Heckington Fen Solar Park

ENO10123

Environmental Statement
Non-Technical Summary

Applicant: Ecotricity (Heck Fen Solar) Limited

Document Reference: 6.4
Pursuant to: APFP Regulation 5(2)(a)

February 2023

Planning Act 2008

NON-TECHNICAL SUMMARY

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INTRODUCTION

This document provides a Non- Technical Summary (NTS) of the Environmental Statement (ES) (document reference 6.1) which has been prepared on behalf of Ecotricity (Heck Fen Solar) Limited (the "Applicant") and forms part of a suite of documents supporting an application under Section 37 of the Planning Act 2008 to the Secretary of State for Department for Business, Energy & Industrial Strategy (BEIS) for a Development Consent Order (DCO) for Heckington Fen Solar Park.

The Environmental Impact Assessment (EIA) presents the findings of the development proposal in relation to a DCO application for the construction, operation (including maintenance), and decommissioning of a ground mounted solar photovoltaic (PV) electricity generation and energy storage facility (hereafter referred to as "the Energy Park"), cable route to, and above and below ground works at, the National Grid Bicker Fen Substation (hereafter referred to as "the Proposed Development" (inclusive of Energy Park)) on land at Six Hundreds Farm, Six Hundreds Drove, East Heckington, Sleaford, Lincolnshire.

The ES assesses the Energy Park, Cable Route Corridor for the grid connection and the above and below ground works needed for connection to the National Grid Bicker Fen Substation.

By virtue of its potential generating capacity, which stands at over 50MW, this project constitutes a Nationally Significant Infrastructure Project (NSIP). Therefore, instead of applying to the local authority for Planning Permission, the application must be made to the Secretary of State (SoS) for the department of Business, Energy and Industrial Strategy (BEIS) for a DCO pursuant to the Planning Act 2008. An EIA is required to be undertaken for the Proposed Development and as such The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Reference 1[1]) (hereafter referred to as "the EIA Regulations") apply.

The Energy Park is located within the county of Lincolnshire on an area of agricultural land approximately 3.7km east of the village of Heckington and 8.9km west of the town of Boston. The connecting cable route extends approximately 8.5km in length from the Energy Park onsite substation to the connection point at the National Grid Bicker Fen Substation. The land within the Order limits that forms the subject of the ES extends to approximately 644.5ha, encompassing the entire Proposed Development.

Heckington Fen Solar Park, as the project title for the draft Development Consent Order document, is interchangeably referenced as Heckington Fen Energy Park within the ES documentation as the Energy Park main site includes an energy storage element.

The Order limits location is shown on **Figure 1** (document reference 6.2.1).

THE APPLICANT

Ecotricity was founded in 1995 as the world's first green energy company and now supplies customers across the UK from a growing portfolio of wind and sun parks, with all its electricity supply coming from 100% renewable energy. Ecotricity is a high technology business, developing cutting edge green technology and energy for a low carbon future.

Ecotricity (Heck Fen Solar) Limited, an Ecotricity company, has been formed to create and develop the Heckington Fen Energy Park.

1 **Full list of References can be seen on Page 67**

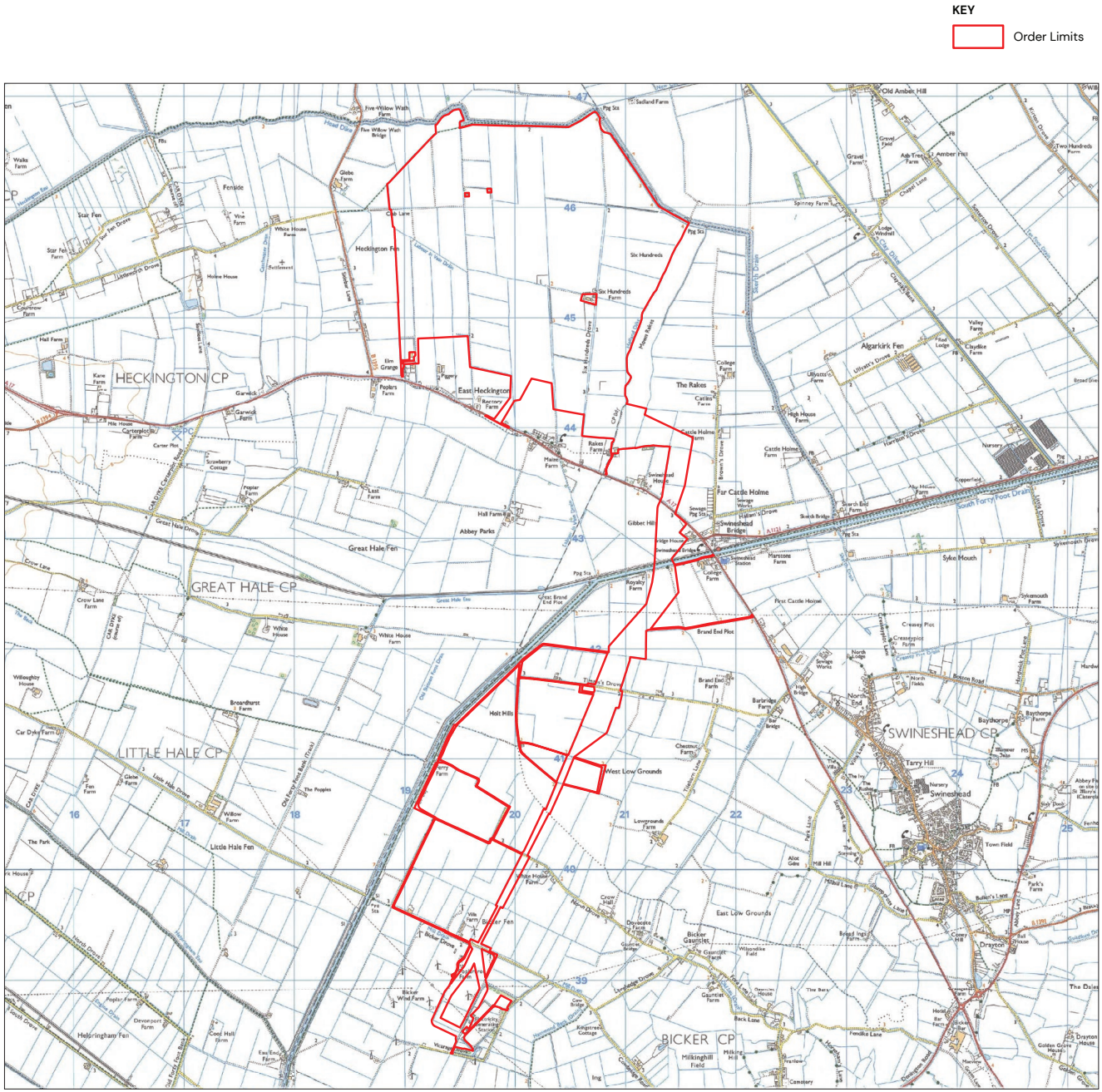


FIGURE 1: DCO ORDER LIMITS

LEGISLATIVE AND PLANNING POLICY CONTEXT

Heckington Fen Solar Park represents a significant planning project and is defined as a NSIP in accordance with the Planning Act 2008 (Reference 2). The Proposed Development falls within the definition of an onshore generating station in England exceeding 50 megawatts (MW) and therefore represents an NSIP under section 14 and 15 of the Planning Act 2008.

The Planning Act 2008 dictates that the Secretary of State is responsible for determining the application for a DCO, with the power to appoint the Planning Inspectorate to manage and examine the application. In this role, the Planning Inspectorate will examine the application through an appointed Examining Authority for the Proposed Development and make a recommendation to the Secretary of State who will then decide whether to grant a DCO which authorises and permits the development.

The EIA takes account of the following policy documents:

- Overarching National Policy Statement for Energy (EN-1) (Reference 3)
- National Policy Statement for Renewable Energy (EN-3) (Reference 4)
- National Policy Statement for Renewable Energy (EN-5) (Reference 5)
- Renewable Energy Framework (Reference 6)
- Energy White Paper (December 2020) (Reference 7)
- The Carbon Budget Order (June 2021) (Reference 8)
- Net Zero Strategy: Build Back Greener (October 2021) (Reference 9)
- National Planning Policy Framework (Reference 10)
- National Planning Policy Guidance
- Local Planning Policy

PURPOSE OF THE ENVIRONMENTAL STATEMENT

The ES is a document that sets out the findings of an EIA. An EIA is a process for identifying the likely significance of environmental effects (beneficial or adverse) arising from a Proposed Development, by comparing the existing environmental conditions prior to development (the baseline) with the environmental conditions during/following the construction, operational and decommissioning phases of a development should it proceed. The baseline for the assessment has been derived from surveys and studies within and around the Order limits. The ES has also considered measures to avoid, reduce, or mitigate any significant adverse effects on the environment and, where possible, enhance the environment. It has then identified residual effects, which are defined as the effects that remain on receptors following the implementation of mitigation measures. The EIA is carried out prior to the submission of a planning application.

The full findings of these studies and planning application documents will be available to view on the National Infrastructure Planning website https://infrastructure.planninginspectorate.gov.uk/. The website is managed by the Planning Inspectorate, the government agency responsible for examining applications for NSIPs.

Additional copies of the NTS (no charge) and ES Main Text/ Technical Appendices (£0.35p per sheet to cover printing costs) are available from Pegasus Group. The complete ES can also be obtained in digital CD format or USB stick for £15. For copies of any of these please contact:

Pegasus Group Limited
Pegasus House
Querns Business Centre
Whitworth Road
Cirencester
Gloucestershire
GL7 1RT

Telephone: 01285 641717

Email: Cirencester@pegasusgroup.co.uk

When ordering, please quote reference **P20-2370**

ENVIRONMENTAL STATEMENT ASSESSMENT SCOPE AND METHODOLOGY

SCOPING

In order to determine the content of the EIA, the EIA Regulations make provision for, but do not statutorily require, an applicant to request that the Planning Inspectorate (on behalf of the Secretary of State) to provide a written opinion as to the information to be provided (i.e. 'scoped') within the ES- in EIA terms, this is referred to as a Scoping Opinion.

A request for a Scoping Opinion, which included information regarding the proposed scope and methodology of the technical studies to be included within the ES, was submitted on behalf of the Applicant on the 7th of January 2022 to the Planning Inspectorate. The Planning Inspectorate provided a Scoping Opinion on the 17th of February 2022. The Scoping Opinion confirmed that the topics proposed were generally acceptable and appropriate.

PRELIMINARY ENVIRONMENTAL INFORMATION REPORT

Prior to the completion of the ES, a Preliminary Environmental Information Report (PEIR) was prepared to support statutory consultation. The PEIR was published in June 2022 to inform the public and stakeholders of the Applicant's preliminary assessment of the likely significant environmental effects of the development proposal at the point of writing.

The PEIR has been further developed following completion of the design work and environmental assessment and has been used to inform the ES, which this NTS summarises.

CONSULTATION

Further targeted consultation was undertaken in November 2022. The Applicant sought the views of consultees on the information contained within the PEIR, and there was an opportunity within the process up to submission of the DCO application for both the EIA and the project design to have regard to comments received. All issues raised during consultation on the PEIR has been considered during the EIA process and used to inform the final impact assessment for the ES.

THE ORDER LIMITS AND ENVIRONMENTAL CONTEXT

The Order limits is a term that is used to describe the land required to deliver the components of the Proposed Development. The land within the Order limits that forms the subject of the ES extends to approximately 644.5 hectares (ha) encompassing the entire Proposed Development, shown in **Figure 1** (document reference 6.2.1). The Energy Park extends to approximately 524 ha as one site and is shown on **Figure 2** (documents reference 6.2.1).

The Energy Park is comprised of agricultural land subdivided into rectilinear parcels by long linear drainage ditches. The Energy Park is located within East Heckington, approximately 3.7km east of the village of Heckington and 8.9km west of the town of Boston, Lincolnshire. The closest major city is Lincoln approximately 32km north-west of the Proposed Development. The village of Heckington is separated from the Energy Park site by agricultural land within the surrounding fenland landscape. The Energy Park is bound by Head Dike to the north, a smaller watercourse to the east, further agricultural land to the south and B1395 Sidebar Lane/agricultural land to the west.

The Energy Park site lies wholly within the administrative district of North Kesteven, abutting Boston Borough Council administrative boundary along the eastern edge of the Energy Park site. The Cable Route Corridor spans across Boston Borough Council and North Kesteven District Council administrative area, with a section within the Energy Park running from the Onsite Substation in the Energy Storage Compound, south through the Energy Park site and then off-site for a short distance once it has left the Energy Park site. At this point it leaves the administrative boundary of North Kesteven and enters Boston Borough Council.

The Cable Route leaves the Energy Park on the southeastern boundary crossing agricultural land as it travels towards National Grid Bicker Fen Substation. To reach the Substation the Cable Route Corridor crosses the Viking Link and Triton Knoll connections before heading south towards National Grid Bicker Fen Substation. Within the Cable Route Corridor crossings are required for the A17, the South Forty Foot Drain, the railway, a high-pressure gas pipe and a number of watercourses.

