe and Fenton located adjacent to the southern boundary, South Leverton approximately 1.1km south, Clarborough approximately 850m west, north Wheatley and South Wheatley approximately 1.3km and 1km north-west respectively and Gainsborough is located c. 5km to the north-east of the Site.

A small rectangular area located in the north-western portion of the Site has been excluded from the Site; this area is part of a separate development which has secured consent for solar development (under BDC planning application reference 20/00117/FUL). Small woodland plantations are located within some of the fields. Two settlements or clusters of properties are located beyond the Site boundaries including Sturton le Steeple and Fenton. Individual properties are also located close to the boundaries of the Site and within the wider surrounding area.

The Site generally slopes from west to east, towards the River Trent. Levels along the eastern boundary are at approximately 3m Above Ordnance Datum (AOD), rising gradually westwards towards the village of Sturton le Steeple at approximately 10m AOD, then rising more steeply to high ground at approximately 75m AOD along the western boundary. A vegetated earth bund (flood defence) runs along the eastern Site boundary with a crest level of approximately 7m AOD and a height 3-4m above adjacent land.

The Site comprises 898 ha of agricultural land. A provisional Agricultural Land Classification (ALC) survey was undertaken on the Site between July and September 2024; the details are set out further in this NTS. The Site provisionally comprises 88% of Best Most Versatile (BMV).

A network of roads is located both within the Site and adjacent to the boundary. The Sheffield – Lincoln railway line passes through the western section of the Site and the Torksey Branch railway line lies adjacent to the southwestern corner of the Site both are located outside of the Site boundary and are both minor rail lines. The River Trent lies adjacent to the eastern boundary of the Site. The Catchwater Drain is located in the eastern section of the Site close to the Site's boundary with the eastern side of Sturton le Steeple.

A series of Public Rights of Way (PRoW) are located within the Site, including a number of footpaths travelling west from Sturton le Steeple to the surrounding settlements. A footpath routes northwards from Fenton to Sturton le Steeple, travelling northwards through the site and a further footpath to the east of this also routes north through the Site. The long-distance path known as the Trent Valley Way travels through the Site from east to west through the southern edge of the settlement of Sturton le Steeple.

There are a number of overhead electric lines which pass through the Site.

No ancient Semi-Natural Woodlands (ASNW) are located within the Site. Arboricultural survey work performed on the Site recorded 1,045 arboricultural features. Thirty-six individual trees and six groups of trees have been recorded as high-quality (BS 5837:2012 Category A) features. The species of trees break down as twenty oak, one crab apple, four maple, six willow, one hawthorn, three ash, one lime and groups of oak, ash, lime, willow and sycamore.

One off-Site oak (T493) has been recorded as a 'veteran' tree; however, it could also be considered to be 'ancient' due to its exceptionally large stem diameter. This tree is located outside of the Site but the applied 30m buffer extends into the eastern-most portion of the Site.

There are five Sites of Special Scientific Interest (SSSIs), four Special Areas of Conservation (SACs), one Special Protection Area (SPA) and one Ramsar site within the vicinity of the Site. The closest SSSI is Clarborough Tunnel SSSI, located 40m to the south-west. The closest SAC is Birklands and Bilhaugh SAC, 17km to the north. The SPA and Ramsar sites are respectively set out below:

- Thorne and Hatfield Moors SPA, 19.5km to the north; and
- Humber Estuary Ramsar, 25.5km to the north.

There are four Sites of Importance for Nature Conservation (SINCs) that are located wholly, or partially within the Site: Littleborough Lagoons; Mother Drain; Thornhill Lane Drain; and Blue Stocking Lane. There are two SINCs (West Burton Meadow and High House Road Verges) which are off-the Site but adjacent the boundary. Clarborough Tunnel SINC (which is also notified as a SSSI) is located 40m to the south of the Site.

The habitats within the Site are primarily cropland bound by managed native species hedgerows or drainage ditches. The cropland was primarily winter stubble during the January to March 2024 walkovers, with signs of being sown with cereal crops during the previous summer. The Site is typical of agricultural farmland; it has areas of pasture, grassland leys, and occasional areas sown with game cover mixes.

Several small blocks of woodland are present, and a traditional orchard is present in the north of the Site.

There are areas of permanent grassland, typically forming arable field margins and the banks of drains, and also several parcels of modified and neutral grassland. Blue Stocking Lane SINC is located partially within the Western Biodiversity Mitigation Area and is designated in part for species-rich grassland along a bridleway.

Several small ponds are present at the Site. There is one larger waterbody present in the eastern biodiversity mitigation area which is designated as a SINC (Littleborough Lagoons). Littleborough Lagoons has not yet been subject to detailed survey which is required to determine if the lake qualifies as a priority habitat. There is a network of watercourses within the Site, including drains and wet ditches, some of which are designated as SINCs (Mother Drain and Thornhill Lane Drain).

There are no designated heritage assets within the Site. The Scheduled Monument 'Segelocum Roman Town' was formerly within the Site at 'scoping' stage; however, the design evolution of the Proposed Development has resulted in the exclusion of this asset from the Site.

Within 3km of the Site, the following designated heritage assets are located:

- Nine Grade I Listed Buildings;
- Eight Grade II\* Listed Buildings;
- Six Scheduled Monuments;
- Two Conservation Areas; and
- 123 Grade II Listed Buildings.

The noise climate on and in the vicinity of the Site is expected to be typical of a relatively rural area, consisting of sound generated by vehicle movements along the local and more distant wider road network, birds and wildlife, farm machinery, localised human activities and overhead aircraft movements with some industrial sound emanating from the former power station site to the north of the Site.

Existing sources of vibration are expected to emanate from traffic movements in the area, in particular Heavy Goods Vehicle (HGV) movements. Some existing vibration may also result from the very occasional tremor and as a result of the decommissioning works that are currently taking place at the West Burton Power Plant.

The Site is not located in an Air Quality Management Area (AQMA), which are declared when an area does not meet the Government's national air quality objectives. The closest AQMA to the Site is 'Lincoln NO<sub>2</sub> AQMA' which is located in City of Lincoln Council's administrative area. This AQMA has been declared for exceedances of the annual mean nitrogen dioxide (NO<sub>2</sub>) objective.

The River Trent is adjacent to the east of the Site. Ordnance Survey (OS) mapping also identifies a number of Ordinary Watercourses crossing the Site, as shown in **Figures 3** and **4**. Two primary rivers are shown within the Site. The first is the Catchwater Drain which flows from south to north through the eastern part of the Site, discharging to the River Trent approximately 1km to the northeast of the Site. The second is the Mother Drain which flows from south to north just within the southeastern Site boundary, also discharging into the River Trent to the northeast of the Site.

The Site is not located within 1km of a groundwater Source Protection Zone, which are designated for the purposes of safeguarding drinking water quality. The Site is not located within 1km of a Drinking Water Safeguarding Zone (surface or groundwater). However, the eastern part of the Site (land lying to the east of the Catchwater Drain) falls within a Drinking Water Protected Area. These are defined as locations where raw water is abstracted for human consumption, providing, on average, more than 10 cubic metres per day, or serving more than 50 persons, or is intended for such future use.

**Figures 3** and **4** show that the western half of the Site lies within Flood Zone 1, representing the lowest probability of flooding from rivers or sea in any given year. A central band of the Site (affecting approximately 5% of the Site) lies within Flood Zone 2, representing a 1 in 100 to 1 in 1000 annual probability of fluvial flooding or a 1 in 200 to 1 in 1000 annual probability of tidal flooding. The eastern part of the Site falls within Flood Zone 3, representing a 1 in 100 annual probability of fluvial flooding or a greater than 1 in 200 annual probability of tidal flooding. The flood risk in this area is primarily fluvial (i.e., associated with the River Trent); however, there is a degree of tidal influence on the River Trent. Flood defences are present along the River Trent.

With regard to the potential for sources of contamination, no significant contaminative processes have operated on the majority of the Site. Potential Asbestos Containing Materials, such as cement / asbestos roofing is suspected on some farm buildings; however, at this stage, no significant sources of contamination are anticipated, and no development is proposed in proximity to the farm buildings.

- Site Boundary
- EA Main Rivers
- Ordinary Watercourses (Primary)
- Ordinary Watercourses (Secondary and Tertiary)

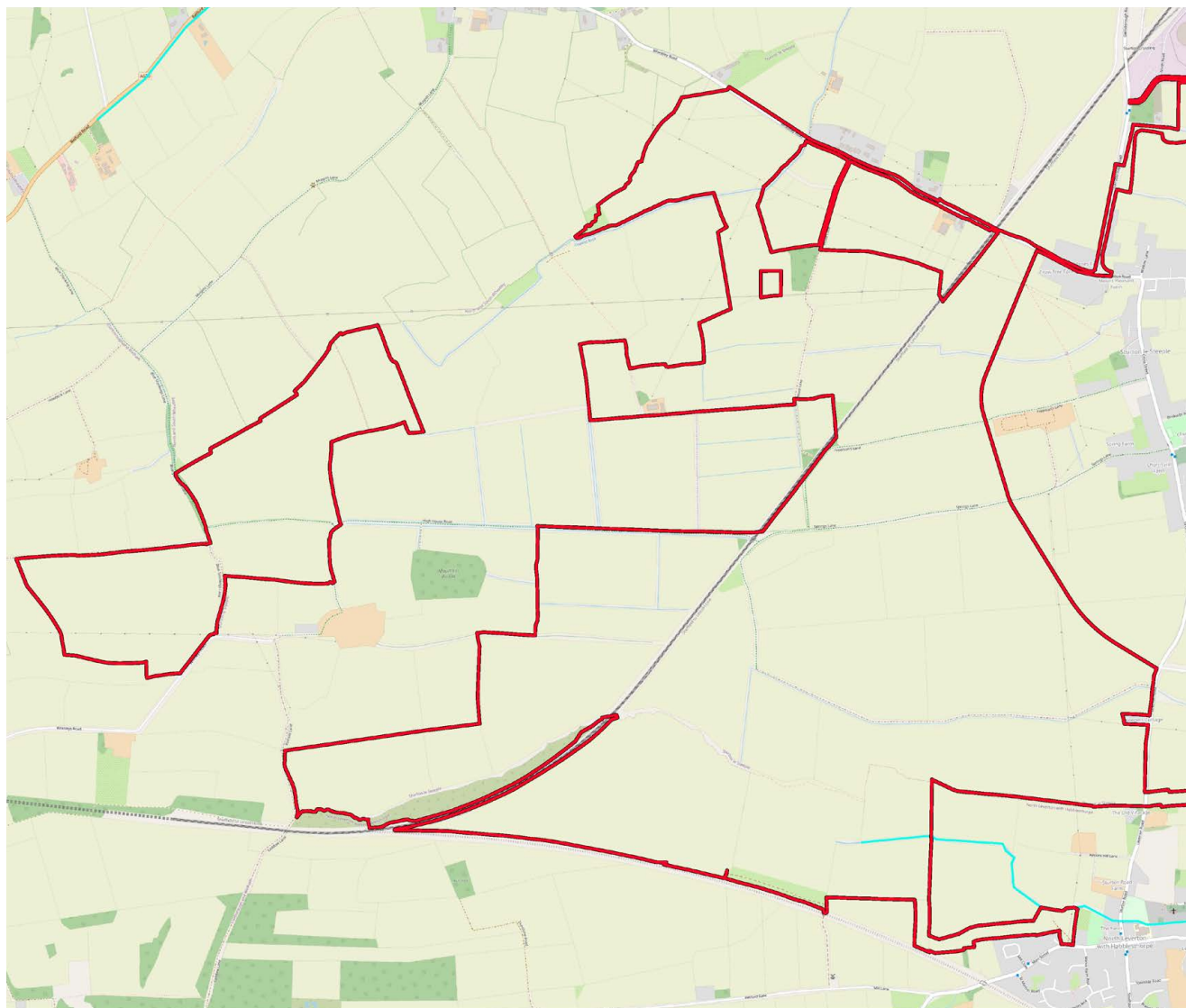


FIGURE 3: WATERCOURSES (WEST)



- Site Boundary
- EA Main Rivers
- Ordinary Watercourses (Primary)
- Ordinary Watercourses (Secondary and Tertiary)

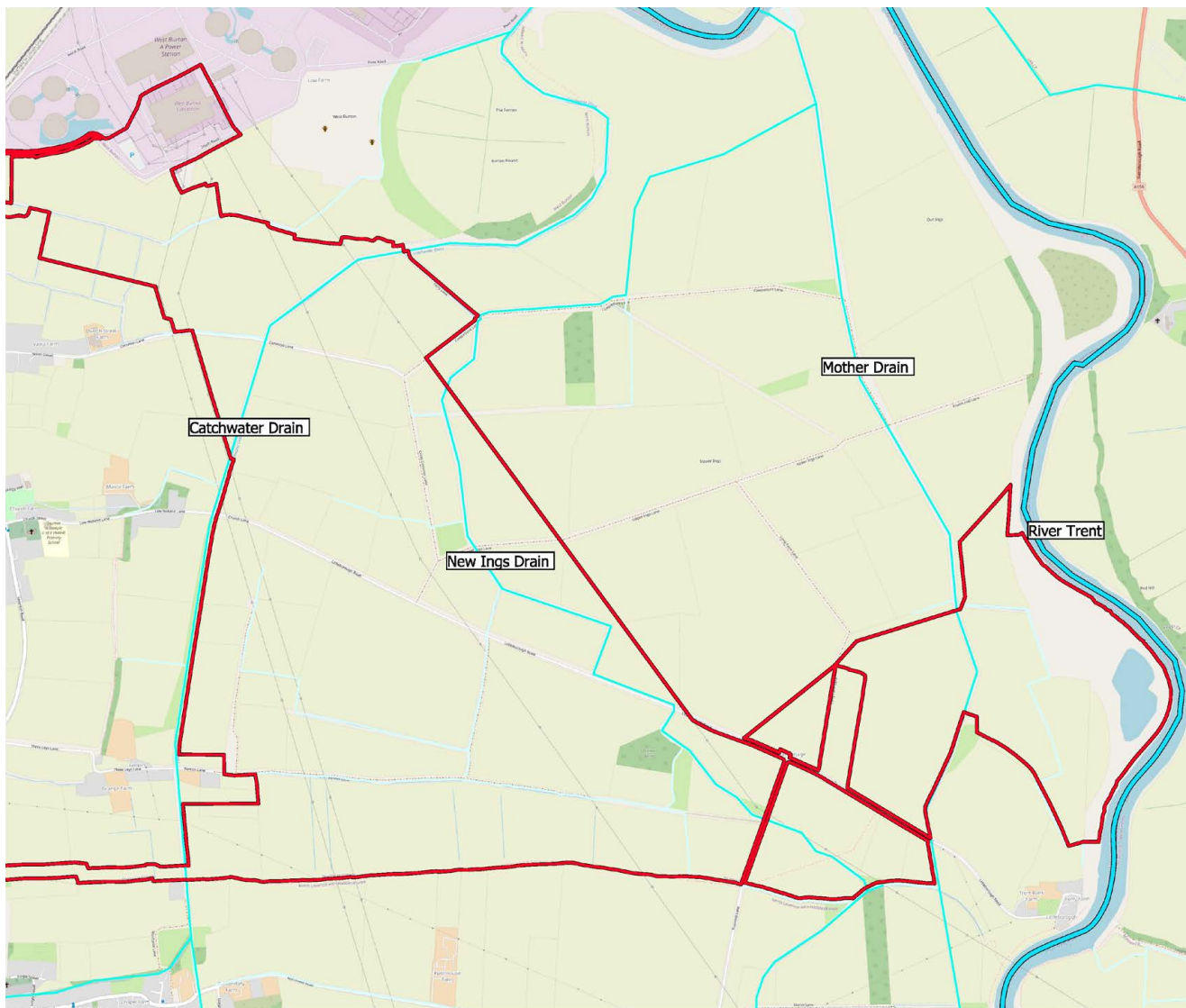


FIGURE 4: WATERCOURSES (EAST)

### 3.2 SITE SELECTION

There is no standard methodology for the selection of sites for renewable energy generation projects, however, assessing the environmental impacts of an NSIP requires consideration of how a site was selected for development and how any alternatives to the development were reviewed. National policy on NSIPs also requires an explanation of alternatives considered when a proposal involves development of a site in a flood zone. These are both processes that continue through the life of an application for a DCO, resulting in documentation upon which recommendations are made, and a decision is made by the Secretary of State.

The Environmental Statement will demonstrate how a wide range of factors, including flood risk were considered by the Applicant in identifying a site for development and then how through an iterative design process the application proposal has been formulated and assessment made of the likely impacts and how those impacts, including on site flood risk, can be minimised and mitigated. Following correspondence with National Grid, the Applicant was notified of grid capacity at an existing substation at the West Burton Power Station site. This capacity was available due to the imminent closure of the coal fired elements of the site. Due to the immediate availability of this Point of Connection (POC), the Applicant did not consider any further alternative grid connection points. The Applicant therefore made a grid connection application to National Grid for connection at West Burton Power Station and an offer was made for 600MW.

The POC therefore formed the centre point of the 'Area of Search', which was used when identifying a suitable site. To minimise the potential for significant effects

associated with cable routes (e.g., soil disturbance and associated dust), and to minimise the potential for any losses in electricity via transmission, it is preferable to locate a renewable energy development such as the Proposed Development as close as reasonably practicable to a POC.

It was deemed appropriate that the Area of Search around the POC should be at 15km, to ensure that every opportunity had been given to finding a site that was both technically feasible and minimised any potential environmental effects. Beyond 15km, it was considered that the technical restrictions and associated environment effects associated with providing cable routing back to the POC would outweigh any potential benefits that a potential site may have.

The site selection process then involved the consideration of potential environmental constraints within the 15km search area. Such environmental constraints involved soil quality, ecology (i.e., flora and fauna), flood risk, access to the sites being considered, cultural heritage (e.g., a listed building), and the landscape and visual amenity. Following this, it was recognised that across the Area of Search, there were already various other renewable energy projects at various stages of development. These schemes were plotted within the 15km search area, along with other areas of existing built development.

It was then important to ensure that any potential site comprised a suitable shape, orientation and size that could appropriately accommodate the Proposed Development. Large open fields reduce the impact that smaller fields can have on the layout design as typically, buffers are left around field edges to offset from vegetation, tree root protection zones and other

constraints such as ditches. So significantly less capacity can be sited within a group of smaller fields compared to fewer larger fields.

A site should also be either level or have a gentle sloping topography. The preference is for a site with a southerly aspect to maximise solar gain; however, sites with other primary aspects are still technically viable.

It is also advantageous to find a site which has a single landowner, where possible, to minimise the complexity which can arise when dealing with multiple landowners as part of the same project. For a project of this nature, an area of at least 150 acres under single landownership was deemed preferable when looking for a suitable site. In addition, it was considered (due to the Applicant's experience in developing similar projects) that any such sites of 150 acres would need to be within 5km of one another and preferably there would be a minimum of 3 such parcels near to each other for them to reasonably form a potential site option.

As the closest potential site to the POC, which had been identified through the stages set out above, the landowner of the Site was approached first and they confirmed that they would be willing to take on the Proposed Development. No other sites were therefore taken forward at this stage due to the Site having the least environmental impacts associated with the cable route.

### 3.3 ITERATIVE DESIGN PROCESS

The parameters identified for the Proposed Development have begun to evolve iteratively, taking into consideration the emerging preliminary findings in relation to likely environmental effects, the planning and environmental policy objectives and technical functionality of the Proposed Development, as well as feedback from stakeholders and non-statutory public consultation undertaken in 2023. This iterative process is set out in Chapter 3 Site Selection and Iterative Design Process of the PEIR, and will continue between now and the production of the ES, as the parameters evolve into a fully detailed layout proposal.

## 4. THE PROPOSED DEVELOPMENT

The Proposed Development is defined under sections 14(1)(a) and 15(2) of the Planning Act 2008 as a NSIP, as it consists of construction of an onshore generating station in England exceeding 50 megawatts (MW). Associated development (e.g., PV module mounting infrastructure, inverters and transformers) and other ancillary works are also proposed as part of the Proposed Development.

Indicative timescales for the construction and operation of the Proposed Development that have been assumed for the purposes of the preliminary assessment are as follows:

- It is currently anticipated that (subject to the necessary consents being granted) construction work will commence, at the earliest in the year 2027, and will run for 24-months. This assumed that the Proposed Development will be built in a single phase, which is considered to give rise to the worst-case scenario for the purpose of the assessment. Construction in a single phase, rather than multiple phases spaced over longer timescales, would result in higher peak traffic volumes and a greater number of construction activities being undertaken concurrently (generating noise, dust etc.) The subsequent ES will set out further detail on the construction programme of the Proposed Development.
- It is currently anticipated that the earliest the Proposed Development will commence commercial operation is the year 2029. It is anticipated that sections of the Proposed Development will commence their electricity generation in stages, rather than await completion of the Proposed Development before any renewable energy enters the National Grid; and

- The operational life of the Proposed Development is to be up to 40 years and decommissioning is therefore estimated to take place no earlier than the year 2069. Decommissioning is expected to span approximately 18 months – two years and will be undertaken in one phase, to account for the worst-case scenarios. A 24-month decommissioning phase has been assessed for the purpose of a worst-case assessment in this PEIR.

### 4.1 NEED FOR THE PROPOSED DEVELOPMENT

The case for the need for the Proposed Development is centered on its significant contribution to the three important national energy policy aims, which are:

Decarbonisation – achieving Net Zero by 2050 and the importance of urgently deploying zero-carbon generation assets at scale – the Proposed Development will provide a large-scale low carbon energy generating asset which is expected to be operational during 2029.

Security of supply – geographically and technologically diverse supplies – the Proposed Development will provide the security of supply due to its large scale; direct connection to the National Electricity Transmission System, meaning the power that is generated has a national benefit; ability to complement other renewables and the efficient opportunity to integrate energy storage into the design of the Proposed Development help balance electricity needs over the wider Grid system.

Affordability – the Proposed Development will provide large scale generation at low cost which removes the market fluctuations from fossil fuel costs, which lead to energy prices rising for the end user.

## 4.2 THE COMPONENTS OF THE PROPOSED DEVELOPMENT

An accompanying set of parameters for assessment have been drafted, portraying the maximum parameters of each aspect of the Proposed Development (e.g., solar panels, cable infrastructure, and access points). As the environmental assessments progress, the parameters plans will evolve into an indicative site layout and allow for mitigation through design in the Proposed Development.

During the construction phase, five or more temporary construction compounds will be required, as well as tracks to facilitate access to all parts of the Site.

In areas around the solar arrays and on other parts of the Site, biodiversity mitigation areas (i.e., compensatory areas for wildlife, resulting from the temporary loss of land arising from the Proposed Development), as indicated by **Figure 5** and **Figure 6**, will additionally support opportunities for landscaping, biodiversity enhancements and habitat management. Further information on the biodiversity mitigation areas will follow at the subsequent ES stage.

### **Solar PV Modules**

Solar PV modules/panels convert sunlight into electrical current (as direct current (DC)). Individual modules/panels are typically 2.3m long and 1.1m wide and typically consist of a series of mono-crystalline cells which make up each panel (66 or 72 cells per panel). The module frame is typically built from anodised aluminium.

Each module could have a DC generating capacity of between 400–650watts (W), or more depending on advances in technology.

The number of modules required at the Proposed Development will be highly dependent upon the final layout, following the design process. **Figures 5** and **6** set out the parameters for the Proposed Development.

The modules are fixed into a mounting structure in groups known as “strings”. This mounting structure will use a fixed panel system where the panels are fixed in one position and one angle. The number of modules which will make up each of the string is not yet known. Various factors will help to inform the number and arrangement of modules in each string, and it is likely some flexibility will be required to accommodate future technology developments.

### **Module Mounting Structures**

Each row of modules will be mounted on a rack supported by galvanised steel poles driven into the ground. Various mounting structures are available however, driven poles are currently expected to be the most likely foundation solution. Between each string of panels there are likely to be an average separation distance of approximately 2.6m to maximise generation and allow sufficient access for maintenance.

The panel modules are likely to be mounted on structures with an upper height of a maximum of 3.6m Above Ground Level (AGL).

## Inverters

Inverters are required to convert the DC electricity generated by the PV modules into alternating current (AC) which allows the electricity to be exported to the National Grid. Inverters are sized to deal with the electrical output from strings of PV modules.