In terms of landform, the Energy Park site is very flat and low-lying at between 2m and 3m Above Ordnance Datum (AOD) across the entire Energy Park site. The Energy Park is situated on the Lincolnshire Fens, a coastal plain in the east of England which comprises a large area of broad flat marshland supporting a rich biodiversity.

The Agricultural Land Classification (ALC) for the Energy Park site show over 80% of the site is Grade 3, comprising 30.5% Grade 3a (160 ha) and 50.6% Grade 3b (265 ha). Grade 3b is considered to be poorer quality land. Grades 1, 2 and 3a are considered to Best and Most Versatile thereby totalling 49% of the site Grade 1 – 11.1% (58 ha); Grade 2 – 7.4% (39 ha) and Grade 3a - 30.5%. The remaining land is considered Non-Agricultural land - 0.4% (2 ha) and comprises woodlands and agricultural units.

Overhead lines supported on wooden poles traverse the Energy Park, running parallel to Six Hundreds Drove and the A17 in the south, and near the north-western boundary of the Energy Park. An underground gas pipeline bisects the Energy Park, extending south-north to the east of Rectory Farm.

One public right of way (PROW) footpath HECK/15/1 runs along the northern boundary, crossing a small part (c.280m) of the Energy Park, this will not require a diversion or closure as part of the proposals; no other PROW occurs within the Energy Park.

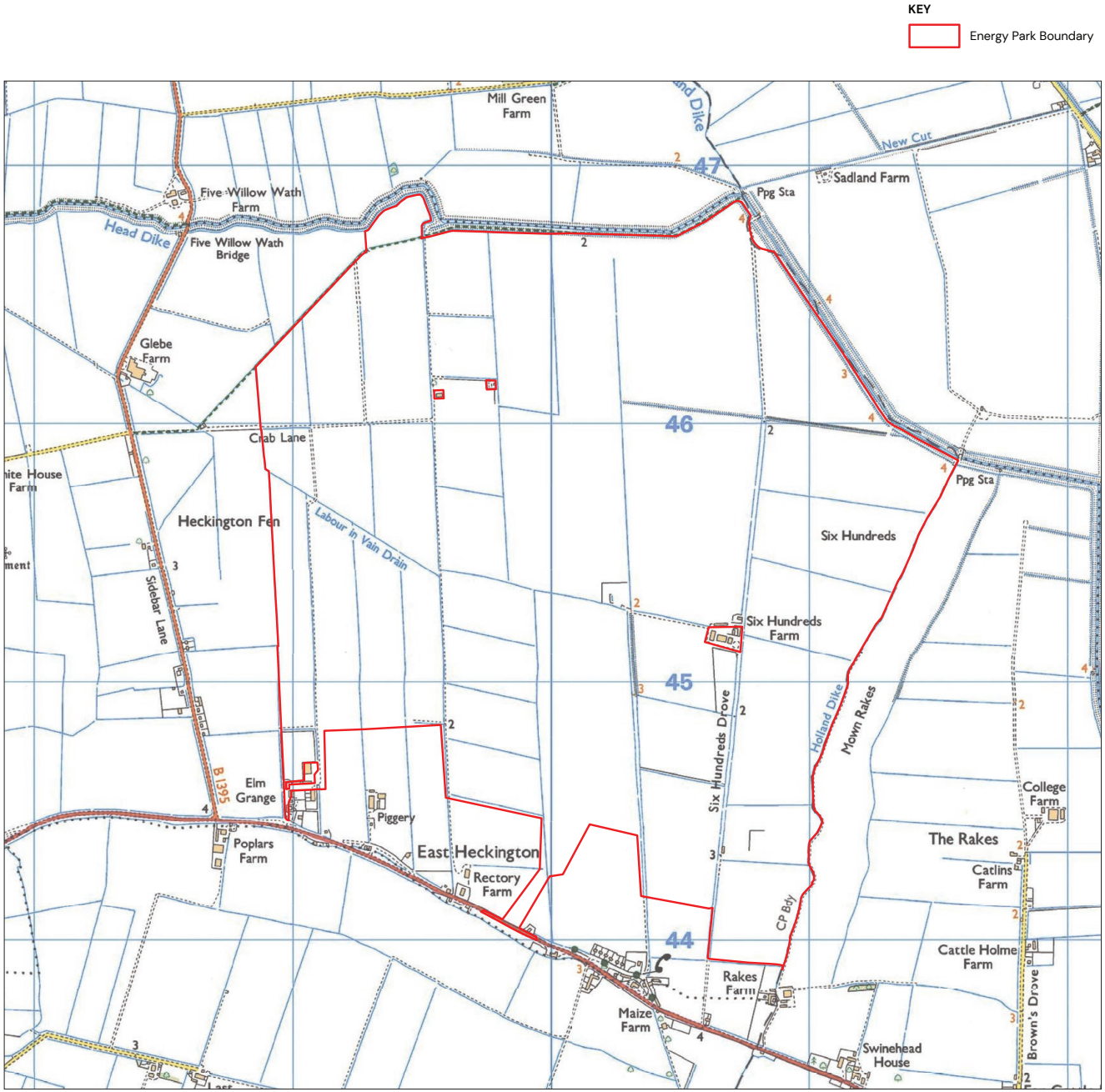


FIGURE 2: ENERGY PARK BOUNDARY

There are no European statutory designated sites (Ramsar, Special Areas of Conservation (SAC) & Special Protection Areas (SPA)) or national sites (Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Local Nature Reserve (LNR)) within 10km of the Energy Park site, but there is one within 10km of the Cable Route Corridor and National Grid Substation at Bicker Fen. The nearest SSSI to the Energy Park is Horbling Fen SSSI located 11.5km to the southwest of the Energy Park site and 14.7km from the Cable Route Corridor, designated for its geological interest. The Wash SSSI/SPA/SAC/Ramsar and NNR, is situated approximately 17km to the southeast of the Energy Park site at its nearest point and 4.9km from the Cable Route Corridor.

There are no non-statutory designations within the Energy Park site. The South Forty Foot Drain Local Wildlife Site (LWS) is located approximately 1km to the south of the Energy Park site. This is a man-made watercourse with bankside vegetation comprising rough neutral grassland, scrub, and trees. The Cable Route Corridor passes through this LWS – but will be undergrounded under the Drain so to reduce any impacts on it.

There are no designated heritage assets located within the Energy Park site. One Scheduled Monument to the west and four Grade II Listed Buildings lie within a 2km radius of the Energy Park site. There are no Listed Buildings or other known heritage assets in close proximity to the Cable Route Corridor. There are no designated archaeological remains, e.g., Scheduled Monuments, located within the Energy Park site. Known and potential non-designated built and archaeological remains located within the Energy Park site comprise:

- Upstanding post-medieval/modern buildings of Six Hundreds Farm;
- Upstanding post-medieval/modern brick boundary wall to the west of Elm Grange;
- Upstanding remains of a post-medieval/modern drainage pump close to Head Dike to the north-east;
- Buried remains of a post-medieval duck decoy to the east;
- Buried remains of former outfarms and field boundaries in various locations, some but not all of which are shown on historic maps;
- Buried remains of a possible enclosure of uncertain origin to the west of centre; and
- Buried remains of a possible enclosure and circular and linear features of uncertain origin to the east.

The majority of the Energy Park site is within Flood Zone 3, with some sections of the Energy Park falling within Flood Zone 2 and Flood Zone 1.

The Proposed Development is located approximately 11.3km west of its nearest Air Quality Management Area (AQMA), 'Haven Bridge AQMA' which is located in Boston Borough Council's (BBC) administrative area, and which has been declared for exceedances of the annual mean nitrogen dioxide (NO2) air quality objective (AQO).

The Order limits and surrounding context is shown on the Environmental Designations Plan at **Figure 3** (document reference 6.2.3).

FIGURE 3: ENVIRONMENTAL DESIGNATIONS PLAN

PROPOSED DEVELOPMENT

The development description is as follows:

> ***"Development Consent Order Application for Ground Mounted Solar Panels, Energy Storage Facility, Below Ground Grid Connection to, and extension at, Bicker Fen Substation and all associated infrastructure works."***

The Proposed Development comprises of an Energy Park with solar PV and Energy Storage System (ESS) infrastructure. Solar PV and ESS are rapidly evolving and as a result the DCO application will require a degree of flexibility to allow the latest technology to be utilised at the time of construction.

Given the flexibility applied for and in order to ensure a robust assessment of the likely significant environmental effects of the Proposed Development, the EIA has been undertaken adopting the principles of the 'Rochdale Envelope'. This involves assessing the maximum (and where necessary the minimum) parameters of the Proposed Development where flexibility needs to be retained. This approach sets worst case parameters for the purpose of the assessment but does not constrain the Proposed Development for being built in a manner that would lead to lower environmental impacts. The draft DCO secures the likely worst-case parameters, providing certainty that the impacts of the Proposed Development will be no worse than those assessed as part of the Environmental Statement.

It is anticipated the Energy Park could create renewable energy to power 100,000 homes and would prevent 75,000 tonnes of carbon dioxide (CO2) per year from entering the atmosphere. The calculations for these numbers can be seen in Appendix 1 of the Consultation Report (document reference 5.1). The Proposed Development includes the following key components as shown on **Figure 4** Indicative Site Layout (document reference 6.2.2):

- Solar PV panels: these convert sunlight into electrical current. The solar panels will be fixed onto a mounting structure and the panels are typically 2-2.5m long and 1-1.5m wide.
- PV module mounting structures: the solar panels will be fixed into these mounting structures which would have a maximum height of 3.5m in the northeast section of the energy park and a maximum of height of 3m for the remainder of the park.
- Inverters and transformers: these are required to convert low voltage DC electricity generated by the PV modules into high voltage alternating current (AC) which allows the electricity to be exported to the National Grid. The unit itself tends to be containerised with associated control, switchgear equipment and transformer within a 13m x 4m x 4m (maximum dimensions) container and will be distributed throughout the Energy Park site. The inverters can also be mounted in a box onto the underside of the solar panels, these are known as string inverters.
- Cabling (including extra high, high, and low voltage power, earthing, communication, and control) – below ground for the grid connection to Bicker Fen, and in trenches and/or behind the panels on the Energy Park.
- Energy Storage Systems (ESS): proposed to be located in the central section of the Energy Park site and will be housed in a series of individual containers. A maximum of 5.3ha is set aside for this element of the development and the maximum dimensions of each individual container is 13m x 4m x 6m. The ESS is likely to include energy storage containers, inverters / transformers and system controllers but its final design has not yet been determined.

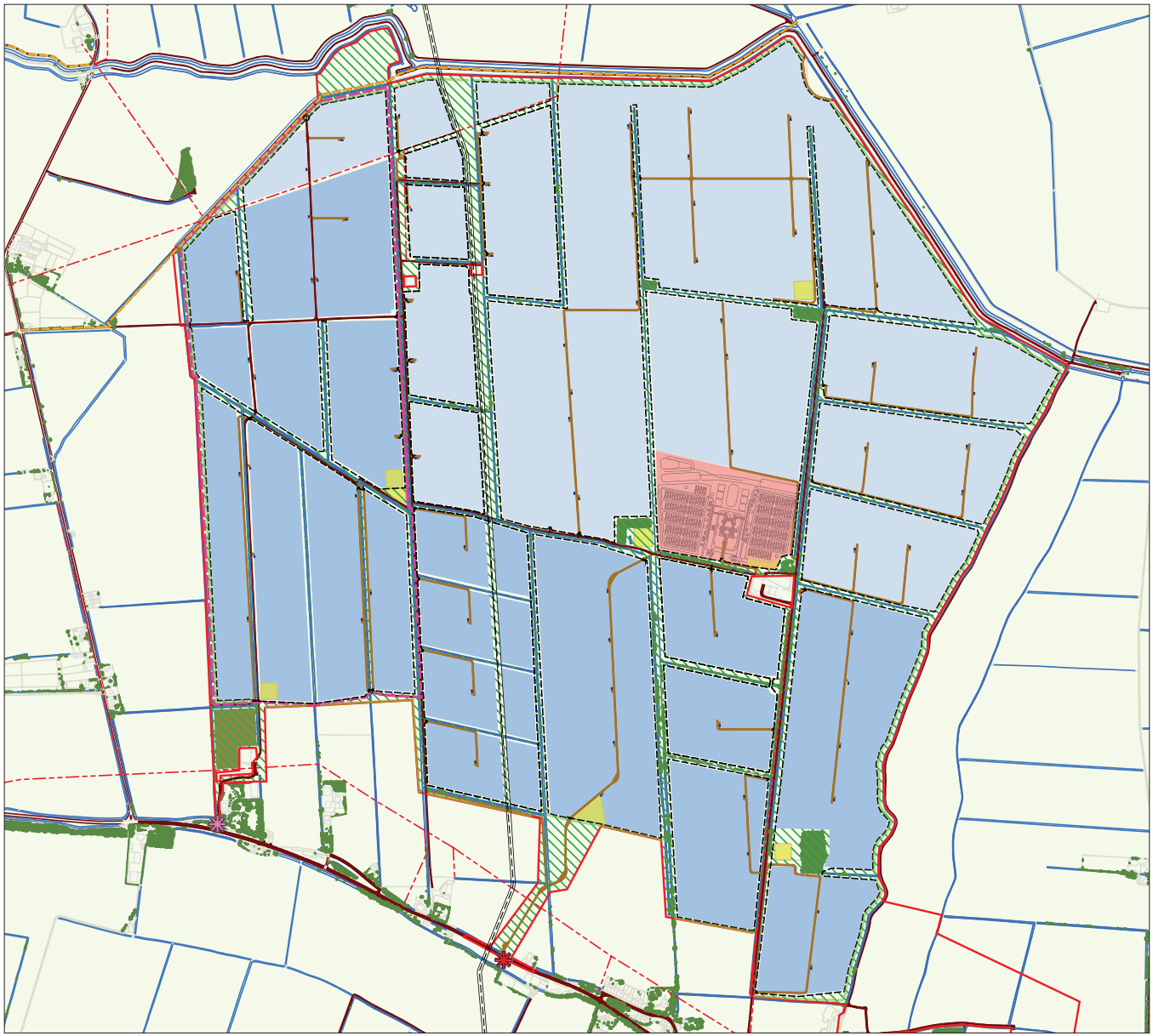
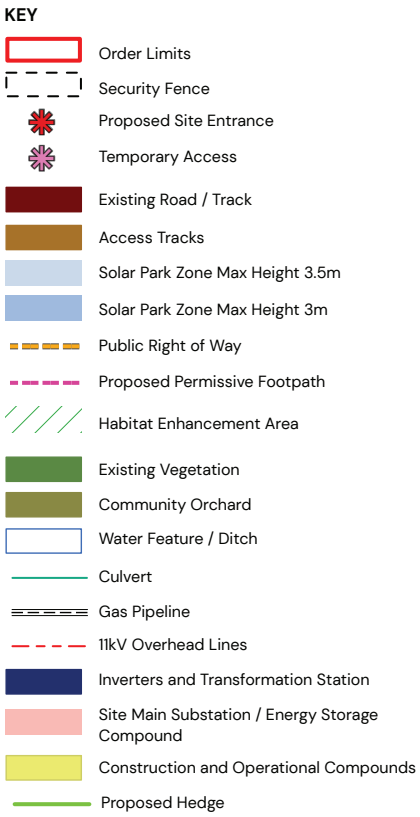


FIGURE 4: INDICATIVE SITE LAYOUT



- Onsite 400kV Substation comprising a substation and control buildings: the Main Substation area will include up to 3no. main step up Transformers (15m x 10m x 12m), one of which will be an on-site spare; 4no. Auxiliary Transformers (4m x 4m x 4m); 4no. Distribution Substations (15m x 5m x 4m); 8 lighting column each less than 1m in area with a height of up to 6m; 1no. substation control room (12m x 5m x 4m).
- Fencing, gatehouses, and security measures: the fence will enclose the operational areas of the Energy Park site and is likely to be a metal mesh fence of approximately 3m in height.
- Internal access tracks.
- Community orchard.
- Permissive path.
- Construction of new access point onto highway.
- Landscaping including creation of new habitat areas.
- Construction areas, worker facilities, temporary compounds, and infrastructure.
- Digging of cable trench and laying cables for connection to the National Grid Bicker Fen Substation.
- Installing access points along the Cable Route Corridor for the grid connection.
- Extension of National Grid Bicker Fen Substation and installation of above ground equipment.

ONSITE AND OFFSITE CABLE ROUTE CORRIDOR

The onsite cabling will connect the solar panels and the ESS to the onsite 400kV substation. There will also be cabling connecting buildings and equipment. All of this cabling will be laid below ground. Cables will then

leave the substation (400kV) and run to National Grid Bicker Fen Substation via the Cable Route Corridor. It is estimated that there will be approximately 50km of onsite cabling laid through this Proposed Development.

ACCESS

There are number of access points into the Energy Park site from the A17, the existing access point near the 'Build-A-Future East Heckington' facility at Elm Grange is proposed to be used for the initial phase of construction. The initial phase of construction will include the construction of a new point of access onto the Energy Park Site also from the southern boundary and would form a new access point off the A17. This new access point will be used for the remaining stages of the construction process and the operational activities for the Energy Park site. The access was approved for the wind turbine application but not built out. It offers a greater distance from properties compared to using one of the existing site accesses.

The proposed access is shown on **Figure 5** (document reference 6.2.4)**.**

BICKER FEN SUBSTATION WORKS

The electricity generated will be exported via a connection from the Energy Park Site to the existing National Grid Electricity Transmission (NGET) 400kV Bicker Fen Substation. This will be done via an underground cable laid within the Cable Route Corridor.

The connection will require an extension to the existing substation at the National Grid Bicker Fen Substation. This extension will be to the south-west of the existing substation site. The area of land required for the Heckington Fen element of the extension is up to 145m x 45m and 15m (at its maximum width and height and subject to National Grid's design). This extension will include a new generation bay, a new generation bay control room amid a section of perimeter access road. Within the new Generation Bay will be electrical equipment required for connection to the Transmission system. The new equipment will look similar to the equipment already installed at the National Grid Bicker Fen Substation site and will take up an area approximately 55m x 30m x 15m.

CONSTRUCTION

It is currently anticipated that (subject to the necessary consents being granted) construction work will commence, at the earliest in the Spring of 2025 and will run for 30 months. The earliest the Proposed Development will commence commercial operation is anticipated to be Autumn 2027.

The types of construction activities that may be required include (but are not limited to):

- Importing of construction materials;
- Culverting some ditches on the Energy Park site;
- The establishment of the construction compound(s) – these will likely move over the course of the construction process as each phase is built out, a maximum of 6 are proposed;
- Creation of a new access point for the Site (A17) – this will be one of the first items within the construction programme to ensure that the majority of the construction traffic enters the Energy Park site from this new access point;
- Installing the security fencing around the Energy Park site;
- Importing the PV panels and the energy storage equipment;
- Erection of PV frames and modules;
- Digging cable trenches and laying cables onsite;

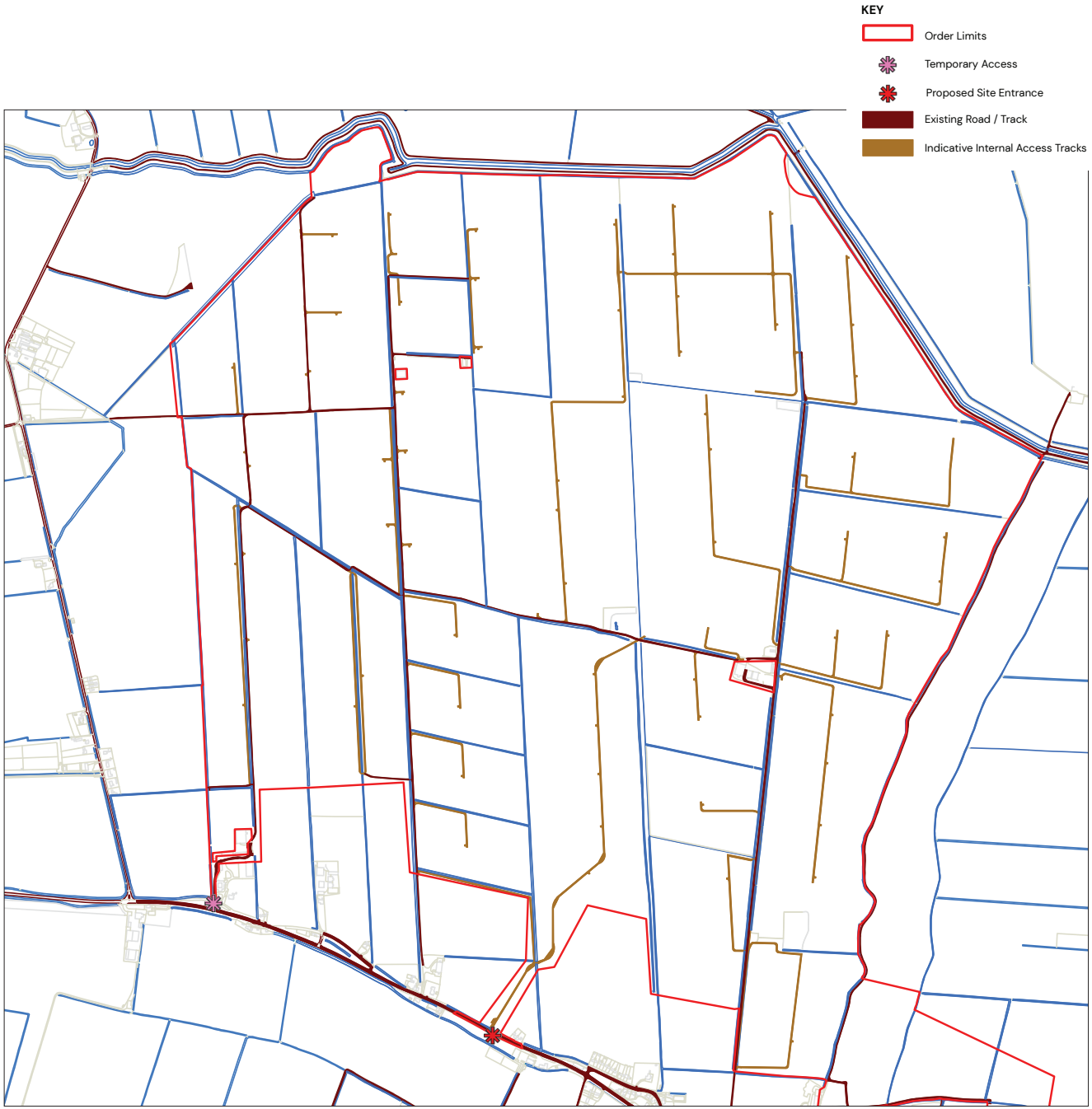


FIGURE 5: PROPOSED SITE ACCESS AND INTERNAL TRACKS

- Installing inverter/transformer cabins;
- Construction of onsite electrical infrastructure for the export of generated electricity
- New habitat creation;
- Creation of the permissive path;
- Digging of cable trench and laying cables for connection to the National Grid Bicker Fen Substation within the Cable Route Corridor;
- Installing above ground grid cable access points along the offsite Cable Route Corridor;
- Improving existing access points off Highways for construction access for Cable Route Corridor;
- Installing new technical equipment within an extension to the National Grid Bicker Fen substation;
- Planting new Community Orchard; and
- Creating new ecological habitats within the Habitat Enhancement Areas.

OPERATION AND DECOMMISSIONING

Once operational human activity on the Energy Park site will be minimal and would be restricted principally to vegetation management, equipment maintenance and servicing, replacement of any components that fail, monitoring to ensure the continued effective operation of the Proposed Development and the shepherd gaining access to the Energy Park site for managing the flock. The operational life of the Proposed Development is to be 40 years and decommissioning is therefore estimated to take place no earlier than 2067. Decommissioning is expected to take in the region of 6-18 months and will be undertaken in phases. All PV modules, mounting poles, cabling above 1m below ground (on and off site) (any cabling buried 1m+ below ground will not be removed at decommissioning), substations, energy storage equipment, inverters, transformers etc would be removed from the Proposed Development. These items would be recycled or disposed of in accordance with good practice and market conditions at the time. It is anticipated that after the 40 years of operation the whole of the Energy Park site will revert to its current use and be used by the Landowner, likely for agricultural operations of their choice, and determined by the global markets at that time.

ALTERNATIVES

The layout of the Proposed Development has evolved iteratively taking into consideration environmental effects, the planning and environmental policy objectives and scheme functionality as well as feedback from stakeholders and non-statutory public consultation (informal and formal) between October 2021 and December 2022.

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

The main alternatives to the Proposed Development which the Applicant has considered comprise:

- The 'No Development' Alternative;
- Alternative Designs/layouts;
- Alternative Sites;
- Alternative Cable Route Corridors; and
- Alternative Technologies.

The 'No Development' alternative would result in the loss of opportunity for providing much needed renewable energy generation within the UK and the Energy Park site would continue to be in primarily agricultural use. No further assessment has been undertaken for the 'No Development' scenario because this option is not considered a reasonable alternative to the Proposed Development as it would not deliver the additional electricity generation and electricity storage proposed.

A back-check and review of some thirteen sites with associated cable routes were considered for the location of the Proposed Development, however none of these were considered to offer a viable alternative. The Energy Park site was chosen as a suitable site for a number of reasons including; a landowner agreement already being in place, the Energy Park site is neatly contained with a single landowner, the orientation of the land and its open nature makes the Energy Park site suitable for efficient energy generation, there are no environmental designations within or in close proximity to the Energy Park Site and the site provides an economically achievable grid connection.