Central inverters are large capacity inverters with ratings above 1MW. Due to their size, they are located in a central location surrounded by the solar cells to which they are connected. The unit itself tends to be containerised with associated control and switchgear equipment within a maximum height of 3m. Compared with string inverters, central inverters tend to offer better efficiencies and economies of scale for PV installations exceeding 20MW.

String inverters are much smaller units with a rating normally above 100kW and tend to be better suited for smaller multi-MW installations.

The Applicant is currently considering both options, and further detail will be set out in the Environmental Statement that will follow this PEIR.

## Transformers

Transformers are required to control the voltage of the electricity generated across the Site and efficiently transmit the power to the Proposed Development substation. A number of transformers of various sizes and voltages will be needed and will be located throughout the Site.

The transformer units will have a maximum height of 3m AGL.

## Cabling

Onsite electrical cabling is required to connect the PV modules to inverters and the inverters to the transformers onsite. Higher rated cables are then required between the transformers and the Proposed Development substation, and between the Proposed Development substation and the energy storage facilities onsite. This is likely to be underground cabling. Extra high voltage cables will then be required to export all of the electricity produced by the Proposed Development to the existing 400kV substation located within the existing West Burton Power Station site.

Data cables will also be installed, typically alongside electrical cables in order to allow for the monitoring of the development during operation.

The POC for the Proposed Development is the existing 400kV substation located within the existing West Burton Power Station site. The exact route for the cable route to connect the Proposed Development to this substation is still being determined; however, as shown on **Figures 5** and **6**, large areas of cabling are not required due to the proximity of the Site to the West Burton Power Station site. All of the new cabling will be laid underground in trenches or ducting. At certain points along the route, it will be necessary to drill past 'obstacles' such as roads. There will be no new above ground power lines for the cabling.

More detail on the extents and locations of the cable routes will be provided within the subsequent ES.

### **Fencing and Security Measures**

A fence will enclose the operational areas of the Proposed Development. The fence is likely to be approximately 2.4m AGL in height. Pole mounted closed circuit television (CCTV) system, which will face towards the Site and away from any land outside of the Site will also be deployed around the perimeter of the Site. These cameras will be mounted on poles of 3.5m AGL in height located within the perimeter fence.

It is likely that lighting on sensors for security purposes will be deployed around the energy storage area and potentially at any other pieces of critical infrastructure. No areas of the Site are proposed to be continuously lit during the operational phase of the Proposed Development.

### **Access Tracks**

Two primary points of access will be taken from Gainsborough Road and Station Road, which will respectively serve the eastern, and western portions of the Site, leading to the primary construction compounds shown at **Figure 5**. After materials comprising the Proposed Development have arrived at the primary construction compounds, they will then be distributed to the 'secondary' construction compounds and then further throughout the site via various access tracks, the locations of which are yet to be confirmed. Some of these tracks will require crossings of the existing highway network and other routes. Full details of the internal access tracks and vehicle routing will be provided in the ES, following further liaison with key highways consultees.

The new access tracks within the Site will likely be made of crushed aggregate.

### **Energy Storage Facility**

A Battery Energy Storage System (BESS) forms part of the Proposed Development. The energy storage is proposed to be located in the northern extent of the eastern section of the Site, as indicated by **Figure 5** and **Figure 6**.

The energy storage system will include batteries. Further, inverters and system controllers are likely to be within the energy storage system; however, its final design will be set out in the subsequent ES.

A 4m high barrier of suitable mass and density surrounding the BESS facility only will be incorporated as part of the Proposed Development, as an embedded noise mitigation measure.

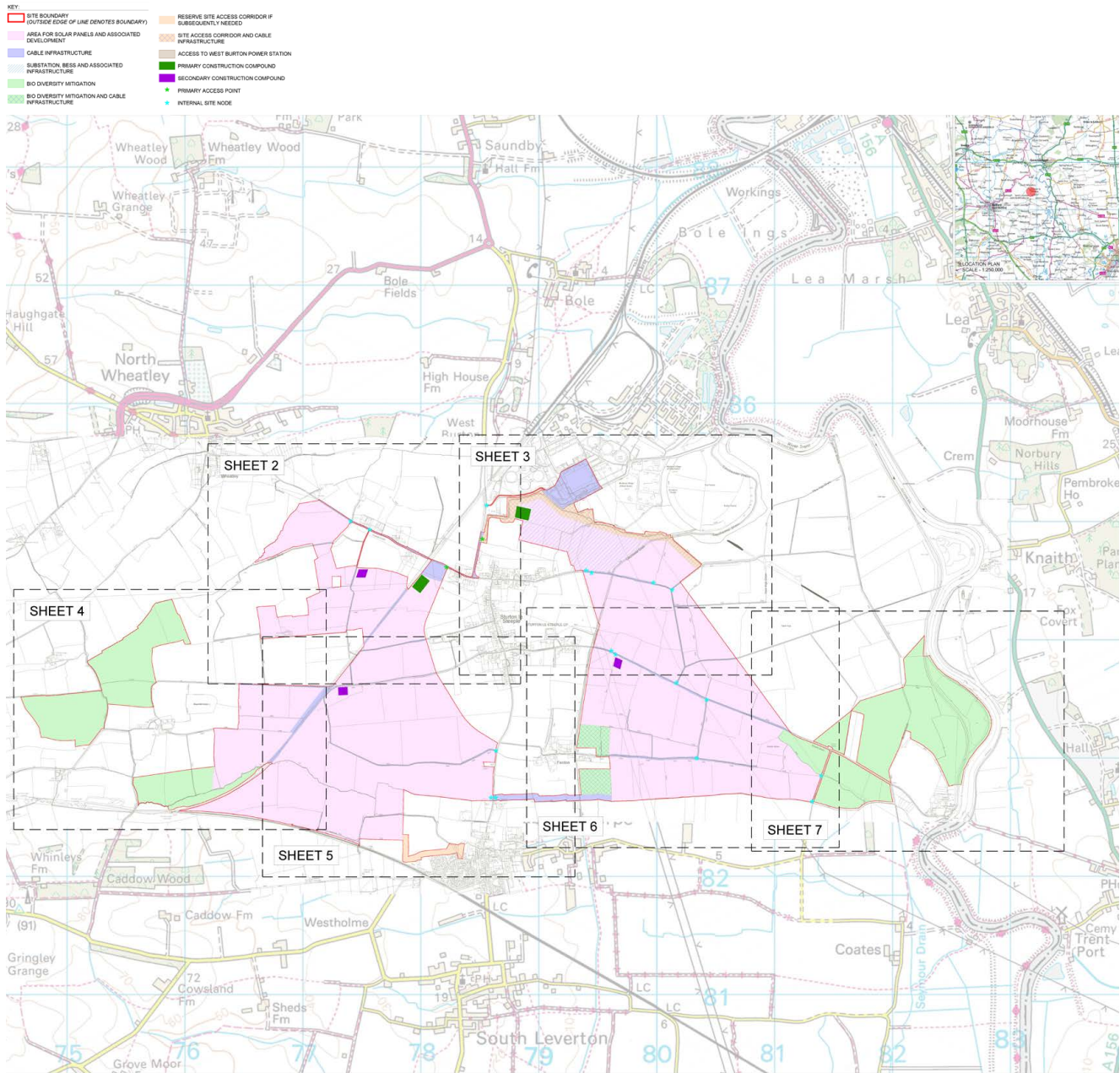


FIGURE 5: CONSTRUCTION PHASE PARAMETER PLAN (TO SEE FIGURE 5 IN MORE DETAIL SEE APPENDIX)



- KEY:**
- SITE BOUNDARY (OUTSIDE EDGE OF LINE DENOTES BOUNDARY)
  - RESERVE SITE ACCESS CORRIDOR IF SUBSEQUENTLY NEEDED
  - AREA FOR SOLAR PANELS AND ASSOCIATED DEVELOPMENT
  - SITE ACCESS CORRIDOR AND CABLE INFRASTRUCTURE
  - CABLE INFRASTRUCTURE
  - ACCESS TO WEST BURTON POWER STATION
  - SUBSTATION, BESS AND ASSOCIATED INFRASTRUCTURE
  - BIO DIVERSITY MITIGATION
  - BIO DIVERSITY MITIGATION AND CABLE INFRASTRUCTURE
  - PRIMARY ACCESS POINT
  - INTERNAL SITE NODE

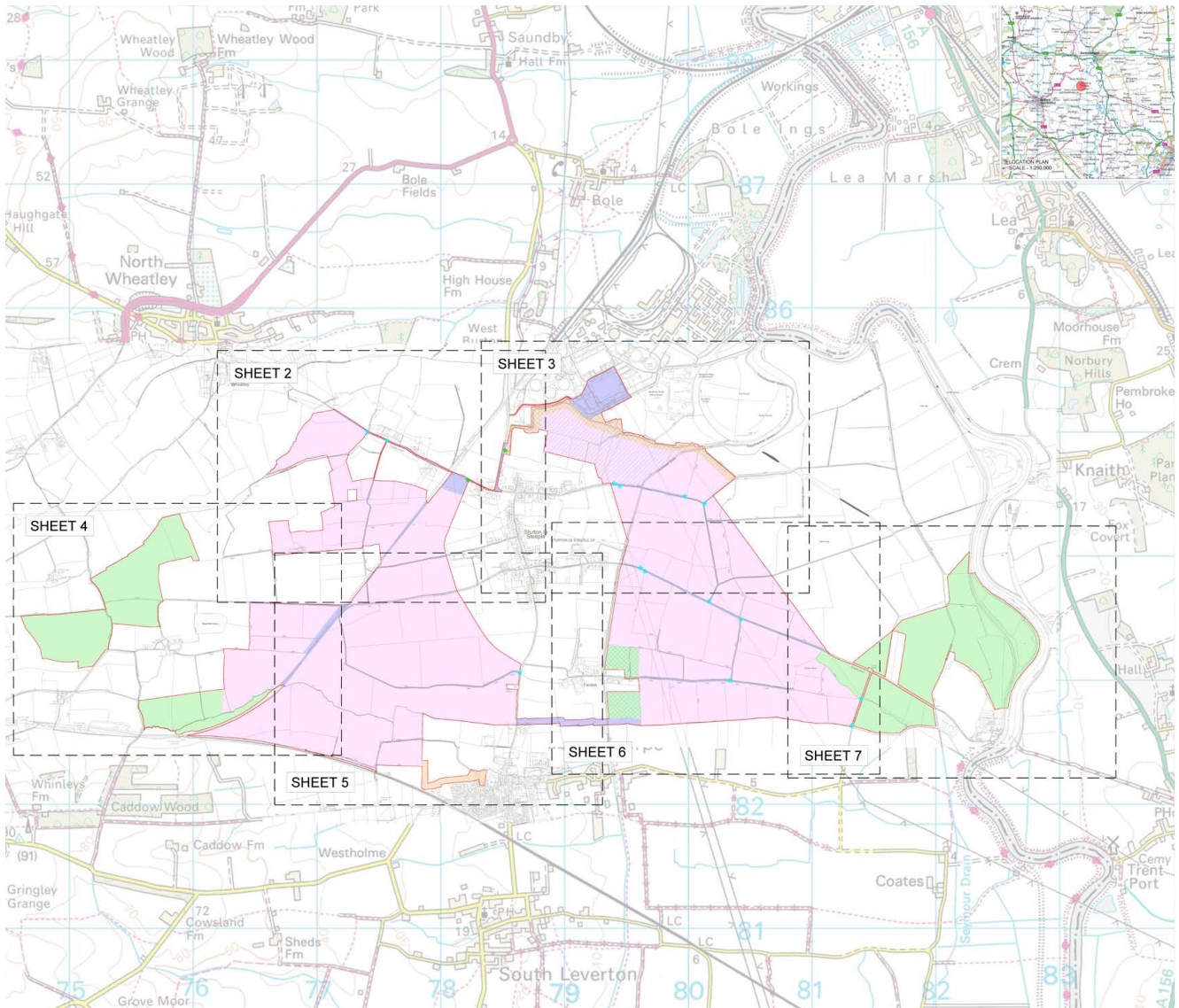


FIGURE 6: OPERATIONAL PHASE PARAMETER PLAN (TO SEE FIGURE 6 IN MORE DETAIL SEE APPENDIX)

### **Substation and Control Building**

The Proposed Development's substation will consist of electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from the Proposed Development to the National Grid. The maximum height of the main substation is proposed to be 11m AGL, which has increased since the scoping submission that set out a maximum height of 2.4m AGL. However, this only relates to a small element of the substation componentry, with the majority of the built form likely to be at the same height as the previous scoping stage parameter. There may also be smaller sub-station control rooms distributed throughout the Site, that would have a maximum height of 2.4m AGL.

The substation forming the Proposed Development is also expected to include a control building which will include office space and welfare facilities as well as operational monitoring and maintenance equipment. The control building is likely to have a maximum height of 4.5m AGL.

### **Electricity Export Connection to National Grid**

The electricity generated is expected to be exported via a connection from the Proposed Development to an existing substation at the West Burton Power Station site.

**Figures 5 and 6** set out the construction phase parameters, and the operational phase parameters, respectively.

### **Construction Phase**

The construction phase of the Proposed Development is anticipated to last up to 24-months but will be dependent on the final design, and outcomes of the traffic assessment which will be set out in the subsequent ES. The types of construction activities that may be required include (but are not limited to):

- Importing of construction materials;
- The establishment of the construction compounds – these will likely move over the course of the construction process as each section is built out;
- Creation of a new access points for the Site;
- Installing the security fencing around the Site;
- Importing the PV panels and the energy storage equipment;
- Erection of PV frames and modules;
- Digging of cable trench and laying cables for connection to the West Burton Power Station substation;
- Installing transformer cabins;
- Construction of onsite electrical infrastructure for the export of generated electricity; and
- New habitat creation.

An outline Construction Traffic Management Plan (oCTMP) is being developed as part of the EIA which will guide the delivery of materials and staff onto the Site during the construction phase. The principles of the oCTMP will be available for comment as part of the consultation process (see Chapter 13 'Transport and Access' of the PEIR for further info) to ensure that the

comments of local residents and stakeholders are taken into account in its development.

Two main temporary construction compounds will be established close to the Site entrances (i.e., from Gainsborough Road, and Station Road, as set out above), to receive the majority of materials for, and construct the Proposed Development. Smaller 'secondary' compounds would be located across the Site to receive materials from the primary construction compounds and build out the Proposed Development across the Site, as indicated on **Figure 5**.

Depending on weather conditions during construction, temporary roadways (e.g. plastic matting, or other temporary solutions) may be utilised to access parts of the Site.

Depending on the season, work needed for habitat enhancement may start during or after construction is completed. A draft Landscape and Ecological Management Plan will be submitted as part of the subsequent ES. This document is being developed, and will set out the proposals for the land and how it will be managed through the operational life of the Proposed Development. It is proposed that the lifetime of the Proposed Development will be 40 years.

### **Operational Phase**

During operation of the Proposed Development, human activity on the Site will be minimal and would be restricted principally to vegetation management, equipment maintenance and servicing, replacement of any components that fail and monitoring to ensure the continued effective operation of the Proposed Development.

### **Decommissioning Phase**

The Proposed Development will be decommissioned at the end of its approved operational phase. All PV modules, mounting poles, cabling above 1m below ground (any cabling buried 1m+ below ground may not be removed at decommissioning), substation, energy storage equipment, inverters, transformers etc would be removed from the Site. These items would be recycled or disposed of in accordance with good practice and market conditions at the time. A Decommissioning Plan, to include timescales (24 months) and transportation methods would be agreed in advance with the Local Planning Authority.

It is the intention that after the 40 years of operation, the whole Site will be available to revert to its current use and be used by the landowner for agricultural operations of their choice and determined by the global markets at that time. This will include the areas that will have been used for biological mitigation over the lifetime of the Proposed Development. It is the intent that the permissive paths would also be closed to the public once the Proposed Development is decommissioned.

The effects of decommissioning are often similar to, or to a lesser magnitude than, the construction effects and will be considered where possible in the relevant sections of the ES. However, there can be a high degree of uncertainty regarding decommissioning as engineering approaches and technologies evolve over the operational life of the Proposed Development.

## 5. FINDINGS OF THE PEIR

### 5.1 TOPICS ASSESSED

Chapter 1 to 5 of PEIR Volume 1: Main Text and Figures provides an introduction to the Proposed Development, approach and methodology to the EIA, description of the DCO Site and surrounds, an overview of the Proposed Development and alternatives that were considered during the design process, and the policy and legislative context.

The following topic specific chapters have been produced and assessed in the PEIR Volume 1: Main Text and Figures:

- **Chapter 6:** Landscape and Visual Impact and Residential Amenity
- **Chapter 7:** Ecology and Biodiversity
- **Chapter 8:** Hydrology, Hydrogeology, Flood Risk and Drainage
- **Chapter 9:** Cultural Heritage
- **Chapter 10:** Socioeconomics
- **Chapter 11:** Noise
- **Chapter 12:** Climate Change
- **Chapter 13:** Transport and Access
- **Chapter 14:** Air Quality
- **Chapter 15:** Land Use and Agriculture
- **Chapter 16:** Glint and Glare

Chapter 17 provides an overview of the topics that can be addressed more concisely than the other topic-specific chapters and therefore do not merit an individual chapter. These topics include major accidents and disasters; telecommunications, utilities; and waste.

An assessment of the environmental effects of the Proposed Development during its construction, operation (including maintenance) and eventual decommissioning has been completed for each of the topics. The likely significant environmental effects of the Proposed Development are fully described within the PEIR Volume I: Main Text and Figures. The following environmental topic sections provides a brief summary of the overall findings of the PEIR.

## 6. LANDSCAPE AND VISUAL IMPACT AND RESIDENTIAL AMENITY

The Landscape and Visual Impact and Residential Amenity PEIR Chapter contains a preliminary assessment of the potential effects upon the landscape elements associated with the Site, landscape character and visual amenity brought about by the Proposed Development. In line with best practice and requirements of National Policy Statements EN-1 and EN-3 it considers the effects during the construction, operation, and decommissioning stages.

### 6.1 BASELINE CONDITIONS

The Site is not located within any national statutory protected landscape designations, such as a National Landscape (formerly known as an 'Area of Natural Beauty'). Further, the Site does not lie within any regional or local non-statutory landscape designations.

The Site lies towards the northern extent of National Character Area (NCA) 48: Trent and Belvoir Vales.

The Landscape Character Assessment prepared by Bassetlaw District Council in 2009 sets out that the Site lies across the 'Mid Notts Farmlands' and 'Trent Washlands' Character Areas.

The landscape character of the Site itself is broadly typical of the two character areas which cover it. The Site can be divided into two halves from a character perspective, with the eastern section being more associated with the Trent valley with fewer hedgerows and more dividing drainage ditches and watercourses, and the western half more typical of the Mid-Nottinghamshire farmland with a stronger network of hedgerows and slightly more undulating ground.

The electricity infrastructure which passes through the eastern section of the Site is a notable characteristic of

that part of the landscape, with the former West Burton Power station site, plus the nearby Cottam power station site, being prominent elements in the landscape.

With regard to visual receptors, it is evident that the core area of any likely visibility would extent to no more than 1km from the Site in all directions, with the exception of a small number of locations which are slightly more elevated in the landscape. Computer modelling known as a screened zone of theoretical visibility (see **Figure 7** - which illustrates the theoretical extent of where the Proposed Development would be visible from which includes the 'screening' effect from existing vegetation and buildings) illustrates no potential visibility of the Proposed Development from the majority of the settlements within 1km of the Site. The only settlements that are considered likely to view the Proposed Development are Sturton le Steeple; North Leverton with Habbleshthorpe; and South Wheatley.

There are a number of small clusters of properties, as well as individual properties, within the vicinity of the Site. As such, a Residential Visual Amenity Assessment will be undertaken within the subsequent ES chapter to consider individual properties within 500m of the Site in detail. It is therefore recognised that the potential exists for significant effect on these relevant properties.

A number of PRoWs are located in the vicinity of the Site, as indicated by **Figure 8**. A number of roads run in the vicinity of the Site, including the A620; A156; A631; the A1500 and the A638, as indicated by **Figure 8**.

## 6.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

The construction of the Proposed Development would result in notable short-term impacts from the construction activity, including the movement of vehicles and plant, temporary compounds and the construction of the Proposed Development itself. However, with regard to the trees, woodland and hedgerows with the Site itself, it is intended that all vegetation is retained bar limited removals of hedgerows to facilitate access tracks, and that existing gaps are utilised for access where possible. This therefore would not result in any significant adverse effects on the most sensitive landscape features at the Site.

Once the construction phase is complete, there would be no further adverse effects on the landscape features of the Site.

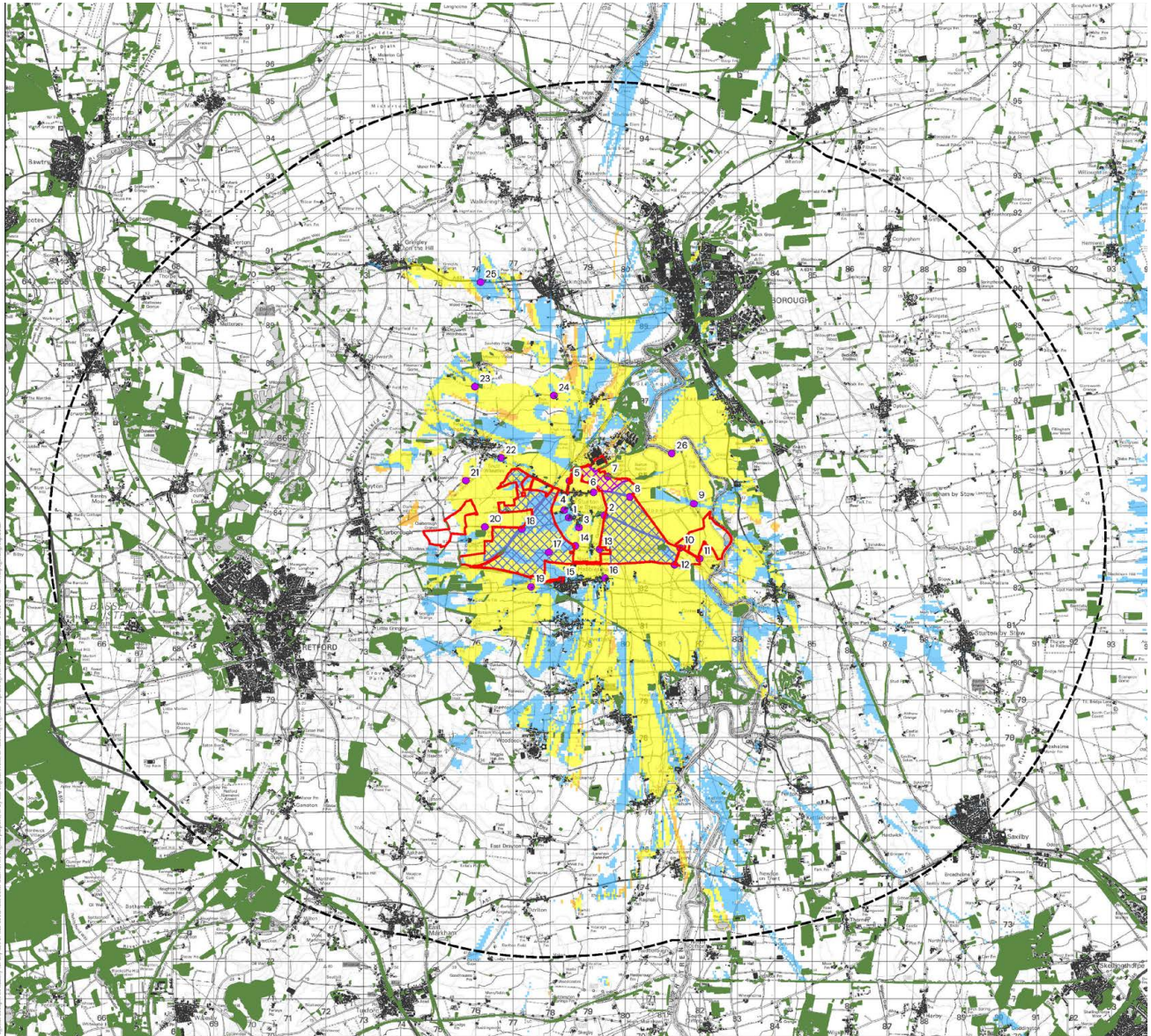
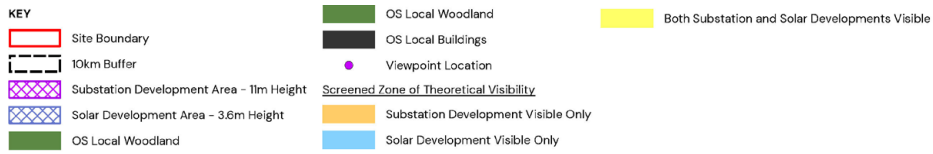
With regard to the landscape character, the construction phase would cause notable, but temporary effects upon the Landscape Character of the Site, due to the extent and size of the Proposed Development. Such effects are likely to be significant given the duration and nature of the of the construction work. Detailed assessment will be provided in the subsequent Landscape and Visual Impact and Residential Amenity Chapter of the ES.

The operational phase would also cause notable effects upon the Landscape Character of the Site, due to the extent and size of the Proposed Development, along with highly localised effects upon the 'Mid Notts Farmlands' and 'Trent Washlands' Character Areas. Such effects are likely to be significant.

In terms of visual receptors, as a worst-case scenario, there may be the potential for significant visual effects on a small number of the properties in the village of Sturton le Steeple, the small cluster of properties at Fenton and a small number of other individual properties which lie outside of the closest settlements. This would apply to those properties which have clear, open views across part of the Site, which are not blocked by other properties or vegetation. For the majority of residential properties however the impacts would be no greater than low, resulting in moderate to minor effects.

Aspects comprising the Proposed Development (e.g., solar panels) will be appropriately offset from the Trent Valley Way that passes through the Site. Although this is not shown on the parameter plan for assessment, this will be included and confirmed as part of the final layout of the Proposed Development. It is recognised that the potential exists for significant effects on small sections of the route, in addition to other PRoWs that traverse the Site. This would apply to those sections that have clear, open views across part of the Site, which are not blocked by existing hedgerow or other vegetation. For the majority of routes, the impacts would not be significant.

The potential exists for significant visual effects on users of some sections of roads in the vicinity of the Site. Further mitigation will need to be considered as part of the Proposed Development. The primary mitigation is likely to be embedded within the design of the Proposed Development, for example by locating aspects of the Proposed Development on the Site sensitively.



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FIGURE 7: SZTV AND VP LOCATIONS (10KM RADIUS)



KEY

- Site Boundary
- 5km Buffer
- OS Open Built Up Areas
- A Road
- B Road

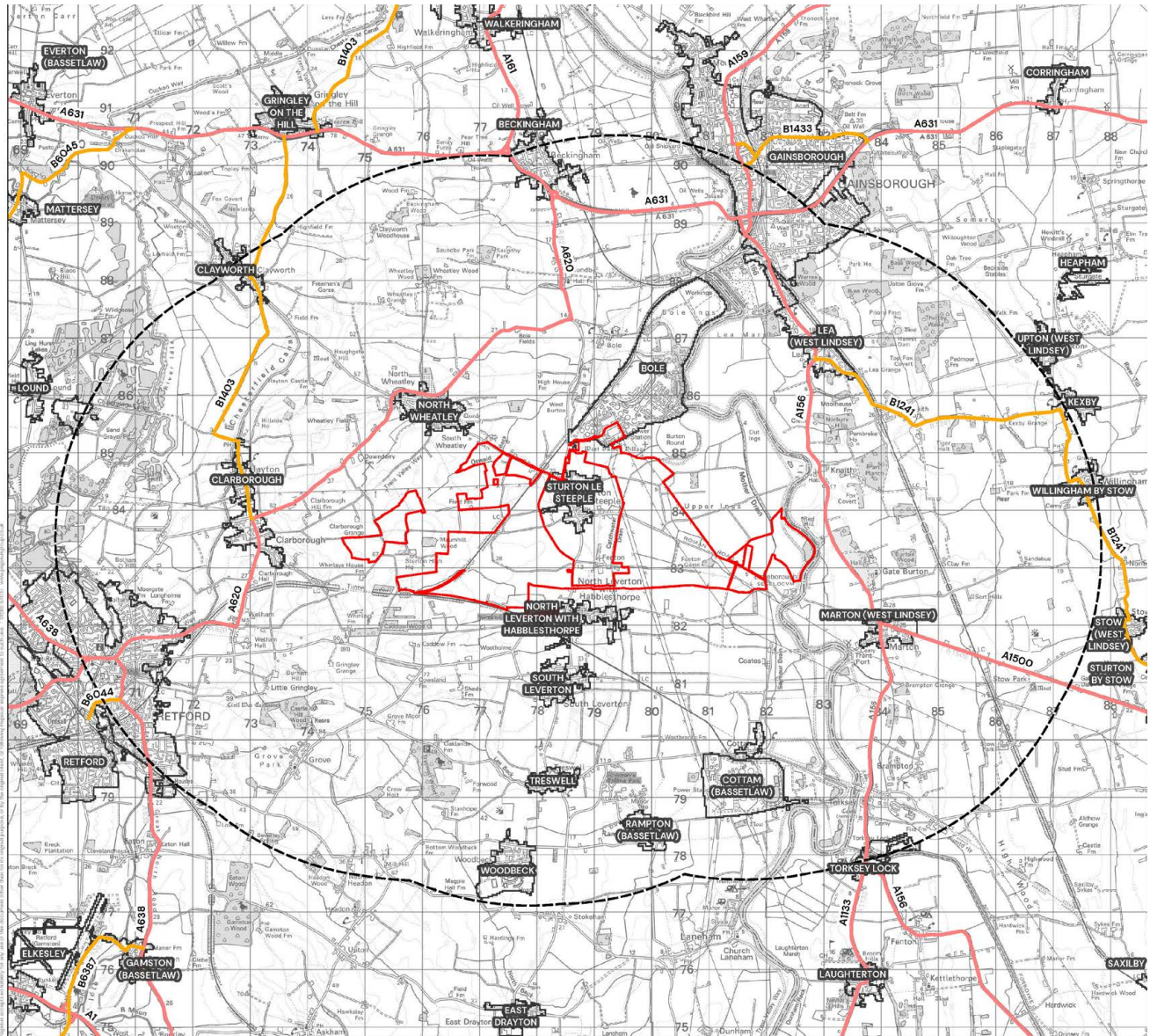


FIGURE 8: VISUAL RECEPTORS

### 6.3 MITIGATION AND ENHANCEMENT

A series of landscape mitigation measures are proposed as part of the Proposed Development, each of which would form the outline landscape strategy plan. The outline landscape strategy plan will include measures such as:

- Existing hedgerows allowed to grow up and be managed at 3m
- Existing hedgerows gapped up where required with locally appropriate mixed native hedgerow species.
- New native hedgerow trees added to existing hedgerows, where appropriate, at approximately 20–50m centres.
- New species rich native hedgerows planted with hedgerow trees adjacent to footpaths and on boundaries with no existing vegetation. Position of new hedge lines reflective of the local landscape pattern and allow for required offset from drainage features.
- Enhancements and strengthening of the Trent Valley Way to include enhancing hedgerows and verges.
- Sowing of new areas of species rich grassland under the proposed solar panels for grazing by sheep reflective of local soil types and enhancement of existing grassland and verges.
- Planting of new orchards and associated community greenspace to allow access to nature and maintenance of existing orchards to maximise environmental benefits.
- Areas of existing cropland managed for grassland creation and Skylark breeding.
- Enhancements to existing watercourses and creation of wetland areas/water meadows.
- Existing areas of woodland and scrub retained, protected and enhanced where possible.
- New areas of linear woodland planting and small copses to provide new habitats and screening.
- New connective footpath links included within green corridors and pedestrian bridge crossings over watercourses.
- Areas of proposed new allotments, if there is interest from the local community, located close to existing residential areas to facilitate access.

### CONCLUSION

The final landscape mitigation measures will be confirmed in the subsequent ES chapter. At that point, it will be possible to carry out an updated assessment of how the effects would reduce with this mitigation in place.

This section of the NTS will therefore be completed in detail in the subsequent chapter of the Environmental Statement.

## 7. ECOLOGY AND BIODIVERSITY

This chapter has identified and assessed the potential effects of the Proposed Development on ecology and nature conservation during construction, operation and decommissioning.

The following surveys have been performed or are underway:

- Habitat survey;
- Aquatic habitats (ditch and watercourse) initial survey;
- Pond surveys;
- River survey;
- Lake condition assessment survey;
- Breeding bird survey;
- Wintering bird survey;
- Ground level assessments of on Site trees and buildings for bat and barn owl;
- Ground level assessments of off Site trees and buildings for bat and barn owl;
- Bat activity survey;
- Badger survey;
- Water vole survey;
- Otter survey;
- Great Crested Newt survey; and
- Aquatic Invertebrate Survey.

The PEIR chapter provides an assessment of the potential direct and indirect effects on nature conservation designations, important habitats, protected species onsite and offsite. It considers avoidance design measures, mitigation, compensation and management activities to minimise any potential effects arising from all phases of the Proposed Development.

### 7.1 BASELINE CONDITIONS

The Site is located around the village of Sturton le Steeple in a rural landscape characterised by agricultural land with occasional villages and individual properties. West Burton Power Station is located adjacent to the north of the Site and the River Trent bounds the Site to the east. Agricultural land is located within the Site.

The Site comprises primarily arable fields with boundary hedgerows and individual trees. There is a network of ditches and drains present and several ponds and waterbodies. There are occasional small woodland blocks, grassland pasture fields, and agricultural buildings.

The Site does not coincide with any internationally or nationally statutory designated sites (i.e., sites that are protected for their ecological value).

The nearest internationally designated site is Birklands and Bilhaugh SAC which is 17 km from the Site. It is designated for its oak wood habitat, rich invertebrate fauna, and diverse fungal assemblage.

The closest nationally designated site is the Claborough Tunnel SSSI, which is 40 m west of the Western Biodiversity Mitigation Area of the Proposed Development.

There are 30 non-statutory designated sites, one ASNWs, and one Plantation on Ancient Woodland Sites (PAWS) within 2km of the Site.

Four Local Wildlife Sites (LWS)s are within the Site boundary, and two LWSs are within 100 m of the Site.

**Figures 9, 10 and 11** show the non-statutory and statutory sites in relation to the Site.

Breeding bird activity is widespread across the Site and there is are breeding birds recorded are expected for the arable agricultural nature of the Site and its location. Most recorded bird species of 'conservation concern' breed throughout the County and are 'common' or 'fairly common' within Nottinghamshire. Skylark also breed on the open habitat on the Site,

Ground level survey work identified trees that provide potential features to support nesting barn owl. Evidence of recent use by barn owl, such as pellets and observations of owls, was associated with a number of these features, but no nests were confirmed. The breeding status of barn owl activity at each potential feature is unconfirmed at the time of writing.

There are also a number of wintering bird species that are expected for the arable agricultural nature of the Site, with part of the Site closer to the River Trent (particularly the wetland and adjacent farmland habitats in the Eastern Biodiversity Mitigation Area) supporting higher species diversity and numbers of birds, typically wading birds and waterbirds, as well as hunting birds of prey.

Most of the Site is of limited value for bats. Woodland, hedgerow, dense scrub, waterbodies and watercourses comprising the Site provide more suitable bat foraging

and commuting habitat and there is habitat connectivity with the surrounding landscape in all directions. Bat activity levels recorded on the Site to date are typical for the habitats and the open fields comprising the Site. The open fields do not appear to be regularly used for foraging or commuting. Most bat species recorded on the Site are widespread in Nottinghamshire or have been recorded infrequently. It is possible that the Site supports bat roosts within buildings or trees, but no evidence has been recorded to-date that suggests significant roosts are present.

The majority of the Site is of limited value for otters and although most of the Site's watercourses and ditches could be used by otter, there is only limited evidence of this. There are historical records of water vole at the Site, and some of the drains and ditches have suitable habitat. It is possible that water vole may be present at very low densities.

No great crested newts have been recorded on the Site. Some offsite ponds within 250 m could support great crested newts. Regular tilling and spraying give rise to few opportunities for great crested newts, apart from small pockets and narrow strips of hedgerows and grassland field margins. If any ponds that are located within 250m of the Site support great crested newts, the areas within 250m of those ponds is sub-optimal habitat for great crested newts. At this stage, great crested newts cannot be discounted; however, it is considered that the Site is unlikely to form a significant habitat resource for great crested newts.

Aquatic invertebrate survey work has been undertaken in targeted watercourses, including component parts of the LWSs on the Site with aquatic invertebrate interest.

Further detail on the ecological baseline can be found in Chapter 7 'Ecology and Biodiversity' of the PEIR.

## 7.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

Prior to the implementation of mitigation measures, the potential construction phase effects are :

- Habitat loss (agricultural land, minor loss of hedgerow and grassland field margins); temporary loss / disturbance (e.g. for laydown areas and construction compounds; hedgerow and field margins where cut and cover cabling is used); habitat damage / degradation (to retained features such as trees and hedgerows adjacent to works, from soil compaction or damage from vehicles).
- Habitat gains (e.g. conversion of arable land underneath solar arrays to permanent grassland, creation or enhancement elsewhere such as woodland and hedgerows).
- Disturbance of species (within and adjacent to the Site, from noise, light, vibration and the presence of vehicles and people; damage, destruction, killing or injuring (for instance badger setts and active bird nests).
- Contamination / pollution (potential ground, water and air pollution from spillages, dust and vehicles).

Prior to the implementation of mitigation measures, the potential operational phase effects are:

- Fragmentation (of habitats and species populations); barrier effects (to certain species from security fencing / installation of built infrastructure).
- Disturbance of species (within and adjacent to the Site, from noise, light and the presence of vehicles and people); changes to foraging and commuting behaviours (installation of solar arrays could result in avoidance / attraction by bats, birds, and invertebrate species).
- Beneficial effects (from increased habitat diversity and reduction of pesticide application as the Site transitions from intensive arable management to less intensive grazing. This would benefit a range of aquatic and terrestrial invertebrate species and other species that prey upon them).

No information is available with regard to the detail of the decommissioning phase of the Proposed Development; a detailed receptor-by-receptor impact assessment has not been attempted in the main PEIR chapter. Any effects arising from the decommissioning phase of the Proposed Development are not considered to be greater than those pertaining to the construction phase.

This will be given more consideration at ES stage.

- Legend
-  Site boundary
  -  10km from site boundary
  -  30km from site boundary
  -  Counties & Unitary Authorities
  -  Special Areas of Conservation
  -  Ramsar Site
  -  Special Protection Areas

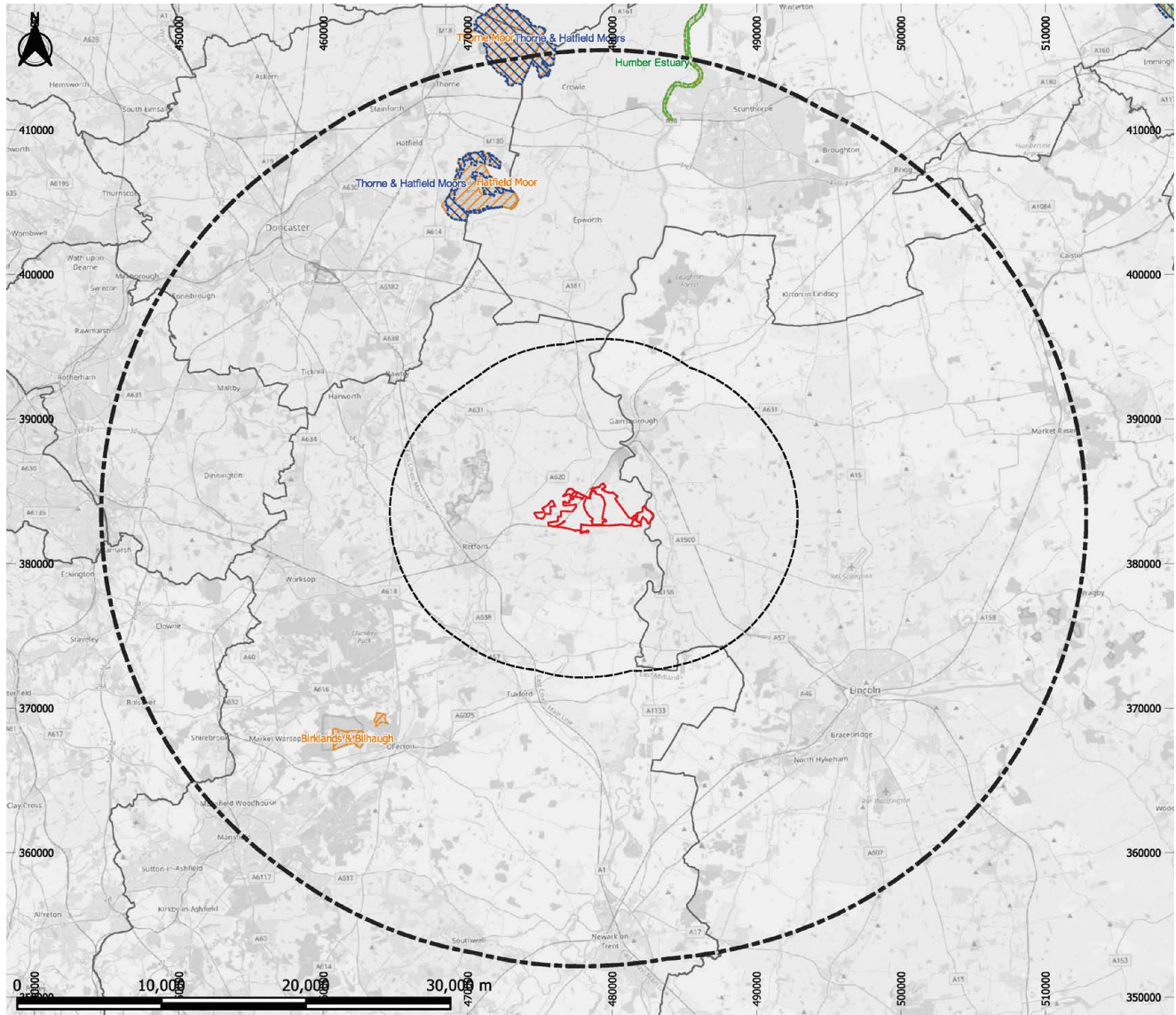









FIGURE 9: INTERNATIONALLY DESIGNATED SITES OF NATURE CONSERVATION

- Legend
-  Site boundary
  -  2km from site boundary
  -  5km from site boundary
  -  Counties & Unitary Authorities
  -  Sites of Special Scientific Interest
  -  Ancient Semi-Natural Woodland
  -  Plantation on Ancient Woodland Site

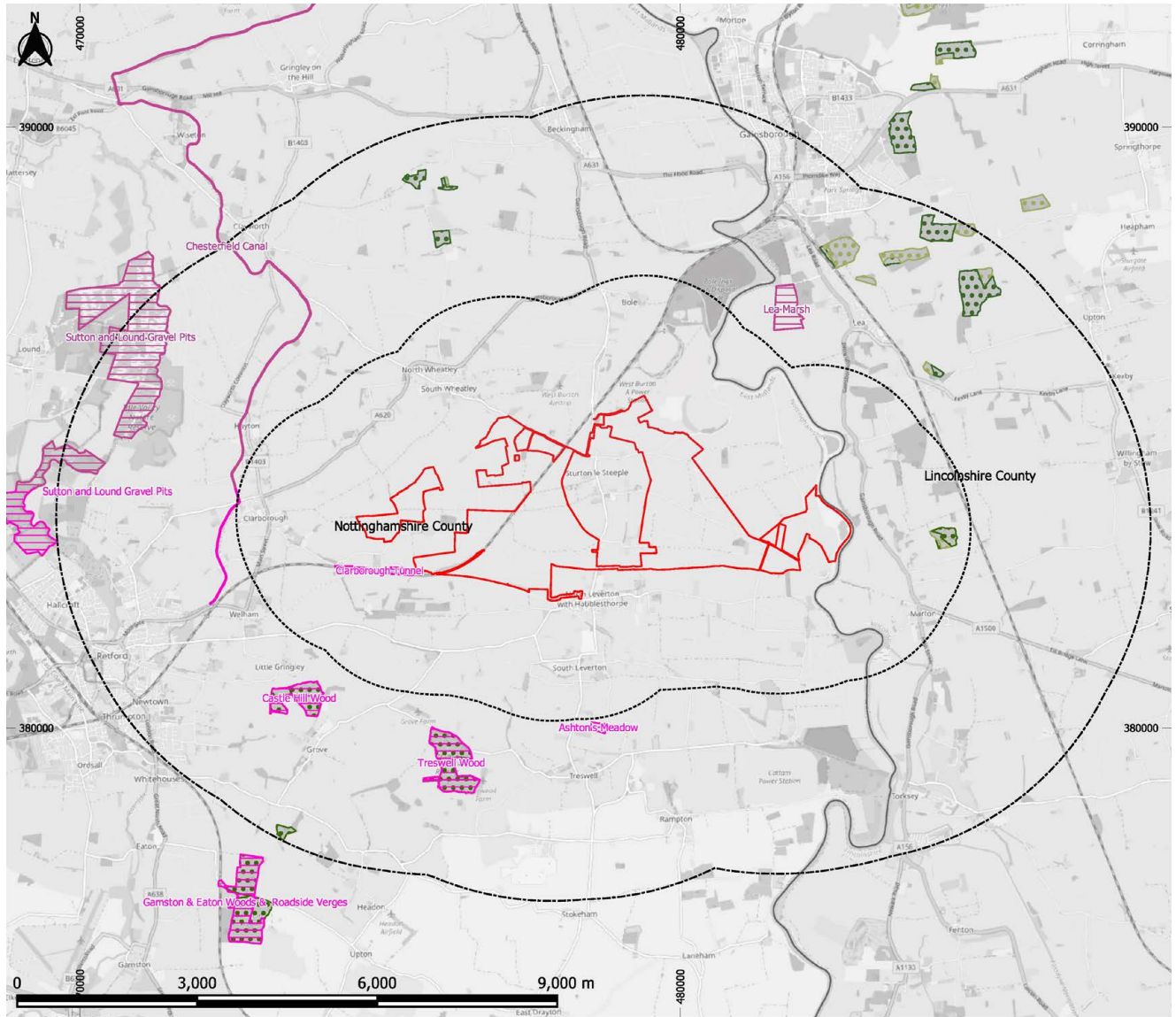


FIGURE 10: EA FLOOD MAP

- Legend
- Site boundary
  - 2km from site boundary
  - Counties & Unitary Authorities
  - Indicative location of locally designated non-statutory site (LWS provided by LERC)
  - Location of locally designated non-statutory site (SINC provided by NBGRC)

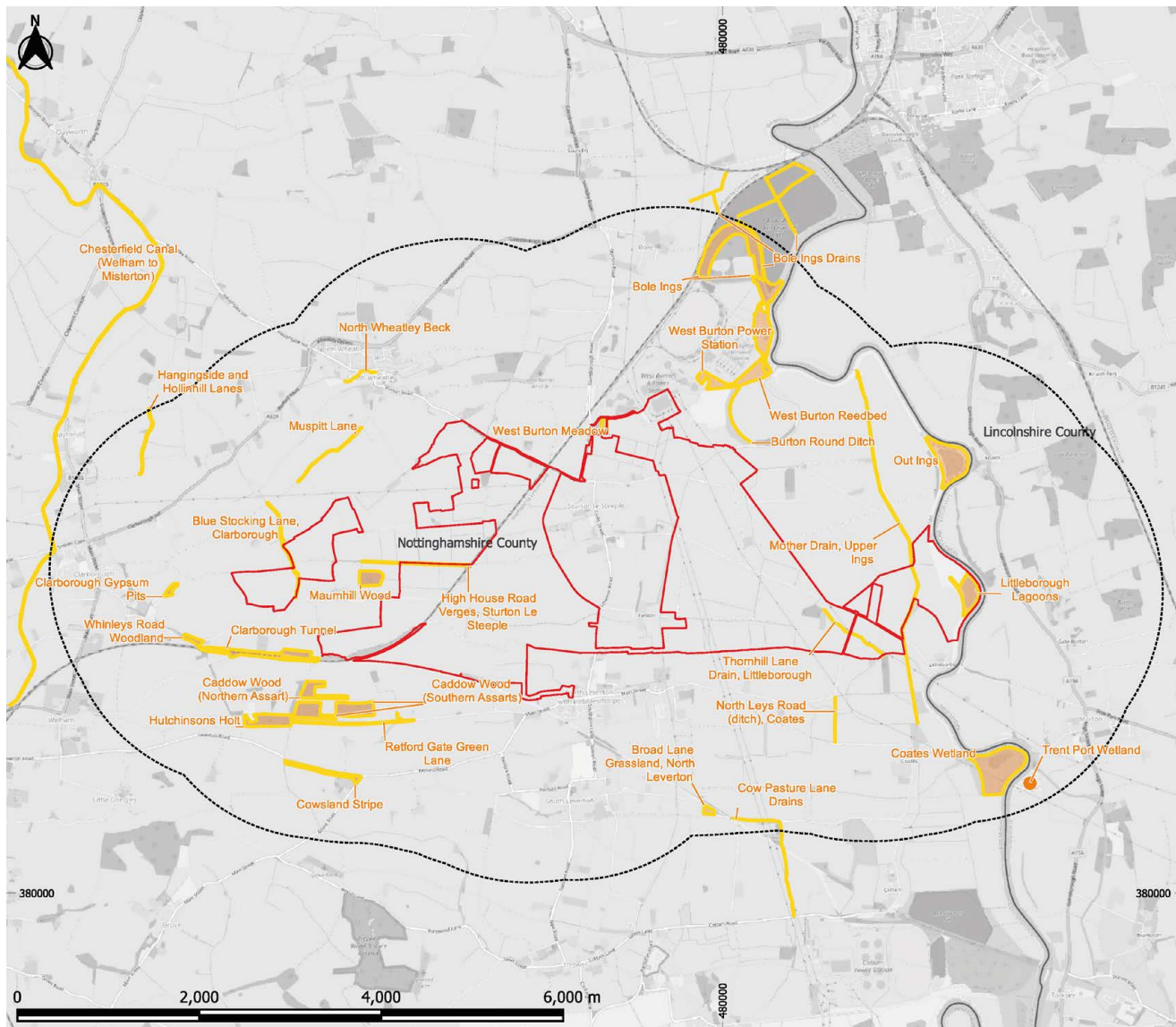


FIGURE 11: LOCALLY DESIGNATED SITES OF NATURE CONSERVATION



### 7.3 MITIGATION AND ENHANCEMENT

Mitigation measures include:

- Clear span structures on ditches / drains where required;
- A lighting strategy for all phases of development; measures for pollution prevention and dust management (incorporated into the CEMP for the construction and decommissioning phase);
- Timing of works to avoid impacts; for example favouring vegetation clearance outside of the bird nesting period;
- Precautionary methods of working to avoid disturbance, damage, killing / injury (such as precautionary vegetation clearance methods in areas suitable for reptiles);
- Securing and implementing protected species licences as required, such as for bats or badgers; and
- Measures in the Western and Eastern Biodiversity Mitigation Areas to mitigate impacts on skylark which will be confirmed in the subsequent ES.