Alternative technologies which have been considered include onshore wind, ground mounted solar with a tracking panel system, agrivoltaics (with the possibility of growing crops underneath the solar panels), tidal power, offshore wind and hydroelectric storage. These technologies were assessed against the site and were not considered feasible due to the nature and location of the site or were not considered economically viable for the Energy Park site.

As part of the iterative EIA and design process, the design of the Proposed Development has evolved to take account of various environmental constraints and opportunities over many years, including previously approved planning applications. In this respect, environmental desktop and on-site reviews, interim assessments of the emerging Proposed Development and relevant knowledge gained from environmental baseline surveys and extensive consultation with consultees, have influenced the evolution of the proposals. In adopting this iterative design process, this has enabled the early identification of mitigation measures which have then become inherent in the design.

In essence, over the period of the development of Indicative Site Layout (document reference 6.2.2), shown in **Figure 4**, and the associated environmental work, the design of the Proposed Development has been influenced by the key constraints and opportunities, which in turn have helped refine and structure the scheme to the parameters now seeking approval.

LANDSCAPE AND VISUAL AMENITY

The Landscape and Visual Amenity chapter of the ES (document reference 6.1.6) has sought to determine the effects upon the identified landscape character and visual receptors and determine whether such effects would be significant. In line with best practice and policy requirements, it considers the effects during the construction, operation, and decommissioning stages.

The Proposed Development encompasses the Energy Park, including the Onsite Substation and Energy Storage System and Cable Route Corridor, Off-site Cable Route Corridor, and National Grid Bicker Fen Substation Extension Works. The Energy Park comprises solar modules infrastructure, onsite cabling, ancillary infrastructure, and the Onsite Substation and Energy Storage System, and is located to the north of the A17 across Heckington Fen. The Off-site Cable Route Corridor and National Grid Bicker Fen Substation Extension Works are located south of the A17 and within Bicker Fen.

This Chapter of the ES (document reference 6.1.6) has considered the Proposed Development in terms of its maximum parameters: the extent and height of the solar modules, substation elements, and fencing. This Chapter (document reference 6.1.6) has also set out the main policies and guidance relevant to landscape and visual matters based on the Overarching National Policy Statement for Energy (EN-1) and National Policy Statement for Renewable Energy Infrastructure (EN 3) and their current drafts. In addition, policies provided in the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) have also been reviewed to inform the approach and assessment work. The provided assessment is based on established best practice methodologies.

BASELINE CONDITIONS

The Proposed Development is not located within any national statutory protected landscape designations. It does not lie within any regional or local non-statutory landscape designations, either. It is not considered to be of high value in the context of the National Planning Policy Framework (NPPF).

The Order limits falls within National Character Area 46 The Fens.

The North Kesteven Landscape Character Assessment, prepared by David Tyldesley and Associates for North Kesteven District Council, has been reviewed. The Energy Park has been identified as falling within The Fens Regional Landscape Character Type in the east of the district, and the Fenland Landscape Character Sub-Area.

The Off-site Cable Route Corridor, and National Grid Bicker Fen Substation Extension Works has been identified as being located within the Landscape Type (LT) A Reclaimed Fen and more specifically its Landscape Character Area (LCA) A1 Holland Reclaimed Fen, as identified within the Landscape Character Assessment of Boston (2009) published by Boston Borough Council.

With regard to the visual receptors, receptors in East Heckington, road users associated with Sidebar Lane and the A17, the railway line between Heckington to the west and Boston to the east, and nearest PRoWs have been considered relevant, based on the preliminary assessment carried out at the PEIR stage and as confirmed in this Chapter of the ES (document reference 6.1.6).

The assessment has reviewed the local PRoWs, shown on **Figure 6,** located at varying distances and offering a variety of views. Those that have been judged to be

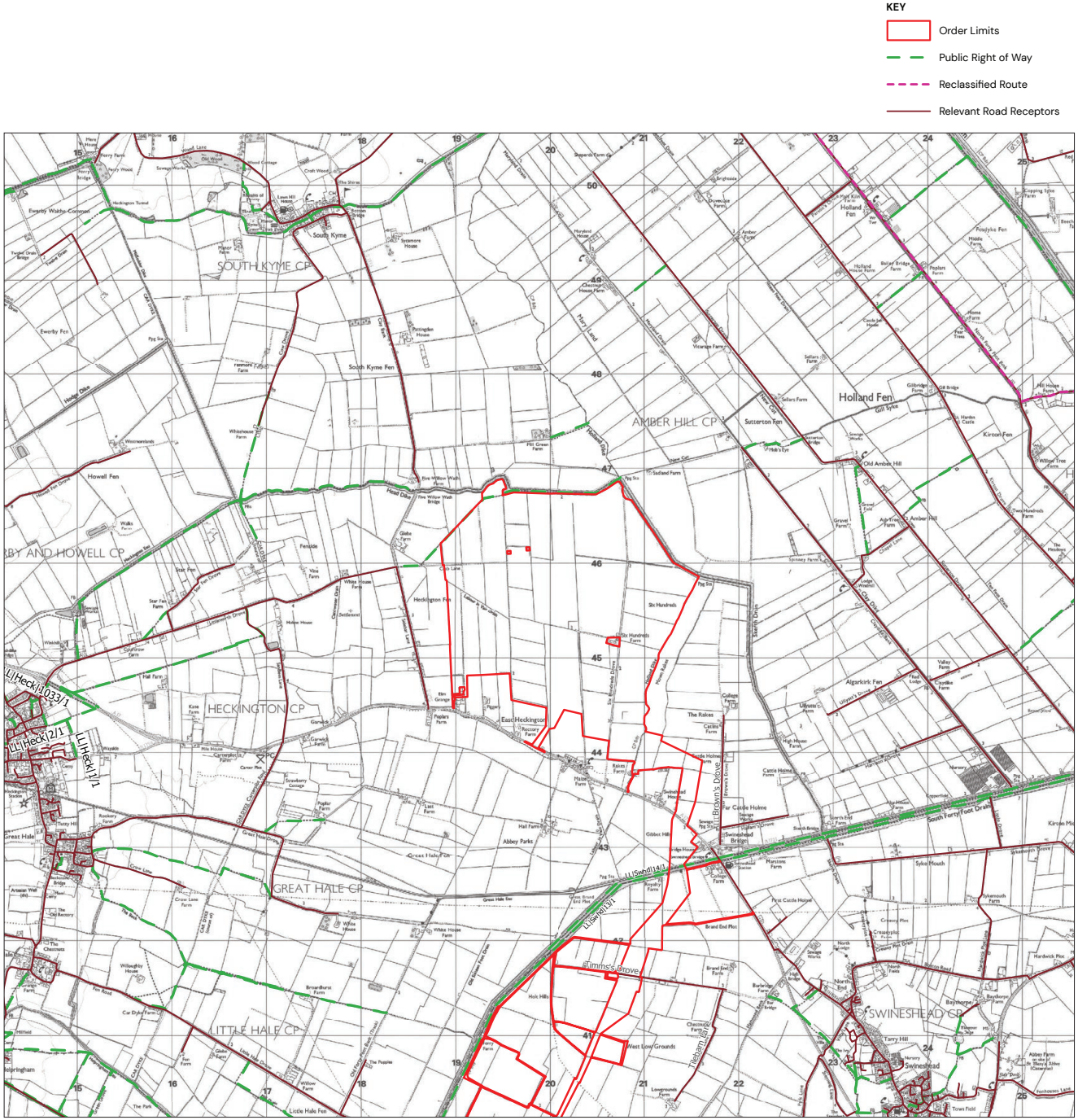


FIGURE 6: VISUAL RECEPTORS PLAN – ENERGY PARK

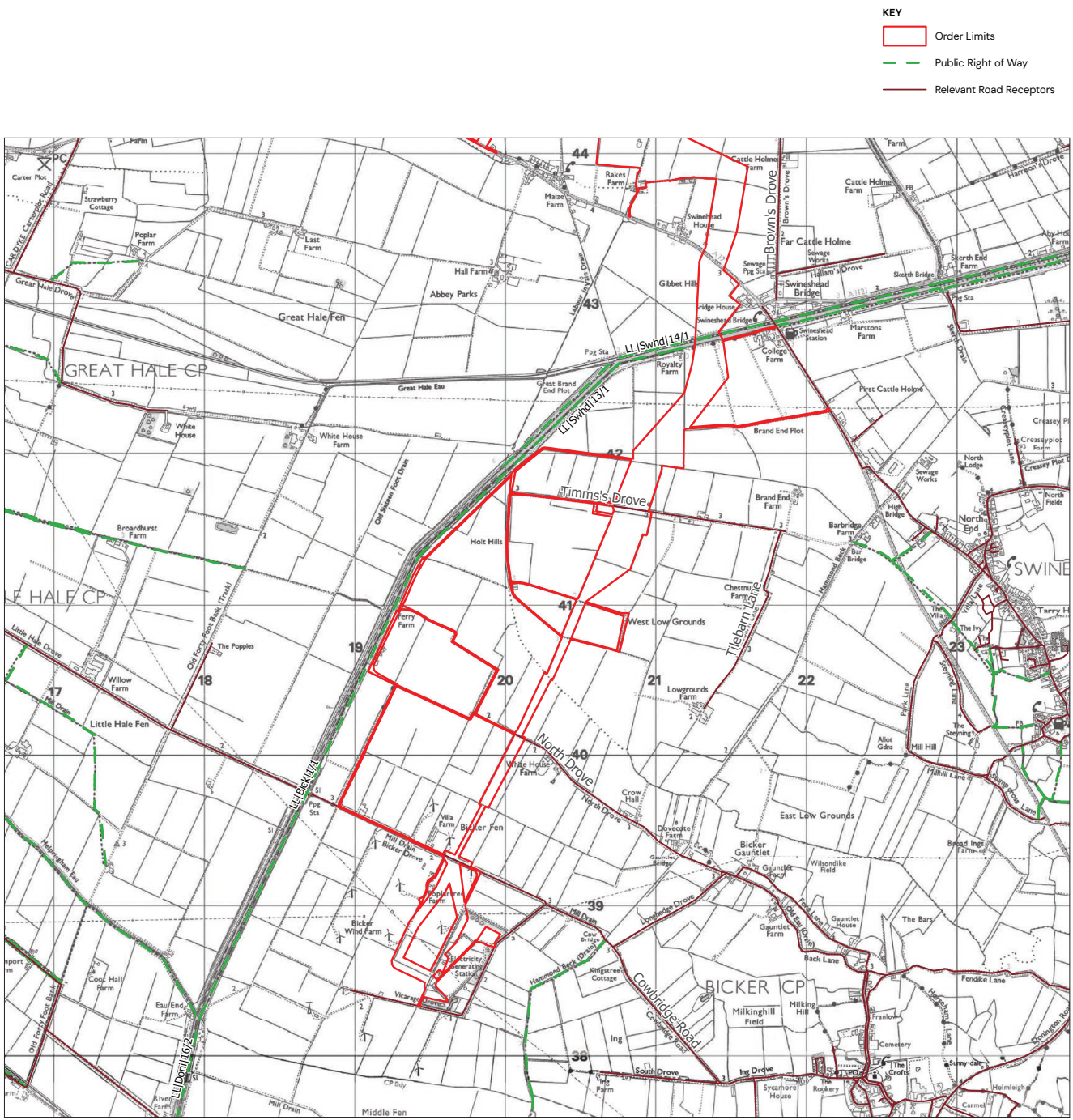


FIGURE 6: VISUAL RECEPTORS PLAN – OFF-SITE CABLE ROUTE CORRIDOR AND NATIONAL GRID BICKER FEN SUBSTATION EXTENSION WORKS

relevant to this process have been listed below:

- Public Footpath SKym/2/1 along the western section of Head Dike.
- Public Footpath Heck/15/1 between Sidebar Lane and the Order limits
- Public Footpath Swhd/14/1 leading from Swineshead Bridge along the railway line.
- Public Footpath Ambe/4/1, at Claydike Bank, near Amber Hill, Sutterton Fen.

Based on the preliminary works, further desktop and field work, and consultation, a total of 23 no. of viewpoints have been selected. They include locations discussed with North Kesteven District Council, Boston Borough Council, and Lincolnshire County Council during the consultation process through the Scoping Report, and PEIR stage. The identified viewpoints are not intended to cover every possible view of the Proposed Development, but rather they have been selected to be representative of a range of receptor types. The viewpoint locations are shown on **Figure 7**.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Construction Phase

This Chapter of the ES (document reference 6.1.6) has concluded that the construction of the proposed Energy Park would bring about major beneficial significant effects upon the PRoW resource and hedgerow vegetation. No other landscape elements or features would be significantly affected by the Proposed Development during its construction phase.

In terms of landscape character, it has been assessed that the construction stage would result in temporary short term significant adverse effects upon the landscape associated with the Proposed Development and its immediate context up to approximately 500m away. Beyond this distance, the effects have been assessed as diminishing to minor, thus not significant, effects. Therefore, the wider surrounding landscape of The Fens Regional Landscape Character Type and the Fenland Landscape Character Sub-Area and the LT A Reclaimed Fen and more specifically its LCA A1 Holland Reclaimed Fen, would be subject to minor not significant effects.