Enhancement measures include:

- Habitat creation in the Eastern Biodiversity Mitigation Area, such as wildflower grassland, species-rich hedgerows, scrub, and ponds or ditches;
- Habitat improvements such as infilling of gaps in hedgerows, and improvements to plant species diversity by additional planting / seeding in retained habitats;
- Improved management of retained habitats, such as grasslands within the nearby LWS;
- Management of hedgerows to favour breeding birds and to increase their potential for dormouse;
- Management of ditches and woodlands to improve their biodiversity value; and
- Installation of other wildlife features such as bat and bird boxes.

### 7.4 CONCLUSION

With mitigation in place, no significant adverse effects on designated sites for nature conservation or important habitats are likely. Most species impacts are 'scoped out' (i.e., considered to be so minimal that they need not warrant assessment), or are likely to be neutral, not significant, or slightly beneficial in the long-term. Effects on skylark are assessed as adverse (locally significant). Further detail will follow in the subsequent ES.

## 8. HYDROLOGY, HYDROGEOLOGY, FLOOD RISK AND DRAINAGE

This PEIR chapter has set out the assessment of likely significant effects of the Proposed Development upon hydrology, hydrogeology, flood risk and drainage arising from its construction, operation and decommissioning phases.

The assessment has been supported by the acquisition and interpretation of data and information requested from the Environment Agency (EA), the Trent Valley Internal Drainage Board (IDB), and Nottinghamshire County Council (NCC) as the Lead Local Flood Authority (LLFA). This information has been used to characterise the baseline water environment and identify receptors. Further, a targeted visual inspection of the key water features of the Site was undertaken in July 2024, focussing on the main watercourses within the study area, existing flood defences, areas where historical flooding has been reported, and the locations with infrastructure proposed within Flood Zones on the Site (see baseline conditions below for information).

### 8.1 BASELINE CONDITIONS

The nearest main river is the River Trent, which runs along the eastern boundary of the Site. It flows in a northerly direction, eventually discharging into the Humber Estuary at Blacktoft Sands approximately 38km to the north of the Site.

A number of watercourses cross the Site, as indicated by **Figures 3 to 4**. The EA categorises these watercourses as primary, secondary, and tertiary rivers. Primary watercourses consist of Main Rivers<sup>1</sup> and major Ordinary Watercourses<sup>2</sup>, secondary watercourses consist of smaller Ordinary Watercourses, and tertiary watercourses<sup>3</sup> comprise drainage ditches and Ordinary Watercourses receiving limited flows. Two primary rivers are shown within the Site, the first being Catchwater Drain which flows from south-to-north through the eastern part of the Site, discharging to the River Trent approximately 1km to the north-east of the Site. The second primary river within the Site is Mother Drain, which flows from south-to-north, just within the south-eastern part of the Site. Mother Drain also discharges into the River Trent to the north-east of the Site. A large number of unnamed secondary and tertiary watercourses pass through the Site, generally flowing from west-to-east, and discharging into the Catchwater Drain or the Mother Drain. Many of the unnamed secondary and tertiary watercourses were noted as dry during the Site visit, which was undertaken on a dry sunny day.

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1. A Main River is a watercourse that is managed by the Environment Agency.

2. A major Ordinary Watercourse refers to a watercourse that is not a Main River, but is still large enough to require attention for flood risk management.

3. A tertiary watercourse is a small or minor water feature such as a field ditch, or drainage channel. These are the lowest level in watercourse hierarchy

The Site is not located within 1km of a Source Protection Zone, which are designated for the purposes of safeguarding drinking water quality. However, the eastern part of the Site (i.e., the land that lies to the east of Catchwater Drain) falls within a Drinking Water Protected Area. A Drinking Water Protected Area is defined as a location where raw water is abstracted for human consumption, providing on average, more than 10 cubic metres per day, or serving more than 50 persons, or is intended for such future use.

The latest Flood Zone map published by the EA (see **Figures 12 and 13**) shows that the (approximately) western half of the Site lies within Flood Zone 1, representing a less than 1 in 1000 annual probability of fluvial or tidal flooding. A central band of the Site (affecting approximately 5% of the Site) lies within Flood Zone 2, representing a 1 in 100 to 1 in 1000 annual probability of fluvial flooding or a 1 in 200 to 1 in 1000 annual probability of tidal flooding. The eastern part of the Site (approximately 45% of the Site) falls within Flood Zone 3 with a greater than 1 in 100 annual probability of fluvial flooding or a greater than 1 in 200 annual probability of tidal flooding. The flood risk in this area is primarily related to rivers, but there is a degree of tidal influence on the River Trent. Flood defences are present along the River Trent. In relation to flood risk, Government policy used to determine DCO applications sets out requirements for the application of a Sequential Test<sup>4</sup>. This policy requirement will be addressed in the Flood Risk Assessment supporting the subsequent ES and within a separate Sequential Test assessment.

Areas of surface water flood risk are present on the Site, most notably along the flow paths of the Ordinary Watercourses and within the fields to the east of the Catchwater Drain, as shown by **Figures 14 and 15**. The majority of the Site is at 'very low' risk of surface water flooding, with areas of 'low', 'medium', and 'high' surface water risk identified at various locations across the Site. The village of Sturton le Steeple has an identified area of 'high' surface water flood risk at the crossroads at the southern end of Cross Street. Local residents have advised of recent incidents of surface water flooding in this area following heavy rainfall, due to runoff being conveyed from the land higher in the catchment and being funnelled along the roads running into the village and ponding at a low point at the bottom of Springs Lane.

With regard to geology, the eastern part of the Site between the Catchwater Drain and the River Trent is underlain by Alluvium (i.e., clay, silt, sand and gravel) and River Terrace deposits. A small, isolated area of Till is located in the north-eastern area of the Site.

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4. A Sequential Test is a process used in the planning system to direct new development to areas with the lowest risk of flooding. It is a key part of the Government's planning policy for flood risk management

- Site Boundary
- EA Main Rivers
- Ordinary Watercourses (Primary)
- Ordinary Watercourses (Secondary and Tertiary)
- Flood Zone 3
- Flood Zone 2

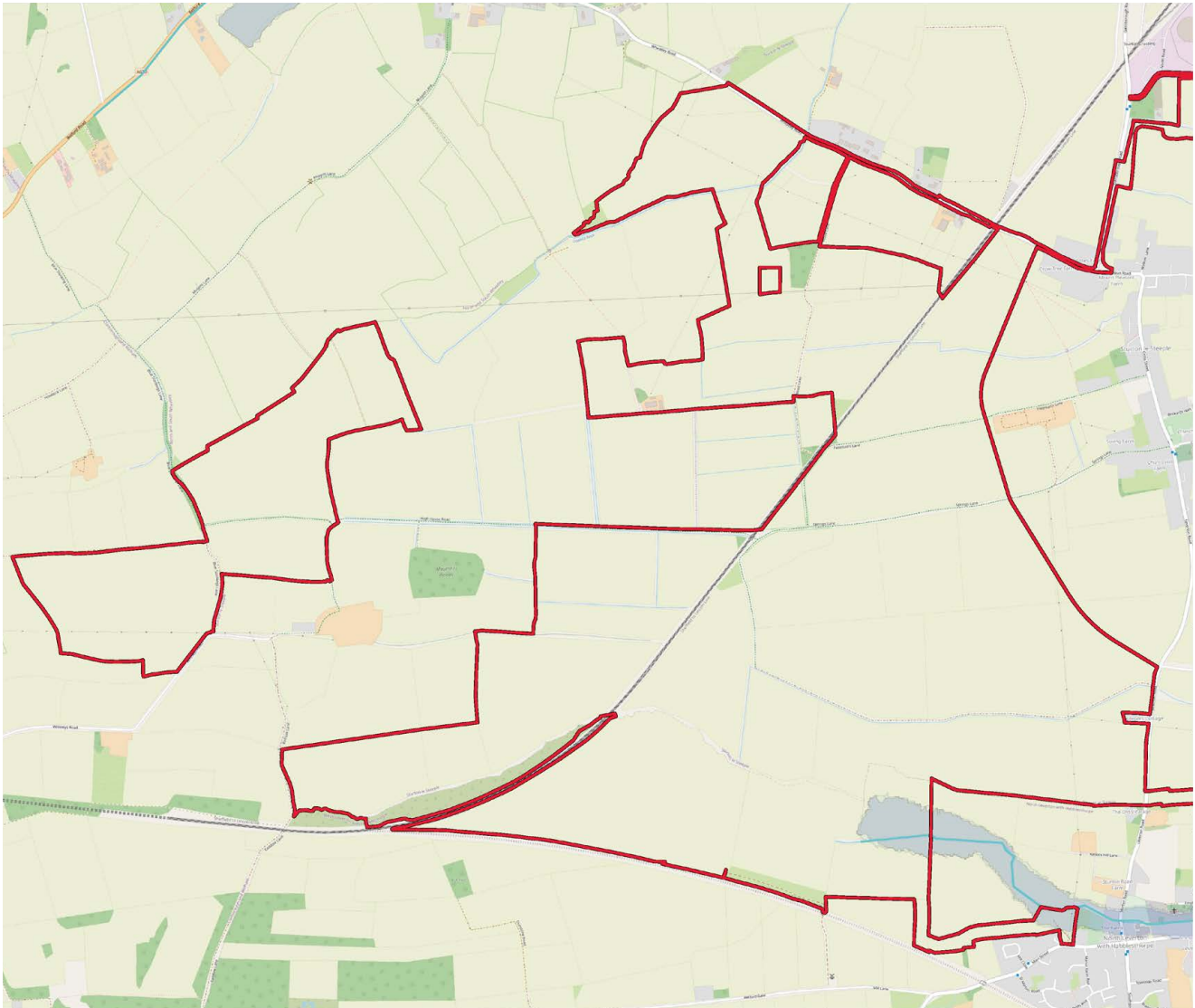


FIGURE 12: EA FLOOD ZONES (WEST)

- Site Boundary
- EA Main Rivers
- Ordinary Watercourses (Primary)
- Ordinary Watercourses (Secondary and Tertiary)
- Flood Zone 3
- Flood Zone 2

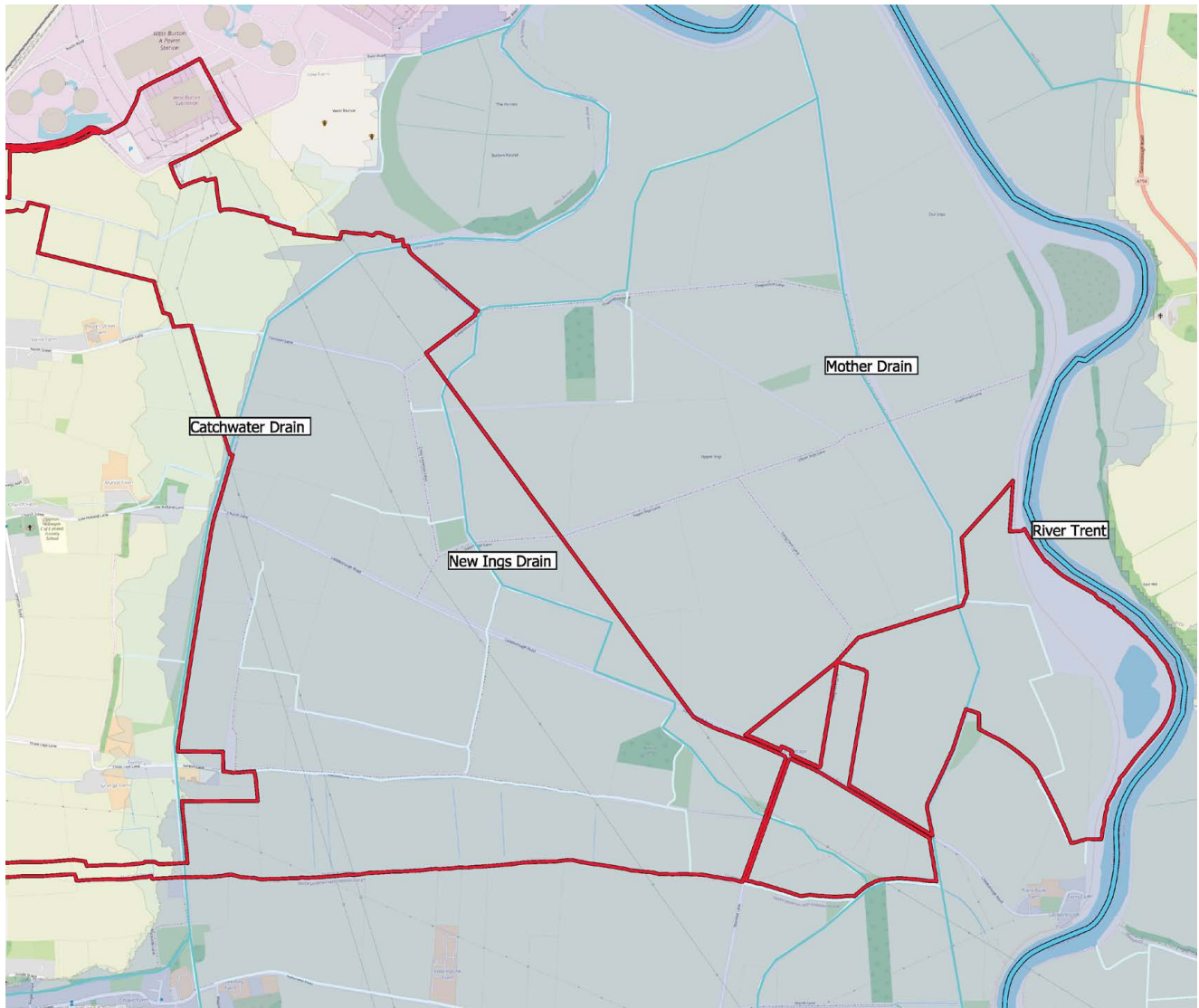


FIGURE 13: EA FLOOD ZONES (EAST)

- Site Boundary
- EA Main Rivers
- Ordinary Watercourses (Primary)
- Ordinary Watercourses (Secondary and Tertiary)
- 3.3% Surface Water Flood Risk
- 1.0% Surface Water Flood Risk
- 0.1% Surface Water Flood Risk

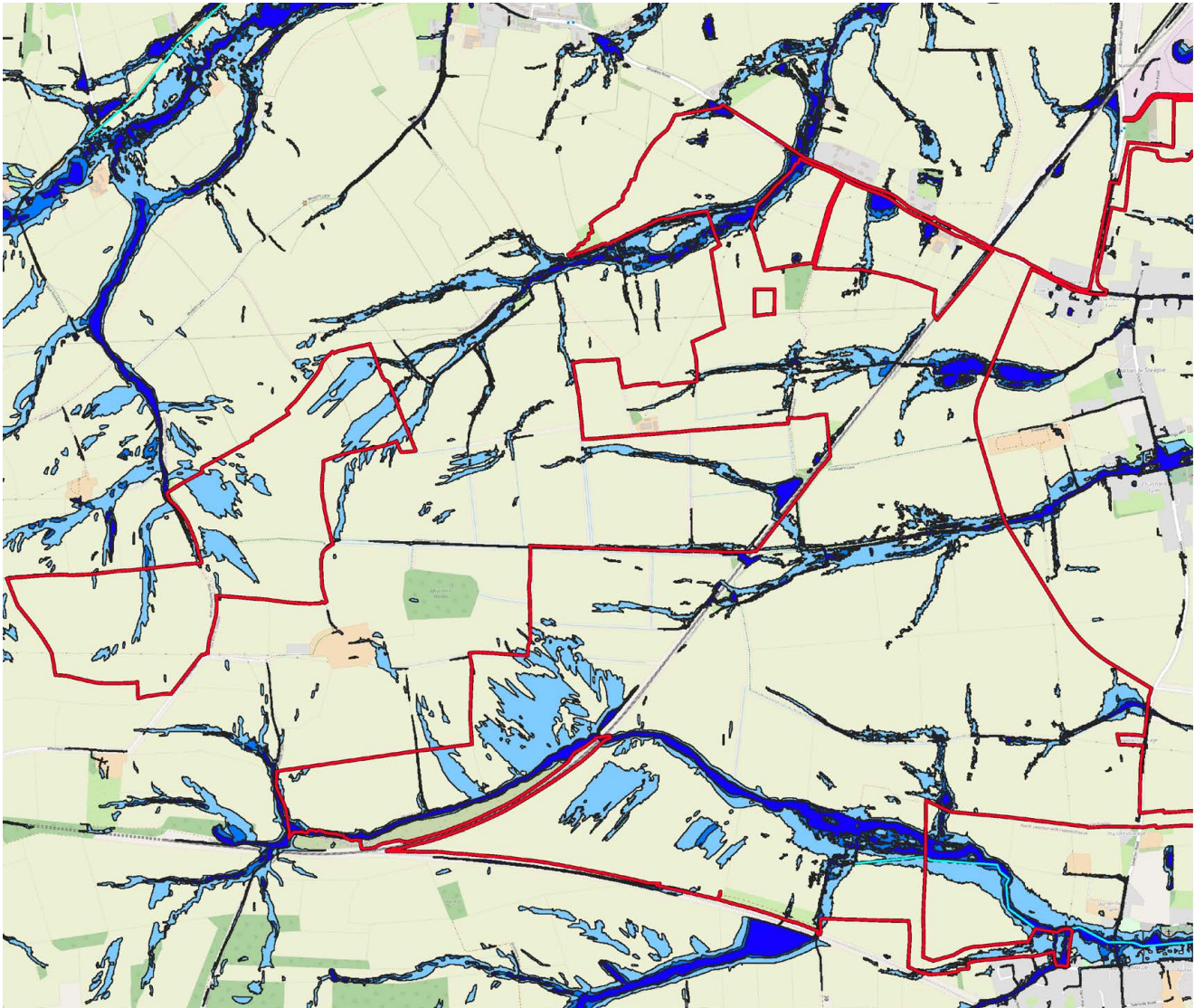


FIGURE 14: EA SURFACE WATER FLOOD EXTENTS (WEST)

- Site Boundary
- EA Main Rivers
- Ordinary Watercourses (Primary)
- Ordinary Watercourses (Secondary and Tertiary)
- 3.3% Surface Water Flood Risk
- 1.0% Surface Water Flood Risk
- 0.1% Surface Water Flood Risk

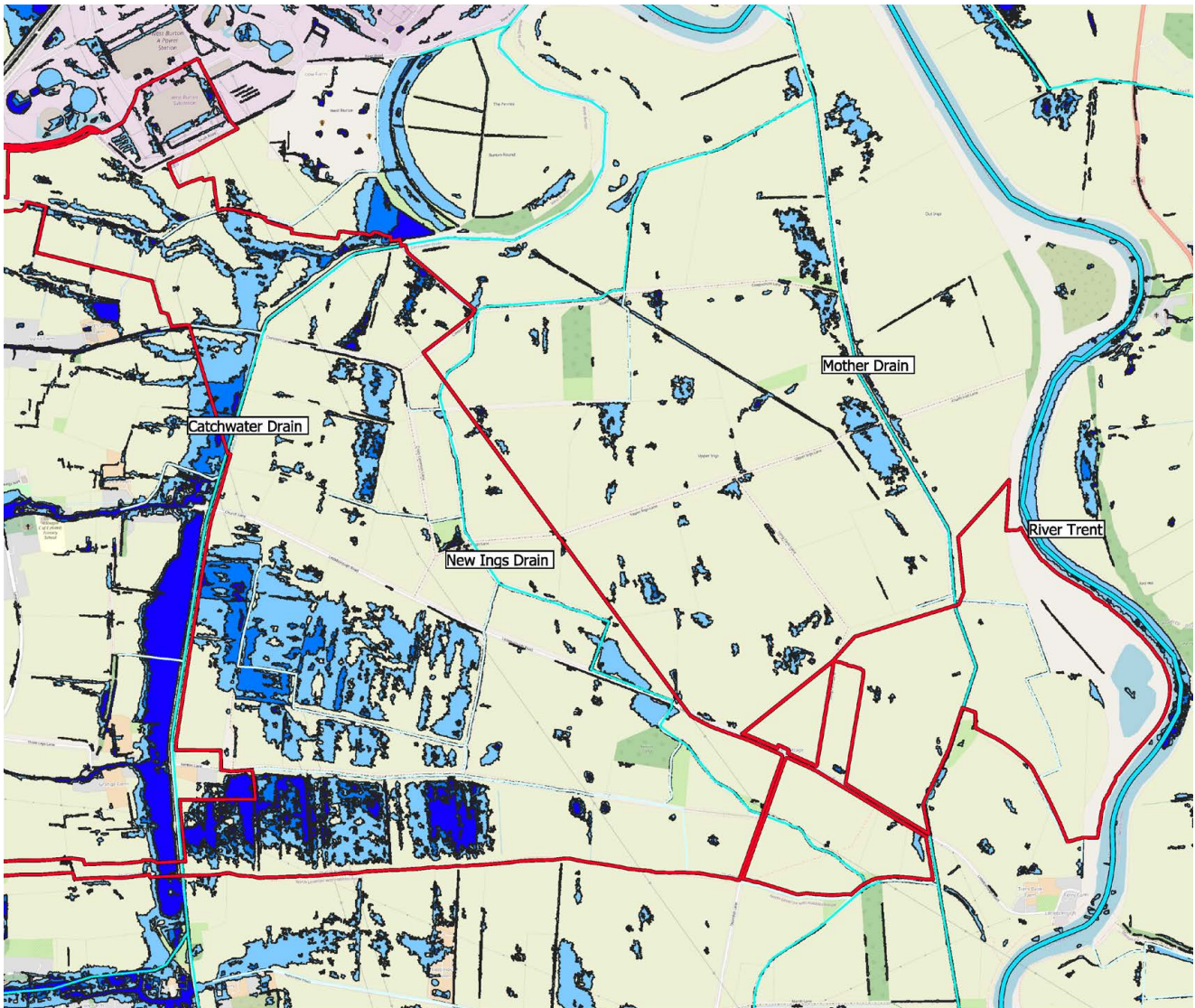


FIGURE 15: EA SURFACE WATER FLOOD EXTENTS (EAST)

## 8.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

The assessment within the PEIR finds that construction activities have the potential to result in the release of chemicals, concrete washout and silt laden runoff which could be conveyed via overland flow or local drainage features into nearby watercourses. The Proposed Development includes measures to reduce this risk, for example construction compounds will be located at least 10m from existing watercourses. However, there remains the potential for release of hazardous materials which could impact on local watercourses.

Construction works could also result in physical changes to the existing watercourse channels. However, the Proposed Development includes measures to avoid this, for example by use of 'Horizontal Directional Drilling', which, for example, involves drilling beneath watercourses for the installation of cable infrastructure, to avoid physical works upon the alignment of watercourses. The likely significant effects at this stage upon watercourses is minor adverse, which is not considered to be significant. The effect would be temporary, direct and of local importance.

Limited water use is required during the construction phase of the Proposed Development, for use by construction workers, and for construction activities such as suppressing airborne dust with water (to avoid effects relating to airborne dust). With the current uncertainty regarding the source of water for use during the construction phase, a minor adverse effect is predicted upon surface water reserves and public water supply. This is not considered to be significant. The effect would be temporary, direct and of local importance.

Construction Activities have the potential to result in the release of chemicals to the ground which could percolate into underlying aquifers (i.e., an underground layer of water). Construction activities could also mobilise any historical ground contamination beneath the Site. However, due to the small magnitude of the effect, and the low sensitivity of groundwater, a negligible effect is currently predicted. This is not considered to be significant. The effect would be temporary, direct and of local importance.

The construction phase comprises the potential for increased surface water runoff arising from temporary hardstanding areas, or areas of compacted ground which could result in increased water in local watercourses and resulting in an increase in flood risk from those watercourses. There is also the potential for a reduction in channel capacity due to creation of new crossings or culverts. However, as part of the Proposed Development, existing watercourse crossings will be utilised where possible. Taking account of the measures forming part of the Proposed Development, as set out above, a minor adverse effect is currently predicted. This is not considered to be significant. The effect would be temporary, direct and of local importance.

With regard to the operational phase of the Proposed Development, there is the potential for water quality impacts to local watercourses due to accidental releases of chemicals or contaminated runoff, for example associated with chemical use within the BESS and substation areas and the release of contaminated runoff in the event of a fire (considered a possibility particularly for the BESS area). However, as part of the Proposed Development, a leak detection system and alarm will be fitted to the cooling system. Further,



the BESS aspect of the Proposed Development comprises the provision of automatic retention of any contaminated firefighting runoff in the event of a fire. As such, negligible effects are currently predicted, which is not considered to be significant. The effect would be temporary (i.e., for the lifetime of the Proposed Development), direct and of local importance.

The area of the Site closest to the River Trent is proposed for biodiversity mitigation only. The nearest proposed solid infrastructure is approximately 950m from the watercourse. Due to the separating distance, negligible effects are currently predicted. This is not considered to be significant. The effect would be temporary, direct and of local importance.

The creation of access / haulage roads will require a number of new watercourse crossings on the Site. Further, buried cables are proposed beneath and in close proximity to a number of watercourses on the Site. As part of the Proposed Development, a minimum 9m free easement has been allowed for either side of watercourses managed by the Trent Valley Internal Drainage Board, and a 5m easement either side of watercourses on the Site managed by Nottinghamshire County Council will be maintained. Clear span bridges will be used to ensure that existing flows in watercourses are maintained, if they need to be crossed. Further, undergrounded cable crossings will take account of potential deepening of watercourse channels over the lifetime of the Proposed Development. At this stage, negligible effects are predicted which are not considered to be significant. The effect would be temporary, direct and of local importance.

It is understood that the Proposed Development will require minimal water resource during the operational phase.. Due to the current uncertainties with the viability of a new connection to the Anglian Water supply or a new licensed abstraction from the River Trent this aspect will require following up in the subsequent ES (or in this case, the subsequent Non-Technical Summary). At this stage, minor adverse effects are predicted, which are not considered to be significant. The effect would be temporary, direct and of local importance.

During the operational effects, due to the nature of the Proposed Development, negligible effects are anticipated upon groundwater and flood risk. No significant effects are anticipated.

During the decommissioning phase of the Proposed Development, works will be similar in nature to that during the construction phase. As such, effects are expected to mirror the construction phase i.e., temporary and no greater than negligible or minor adverse effects, none of which would be significant.

### 8.3 MITIGATION AND ENHANCEMENT

Potential effects arising from the construction of the Proposed Development are likely to be localised and temporary. A number of measures have been included as part of the Proposed Development, as detailed above, to minimise the potential for significant adverse effects. The following mitigation measures are committed to as part of the construction phase of the Proposed Development:

- A CEMP will be prepared for the construction phase to ensure best practice is followed to minimise the risk of release of pollution or sediment;
- Trenchless Horizontal Directional Drilling Methods will be supported by a drilling fluid breakout plan forming part of the CEMP;
- A Flood Management Plan will be prepared for the construction and decommissioning phases to ensure the works are scheduled to avoid periods of increased flood risk on the Site;
- A temporary drainage strategy will be implemented during construction works to control runoff rates and sediment mobilisation.

With regard to the operational phase, an outline Operational Environmental Management Plan (OEMP) / Soil Management Plan / Battery Safety Management Plan will be prepared, detailing how potentially harmful materials will be controlled and how emergencies will be managed.

An outline Decommissioning Environmental Management Plan (DEMP) will be prepared prior to the decommissioning of the Proposed Development on the Site to ensure that best practice measures are followed to avoid the potential for significant effects. Other mitigation measures for the decommissioning phase will to a large extent replicable those proposed for the construction phase.

## 8.4 CONCLUSION

During the construction phase, the implementation of a CEMP, temporary drainage strategy and drilling fluid breakout plan will ensure that effects are reduced to a negligible level. The implementation of the temporary construction phase surface water drainage strategy and Flood Management Plan for the duration of the works will reduce overall flood risk effects from minor adverse to negligible.

Mitigation proposals are still being developed and will be fully documented in the ES. Should any additional mitigation requirements be identified through the ongoing consultation and assessment, this will be detailed in the ES.

## 9. CULTURAL HERITAGE

The PEIR Chapter has considered potential effects upon the significance of cultural heritage receptors. Buried archaeological remains, earthworks, buildings / structures, and all other aspects of the historic environment have all been considered.

### 9.1 BASELINE CONDITIONS

No designated heritage assets lie within the Site. The following designated heritage assets are located within 3km of the Site:

- Six Scheduled Monuments;
- Nine Grade I Listed Buildings;
- Eight Grade II\* Listed Building;
- 123 Grade II Listed Buildings; and
- Two Conservation Areas.

There is no confirmed evidence of prehistoric activity within the Site and only a small amount is recorded within the study area. A number of records from the Nottinghamshire Historic Environment Record (NHER) comprise details of scatters of flint artefacts to the north-east of the Site. A geophysical survey has been carried out within the Site which has identified several areas of potential archaeology.

No medieval archaeology is recorded within the Site, and only a very small amount if identified within 1km of the Site; however, the geophysical survey data suggests that some remnant ridge and furrow is present across the Site.

No post-medieval heritage is recorded within the Site, and nearly all of the recorded heritage from this period in the wider study area comprises extant buildings focussed within the nearby settlements and/or associated with farmsteads.

A proposed trench plan for a programme of targeted, pre-determination trial trenching is currently being prepared in consultation with the archaeological advisors to Nottinghamshire, and Lincolnshire County Councils.

## 9.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

The construction phase of the Proposed Development would not result in any direct, physical impacts to any designated assets. As set out above, discussions are ongoing with the archaeological advisors for Nottinghamshire, and Lincolnshire with regards to a targeted programme of trial trench evaluation, to inform an appropriate mitigation strategy with regard to discrete areas of archaeological potential. The Proposed Development has also been offset from the most significant areas of archaeological potential in the east of the Site, as identified by the geophysical survey and desk-based research. There is potential for the excavation of the underground cable route corridor within the Site to cause physical impacts to below-ground archaeological deposits; however, none of the areas identified for cable infrastructure in **Figures 3** and **4** correspond with any of the key areas of archaeological potential identified to date. Should these areas be identified as having potential for significant archaeological remains, it is considered that an Archaeological Watching Brief could be undertaken during the excavation works for the cable trenches, which would allow for the recording of any archaeological deposits which may be disturbed via the works. The narrow width of the cable routes would not allow for any archaeological deposit, which could be considered significant, to be removed in its entirety. No significant effects are therefore anticipated.

Based on the routing of the construction traffic (see **Figure 16**), traffic will avoid the cores of nearby settlements and therefore there would be no impact (e.g., dust deposition) on any heritage assets.

With regard to the operational phase, only indirect effects would occur as no construction works would take place. However, the assessment within Chapter 9 of the PEIR sets out that no significant effects are anticipated on any heritage assets. The largest (moderate adverse – not significant) effect related to how the Proposed Development would be visible from the Grade II\* listed Church of St Peter and St Paul within Sturton le Steeple. The Proposed Development is anticipated to result in some visible built form in the wider surrounds of the asset, and will impact some longer distance views towards the church tower, with the Proposed Development appearing in the foreground of longer-range views of the tower. However, key elements of the asset's significance will remain unchanged. It is considered that there will be no areas from which any views of the tower would be blocked entirely by the Proposed Development. It is anticipated that whilst the Proposed Development may be visible as an element within views of the tower, the amount of the tower visible in those views will remain largely unchanged.

The decommissioning of the Proposed Development would not result in any physical effects to heritage assets. Following appropriate mitigation, based on the results of the trial trench evaluation, it is anticipated that areas of significant archaeological potential will not require any intrusive works to remove the infrastructure of the Proposed Development, given the above-ground nature of all of the elements within, or the potential avoidance of areas of significance. Therefore, no significant effects either direct or indirect are anticipated during this phase.

Key:

- Approximate Proposed Development Boundary
- Construction Traffic Route
- Western Land Parcel
- Eastern Land Parcel
- Bio Diversity Mitigation Land Use

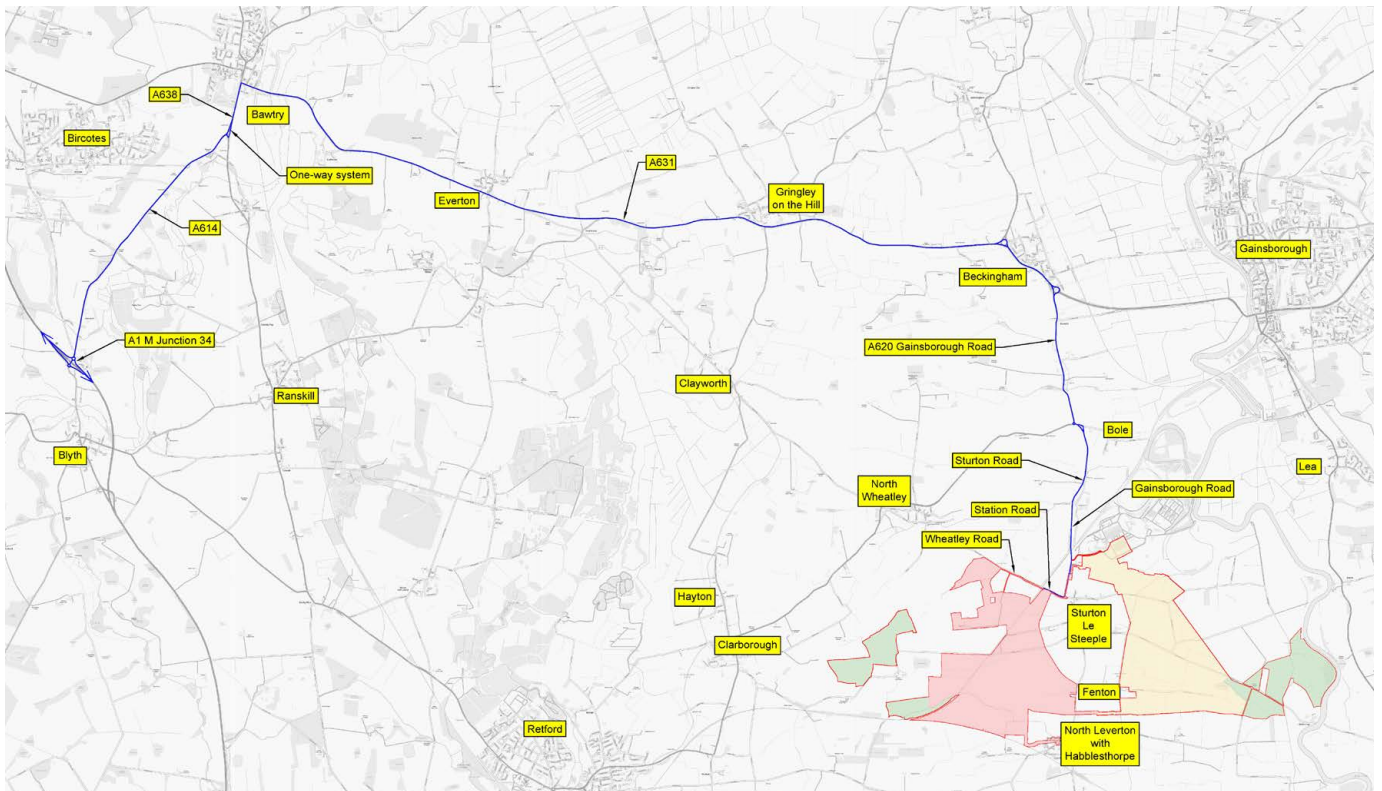


FIGURE 16: SITE LOCATION AND VEHICLE ROUTING PLAN

### 9.3 MITIGATION AND ENHANCEMENT

With regards to impacts to below-ground archaeology, development has been offset from identified areas of significant archaeology within the east of the Site. A programme of targeted trial trenching will be undertaken prior to determination of the application to identify whether any other areas of archaeological significance require further mitigation.

Should significant archaeological remains be encountered during the trial trench evaluation, such remains could either be avoided by the Proposed Development, or 'no dig' methods of construction be utilised. Should such methods of mitigation be employed, the magnitude of impact to the identified areas of archaeological potential arising from the Proposed Development would be no change. The anticipated significance of effect on the sensitive archaeology receptors would be neutral (not significant).

With regard to the operational phase, a scheme of interpretation, facilitated via the erection of information boards, will be implemented on the Site. This will provide information on the heritage of the area along with other aspects of the surrounding natural and built environment. This will help to provide further information on the heritage assets within the area, including information on the anomalies identified during the geophysical survey. The information boards will be implemented to help better reveal the historic environment of the area and to help disseminate information gained during the preparation of the DCO to the public.

No mitigation measures are considered to be likely for the decommissioning phase.

### 9.4 CONCLUSION

This PEIR Chapter has identified no significant residual effects in respect of cultural heritage assets (above and below ground) that would arise from the Proposed Development.

## 10. SOCIOECONOMICS

The Socioeconomics chapter of the PEIR has assessed the baseline socioeconomic conditions and then gone on to assess the likely socioeconomic effects of the Proposed Development.

### 10.1 BASELINE CONDITIONS

Data from the Office for National Statistics (ONS) mid-year population estimates show that as of 2023 the population of Bassetlaw is around 122,286. This is an increase of 7.7% (8,709) since 2013. This population growth is above the growth seen in Nottinghamshire County (6.2%) and England (7.0%), but below the growth seen in the East Midlands (8.4%) over the same timeframe.

Data on population change by age show that between 2013 and 2023 the fastest growing population group in both Bassetlaw and Nottinghamshire were those aged 65+, with that group increasing by 19.8% (4,499) and 17.7% (27,303) respectively. This compares to increases of 18.2% and 16.1% seen in the East Midlands and England in the same timeframe. Between 2013 and 2023, the number of people aged 0–15 in Bassetlaw and Nottinghamshire increased at a slower rate of 7.8% and 5.4% respectively and the number of people aged 16–64 increase by just 3.7% and 2.9% respectively.

Based on the ONS 2018–based population projections, between 2018 and 2038, the population of Bassetlaw is projected to increase by 11.4% (13,336) and the population of Nottinghamshire County is projected to increase by 12.3% (101,423).

This compares to projected increases of 12% in the East Midlands and 8.6% in England. Between 2018 and 2038, the fastest growing age group in both Bassetlaw and Nottinghamshire are those aged 65+ with the cohort projected to increase by 43.9% (11,210) in Bassetlaw and 40.5% (68,970) in Nottinghamshire. In the same timeframe the number of people aged 0–15 in Bassetlaw and Nottinghamshire are projected to increase by 4.3% and 2.8% respectively and the number of people aged 16–64 are projected to increase by 1.8% and 5.6% respectively.

Data from the ONS Business Register and Employment Survey show that as of 2022, there were 52,000 jobs – including self-employment – in Bassetlaw, and 334,000 jobs – including self-employment – in Nottinghamshire. Between 2015 and 2022, employment in Bassetlaw increased by 2%, which equates to an increase of 1,000 additional jobs. This was below the employment growth seen in Nottinghamshire (10.2% – 31,000 additional jobs), the East Midlands (7.1% – 149,000 additional jobs) and Great Britain (7% – 2.1 million additional jobs). As of 2022, the largest sector in terms of employment in Bassetlaw is public administration, education and health which accounted for 26% of total employment and supported 13,250 jobs. This was also the largest sector in Nottinghamshire supporting 88,000 jobs and accounting for 26.5% of total employment, the East Midlands (25.5%) and Great Britain (26%).



With regard to unemployment, in July 2021 those claiming Jobseeker's Allowance plus those who claim Universal Credit in Bassetlaw was 4.1%, by July 2024 it had fallen to 3.7%. In July 2024, the claimant count in Nottinghamshire was 4.1% and by July 2024 it had fallen to 3.4%. The claimant count in Bassetlaw and Nottinghamshire are currently below the rates seen in the East Midlands (3.9%) and Great Britain (4.4%).

Data on deprivation is available at a local authority level, with the ONS providing summaries for each local authority district within England. The latest data was published in 2019 and shows that of the 317 local authorities in England, Bassetlaw had a deprivation ranking of 108. The lower the number, the more deprived an area is (1 = most deprived, 317 = least deprived). The most deprived domain for Bassetlaw is the 'Health and Disability' domain, with a rank of 68.

## 10.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

With respect to the construction phase, economic benefits will arise through the provision of temporary jobs. The Proposed Development is likely to create opportunities for local businesses through the supply chain, during the construction process. It is estimated that there will be an average of 187 direct on-site jobs<sup>1</sup> supported during the construction period, which is estimated to be up to 24 months. For every job supported on the Site, 1.33 indirect / induced jobs are supported in the wider economy<sup>2</sup>. Applying this multiplier to the 187 on-site jobs, the Proposed Development could support 249 temporary jobs in the wider economy during the 24-month construction phase.

In total, the Proposed Development could support 436 temporary jobs, both direct jobs on-site and indirect/induced roles in the wider economy, during the 24-month construction phase. The overall Gross Value Added (GVA) associated with the construction phase of the Proposed Development is estimated at £33.7million per annum over the 24-month construction programme. The significance of the effect is minor – major beneficial, which is significant.

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1. Information provided by the Applicant.

2. Solar powered growth in the UK – the macroeconomic benefits for the UK of investment in solar PV: Cebr (report for the Solar Trade Association), September 2014.

With respect to the operational phase of the Proposed Development, it is estimated that once operational, there will not be any permanent jobs on the Site. Rather than permanent staff working within the operational Proposed Development, there will be frequent visits made by off-site workers whose remit includes this Site to ensure the Proposed Development is maintained appropriately and remains operational. The significance of the operational phase is therefore considered to be negligible.

Given that the Proposed Development is not expected to support any permanent jobs, there will be little to no GVA supported by the operational phase of the Proposed Development. The significance of the operational effect is therefore negligible.

Business rates are an important economic contributor to an area. It is estimated that the solar element of the Proposed Development could generate around £2million per annum in business rates. Over the intended 40-year lifespan of the Proposed Development, business rates generated could total around £44million (present value). For the area of Bassetlaw, this is considered to be a moderate beneficial effect, which is significant. Given that Bassetlaw falls within Nottinghamshire, and it is possible that central government could re-invest funds within Nottinghamshire, there is also the potential for beneficial effects relating to business rates at the Nottinghamshire scale. The operational effect is therefore considered to be minor beneficial, which is not considered to be significant.

With regard to the decommissioning phase of the Proposed Development, associated activities are typically less labour-intensive than the construction phase. As such, the workforce during decommissioning could reasonably be expected to equate to around 50% of the construction workforce. Therefore, it is assumed that the Proposed Development could support around 94 temporary construction jobs during its decommissioning phase which is expected to last for around 24 months. Applying the same multiplier as previously used to the 94 on-site jobs the Proposed Development could support 124 temporary jobs in the wider economy during the 24-month decommissioning phase. In total, the Proposed Development could support 218 temporary jobs, both direct jobs on-site and indirect/induced roles in the wider economy, during the 24-month decommissioning period. The level of effect pertaining to the decommissioning phase with respect to employment within Bassetlaw is moderate beneficial, which is significant. For the wider area of Nottinghamshire (excluding Bassetlaw), the level of effect is considered to be minor beneficial which is not considered to be significant.

Applying the same method to calculate GVA, it is estimated that over the 24-month decommissioning phase the GVA impact associated with the decommissioning phase is estimated at £16.8million per annum. For the area of Bassetlaw, this equates to a major beneficial effect, which is significant. For Nottinghamshire (excluding Bassetlaw), there is not expected to be a GVA increase seen, leading to a negligible effect.

### 10.3 MITIGATION AND ENHANCEMENT

There are no significant adverse effects related to socioeconomics in any of the phases of the Proposed Development. As such, no mitigation is considered to be required at this stage.

Regarding enhancement measures, during the construction and decommissioning phases there is expected to be significant beneficial effects with respect to employment. The Applicant is committed to the enhancement of these effects as far as is practicably possible. As such, it is proposed that opportunities for employment and skills are supported through the preparation of an Outline Supply Chain, Employment and Skills Plan (OSCESP). The OSCESP will be submitted with the application and secured by DCO requirement. Correspondence has already begun with Bassetlaw District Council and Nottinghamshire County Council to ensure that the content and detail presented within the OSCESP are appropriate to all relevant stakeholders. Further detail will follow in the subsequent ES. The use of an OSCESP is intended to enhance the beneficial employment effects during the construction and decommissioning phases to result in a major beneficial residual effect. It is acknowledged that the major beneficial residual effect relates to development phases that are temporal in nature, however, the legacy effect of upskilling the local workforce where possible will result in a long-term significant benefit at the Bassetlaw and Nottinghamshire scale.

### 10.4 CONCLUSION

The Proposed Development would lead to no adverse significant residual effects. The construction phase of the Proposed Development will result in minor beneficial (not significant) – major beneficial (significant) residual effects with respect to employment. Economic contributions range from negligible (not significant) to major beneficial (significant) residual effects. The operational phase of the Proposed Development with respect to employment, and economic contributions will result in negligible (not significant) residual effects. Moderate beneficial (significant) residual effects for business rates are anticipated; albeit only within the Bassetlaw area. Minor beneficial residual effects for business rates are anticipated within the wider Nottinghamshire (excluding Bassetlaw) area. The decommissioning phase of the Proposed Development would see residual effects ranging from minor beneficial (not significant) to major beneficial (significant) with respect to employment. Major beneficial residual effects are anticipated within the Bassetlaw area with respect to economic contributions. Negligible effects pertaining to economic contributions are anticipated within the wider Nottinghamshire (excluding Bassetlaw) area. Continued efforts to address wider benefits for the community will be undertaken separately and outside of the DCO process.

# 11. NOISE AND VIBRATION

The Noise and Vibration chapter of the PEIR has considered the potential effects of noise and vibration associated with the Proposed Development.

## 11.1 BASELINE CONDITIONS

The baseline conditions were determined using data available in the public domain from other schemes in the area.