The assessment has concluded that the construction stage of the Proposed Development would bring about major and significant effects upon the receptors at East Heckington, road users present along the highly localised sections of Sidebar Lane, those traveling along the railway line west from Swineshead Bridge as they cross the Off-site Cable Route Corridor and its immediate area, and users of Public Footpath SKym/2/1, Public Footpath Heck/15/1 (including its reconnected eastern section), and Public Footpath Swhd/14/1.

The identified effects have been considered to be highly localised and limited to certain static viewpoints and sections of the identified PRoWs and largely experienced in very close to close range views, of up to 500m away.

Operational Phase

The Energy Park of the Proposed Development has been assessed as potentially causing geographically highly limited yet significant adverse effects upon the character of The Fens Regional Landscape Character Type and the associated Fenland Landscape Character Sub-Area (identified in the published North Kesteven Landscape Character Assessment), within the Energy Park itself and its immediate landscape context of up to approximately 500m.

Beyond the immediate context, the approximate 500m

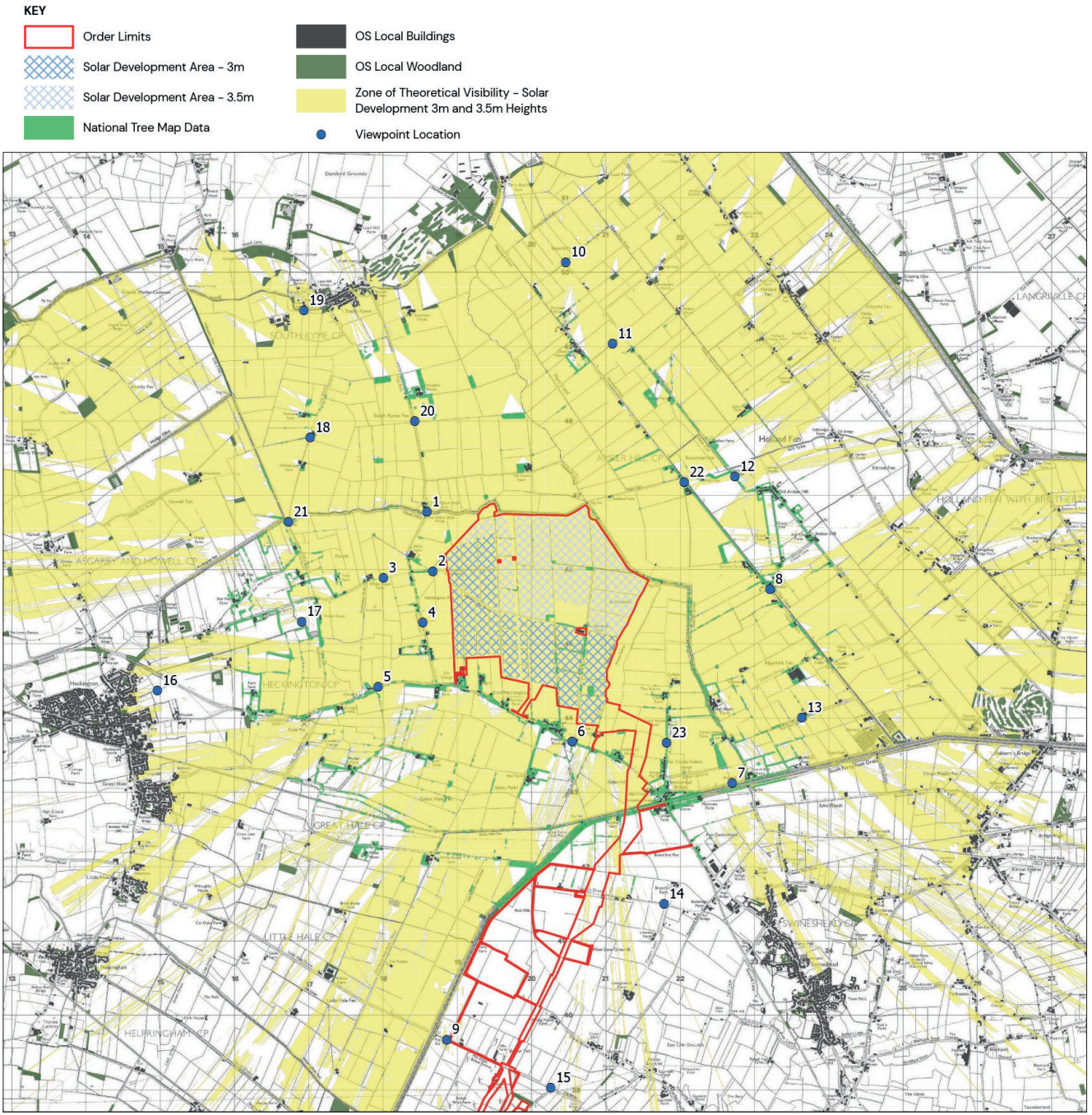


FIGURE 7: SCREENED ZONE OF THEORETICAL VISIBILITY – SOLAR AREAS AND PROPOSED VIEWPOINT LOCATIONS PLAN

distance from the Energy Park, the effects upon the character of the local landscape: the regional LCT The Fens and the associated Fenland Landscape Character Sub-Area, have been assessed minor, thus not significant.

No other landscape character receptors have been assessed as subject to significant adverse effects during the operational phase of the Proposed Development.

With regard to the visual receptors, the operational stage of the Proposed Development has been considered to bring about significant adverse effects upon the receptors within East Heckington, road users travelling along the central and southern section of Sidebar Lane and the following PRoWs:

- Public Footpath SKym/2/1.
- Public Footpath Heck/15/1 (including its reconnected eastern section).
- Permissive path within the Energy Park.

In terms of static receptors, the following viewpoints have been assessed as potentially experiencing significant adverse effects during the operational phase of the Energy Park, (shown on **Figure 7**):

- Viewpoint 1.
- Viewpoint 2.
- Viewpoint 4.
- Viewpoint 6.

See VP2a below as an example of the proposed development in year 1 and year 5 when proposed new planting has been able to establish.

No other visual receptors have been assessed as experiencing significant adverse effects during the operational phase of the Proposed Development.

LVIA PHOTOMONTAGES: VIEWPOINT 2A: EXISTING

LVIA PHOTOMONTAGES: VIEWPOINT 2A: YEAR 1

LVIA PHOTOMONTAGES: VIEWPOINT 2A: YEAR 5

Mitigation and Enhancement

The Proposed Development has incorporated a number of built-in mitigation measures developed through the iterative design process and additional mitigation measure addressing the assessment of potential significant effects carried out in this Chapter of the ES (document reference 6.1.6). From an LVIA point of view the following mitigation measures are considered to be the most relevant:

Embedded mitigation measures:

- Offsets from internal and boundary watercourses and vegetation are proposed to safeguard these features and to ensure continued maintenance access.
- Increased offset from properties No. 1 – No. 12 Council House in East Heckington, by approximately 250m, reducing the visual effects.
- Decrease in height of the solar modules from 4.5m to 3.5m in the northern and eastern parts and 3m in the western and southern parts of the Energy Park i.e., those closest to the residential receptors. Thus, reducing the visibility of the proposed solar modules.
- The proposed 132kV substations have been removed from the design of the Energy Park.
- Change to a single centralised Onsite Substation and Energy Storage System, increasing the distance to nearest residential receptors and the settlement of East Heckington.
- The indicative 132kV overhead cable route has been removed from the design of the Energy Park to reduce the degree of change and avoid potentially significant effects upon the higher number of receptors.

- Utilising the existing built form and tree vegetation associated with Six Hundreds Farm to provide context and screening, thus helping to assimilate this part of the Proposed Development into the landscape and views.
- The National Grid Bicker Fen Substation Extension Works are proposed to be located towards the south western corner of the existing National Grid Bicker Fen Substation. The context and surrounding tree vegetation greatly reduce the anticipated landscape character and visual effects.
- Use of metal mesh perimeter fencing (so-called '358' welded mesh panels to BS 1722-14 Fences) instead of palisade fencing. Optional, the use of deer style fencing could be considered, but given the distance from the closest residential receptors it is unlikely that such design change would reduce the anticipated scale of effects.

Additional mitigation measures:

- New hedgerow of varied height proposed along the perimeter of the Energy Park. The majority of the proposed perimeter hedgerows would be generally maintained at approximately 3m – 3.5m height,
- Taller section of perimeter hedgerow, approximately 5m in height, have been introduced to resemble overgrown hedgerows, and echo the character and screening potential of the existing hedgerows present along Six Hundreds Drove.
- In addition, the following enhancements have been incorporated into the Proposed Development:
- A small area of habitat enhancements between Head Dike and Public Footpath Heck/15/1. The area would remain open and undeveloped increasing the separation distance between the northern edge of the Energy Park and visual receptors to the north

and north west.

- New community orchard (2.15ha) has been proposed in the south western corner of the Energy Park, as a recreational and amenity resource for the local community.
- A currently inaccessible section of Public Footpath Heck/15/1 would be re-linked with Crab Lane reinstating access to the countryside.
- Public access would be further enhanced with an approximately 4km long permissive path from Heck/15/1 providing a circular route across the western part of the Energy Park and towards the recently opened education facility at Elm Grange and new community orchard.

CUMULATIVE AND IN-COMBINATION EFFECTS

Construction Phase

The review of the potential cumulative schemes has included schemes at varying distances and located in varied landscape contexts. Only three cumulative schemes have been considered relevant to this Chapter of the ES (document reference 6.1.6), based on their geographical relationship with the Proposed Development, context, and inter-visibility:

- Land at Little Hale Fen – Screening application ref 21/1337/EIASCR.
- Vicarage Drove [application ref B/21/0443].
- Land West of Cowbridge Road, Bicker Fen, Boston- Full Planning Application awaiting decision [application ref H04-0849-22 – South Holland District Council] [application ref B/22/0356 – Boston Borough Council].

This Chapter of the ES (document reference 6.1.6) has concluded that there is potential for significant cumulative landscape character effects upon the LT A Reclaimed Fen and more specifically its LCA A1 Holland Reclaimed Fen. For such significant effects to occur, however, the construction work on the Vicarage Drove scheme [application ref B/21/0443] and scheme at Land West of Cowbridge Road, Bicker Fen, Boston [application ref B/22/0356] would have to coincide with the construction of the Off-site Cable Route Corridor and National Grid Bicker Fen Substation Extension Works.

With regard to the cumulative visual effects, the assessment has concluded that receptors present at one viewpoint, Viewpoint 15, would be potential subject to significant effects due to the proximity to other cumulative schemes and extent of the proposed Off-site Cable Route Corridor.

Operational Phase

This Chapter of the ES (document reference 6.1.6) has concluded that there is no potential for any significant cumulative landscape character effects upon the LT A Reclaimed Fen and more specifically its LCA A1 Holland Reclaimed Fen, and no significant effects upon the Regional LCT The Fens and the associated Fenland Landscape Character Sub-Area, due to the physical and visual segregation, and nature of the proposed Off-site Cable Route Corridor and National Grid Bicker Fen Substation Extension Works. It has been assessed that the landscape between the Energy Park and the identified cumulative sites located across Bicker Fen would retain its agricultural character and would serve as a physical and visual buffer.

No visual receptors have been assessed as experiencing significant visual effects.

CONCLUSION

It is important to acknowledge that significant effects on landscape character and visual amenity are an inherent consequence of a new development of this type and scale. However, in this case, any potential for adverse effects has been judged to be considerably limited by the existing vegetation that characterises the close to medium range landscape. The proposed mitigation planting has the potential to considerably reduce such significant effects, which would be geographically highly limited, both in character and visual terms. Whilst certain elements of the Proposed Development would, inevitably, be more visible, for a scheme of its scale the residual landscape and visual effects arising are considered to be highly limited. Those effects which have been identified as being significant should therefore be balanced against the benefits of the Proposed Development.

RESIDENTIAL VISUAL AMENITY

This Residential Visual Amenity Chapter of the ES (document reference 6.1.7) has sought to determine the visual effects upon the identified residential receptors and whether or not the Energy Park would result in unacceptable consequences to living conditions such that consent should be refused in the public interest.

BASELINE CONDITIONS

The majority of the residential receptors identified within the defined 1km radii study area gain views towards the surrounding open countryside and the proposed Energy Park, shown in **Figure 8**. Views tend to be gained from front or rear elevations and this reflects the settlement pattern, which is strongly associated with the A17, Sidebar Lane, and Brown's Drove.

Not all of the properties, however, benefit from open and unrestricted views out. The majority of the analysed receptors have their views truncated by other built form, perimeter fencing associated with their property or adjacent dwellings, garden vegetation, roadside vegetation or intervening field boundary vegetation, or are affected by the movement associated with the A17. Therefore, the visual baseline is varied, and the nature and character of the views varies to a degree, particularly from the upper floor windows which tend to be more open. Views gained from side elevations tend to be oblique to very oblique or gained at right angle, thus the appreciation of the Energy Park is greatly diminished.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The findings of this Chapter of the ES (document reference 6.1.7) demonstrate that the Energy Park would cause some localised significant visual effects but such effects would not be overbearing. In other words, the properties would continue to provide an attractive outlook and good living environment, from a visual point of view, albeit affected by the proposed Energy Park.