The existing environment at the majority of properties neighbouring the Site is expected to be typical of a relatively rural area and to consist of sound generated by vehicles moving and the local and more distant wider road network, birds and wildlife, farm machinery, localised human activities and aircraft overhead with some industrial sound from existing industry located to the north of the Site.

Existing sources of vibration are expected to primarily emanate from traffic movements in the area, from HGVs in particular. Some existing vibration may also result from the very occasional tremor and as a result of demolition works at the West Burton Power Plant. A selection of property locations, which surround and are located closest to the Proposed Development are shown in **Figure 17**. The locations of PRoWs are also shown on **Figure 17**.

## 11.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

The main activities that have the potential to generate sound and vibration during construction and decommissioning are the formation or removal of the access tracks, piling/removal of the solar panel frame supports, construction / break-up of hard standing, horizontal direction drilling, cable trenching and landscaping, when occurring in proximity to neighbouring residences. Further, the construction of the BESS and any ancillary equipment, the installation of a transmission connection; and the installation of ecological and landscape mitigation measures. However, most of these works will be taken at large distances from neighbouring properties.

Other activities will either occur at distances which are very unlikely to result in levels that would breach typical construction sound limits or involve relatively light construction methods/techniques that would equally result in the generation of comparably low temporary levels of sound and vibration.

Traffic movements through the construction phase have the potential to have sporadic sound and vibration impacts at adjacent residences. However, this only tends to result in a minor increase over the existing sound levels from pre-existing roads. A review of predicted traffic volumes indicates that these would not increase by ~30% during the most intensive periods of the construction phase – this increase corresponds to a very minimal difference in sound due to traffic of a maximum of one decibel, which would have a negligible (not significant effect).

- KEY:
- SITE BOUNDARY  
(INSIDE EDGE OF LINE DENOTES BOUNDARY)
  - + ACOUSTIC ASSESSMENT LOCATION
  - + BACKGROUND MONITORING LOCATION
  - PUBLIC RIGHT OF WAY (PRoW)

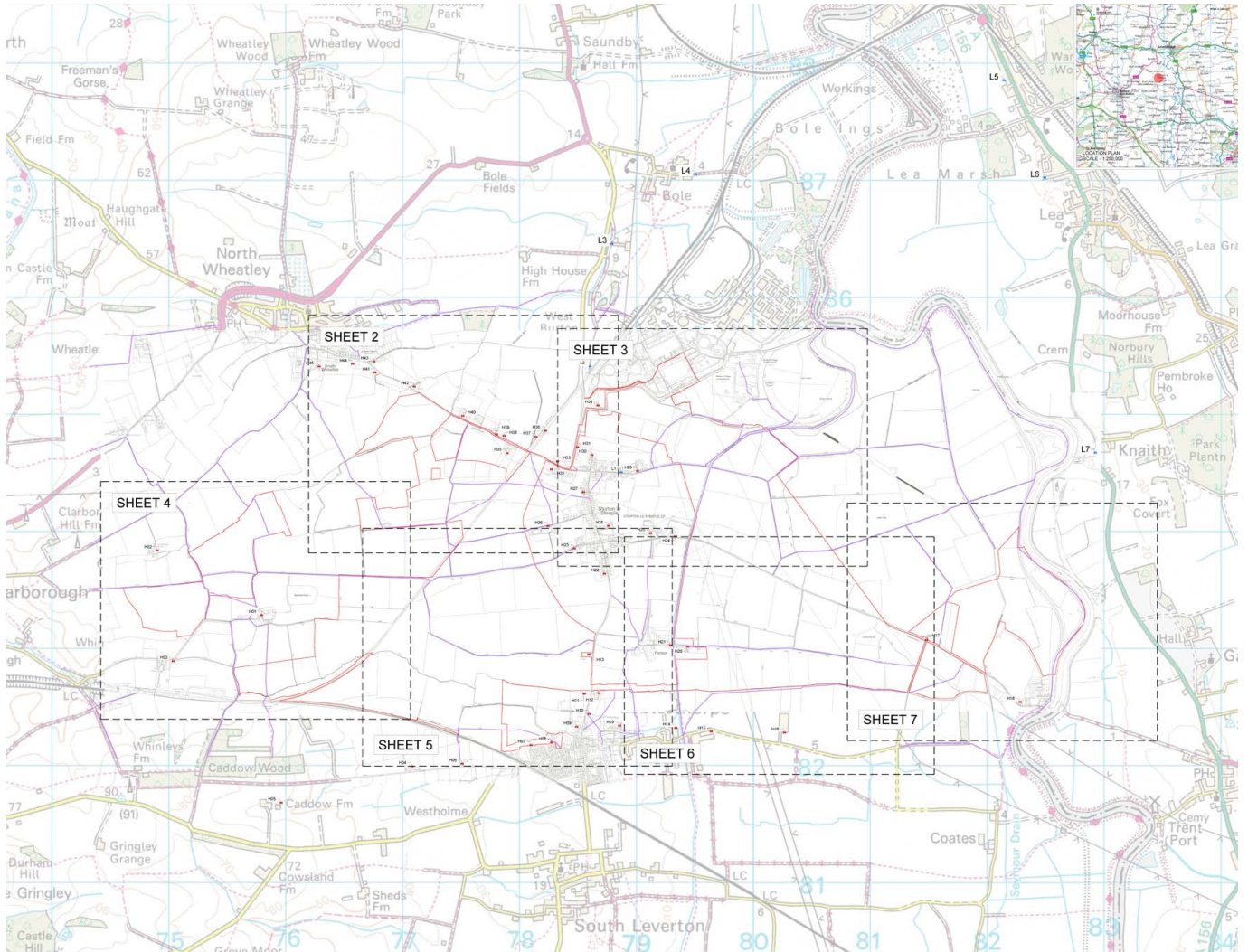


FIGURE 17: NOISE SENSITIVE RECEPTORS PLAN (TO SEE FIGURE 17 IN MORE DETAIL SEE APPENDIX)

Where relatively intense construction activities are to be undertaken near neighbouring residences, particularly during the construction of the Site access routes, horizontal directional drilling, piling and trenching, the potential for significant adverse effects exists in instances such as the reserve site access corridor next to the west of North Leverton.

It is expected that the maximum potential impacts due to the construction of the Proposed Development may result in a major/moderate effect, prior to the implementation of mitigation measures. This is considered to be significant. Occasional temporary sound and vibration generated during the construction phase may well be perceptible to users of the PROWs passing through and surrounding the Site and could result in major/moderate and therefore significant effects, without typical/standard mitigation measures in place.

Due to the nature of the Proposed Development, no significant effects are anticipated upon residential receptors during the operational phase. With regard to users of PROWs during the operational phase, perceived effects will be entirely subjective. However, an indication of the expected varying levels of operational sound generated by the Proposed Development on the PROWs crossing and near to the Site will be shown in the subsequent ES. The operational noise generated by the Proposed Development will be at a level for which it would be easy to hold a conversation, even when positioned directly adjacent to any electrical equipment installed as ancillary to the panels comprising the Proposed Development. Furthermore, there is no evidence these typical acoustic levels of onsite operational sound would result in any potential health impacts. The resultant effects can be described as minor/moderate and the overall impact is therefore considered not significant.

### 11.3 MITIGATION AND ENHANCEMENT

The following construction sound and vibration mitigation measures are available to be considered if necessary and implemented where appropriate and proportionate, facilitated via the CEMP:

- Consideration shall be given to sound and vibration emissions when selecting or modifying the plant and equipment to be used on the Site, with quieter variants given preference;
- All plant and equipment will be used in accordance with manufacturers' instructions, maintained in good working order and fitted with the appropriate silencers, mufflers or acoustic covers where applicable;
- Where sound generated from a specific activity is expected to be directional, steps will be taken to orientate the equipment such that sound is directed away from any sensitive areas;
- Stationary sound sources shall be sited as far away as reasonably possible from residential properties and consideration given as to whether it is necessary to install acoustic barriers to provide screening;
- The movement of vehicles to and from the Site shall be controlled and employees instructed to ensure compliance with the sound control measures adopted;
- Reducing the number of construction activities occurring simultaneously;

- The re-routing and/or temporary closure of relevant PROWs (to be confirmed in the subsequent ES);
- Restricting activities being performed within a certain distance of sensitive locations; and,
- Minimising the level of construction traffic associated with the Proposed Development.

### 11.4 CONCLUSION

The effects of the Proposed Development can be suitably controlled such that any residual effects would not be significant.

## 12. CLIMATE CHANGE

To reflect the requirements of the EIA Regulations, an assessment has been undertaken of the potential effects of the Proposed Development on climate change. The assessment is split into two parts: Emissions Reduction (Part A) which focuses on reducing the amount of greenhouse gasses (e.g., carbon dioxide) arising from the Proposed Development entering the atmosphere; and Climate Change Adaptation (Part B) which considered the vulnerability of the Proposed Development to Climate Change, and also the implications of climate change for the predicted effects arising from the Proposed Development, as assessed within the other chapters (these are known as 'in-combination effects').

An Emissions Reduction Assessment has not been undertaken at the PEIR stage, as quantified detail on the greenhouse gas emissions arising from the Proposed Development are yet to be confirmed (as the design of the Proposed Development is evolving). The Emissions Reduction Assessment will follow within the subsequent ES chapter.

### 12.1 BASELINE CONDITIONS

Baseline conditions have been determined with respect to average maximum and minimum summer and winter temperatures, average summer and winter sunshine hours and average summer and winter wind speeds.

With respect to the future baseline (i.e., the environmental conditions of the Site in the future in the absence of the Proposed Development), the United Kingdom Climate Projections (UKCP) shows a general trend towards warmer, wetter winters and drier, hotter summers. However, it should be noted that both temperature and rainfall patterns across the UK are not consistent and will vary depending on seasonal and regional scales and will continue to vary in the future. Temperatures across in the East Midlands region are projected to increase, the highest of which relate to summer temperatures. Winter rainfall is projected to increase, and summer rainfall is likely to decrease. With regard to wind, wind speeds are not currently available at the regional level and there remains considerable uncertainty in the projections. The global projections over the UK show a modest increase in near-surface wind speeds over the UK for the second half of the 21st century for the winter season. An increase in the frequency of winter storms over the UK is also expected.



## 12.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

With respect to the vulnerability of the Proposed Development to a changing climate, it is not considered that the project could be affected by climate change to such an extent that the construction and/or operation of the Proposed Development could potentially become unviable. Therefore, no significant adverse effects are predicted.

With respect to 'in-combination climate effects', the assessment considered the projected climate change projections in more detail in relation to landscape and visual amenity (operational phase), cultural heritage (construction phase) flooding and drainage (construction and operational phase), ecology (construction and operational phase) and noise (operational phase). No new significant effects were identified for these topic areas as a consequence of projected climate change. This will be revisited within the subsequent ES Chapter.

## 12.3 MITIGATION AND ENHANCEMENT

Whilst a number of mitigation measures will be included to ensure project resilience, effects will remain as outlined above.

No additional mitigation is required in relation to in-combination climate effects. Effects will remain as outlined above.

## 12.4 CONCLUSION

No significant residual effects have been predicted in relation to climate change adaptation, either for the Proposed Development in isolation or cumulatively. The assessment will be revisited at ES stage.

## 13. TRANSPORT AND ACCESS

The Transport and Access Chapter of the PEIR assesses the potential effects of the Proposed Development in terms of Traffic, Transport and Access. The Chapter considers the potential on vehicular traffic flows, accidents and safety, severance, driver delay, hazardous and dangerous loads and dust and dirt.

The section of the PEIR has been brought forward in advance of the preparation of supporting traffic and transport assessment work, which will include a draft Transport Statement and draft Construction Traffic Management Plan (CTMP) in due course. It is approximately five kilometers to the southwest of Gainsborough and nine kilometers to the northeast of Retford.

### 13.1 BASELINE CONDITIONS

The Site comprises two parcels of land in the vicinity of the villages and hamlets of Sturton le Steeple, North Leverton with Hablesthorpe, North Wheatley, and Fenton. It is approximately five kilometers to the southwest of Gainsborough and nine kilometers to the northeast of Retford.

The Site comprises the following (please read in conjunction with viewing **Figure 1**):

- The first land parcel (the 'western parcel') is located to the west of Sturton le Steeple. It is northwest of North Leverton with Hablesthorpe, and south east of North Wheatley and comprises largely existing agricultural land and associated buildings.
- The second land parcel (the 'eastern parcel') is located on the eastern side of the Site and to the east of Sturton le Steeple. It includes the area surrounding Fenton and comprises largely existing agricultural land and associated buildings.

Automatic Traffic Counter (ATC) data has been captured along five 'links' for which traffic associated with the construction, operational and decommissioning phases of the Proposed Development. The positions of the ATCs are set out below:

- **ATC 1:** A620 North of Gainsborough Road Roundabout;
- **ATC 2:** Station road 180m west of Gainsborough Road priority junction (approximately where the road changes from 30mph to 40mph);
- **ATC 3:** Gainsborough Road, 65m south of Rose Street (power station access and 215m north of Quarry access);
- **ATC 4:** Station Road 45m east of Gainsborough Road priority junction; and
- **ATC 5:** Leverton Road 250m south of Three Leys Lane priority junction.

At this stage in the design of the Proposed Development, it is assumed that all HGV construction and decommissioning phases of the Proposed Development will route to and from the A1(M) Junction 34, as indicated by **Figure 16**.

The 'baseline' surveys undertaken between 24th June 2024 – 3rd July 2024 are summarized via Table 1.2.

A number of PRoWs cross or adjoin the Site, as set out in Table 1.3.

Table 1.2

ATC/LINK REF.	2024 BASELINE TWO-WAY ANNUAL AVERAGE DAILY TRAFFIC (AADT)	BASELINE NUMBER (HGVS)	HGV PERCENTAGE BASED ON AADT
1	3420	391	11.4%
2	387	50	12.9%
3	1143	119	10.4%
4	1378	155	11.2%
5	1471	146	9.9%

Table 1.3

SITE PARCEL / ROUTE AFFECTED	TYPE OF PROW	PROW NAME / REF	RESPONSIBLE AUTHORITY
'Western' parcel	Footpaths	24, 27, 29, 41	Nottinghamshire County Council (NCC)
	Bridleways	23, 25, 26, 28	NCC
	Restricted Byways	30, 31	NCC
'Eastern' parcel	Footpaths	17, 1, 16, 39, 15, 18, 37, 6	NCC
	Bridleways	32, 5	NCC
	Restricted Byways	32, 33	NCC
	Byways	7, 10	NCC
Sturton le Steeple	Footpaths	18, 19, 41	NCC

Personal Injury Collision (PIC) data will be obtained on behalf of Nottinghamshire County Council, for the most recent three-year period and will be presented the subsequent ES.

The section of the proposed construction routing including the A631 to the west of Gainsborough Road, the A638 and the A614 junction to the A1(M) will not comprise part of the PIC assessment area as a high-level review of the relevant online database (Crashmap) indicates that the PICs recorded on this section are consistent with what is expected with the level of traffic using the road and the data indicates that there are no obvious clusters or blackspots which would require further assessment.

## 13.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

A limitation to the assessment has been identified. There are two Primary Compounds respectively accessing the Eastern Parcel and Western Parcel, to which all traffic will access (see **Figure 3**). The 'primary' traffic movements associated with these primary construction compounds (i.e. those trips to the primary compounds only) are the only movements included in the assessment in this PEIR chapter (which have accordingly been assessed within other pertinent chapters of this PEIR e.g., Air Quality).

Once those 'primary' trips have arrived at the Primary Compounds, vehicles will need to access the Secondary Construction Compounds. One Secondary Construction Compound is located within the Eastern Parcel and two further Secondary Construction Compounds are located within the Western Parcel. Trips from the Primary Compounds will also access individual fields using smaller vehicles for partitionable loads which will then be split and decanted onto other smaller vehicles, and larger vehicles for non-partitionable loads. The traffic associated with these 'Secondary' traffic movements will be included in a further assessment in the ES chapter once the layout of the Proposed Development has been developed further.

Magnitudes of impact have been defined for the construction phase in accordance with professional Transport and Access assessment guidance, which sets out that a significant effect could occur where traffic flows increase by 30%, or more than 10% where the study area is of high sensitivity significance. At this stage in the design of the Proposed Development, it is anticipated that there will be approximately 116 two-way movements, relating only to the construction workforce arriving / leaving the Site. The construction workforce trips will involve the use of mini-bus, Light Goods Vehicles (LGVs) (e.g., vans) and the private car.

Construction trip generation will include a mixture of HGVs, LGVs, and Abnormal Indivisible Loads (AILs). The routing and access to the construction compounds for AILs has been considered within the design of the Proposed Development to limit the potential impact on the highway network. AILs will access the Site through the Gainsborough Road access only due to the highway and access restrictions and have an AIL Management Plan in place, to minimise the potential for adverse effects upon the highway network. Preliminary primary traffic development flows have been added to the baseline flows indicated above. The preliminary primary flows with their associated percentage changes are set out in the below table. Where 'AADT' is referred to in the below table, this simply refers to an average of the annual daily traffic flow (Annual Average Daily Traffic (AADT)).

Table 1.4

ATC/ LINK REF.	2024 Baseline plus 'Primary' Development Trips		Percentage Change	
	Two- Way AADT	Number of HGV	Two- Way AADT	Number of HGV
1	3602	458	5%	1.3%
2	496	89	28%	5.0%
3	1326	186	16%	3.6%
4	1378	155	0%	0.0%
5	1471	146	0%	0.0%

With reference to Transport and Access assessment guidance used to undertake the preliminary assessment, no significant effects are anticipated as the percentage change on top of the baseline is less than 30%, and the areas assessed are not considered to be 'high sensitivity' (such as a school, playground, or retirement home). The highest percentage change pertains to ATC Link Reference 2 (at Station Road). No significant effects are anticipated in this regard.

With regard to the operational phase, trip generation has been derived based from the Applicant's experience with the construction of similar (albeit smaller) renewable energy schemes. The number of vehicle trips associated with the Proposed Development through the operational phase is considered to be low (i.e., a daily average of approximately 14 two-way movements). Resultantly, no significant effects are anticipated due to the relatively small number of trips.

### 13.3 MITIGATION AND ENHANCEMENT

At this stage in the design, the assessment of the Proposed Development pertaining to Transport and Access has not been fully determined, recognising the limitation that the assessment has only considered the 'primary' trips associated with the construction phase. The detail on the secondary trips that distribute the materials across the Site after the 'primary' trips have arrived at the primary construction compounds will follow in the subsequent ES chapter.

The below mitigation measures are currently being considered, to reduce effects as far as possible on the highway network, each of which will be confirmed in the subsequent ES chapter.

A Construction Traffic Management Plan (CTMP) will be implemented during the construction phase of the Proposed Development. The aim of the CTMP will be to minimise the impact of the construction phase on residents, businesses, and the highway network. Construction traffic movements will be kept to agreed working hours where practicable and designed to minimise disruption to the highway network and residents (including during the night-time). The CTMP will comprise a package of measures such as:

- Provision of contractor's parking areas within the Primary and Secondary compounds within the site, providing an area on site for HGVs to park and manoeuvre without impeding the local highway network.
- The arrival and departure of HGVs will be strictly managed by the Site manager. The drivers will adhere to a delivery schedule ensuring phased delivery of goods and HGV drivers will be required to call ahead to ensure vehicles accessing and egressing the site can be managed.

- The introduction of wheel washing facilities should ground conditions dictate, before allowing vehicles to return to the local highway network. In addition, a road sweeping vehicle could be made available to remove any site residue on the local roads as and when necessary.

A PRoW management plan will be provided either within the CTMP or as a separate document. This will include details of any temporary closures and/or diversions and/or temporary management. The use of any Byways Open to All Traffic and Restricted Byways required for access will be managed appropriately.

A Travel Plan will be provided promoting sustainable travel to and from the Proposed Development for workforce trips during construction, operational and decommissioning phases. This will either be provided as a section within the CTMP. This will include for example, measures to minimise single occupancy car use by promoting car sharing and minibuses for staff, as appropriate.

A Construction Traffic Method Statement will be provided relating to the Point of Connection Cable Routing. This will be provided as a section within the CTMP. This will provide information and measures to ensure safe and suitable access and other highways matters are mitigated on the local highway network on the cable route.

An Abnormal Indivisible Load (AIL) Management Plan will be provided to manage AIL vehicles accessing the site through the construction phase on the local highway network.

Any enhancement measures will be set out in the subsequent ES chapter.

## 13.4 CONCLUSION

The likely effects and the significance of the potential impacts and changes to the baseline have not been fully determined at this stage; the secondary trips have not been accounted for. However, at this stage, no significant adverse residual effects are anticipated for the primary trips, after the application of the above mitigation measures. The subsequent ES chapter will set out the results of the full assessment and advise whether there will be any adverse significant residual effects, following the implementation of proposed mitigation measures.

## 14. AIR QUALITY

The Air Quality PEIR chapter focuses on the potential effects to air quality which would be generated by the Proposed Development at existing sensitive receptors during the construction, operational and decommissioning phases.

### 14.1 BASELINE CONDITIONS

The Site is not located within or near to an Air Quality Management Area. Monitored locations in the vicinity of the Site show that pollutant concentrations have been below the Air Quality Objectives in 2022, which is the most recent year of available air quality monitoring.

### 14.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

Predicted construction flows have been screened against Environment Protection UK (EPUK) and Institute of Air Quality Management (IAQM) guidance and has fallen below the screening criteria for which the potential for significant effects are likely. As such, no significant effects are anticipated during the construction phase. Dust has the potential to create significant adverse effects, without the implementation of mitigation measures.

The effects of the decommissioning phase are likely to be similar in nature to the construction phase. Therefore, no significant effects are anticipated during the decommissioning phase.

Predicted operational traffic flows have been screened against the criteria within the EPUK and IAQM planning guidance criteria for human receptors and IAQM and DMRB criteria for ecological receptors and considered to be not significant.

### 14.3 MITIGATION AND ENHANCEMENT

Construction phase emissions to air will be controlled by a CEMP and Construction Traffic Management Plan (CTMP).

Furthermore, routing arrangements during the construction period (and decommissioning) to ensure that they minimise travel through the village of Sturton le Steeple, which will be secured by DCO requirement as part of the CEMP and CTMP, minimising emissions at sensitive receptors within the village of Sturton le Steeple.

### 14.4 CONCLUSION

It is concluded that the proposed package of mitigation will ensure that the Proposed Development is acceptable and that there will be no adverse significant residual effects to air quality.



## 15. LAND USE AND AGRICULTURE

The Land Use and Agriculture PEIR Chapter focuses on the agricultural land quality of the Site and the potential effects of the Proposed Development upon agricultural resources during the construction, operational and decommissioning phases. The grade (quality) of the agricultural resources and a description of the associated soil resources are reported.

Agricultural land quality is assessed by use of Natural England's Agricultural Land Classification (ALC) system. The ALC system divides land into grades 1-to-5, with grade 3 divided into subgrades of 3a and 3b. The National Planning Policy Framework (NPPF) (2024) places Grades 1, 2, and subgrade 3a within the definition of the 'Best and Most Versatile' (BMV) agricultural land. National policy advises that while land type should not be a predominating factor with sites for development, land of lower ALC grade (i.e., non BMV) should be preferred where possible. The change of use of BMV land to solar development does have implications on the ability to farm the land for arable uses, however, these effects are not considered to be a permanent loss of land within a wider agricultural use. The Proposed Development will be operational for 40-years, at which point it will be decommissioned and the land return to unconstrained agricultural use. While the soil is temporarily taken out of arable rotation, the impact on the land is low. Solar projects typically involve minimal ground disturbance and can provide a valuable break from intensive agricultural practices associated with arable rotation. This 'fallow' (resting) period allows the soil to recover from the constant cultivation, chemical inputs, and compaction associated with modern farming practices.

### 15.1 BASELINE CONDITIONS

The Site comprises agricultural fields which are currently used for a mixture of arable and pastoral farming (based on observations made by the agricultural land classification consultant during the Site visit). The area of the Site surveyed corresponds to the areas of the Site that are proposed to have solar infrastructure comprising the Proposed Development (i.e., the pink shaded areas on Figure 5).

A provisional Agricultural Land Classification (ALC) survey of the Site was undertaken between July and September 2024. The provisional ALC results of the survey area demonstrated that:

- 6% of the Site is provisionally categorised as Grade 1 (BMV) land;
- 21% of the Site is provisionally categorised as Grade 2 (BMV) land;
- 61% of the Site is provisionally categorised as Grade 3a (BMV) land; and
- The remainder (12%) of the Site is provisionally categorised as Grade 3b (non-BMV land);

The provisional ALC results can be viewed at [Figure 18](#).