The residents would continue to benefit from views in other directions, gained from the remaining unaffected elevations, and parts of their curtilage not affected by the proposed Energy Park. The properties would remain an attractive place to live when judged objectively, and would not be subject to any overbearing effects.

MITIGATION AND ENHANCEMENT

The embedded mitigation measures include the refinements to the layout of the proposed solar modules (reduction in their extent near No. 1 – 12 Council Houses), and relocation of the proposed Onsite Substation and Energy Storage System away from the identified residential receptors. In addition, the proposed National Grid Bicker Fen Substation Extension would be located towards the south western corner of the existing National Grid Bicker Fen Substation, which benefits from a substantial amount of vegetative cover and limited inter-visibility with the surrounding landscape, and indeed the nearby residential receptors. The change from palisade style fencing to metal mesh perimeter fencing is also considered to be appropriate.

CUMULATIVE AND IN-COMBINATION EFFECTS

Due to the location of the proposed Energy Park, no cumulative or -combination effects have been identified.

CONCLUSION

The proposed Energy Park would cause some highly localised significant visual effects. The residual effects, following the implementation and successful establishment of the proposed additional mitigation measures, **any residual effects are not significant** in EIA terms.

As evidenced this Chapter of the ES, the visual amenity of the identified residential receptors would not be unacceptably harmed. The properties would remain an attractive place to live when judged objectively, and would not be subject to any overbearing effects.

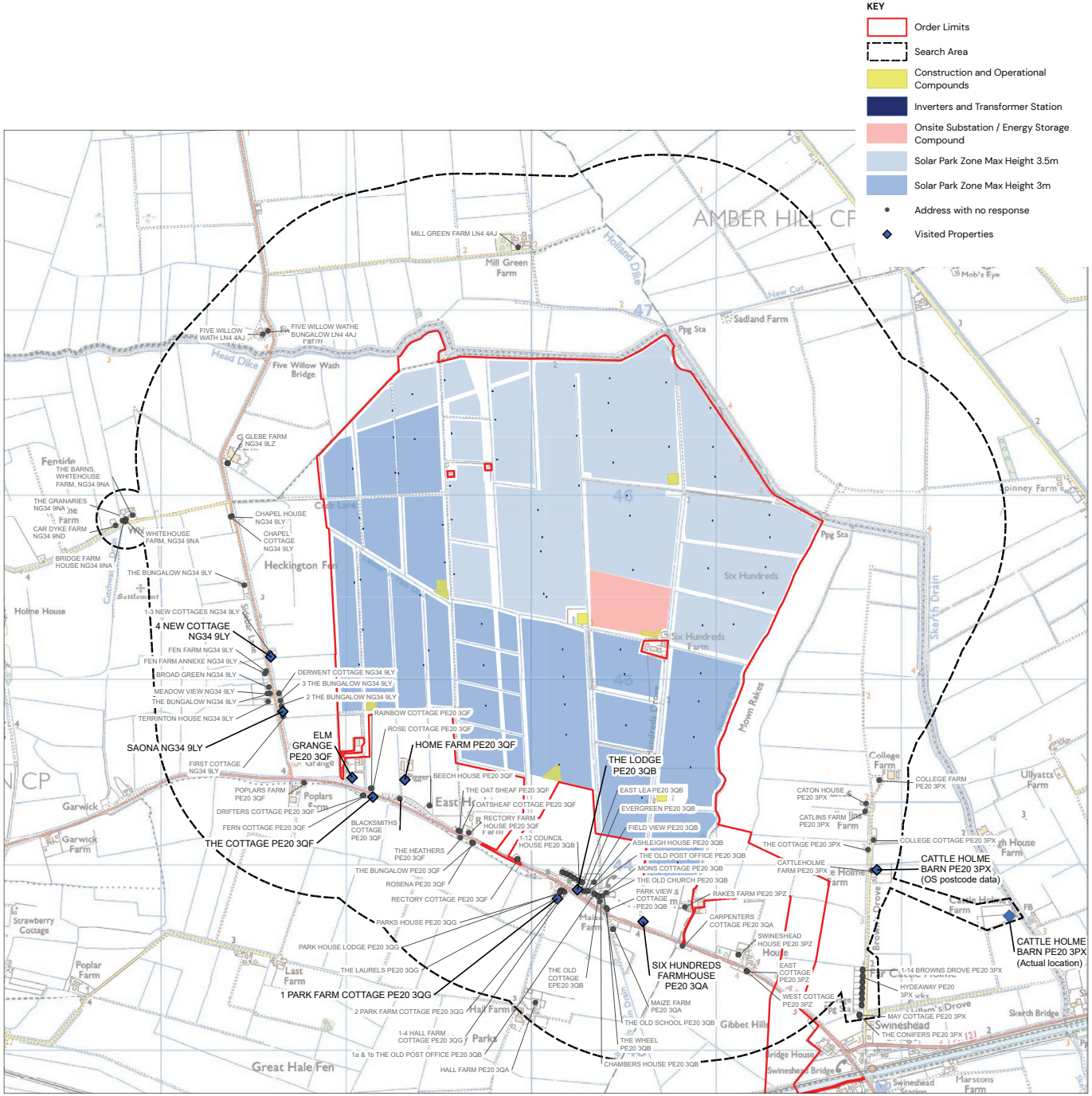


FIGURE 8: ENERGY PARK SITE LOCATION PLAN AND RECEPTOR LOCATIONS

ECOLOGY AND ORNITHOLOGY

The Ecology and Ornithology Chapter of the ES (document reference 6.1.8) has identified and assessed the potential impacts and effects of the proposed development of a 524ha Energy Park and Off-Site Grid Route Corridor and Substation Extension at the National Grid Bicker Fen Substation on ecology, ornithology and nature conservation value during construction, operation, and decommissioning.

Habitat and protected species surveys have been completed on the Energy Park site and the Cable Route Corridor including at Bicker Fen Substation.

This Chapter of the ES provides an assessment of the potential direct and indirect effects on nature conservation designations, important habitats and protected species. It considers avoidance design measures, mitigation, management activities to minimise any potential effects and potential enhancements.

BASELINE CONDITIONS

The Energy Park and associated Off-Site Grid Connection will be situated within an intensively farmed landscape of low nature conservation value. The substation extension is within the National Grid land boundary, alongside the existing Bicker Fen Substation. The large fields associated with the remainder of the Proposed Development are divided by wet ditches and Internal Drainage Board (IDB) managed watercourses. There are no sites of international, national or local importance within or adjacent to the Energy Park site (see **Figure 9**). There is one Local Wildlife Site (The South Forty Foot Drain) along the route of the Off-Site Grid Connection. The Wash SPA is approximately 15km from the Proposed Development. The data searches did not reveal the presence of any protected species within the Energy Park. There are records of otter from the South Forty Foot Drain. There are no records of Water Vole within 1.5km of the Proposed Development from the last two years.

There are limited number of gappy species poor hedgerows on the Energy Park site, and a small number trees mainly restricted to plantation woodlands and small number of isolated trees. The wet drainage ditches provide potentially suitable habitats for Water Vole but no evidence of use by this species was found within this area. The drainage ditches within the Energy Park are suitable habitat for otter but no evidence of otter was recorded within this area. There is an active Badger population within the Energy Park site but not along the Off-Site Grid Connection Route. There are a number of common farmland birds using the Energy Park Site. Two species of birds that contribute to the Wash SPA were found wintering in the area including a small flock of pink-footed geese feeding on one section of Grid Connection route. There is a small bat roost in derelict farm building at Six Hundreds farm. There was a low level of bat activity recorded across the site of up 12 species although majority of bat activity was by Common pipistrelle. The trees in the woodland onsite are of insufficient age to provide suitable roots site for bats or nest sites for hole nesting birds. There were no rare arable plant species recorded within the Proposed Development area and typical and common aquatic plants species within the wet ditches through the Proposed Development area.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

During construction of the Energy Park there is a risk of dust deposit or silt runoff or disturbance to boundary habitat, woodlands, ponds, and wetlands. There is also the risk of disturbance to wintering birds, nesting birds, European Hare, and Badger during construction. With the implementation of mitigation measures embedded into the design of the Proposed Development, discussed in further detail in the following section, no significant adverse effects are anticipated. A significant

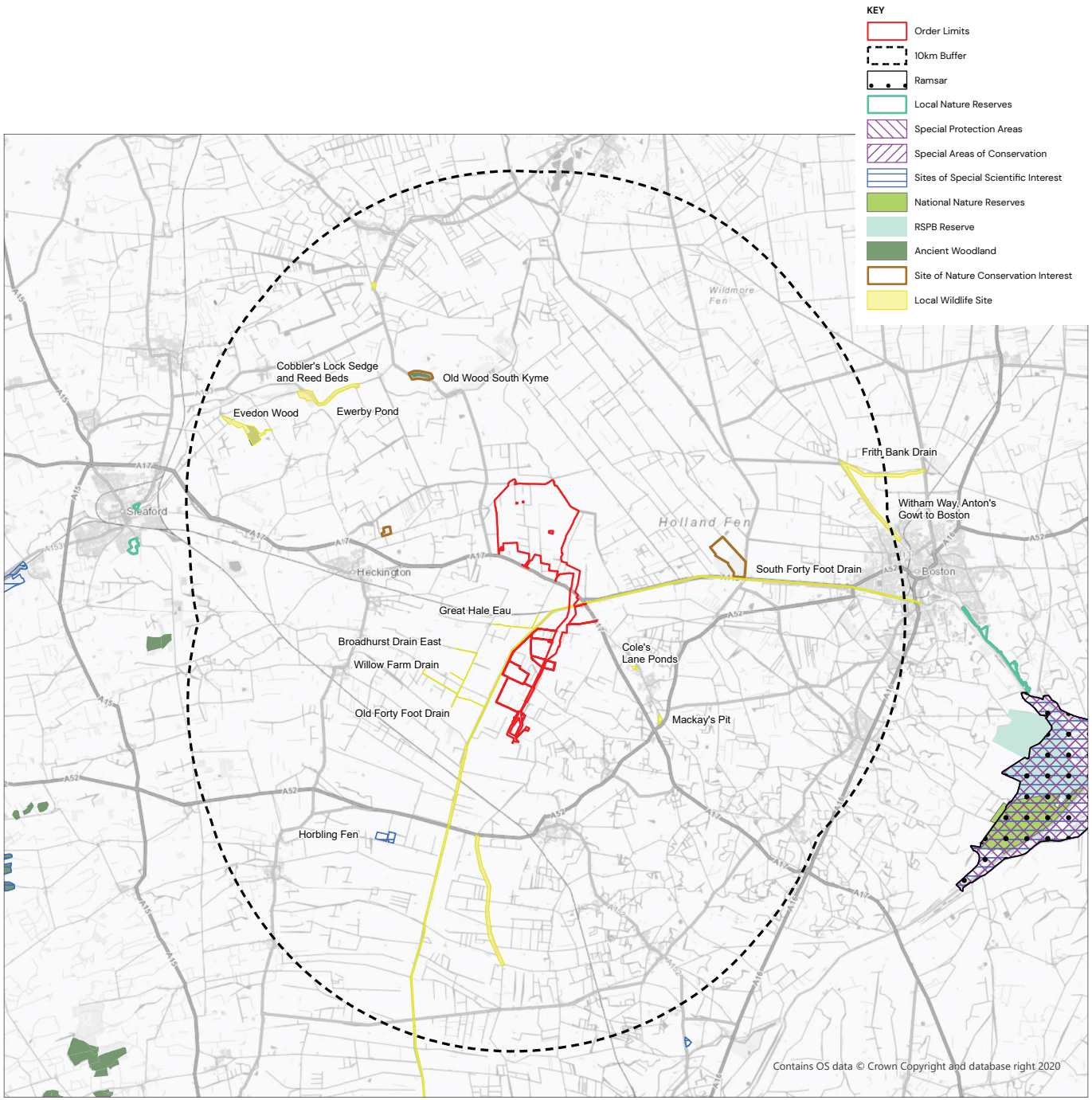


FIGURE 9: STATUTORY AND NON STATUTORY DESIGNATED SITES

beneficial effect during construction is anticipated as a result of the cessation of the application of fertilisers, herbicides and pesticides leading to an improvement in the water quality within the drains on the Energy Park site, this is considered to be a significant effect at the local level. The increase in boundary habitat and grasslands as a result of the Energy Park development will create a biodiversity benefit at the local level which is considered a significant beneficial effect in EIA terms.