Further detailed ALC work is being performed on the Site, which will be presented in the subsequent ES (or in this case, the subsequent NTS).

The Site covers an area of land which is greater than the areas for which solar panels, energy storage, and ancillary equipment are proposed. Further, the Site comprises biodiversity net gain areas which have not been surveyed (as no infrastructure comprising the Proposed Development will be located on this land).

## 15.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

The Proposed Development will not result in the permanent 'sealing' or downgrading of the BMV land within the Site.

Impacts during the construction phase will be limited, and subject to soil management practices as set out in the mitigation section below. The construction phase of the Proposed Development will not result in any significant temporary or permanent downgrading, or loss of land quality.

Areas of the Site that will be affected by 'fixed' infrastructure (e.g., the BESS / Substation area as indicated on Figures 5 and 6) will be affected temporarily, albeit for the duration of the operational phase of the Proposed Development (i.e., 40 years upon completion of the construction phase). The Site can be fully restored to the original ALC grade upon decommissioning.

The majority of the agricultural land on the Site will not be removed from agricultural use during the operational phase, with alternative farming methods implemented such as grazing land. It is anticipated that removing the land from arable rotation to be under grassland for a 'resting' period would lead to some improvements in soil factors. These changes to the Site usage as a result of the Proposed Development will be further discussed in the subsequent ES (or in this case, the subsequent NTS).

The construction processes associated with the installation of solar panels will lead to the retention of most soil resources on the Site, as minimal ground disturbance is required to construct a temporary solar scheme, such as the Proposed Development.

Any temporary sealing of agricultural land resulting from the Proposed Development is confined to the lowest grade BMV land (ALC Grade 3a) across the Site. This area of land will not be permanently sealed and shall be restored at the end of the operational phase of the Proposed Development. A Major temporary significant effect (for the lifetime of the Proposed Development) is therefore anticipated at this stage and further detail will follow when the design of the Proposed Development has been refined and a detailed layout is available to assess.

Any elements of the Proposed Development which are to remain following the decommissioning phase (e.g., cabling) will total less than 20 ha Natural England threshold which identifies the potential for significant effects upon agricultural land. As such, no significant effects are anticipated.

The construction and operational phase of the Proposed Development would affect up to approximately 50 ha of agricultural land in terms of temporary disturbance for fixed infrastructure. This is considered to be a temporary and reversible impact on a receptor of high sensitivity (i.e., the Grade 3a BMV land). This is considered to be a Major adverse effect, which is significant, albeit only for the lifetime of the Proposed Development and is reversible.

The operational phase of the Proposed Development would lead to the change of agricultural enterprise from what is currently mostly arable production to a grassland-based agricultural enterprise. This would therefore remain an agricultural use, which would be considered to be of Negligible impact (not significant) on the land and soil resource.

### 15.3 MITIGATION AND ENHANCEMENT

It is anticipated that during the operational phase of the Proposed Development, the land will be made available for grazing, and therefore not removed from agricultural use.

A point to consider is that should the soils experience disturbances during the construction phase, these are only temporary; any losses in land drainage, climate regulation and other environmental functions can be restored at the completion of the construction phase via the correct storage and re-instatement of soils.

Impacts would be reduced by mitigation measures embedded into the design of the Proposed Development, such as best practice for soil handling, seed mixes for stockpiles of soil, and the use of appropriate equipment to construct the Proposed Development, as well as additional mitigation (see below). These measures would act to avoid, reduce, and mitigate any effects.

The protection measures set out above will include the production of documents advising the best practice for soil handling on the Site, such as a CEMP and/or outline Soil Management Plan for the Proposed Development.

Any effects upon land quality will be avoided through the use of an outline Soil Management Plan which is currently being developed. The outline Soil Management Plan will set out the soil survey work needed once the design of the cable route has been finalised, together with any actions from the CEMP and/or the outline Soil Management Plan.

No further mitigation is considered to be required at this stage; however, as noted above, further assessment will be undertaken when the detailed layout is available for assessment.

## 15.4 CONCLUSION

The majority of effects arising from the construction and operational phases of the Proposed Development are temporary and reversible. Any elements of the Proposed Development which are to remain in-situ after decommissioning the Proposed Development will total less than 20 ha and will not result in a significant effect, in accordance with established thresholds.

To leave the soil in 'fallow' (i.e., a rest period) during the operational phase of the Proposed Development would mean that it is protected from the repetitive disturbances associated with farming machinery and chemical applications which lead to erosion and degradation of the soil. The operational phase of the Proposed Development would allow the soil to undergo period of recovery, potentially improving its structure and drainage characteristics, organic matter content, soil nutrient balance (without the requirement for application of fertilisers) as well as it's resilience to future agricultural use.

The operational phase of the Proposed Development would lead to loss of land from arable production, but not from agricultural use, which would be considered to be of negligible impact on the land and soil resource (i.e., not significant).

**Key**

- Surveyed Land
- Biodiversity Net Gain
- Cable Route
- Grade 1
- Grade 2
- Grade 3a
- Grade 3b
- non-agricultural

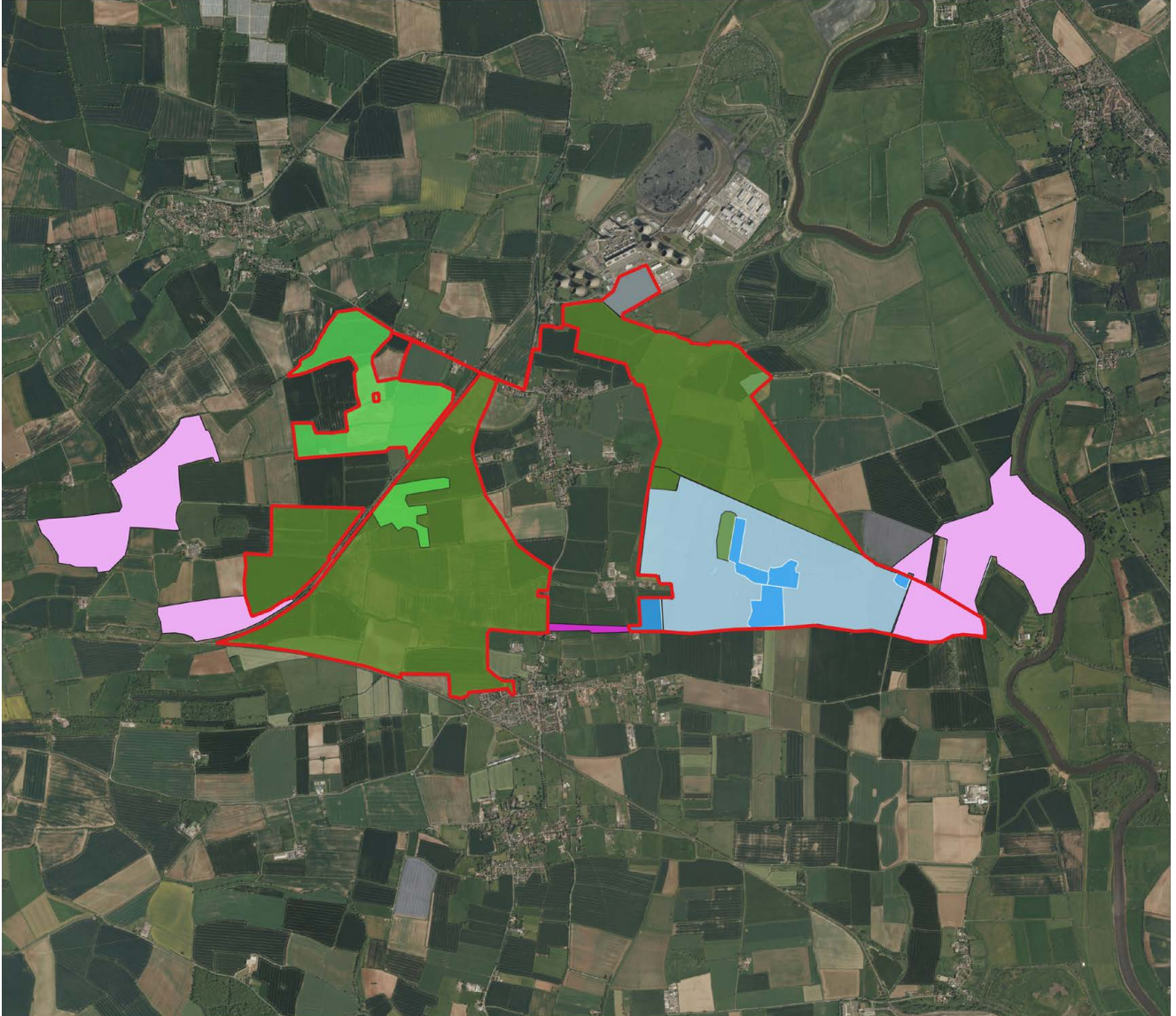


FIGURE 18: ALC GRADES MAP

## 16. GLINT AND GLARE

The Glint and Glare chapter of the PEIR assesses the potential glint and glare effects associated with the solar arrays comprising the Proposed Development.

### 16.1 BASELINE CONDITIONS

The area surrounding the Site includes existing vegetation, intervening terrain and existing non-residential buildings, that provide a level of mitigation for reflecting panels. A number of receptors have been included for the preliminary Glint and Glare assessment:

- Local roads (i.e., Main Street, Leverton Road and Wheatley Road);
- Regional roads (200m section of A156/Gainsborough Road);
- Residential dwellings;
- Railway receptors (e.g., drivers of trains that are traveling along the railway that bisects the western portion of the Site); and
- Aviation (i.e., aerodromes within 15km of the Site).

### 16.2 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

The operational phase has been assessed only, as this is considered to be the worst case for the glint and glare discipline (i.e., the maximum amount of solar panels would then be on the Site, which gives rise to the possible worst case scenario in terms of reflections from solar panels). One of the limitations identified to the Glint and Glare assessment is that the model used to predict the preliminary effects does not take account the existing topography and vegetation on the Site. Therefore, the assessment provides an (unrealistic) worst-case scenario as to the possible effects of the Proposed Development, with respect to Glint and Glare.

With regard to road safety, solar reflections are possible towards a small section of the A156/Gainsborough Road. Based on the model results (bearing in mind that the model doesn't account for existing vegetation within and around the Site), the effect would be moderate adverse, which is considered to be significant.

All residential dwellings in the vicinity of the Site are anticipated to incur negligible effects, as it is considered that screening in the form of existing vegetation, non-residential buildings and intervening terrain would mitigate any reflections arising from panels. No significant effects are predicted.

With regard to train drivers operating trains along the section of railway that bisects the western portion of the Site, solar panel reflections are possible. When considering the baseline conditions of the Site, screening in the form of existing vegetation and intervening terrain is predicted to obstruct views for the section of the railway that forks at the south-western-most point of the Site, the effect arising from the Proposed Development is therefore considered to be negligible (not significant). The section of the railway that continues in a north-east alignment from the aforementioned fork is predicted to result in a minor adverse effect, this is not considered to be significant.

At this stage, solar reflections are possible towards West Burton Airfield, Grove Farm Airfield, and Forwood Farm Airfield have glare intensities with 'potential for temporary after-image'. As such, a moderate adverse effect is predicted. Negligible effects are predicted for the remaining aerodromes within 15km of the Site.

Due to the low sensitivity of users of PRowS and nearby waterways, solar reflections on these receptors are not considered to be significant. Any impact is considered to be minor adverse and does not require mitigation. Glint and Glare effects towards receptors on PRowS and waterways are transient, and time and location sensitive, whereby a pedestrian could move beyond the solar reflection zone with ease. Additionally, screening in the form of existing vegetation, buildings and intervening terrain will reduce the visibility of reflecting panels towards these receptors and therefore further mitigate any impact.

### 16.3 MITIGATION AND ENHANCEMENT

'Moderate' impacts and greater upon ground-based receptors such as roads and railway operations and infrastructure can be reduced to a lower impact by various mitigation strategies – the most common being, for example, the provision of screening along the boundary of the Proposed Development to obstruct views of potentially reflecting panels.

The iterative design of the Proposed Development will consider what mitigation will be implemented for those receptors that have been predicted to result in significant adverse effects, for example the appropriate management of existing and new planting on the Site, in order to minimise the potential for significant effects and ensure a satisfactory level of environmental protection.

With regard to those aerodromes that have been identified as having the potential to incur significant adverse effects, the Applicant is engaging with those aerodromes to ascertain if those effects would actually be 'significant' in the context of their operations, which would identify any mitigation (if required).

### 16.4 CONCLUSION

The iterative design of the Proposed Development, stakeholder engagement, and the incorporation of any required mitigation will be such that any residual effects will not be significant and ensure a satisfactory level of environmental protection during the operational phase. Further detail will follow in the subsequent ES.

## 17. MISCELLANEOUS ISSUES

The PEIR chapter on Miscellaneous Issues assesses the following topics:

- Electric, Magnetic and Electromagnetic Fields;
- Telecommunications and Utilities;
- Waste; and
- Major Accidents and Disasters.

None of these topics call for individual chapters in the PEIR, either due to the brevity of the assessment, or the small impact associated with the Proposed Development.

### 17.1 ELECTRIC, MAGNETIC AND ELECTROMAGNETIC FIELDS

This section sets out the approach to the potential of electric, magnetic and electro-magnetic fields (EMFs) produced by the Proposed Development. EMF is produced both naturally and as a result of certain human activities. EMFs are inevitable wherever electricity is produced, distributed, and used, including electrical substations, power lines and electric cables and around domestic, office or industrial equipment that uses electricity.

Electric fields are produced by voltage. Magnetic fields are produced by the flow of electric current; however, most materials do not readily block magnetic fields. The intensity of both electric fields and magnetic fields diminishes with increasing distance from the source.

#### **Baseline Conditions**

The underground connection to the grid will be located on land that is not publicly accessible; however, the public and occupational exposure reference levels have been used in this assessment to ensure that there are no adverse effects on the closest publicly accessible areas and residential areas.

A proposed connection point for the underground 400 kV cable system will be to the existing substation at the West Burton Power Station site that is located adjacent to the northern extent of the Site, which connects to the existing 400 kV overhead transmission network.



### **Assessment of Likely Significant Effects**

Effects during the construction and decommissioning phases of the Proposed Development are scoped out of the assessment as the cables will not produce any significant EMFs until the Proposed Development is generating electricity when it is operational.

An underground high voltage 400kV cable system will connect the Proposed Development with the West Burton Power Station substation. The highest EMFs produced by underground cables are located directly above the buried cables, and field strength decreases with distance from the source. At this stage in the design, the precise routing of the cabling isn't known; however, it will be a short length as the existing substation at the West Burton Power Station site is adjacent to the north of the Site. The nearest residential receptor is located more than 100m from the likely route of the underground cable (bearing in mind that the PoC is adjacent to the north / north-east of the Site, within the existing West Burton Power Station site). In accordance with public exposure limit values, EMFs will have no effect on local residents. Therefore, no significant effects are anticipated.

### **Mitigation and Enhancement**

The requirement to consider EMF exposure guidance is fully understood by the Applicant and has been factored into the consideration of the route alignment inside the Site from an early stage.

No specific mitigation measures are considered necessary, given the relatively short cable route that will connect the Proposed Development to the existing substation at the West Burton Power Station site.

### **Conclusion**

It has been shown that the relevant electrical infrastructure will comply with the current public exposure guidelines. No significant adverse effects have been predicted; therefore, no significant residual effects are anticipated.

## 17.2 TELECOMMUNICATIONS AND UTILITIES

This section evaluates the effects of the Proposed Development on telecommunication infrastructure and existing utilities.

The Proposed Development has the potential to affect the existing telecommunications and utility infrastructure below ground.

The utilities report used to inform the Miscellaneous Issues chapter of the PEIR has used a different study area, when compared with the boundaries of the Site. As such, areas that do not comprise the Site have been captured. The subsequent chapter of the ES will combine that utilities report, and a new utilities report, together informing the worst case (i.e., capturing more assets than what actually exists within the Site).

### Baseline Conditions

It is understood that three existing telecommunications assets are located within the Site, under the ownership of:

- Openreach (British Telecommunications);
- Vodafone; and
- National Grid.

The area surrounding the Proposed Development received television signals that were made exclusively digital after the digital switchover was completed in the Nottinghamshire region in 2011.

The area within and surrounding the Site is predominantly served by the Belmont transmitter (Lincolnshire), which is located approximately 39km to the east of the Site.

Additional searches were undertaken for the presence of radio masts within the vicinity of the Site:

- Fishpond Hill (Nottinghamshire, England) DAB transmitter, located 36km to the south-west; and
- Belmont (Lincolnshire, England) DAB transmitter, located 39km to the east.

On site utilities include water, sewers, a high pressure gas pipeline, water mains, and electrical cables. Knowledge of the utilities during design and construction allows any effects to be negated by avoiding them or by use of stable structures, such as pipe bridges. The relevant statutory undertakers have been informed and consulted with regard to the Proposed Development.

### **Assessment of Likely Significant Effects**

The Proposed Development consists of fixed low-lying infrastructure and is therefore unlikely to interfere with digital television signals and therefore no effects are anticipated in the construction, operation and decommissioning phases.

The potential exists for utilities to be affected during the construction and decommissioning of the Development through damage caused as a result of excavation and engineering operations. Risk of damage can be mitigated with precautionary measures, which would be detailed within a CEMP which would be implemented on the Site prior to any construction works taking place. Similar measures would be adopted for the decommissioning phase. Consultation with the relevant statutory undertakers will inform agreed offset distances, which will be fed into the CEMP (or similar for the decommissioning phase). Where direct conflict is anticipated, the crossing of utilities will be carried out in collaboration with the relevant utilities providers.

No effects on existing utilities are predicted as a result of the operational phase of the Proposed Development, as no below-ground works will be required during the operational phase.

No significant effects are anticipated.

### **Mitigation and Enhancement Measures**

The risk to existing utilities on the Site during the construction and decommissioning phases would be minimised, as the design of the Proposed Development will incorporate any offset distances from existing utilities, to be agreed with the relevant stakeholders. Further, a CEMP will be implemented on the Site during the course of the construction phase of the Proposed Development, which will further reduce the likelihood of significant effects. No further mitigation is considered to be required.

### **Conclusion**

The Proposed Development is not expected to create a significant effect on Telecommunications, Television Reception and Utilities during construction, operation, and decommissioning. Therefore, the residual effects on Telecommunications and Utilities are resultantly not significant.

## 17.3 WASTE

This section of the PEIR chapter sets out the approach to waste management that will be applied to the design and the expected waste streams during each phase of the Proposed Development. Waste is defined as materials that are unwanted, having been left over after the completion of a process which would otherwise be discarded. The legal definition of waste also covers substances or objects, which fall outside of the commercial cycle or out of the chain of utility.

### **Baseline Conditions**

Waste at the Site is currently associated with agricultural practice. Potential waste streams currently include left over crop and straw bales, fertiliser sacks and chemical containers.

### **Assessment of Likely Significant Effects**

The nature of the Proposed Development and the known construction processes indicate that no significant quantities of waste are anticipated. The generation of construction-related waste can be significantly reduced through the choice of materials and other opportunities pre-construction phase will be explored as far as possible. Possibilities to reuse or recycle materials will be explored before resorting to landfill options, in accordance with the Waste Hierarchy.

During the operational phase of the Proposed Development waste arising is expected to be substantially less than during the construction phase and would include: welfare facility waste; equipment needing replacing; waste metals; and general waste (paper, cardboard, wood, etc.).

During decommissioning, waste streams are expected to include, but not be limited to, solar infrastructure, batteries, cables, welfare facility waste, waste metals, and waste water. Prior to decommissioning, opportunities to minimise waste as far as possible will be explored.

No significant effects are anticipated.

### **Conclusion**

Large amounts of waste are not anticipated through all phases of the Proposed Development. Residual effects with regard to waste are not considered to be significant.

## 17.4 MAJOR ACCIDENTS AND DISASTERS

This section summarises the potential effects of the project on the risks of major accidents or disasters occurring and affecting the Proposed Development. 'Accidents' are an occurrence resulting from uncontrolled developments in the course of construction, operation and decommissioning (e.g., major emission, fire or explosion). 'Disasters' are naturally occurring extreme weather events or ground related hazard events (e.g., subsidence, landslide, earthquake).

### **Baseline Conditions**

A number of receptors are present in the vicinity of the Site that could be vulnerable to major accidents or disasters, either because of their proximity to the Site or their importance to the surrounding area. These include:

- Villages, farms, and residential homes;
- Roads;
- Railways;
- Designated ecological sites, woodland, farmland, and waterbodies; and
- Underground infrastructure services including electricity, water, communications, and gas.

### **Assessment of Likely Significant Effects**

There are various health and safety considerations particularly for workers during construction and decommissioning of the Proposed Development, as a result, workers are considered to be the most at-risk group. However, the risk to both construction workers and the general public is low and not significant during the construction and decommissioning phases.

The design of the Proposed Development's infrastructure, such as batteries, could lead to a fire risk if there was equipment failure. Routine maintenance, system testing, fire protection design for battery equipment would minimise the risk of potential significant adverse effects. No significant effects are anticipated.

The construction and decommissioning of the cable crossing the railway on the Site underground will be managed to the specific requirements of Network Rail and therefore the risk of a rail accident as a result of the crossing will be minimised. Therefore, significant effects relating to rail accidents are not anticipated. No significant effects are anticipated.

A high-pressure gas pipeline bisects the eastern portion of the Site in a general north-to-east alignment. The design of the Proposed Development will seek to ensure that any buffers that the operator requests to be applied to the design are in place (likely to be a 20m easement), including no solar panels in this area. No significant effects are therefore anticipated.

### **Mitigation and Enhancement**

Minimising the risk of major accidents during construction and decommissioning will be addressed through appropriate risk assessments as required in the CEMP.

The Proposed Development is not expected to increase the risk of major accidents or disasters during construction, operation and decommissioning. Therefore, the effects on major accidents and disasters are considered not significant.

## 18. SUMMARY

The intention of the PEIR has been to assess the interim findings of the Environmental Impact Assessment for the Proposed Development, presenting any 'likely significant effects'. Detailed assessment with respect to a number of environmental topics has been undertaken in accordance with definitive standards and legislation where available.

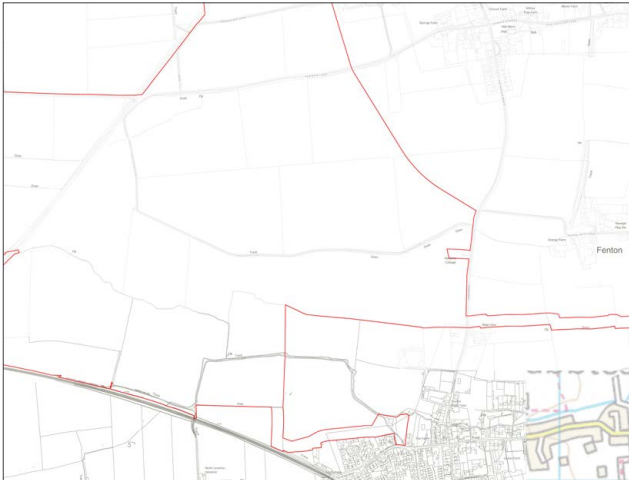
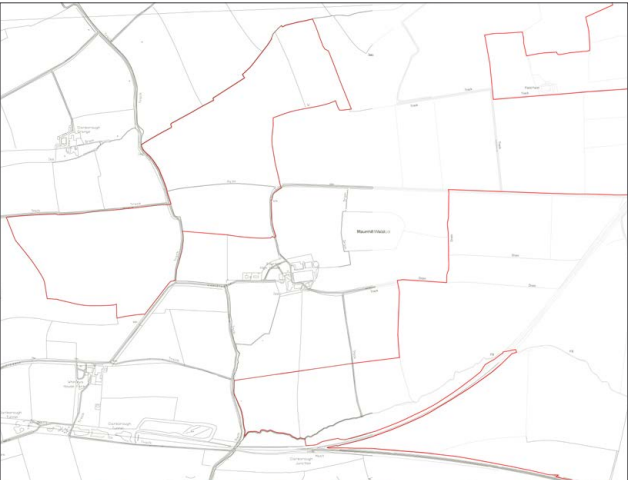
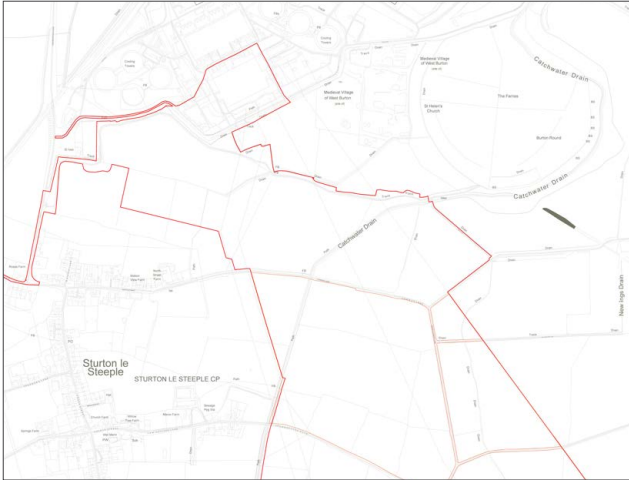
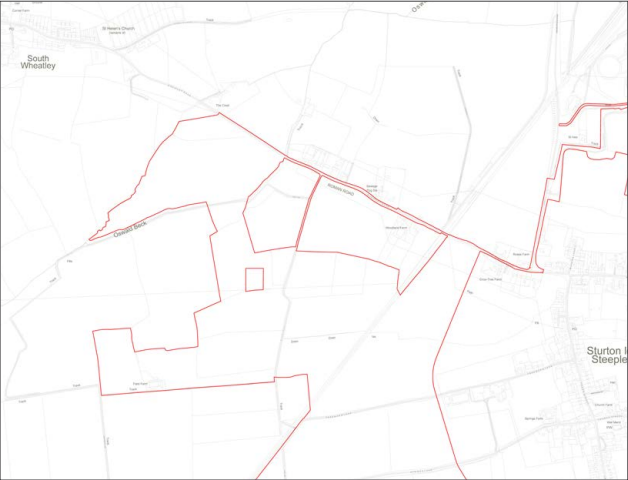
The design of the Proposed Development has taken account of the environmental constraints, and the likely significant effects. Resultantly, a number of mitigation measures have been identified at this stage to mitigate and control significant effects during all phases of the Proposed Development, to ensure a satisfactory level of environmental protection. The mitigation measures proposed will be secured via the appropriate requirements and other controls within the DCO for the Proposed Development, should it achieve development consent.

Feedback from the consultation process will be taken into account when preparing the DCO application and in undertaking the EIA. The PEIR and the parameters for assessment will be revised and further developed to prepare an ES that will accompany the DCO application. The ES will present the final findings and conclusions associated with the EIA process, based on the worst-case proposed layout and design.



# 19. APPENDIX


FIGURE 1: SITE LOCATION PLAN - FURTHER DETAIL







KEY:

 SITE BOUNDARY  
(OUTSIDE EDGE OF LINE DENOTES BOUNDARY)

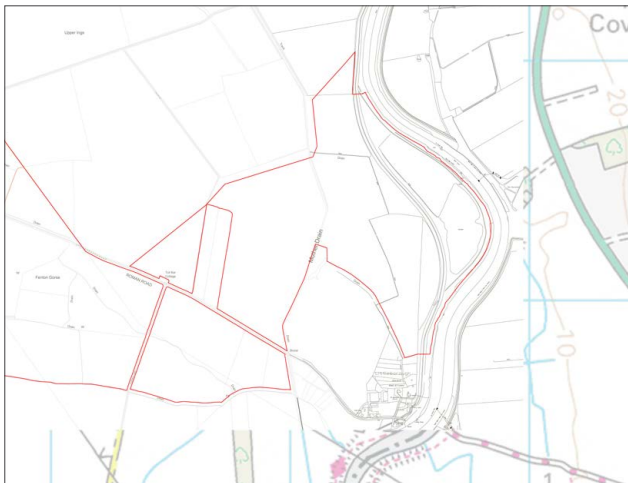
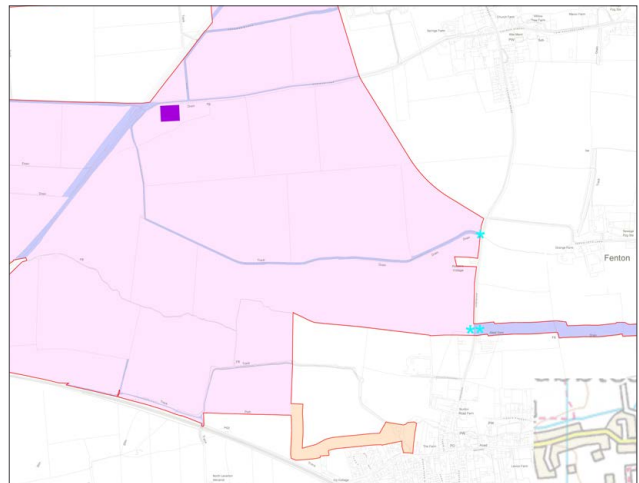
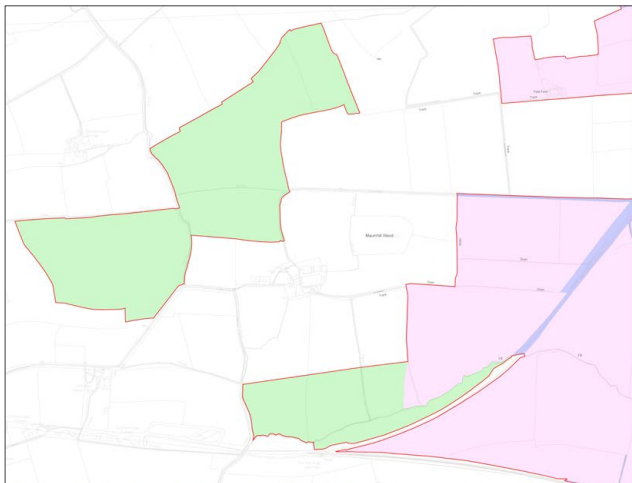
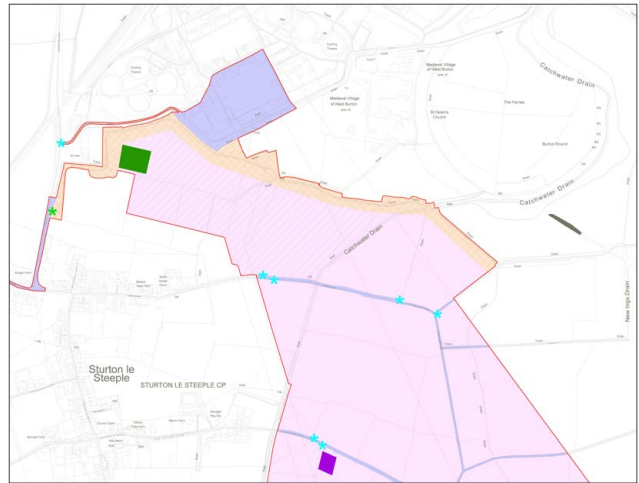
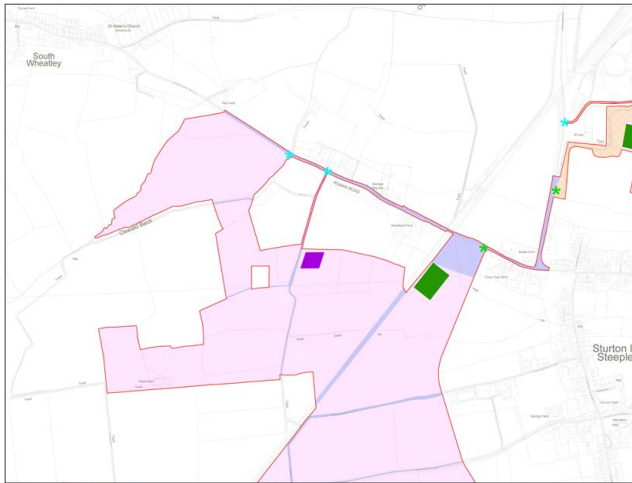
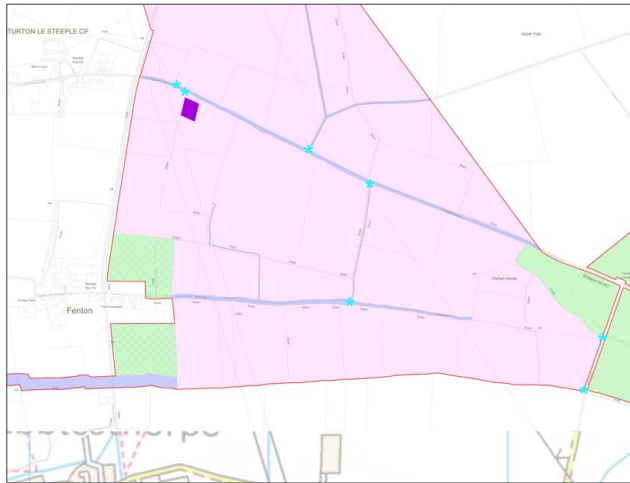


FIGURE 5: CONSTRUCTION PHASE PARAMETER PLAN - FURTHER DETAIL





- SITE BOUNDARY  
(OUTSIDE EDGE OF LINE DENOTES BOUNDARY)
- AREA FOR SOLAR PANELS AND ASSOCIATED DEVELOPMENT
- CABLE INFRASTRUCTURE
- SUBSTATION, BESS AND ASSOCIATED INFRASTRUCTURE
- BIO DIVERSITY MITIGATION
- BIO DIVERSITY MITIGATION AND CABLE INFRASTRUCTURE
- RESERVE SITE ACCESS CORRIDOR IF SUBSEQUENTLY NEEDED
- SITE ACCESS CORRIDOR AND CABLE INFRASTRUCTURE
- ACCESS TO WEST BURTON POWER STATION
- PRIMARY CONSTRUCTION COMPOUND
- SECONDARY CONSTRUCTION COMPOUND
- \* PRIMARY ACCESS POINT
- \* INTERNAL SITE NODE

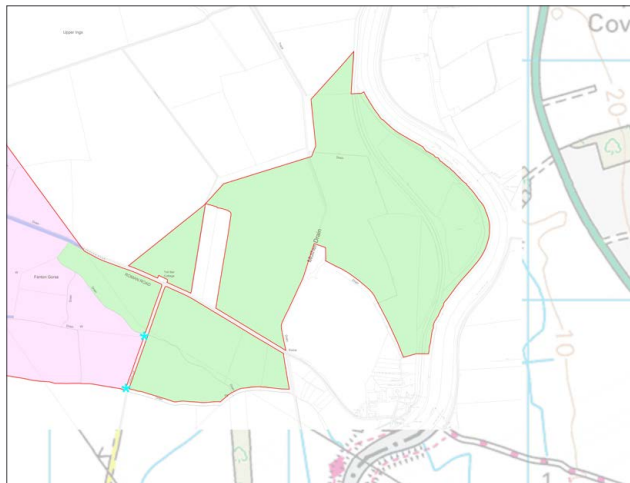
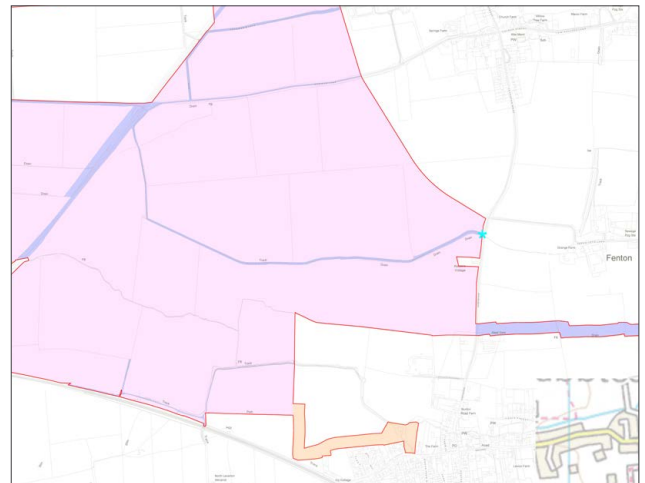
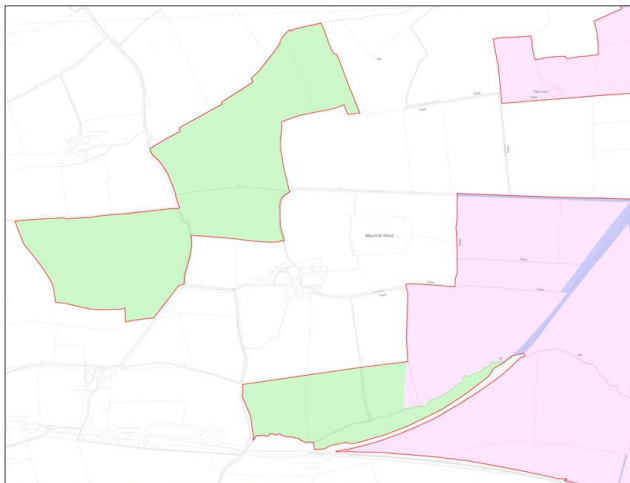
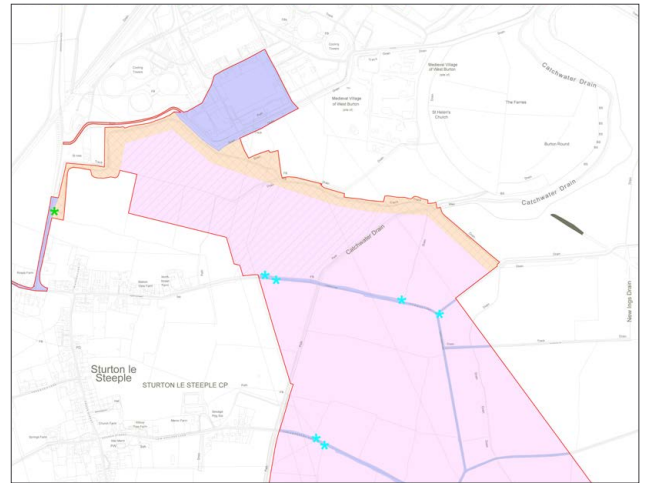
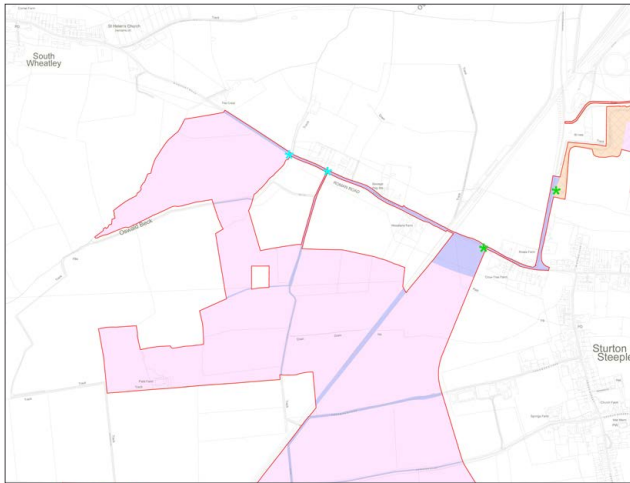
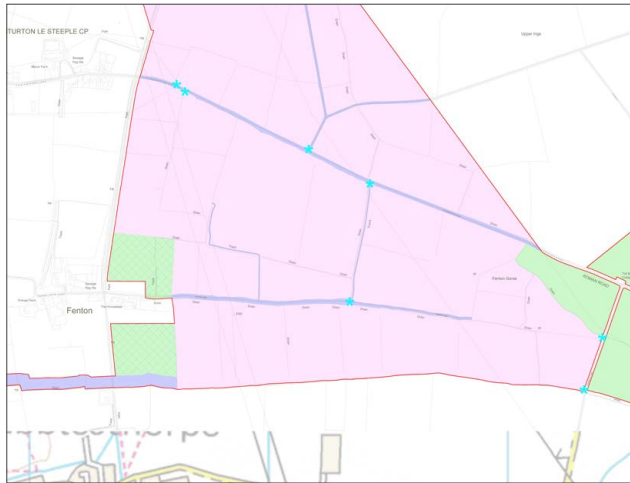


FIGURE 6: OPERATIONAL PHASE PARAMETER PLAN – FURTHER DETAIL





- SITE BOUNDARY  
(OUTSIDE EDGE OF LINE DENOTES BOUNDARY)
- AREA FOR SOLAR PANELS AND ASSOCIATED DEVELOPMENT
- CABLE INFRASTRUCTURE
- SUBSTATION, BESS AND ASSOCIATED INFRASTRUCTURE
- BIO DIVERSITY MITIGATION
- BIO DIVERSITY MITIGATION AND CABLE INFRASTRUCTURE
- RESERVE SITE ACCESS CORRIDOR IF SUBSEQUENTLY NEEDED
- SITE ACCESS CORRIDOR AND CABLE INFRASTRUCTURE
- ACCESS TO WEST BURTON POWER STATION
- ★ PRIMARY ACCESS POINT
- ★ INTERNAL SITE NODE

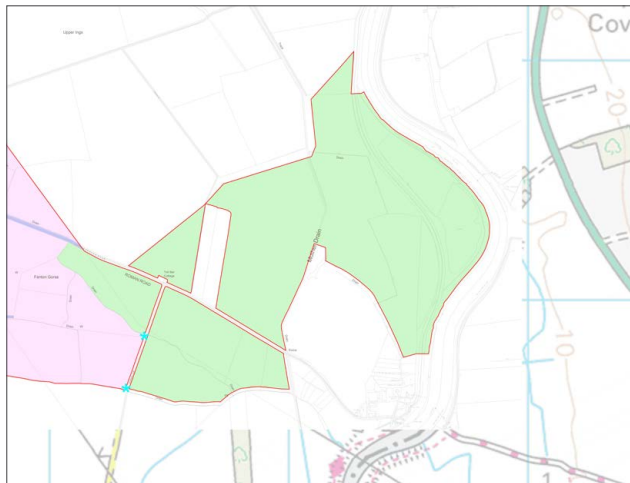
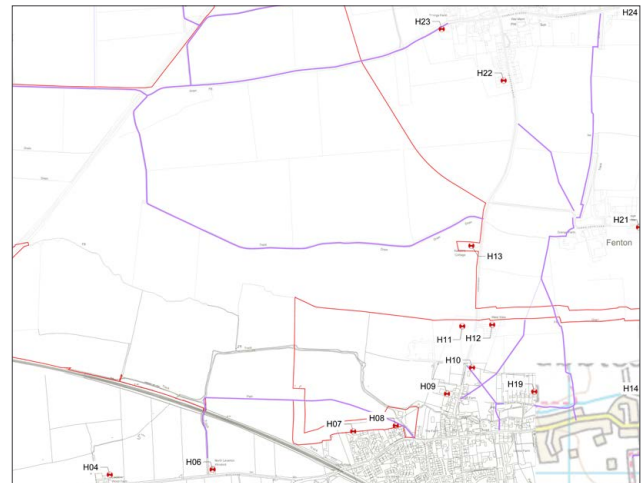
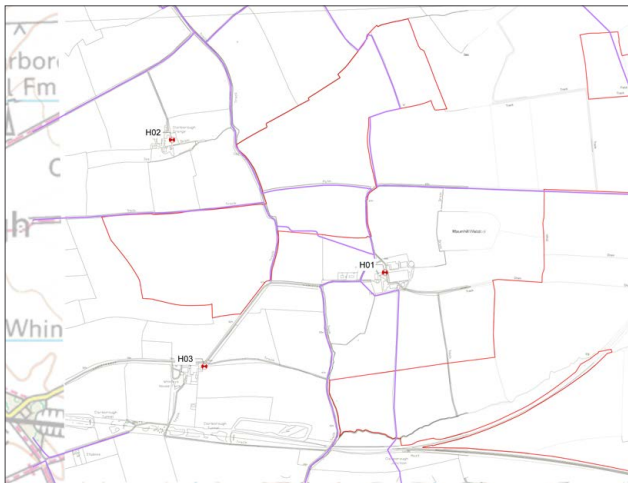
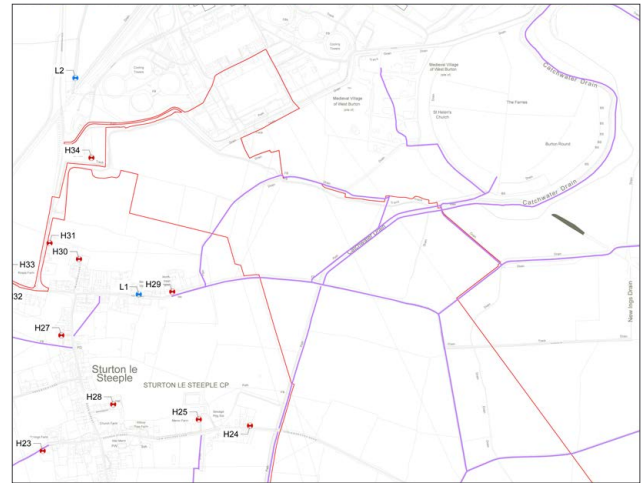
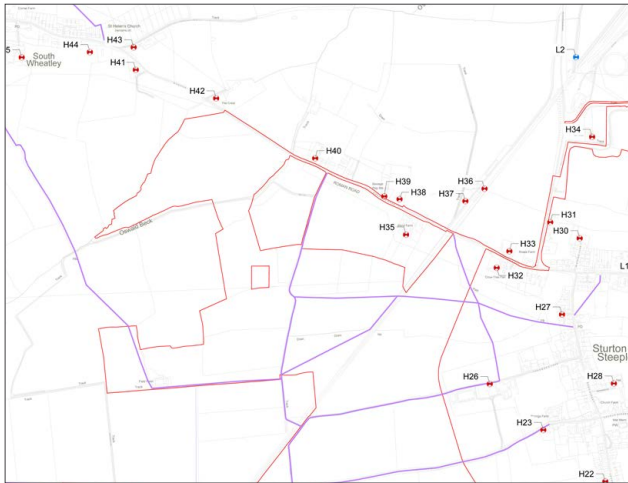
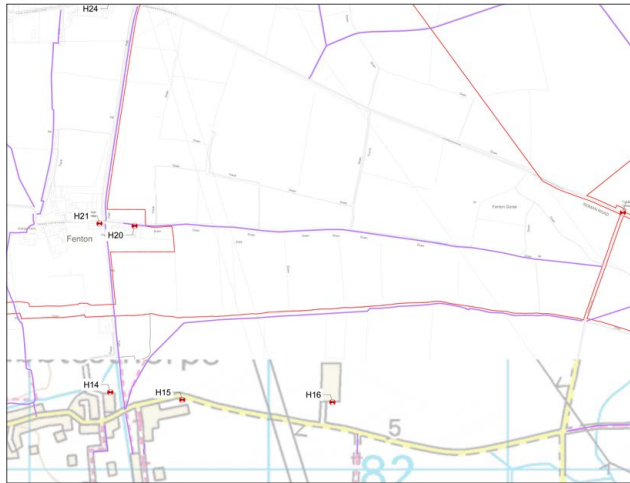
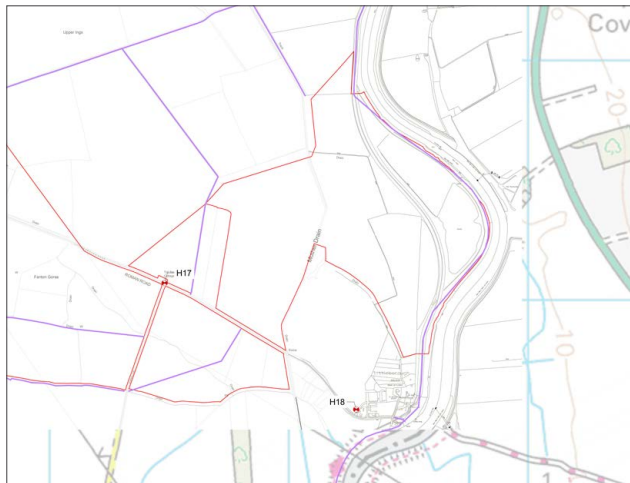


FIGURE 17: NOISE SENSITIVE RECEPTORS – FURTHER DETAIL





- SITE BOUNDARY  
*(INSIDE EDGE OF LINE DENOTES BOUNDARY)*
- ⊗ ACOUSTIC ASSESSMENT LOCATION
- ⊗ BACKGROUND MONITORING LOCATION
- PUBLIC RIGHT OF WAY (PRoW)



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