Once operational the potential effects of the Proposed Development include changes in the level of disturbance to species, loss / gain of habitat, habitat degradation, changing structure of the area, barrier effects of fencing, possible shading and low levels of increased noise from electrical plant. No significant adverse effects are anticipated as a result of the Proposed Development. The Energy Park would result in a number of significant beneficial effects, the change from intensive arable to mosaic to grassland habitat will be a significant biodiversity benefit at least at the local level. There will be a significant beneficial effect as a result of grassland creation and also as a result of increase in boundary habitat. The change from arable land to grassland will also result in the elimination of fertiliser, herbicides and pesticides which is likely to have a significant beneficial effect on wetlands and watercourses in the surrounding area

MITIGATION AND ENHANCEMENT

The initial design and construction methods will ensure negative effects are minimised from the outset. The initial design of the Energy Park ensured a 9m stand off from all IDB watercourses and 8m from all other drains (to the fenceline) which will ensure protection of water vole should they re-colonise the Energy Park Site and minimise the risk of silt run-off during construction.

Directional drilling to lay the new Grid Cable, under the South Forty Foot Drain will ensure no negative effects on the Local Wildlife Site.

The design also includes the creation of 66.73ha of species rich grasslands and 2.15ha of traditional orchard managed specifically for nature conservation, within the Energy Park Site. These high quality grassland will be managed to maximise their value for ground nesting farmland birds, bees, butterfly and other invertebrates. These grasslands will also provide extensive foraging habitat for Brown Hare and Badger.

A number of bat roost boxes of different designs will be placed at appropriate locations around the Energy Park.

Beneath the solar panels 435ha of intensive arable farmland will be converted to sheep pasture. The conversion of the land from intensive arable to grass pasture will reduce the runoff of agri-chemicals and topsoil into in the Wash SPA/SAC/SSSI via the drainage network. There will be an overall significant residual, locally beneficial effect on biodiversity of area. The preliminary Net Biodiversity Gain calculation will achieve the minimum 10% net gain in line with legislation. The Proposed Development is likely to deliver a greater biodiversity net gain than 10%.

The implementation of a comprehensive Construction and Environmental Management Plan (CEMP) will ensure there is no accidental damage to any hedgerow, woodland or watercourses during construction. The implementation of this CEMP will ensure there is no significant disturbance or risk of injury or mortality of breeding farmland birds, disturbance to wintering wetland birds or disturbance and risk of injury to Bats, Badger or European Hare.

CUMULATIVE AND IN-COMBINATION EFFECTS

A review and assessment of other renewable projects in the area has identified no significant cumulative negative effects. Intensive agriculture and climate change have been identified by the UK State of Nature Report as the most significant pressure on wildlife in the UK today. The creation of large areas of renewable energy generation and large area of species rich grassland will lead to a net biodiversity gain of over 10%.

CONCLUSION

The majority of the land is considered to be of low nature conservation value. Any temporary disturbance or risk of harm can be minimised through the implementation of a comprehensive CEMP. The initial design of Energy Park and on-going management will ensure that there is an overall biodiversity gain, and **no residual significant effects**.

HYDROLOGY, HYDROGEOLOGY, FLOOD RISK AND DRAINAGE

This Chapter of the ES (document reference 6.1.9) has set out the assessment of likely significant effects of the Proposed Development upon hydrology, hydrogeology, flood risk and drainage arising from the construction, operation and decommissioning of the Proposed Development.

The assessment was supported by the collection and interpretation of data and information requested from the Environment Agency (EA), Black Sluice Internal Drainage Board (BSIDB) and North Kesteven District Council (NKDC). This information has been used to characterise the baseline water environment and identify receptors.

BASELINE CONDITIONS

The Proposed Development is situated on the Lincolnshire Fens, a coastal plain in the east of England which comprises a large area of broad, flat marshland.

The principal watercourses in the area are the River Witham and South Forty Foot Drain, located approximately 4km and 1.5km to the east and south of the proposed Energy Park respectively. Both are classified as Main River and therefore under the jurisdiction of the EA. The Energy Park itself is bound along the northern boundary by the Head Dike/ Skerth Drain (which is also classified as Main River) and the Energy Park site area is bisected by a number of ditches/drains, some of which are operated and maintained by the BSIDB. Water levels within the network of ditches/drains are managed through pumping to the Head Dike/Skerth Drain.

The Energy Park Site is currently in agricultural use and therefore comprises permeable surfaces, such that surface water run-off generally infiltrates into the ground or is routed to the various ditches/drains that bisect the site. Similarly, the Off-site Cable Route Corridor traverses an area characterised by agriculture.

According to the EA's flood map, the majority of the Energy Park Site is located within Flood Zone 3 (High Probability – land having a 1 in 100 or greater annual probability of fluvial flooding) and benefits from flood defences offering a 1 in 10-year standard of protection.

The Off-site Cable Route Corridor and National Grid Bicker Fen Substation are also shown to lie within Flood Zone 3.

The EA 'Flood Risk from Surface Water Map' shows that the majority of the Energy Park and the Off-site Cable Route Corridor and National Grid Bicker Fen Substation are at 'Very Low' risk of surface water flooding.

The EA 'Flood Risk from Reservoirs Map' shows the area that may be affected by flooding as a result of a breach of a large, raised reservoir i.e. capable of storing over 25,000 cubic metres of water above the natural level of any part of the surrounding land. According to EA records, the nearest reservoir is located approximately 8km to the west of the Energy Park, between Heckington and Sleaford. The EA's map shows that, when river levels are normal, only limited and localised areas along the northern boundary of the Energy Park adjacent to Head Dike are affected by reservoir flooding. The Off-site Cable Route Corridor and National Grid Bicker Fen Substation are unaffected by reservoir flooding when river levels are normal.

British Geological Survey mapping indicates that the Energy Park, Off-site Cable Route Corridor and National Grid Bicker Fen Substation are entirely underlain by superficial and bedrock deposits comprising predominantly low permeability clay. EA aquifer designation maps categorise both the superficial deposits and bedrock deposits as 'unproductive' (i.e. areas comprised of rocks that have negligible significance for water supply or baseflow to rivers, lakes and wetlands). The completed ground investigation did

encounter layers of granular material within the tidal flat deposits which contained groundwater, however these layers are limited in extent and unlikely to contain significant volumes of groundwater.

The Proposed Development lies within the 'Black Sluice IDB draining to the South Forty Foot Drain Water Body', which is designated as 'heavily modified' (substantially changed in character as a result of physical alterations by human activity). The environmental (Water Framework Directive) objective for the water body is to achieve 'good ecological potential'. The overall water body classification is currently 'Moderate' potential (Cycle 2, 2019).

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The assessment found that construction activities have the potential to impact upon the surface water drainage regime and increase surface water run-off from the Proposed Development. Similarly, the assessment identified the potential for construction activities to give rise to the contamination of surface water resulting from spilled hydrocarbons/petrochemicals from construction plant and the mobilisation of silts and contaminants during soil stripping and earthworks operations, potentially leading to increased silt loading in watercourses.

The assessment also noted that construction works in close proximity to the flood defences have the potential to affect the stability of the embankment and therefore the structural integrity of the defences. Also, floodplain storage and flood flows/flood routing processes may be affected as a result of construction activities and earthworks operations within the floodplain, such that there is potential to increase flood risk locally and downstream.

However, the assessment found that these likely effects are Not Significant, on account of 'mitigation by design'/ embedded mitigation measures that are either 'built-in' to the proposals from the outset or secured through a DCO requirement, these embedded mitigation measures are detailed in the following section.

Potential construction phase effects upon groundwater aquifers were found to be Not Significant, principally on account of the low permeability of the ground and the unproductive nature of the superficial and shallow bedrock aquifers.

During the operational phase of the Proposed Development, the assessment found that an increase in the impermeable area within the Energy Park Site has the potential to increase surface water run-off to the adjacent drains, potentially increasing flood risk elsewhere. Similarly, the assessment identified the potential for the contamination of surface water entering the local surface water drains, resulting from the flushing of silts and hydrocarbons from areas of hardstanding. However, the assessment found that these likely effects are Not Significant, on account of 'mitigation by design'/ embedded mitigation measures that are either 'built-in' to the proposals from the outset or secured through a DCO requirement.

The assessment also notes that the raising of ground levels to locate flood-sensitive infrastructure above the flood level has the potential to reduce the volume of storage available within the floodplain. However, the assessment notes that any such ground raising would be very small scale and localised and located within a significant expanse of floodplain. On this basis, it is concluded that the likely effects are Not Significant.

Potential operational phase effects upon groundwater aquifers are found to be Not Significant, principally on account of the low permeability of the ground and the unproductive nature of the aquifers.

The electrical connection to the National Grid Bicker Fen Substation comprises an underground cable that would not require water, nor be sensitive to flood risk. The assessment therefore concluded that, during the operational phase, it would not give rise to impacts upon hydrology, hydrogeology, flood risk and drainage.

MITIGATION AND ENHANCEMENT

Potential effects arising from construction of the Energy Park, off-site cable route and works at the Bicker Fen Substation are likely to be localised and temporary and controlled by embedded mitigation measures. The effects are therefore Not Significant and there is no requirement for additional mitigation measures.

With the implementation of embedded mitigation measures, such as the requirement for a Construction Environmental Management Plan (CEMP) detailing best practice methods (appropriate storage of chemicals and site preparation) to be adopted during the construction phase and the use of surface water management infrastructure once operational, the effects associated with operation of the Energy Park are Not Significant. On this basis, there is no requirement for additional mitigation measures over and above those identified.

The electrical connection within the limits of the Off-site Cable Route Corridor comprises an underground cable such that, during the operational phase, it would not give rise to impacts upon hydrology, hydrogeology, flood risk and drainage.

At the end of its operational life, the decommissioning of the Energy Park is considered to have similar effects upon the water environment as those during the construction stage and, therefore, similar measures to reduce effects are likely to be proposed, such as the implementation of a CEMP. On this basis, it is concluded that there is unlikely to be a requirement for additional mitigation measures.

At the end of its operational life, it is anticipated that the off-site electrical cabling within the limits of the Off-site Cable Route Corridor would be left in situ, although all above ground works would be removed. As such there would be limited decommissioning works and therefore limited or no potential effects upon hydrology, hydrogeology, flood risk and drainage.

CUMULATIVE AND IN-COMBINATION EFFECTS

The assessment notes that construction and operation of the Proposed Development could occur simultaneously with 'Other Developments' located in the vicinity. Other proposed developments will be subject to compliance with local and national planning policy and therefore required to demonstrate (amongst other matters) that flood risk is not increased, that the surface water drainage regime and surface water quality are not adversely affected and that groundwater aquifers are not affected. Without demonstrating compliance, DCO consent (or planning permission, as relevant) would not be granted and construction could not commence. On this basis, these committed development schemes will not give rise to any significant effects and there will be no cumulative effects within the wider catchment.

CONCLUSION

It is concluded that potential effects arising from construction of the Proposed Development are likely to be localised and temporary and controlled by embedded mitigation measures. There are **no residual significant effects** from the Proposed Development.

With the implementation of embedded mitigation measures, the residual effects associated with operation of the Energy Park are Negligible and Not Significant. The electrical connection to the National Grid Bicker Fen Substation comprises an underground cable that would not give rise to impacts upon hydrology, hydrogeology, flood risk and drainage during the operational phase.

CULTURAL HERITAGE

This Cultural Heritage Chapter of the ES (document reference 6.1.10) 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.

BASELINE CONDITIONS

No designated heritage assets are located within the land being considered for the Proposed Development, as shown in **Figure 10**.

Known and potential non-designated heritage assets located within the Energy Park comprise the upstanding structures of a derelict 19th-century outfarm, boundary wall, and drainage pump; and the buried archaeological remains of two pits and a tree throw containing Mesolithic/Neolithic flints, a Roman saltern and briquetage deposits elsewhere, ditches suggestive of Roman agricultural activity as well as nearby occupation, undated ditches and gullies, a post-medieval duck decoy, and post-medieval and modern outfarms and field boundaries.

Known and potential non-designated heritage assets located within the Cable Route Corridor comprise buried remains of enclosures and linear features of possible Roman origin to the south-west of Royalty Farm and to the east of Villa Farm.

The Roman features in the Energy Park and the Cable Route Corridor represent non-designated heritage assets of up to regional significance. In the Energy Park, the post-medieval duck decoy represents a non-designated heritage asset of local to regional significance; while the upstanding historic structures represent non-designated heritage assets of local significance. Buried historic agricultural remains in the Energy Park and the Cable Route Corridor are not considered heritage assets.

Detailed setting assessments have identified no harm to the significance of any Scheduled Monument, Listed Building or Conservation Area as arising from the Proposed Development; but minor harm to the significance of the non-Listed Mill Green Farmhouse.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The potential for significant cultural heritage effects has been identified for the construction and decommissioning stages of the Proposed Development. These effects relate to the possible destruction of known buried archaeological remains of prehistoric and Roman activity. Which could be considered significant in EIA terms, however this is a worst-case scenario, as trial trench evaluation has not yet been completed for the Cable Route Corridor. However, with the implementation of the mitigation measures discussed below the residual effects is likely to be minor, which would not be considered significant in EIA terms.

MITIGATION AND ENHANCEMENT

The derelict cottages and barn of Six Hundreds Farm, the low boundary wall at Elm Grange, and the former drainage pump at Head Dike will be retained as part of the Proposed Development.

Six areas within the Energy Park that preserve the densest and most extensive evidence of Roman salt-working and agricultural activity will be subject to a mitigation strategy of strip map sample excavation (and follow-on mitigation as appropriate) to preserve the buried archaeological resource by record prior to its destruction through construction and decommissioning activities. The residual effect is minor harm to its heritage value.

Planting along the northern boundary of the Energy Park and the Head Dike will help screen visibility of the

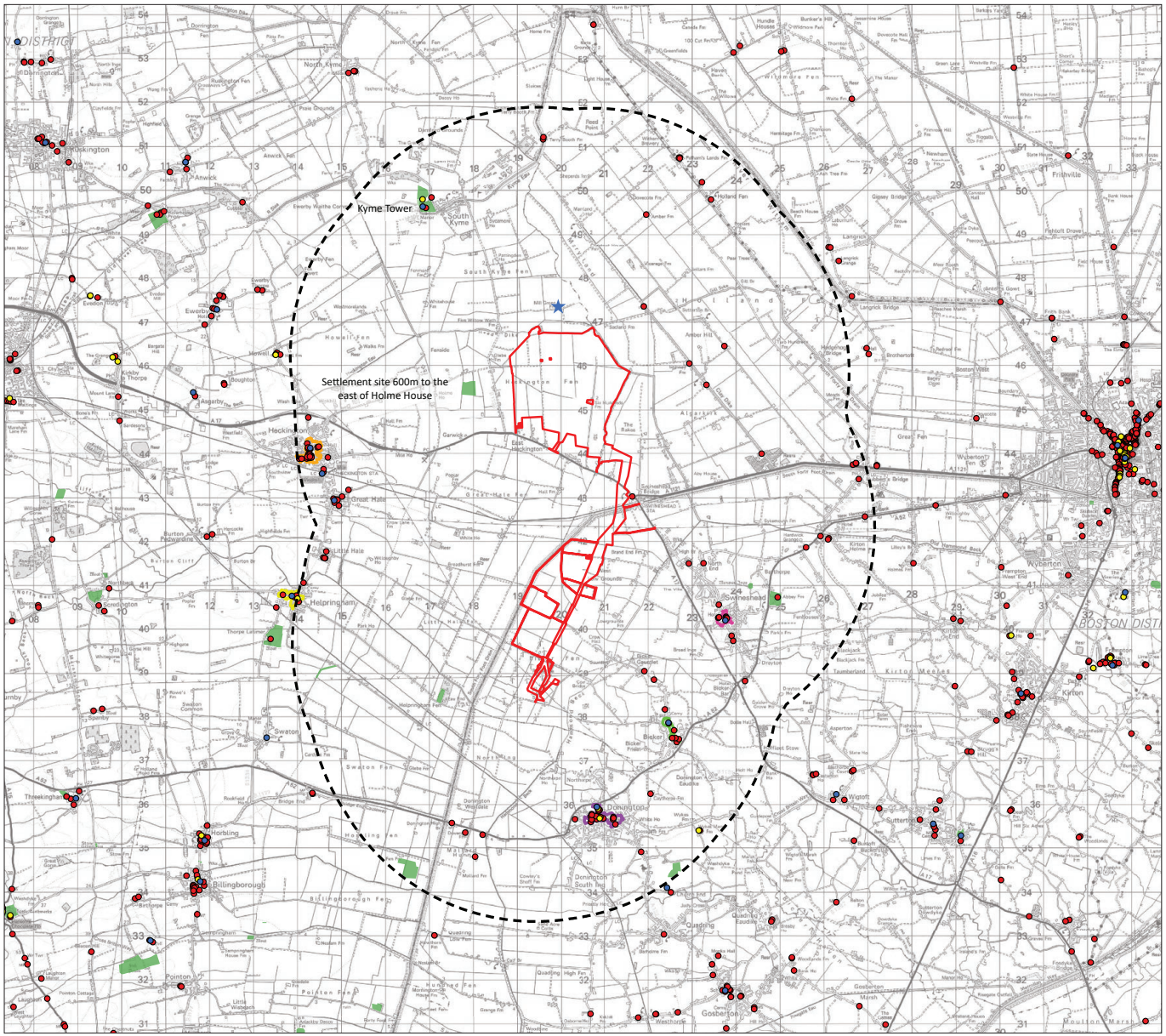
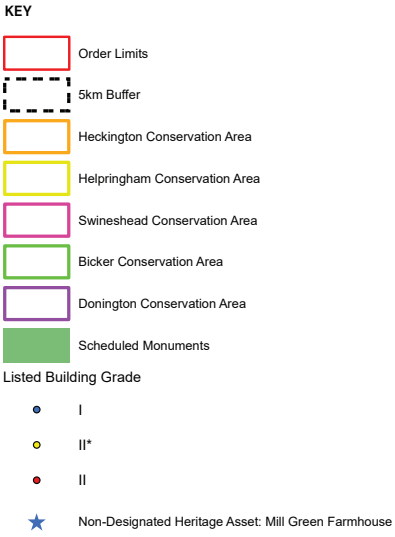


FIGURE 10: DESIGNATED HERTIAGE ASSETS



Proposed Development in designed views from (non-Listed) Mill Green Farmhouse, and accordingly reduce the level of minor harm to its heritage value.

CUMULATIVE AND IN-COMBINATION EFFECTS

None of the identified cumulative schemes would have an effect on the archaeological or built heritage resource of the land being considered for the Proposed Development. Further, the heritage assets considered sensitive to the Proposed Development through change to setting lie outside the zone of influence with the identified cumulative schemes.

No cumulative effects are anticipated to result from the Proposed Development in respect of cultural heritage.

No in-combination effects are anticipated to result from the Proposed Development in respect of cultural heritage.

CONCLUSION

This chapter of the ES (document reference 6.1.10) has identified **no significant residual effects** in respect of cultural heritage assets (above and below ground) that would arise from a development of the nature and on the scale proposed.

SOCIO-ECONOMIC

The Socio-Economic Chapter of the ES (document reference 6.1.11) has analysed the baseline socio-economic conditions and then gone on to assess the likely socio-economic effects of the Proposed Development.

BASELINE CONDITIONS

North Kesteven experienced population growth of 8.8% between 2011 and 2021 (9,557 additional people), and in Boston there was a relatively higher population growth of 9.1% (5,888 additional people). Relative to the benchmark areas of East Midlands and Great Britain, North Kesteven and Boston's population grew at a faster rate over this timeframe. Employment growth in North Kesteven over the last five years has been strong with 10.3% increase in job numbers, especially when compared to the picture at a regional and national level (5.4% and 5.2% respectively). Boston's employment growth was 3% in that same period. The construction sector, which is likely to see increased employment opportunities during the Proposed Development's build phase represents 7% of total employment in the District, which is above the proportion of total jobs at the regional scale (4.9%) and Great Britain (5%). North Kesteven has a net outflow of commuters, while Boston has a net inflow of commuters. The claimant count (the number of people claiming unemployment related benefits) in Boston has risen by 1.7% in the period January 2020 to September 2022 and is currently above all other comparator areas. The claimant count in North Kesteven increased but only by 0.3% in this period from 1.7% to 2.0% and is well below all other comparator areas as well as Boston.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

In respect of the construction phase, the assessment indicates that the Proposed Development will have the following temporary effects:

- 400 peak on-site construction jobs, with an average of 150 on-site construction jobs, over the 30-month construction programme.
- £175million of gross value added over the 30-month construction programme.
- Increase (up to 200 construction) in demand on Serviced and Non-Serviced Accommodation in North Kesteven.

In respect of the operational phase, the assessment indicates that the Proposed Development will have the following effects:

- 5 direct additional jobs in the North Kesteven economy.
- £627,000 of gross value added per annum or £13.9million over 40-year lifespan of the project (when compared to present value).
- Business rates £1.3million per annum and £29.3million over the 40-year project lifespan (when compared to present value).
- In respect of the decommissioning phase, the assessment indicates that the Proposed Development will have the following temporary effects:
- 200 peak on-site construction jobs over the 18-month decommissioning programme.
- £52.5million of gross value added over the 18-month decommissioning programme.
- Increase (up to 100 construction) in demand on Serviced and Non-Serviced Accommodation in North Kesteven.

Overall, there are beneficial effects in terms of employment, economic contribution, and business rates in all relevant phases of development. Notably, beneficial economic contribution effects are considered to be significant in the construction and decommissioning

phases, and beneficial business rates effects are considered to be significant in the operational phase. Effects relating to accommodation demands in the construction and decommissioning phases are adverse but not significant in EIA terms.

MITIGATION AND ENHANCEMENT

Most effects of the Proposed Development are beneficial, and therefore no mitigation is required. The accommodation demand effects as a result of the construction and decommissioning phase of the Proposed Development are adverse but not significant in EIA terms and therefore do not require mitigation.

It is noted that, to maximise the beneficial impacts identified by the scheme, an Outline Supply Chain, Employment and Skills Plan (document reference 7.12) will be produced to optimise the number of local people who will have access to employment and training opportunities arising from the Proposed Development and will be secured by DCO requirement.

Wider benefits for the community will be undertaken separately and outside of the DCO process.

CUMULATIVE AND IN-COMBINATION EFFECTS

As for the Proposed Development in isolation, there are likely to be beneficial effects in terms of employment, economic contribution, and business rates in all relevant phases of development. Similarly, significant beneficial economic contribution effects are predicted in the construction and decommissioning phases, and significant beneficial business rates effects are predicted in the operational phase. Effects relating to accommodation demands in the construction and decommissioning phases are adverse but not significant in EIA terms, with surplus bedspaces available in all 12 months of the year after factoring in the potential number of construction and decommissioning workers requiring accommodation during those build phases.

CONCLUSION

The Proposed Development would lead to **no adverse residual significant effects** from a socio-economic perspective. The Proposed Development will result in beneficial effects in terms of employment, economic contribution, and business rates in all relevant phases of development, and adverse but not significant effects in EIA terms on accommodation demands in the construction and decommissioning phases.

An Outline Supply Chain, Employment and Skills Plan (document reference 7.12) will be produced to optimise the number of local people who will have access to employment and training opportunities arising from the Proposed Development and will be secured by DCO requirement. Continued efforts to address wider benefits for the community will be undertaken separately and outside of the DCO process.

NOISE

The Noise Chapter of the ES (document reference 6.1.12) has considered the potential effects of noise and vibration associated with the Proposed Development, both associated with the different construction and decommissioning activities and traffic, as well as the operational phase.

BASELINE CONDITIONS

The baseline conditions were determined from a combination of new survey work and reference to historical data captured at noise-sensitive receptors neighbouring the Energy Park, shown in **Figure 11**.

The baseline noise environment in the vicinity of the Energy Park site was observed to be generally rural in nature, with a range of natural noise sources (bird noise, wind in trees, etc.). Noise from agricultural activities will also represent a contribution at times given the nature of the area, although this may be for limited periods particularly during evening and night-time periods.

Traffic noise, in particular from the A17, also represents a notable influence in the area, which can be dominant for properties located in proximity to the A17, and more distant or minimal for others. As the water in the drains located in the area is generally not running, no audible water noise was noted during the surveys.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

During construction the assessment has identified potential significant noise effects if trenchless work is required and remains active at night, depending on the final locations where this may be required along the grid connection route.

Noise and vibration from other construction activities may be audible or perceptible at times but the worst-case levels are such that, providing construction working hours are controlled in a standard manner, their effect would be either not significant or negligible. Construction traffic is associated with negligible effects.

Likely levels of operational noise from electrical or mechanical plant, in relation to the baseline noise environment and context of the area (during quieter periods of the evening and night), on the basis of worst-case assumptions, are such that no significant effects are expected.

MITIGATION AND ENHANCEMENT

Construction working hours would be controlled for most noise-generating activities, and good practice measures would further reduce noise levels in practice.

The potential effects of horizontal directional drilling (HDD) trenchless construction if required for night-time work would be minimised and managed through the selection of the final drilling locations and liaison with the closest affected residents. Where these works are required in relative proximity to sensitive receptors, such that significant effects remain likely, the drilling will be interrupted at night where possible, or alternatively different trenchless techniques, screening, or offer of temporary re-housing (for the duration of these works) would be investigated. Residual effects would likely be minor at most following implementation of these measures.

Operational noise would be controlled to a set of proposed noise limits at the nearest noise-sensitive receptors through detailed design and selection of electrical/mechanical equipment, attenuation and/or screening measures. The residual effects would then be either not significant or negligible.

CUMULATIVE AND IN-COMBINATION EFFECTS

No Cumulative or In-combination Effects of noise or vibration were identified.

CONCLUSION

It is therefore concluded that the effects of the Proposed Development can be suitably controlled such that no significant adverse residual effects remain where reasonably practicable.

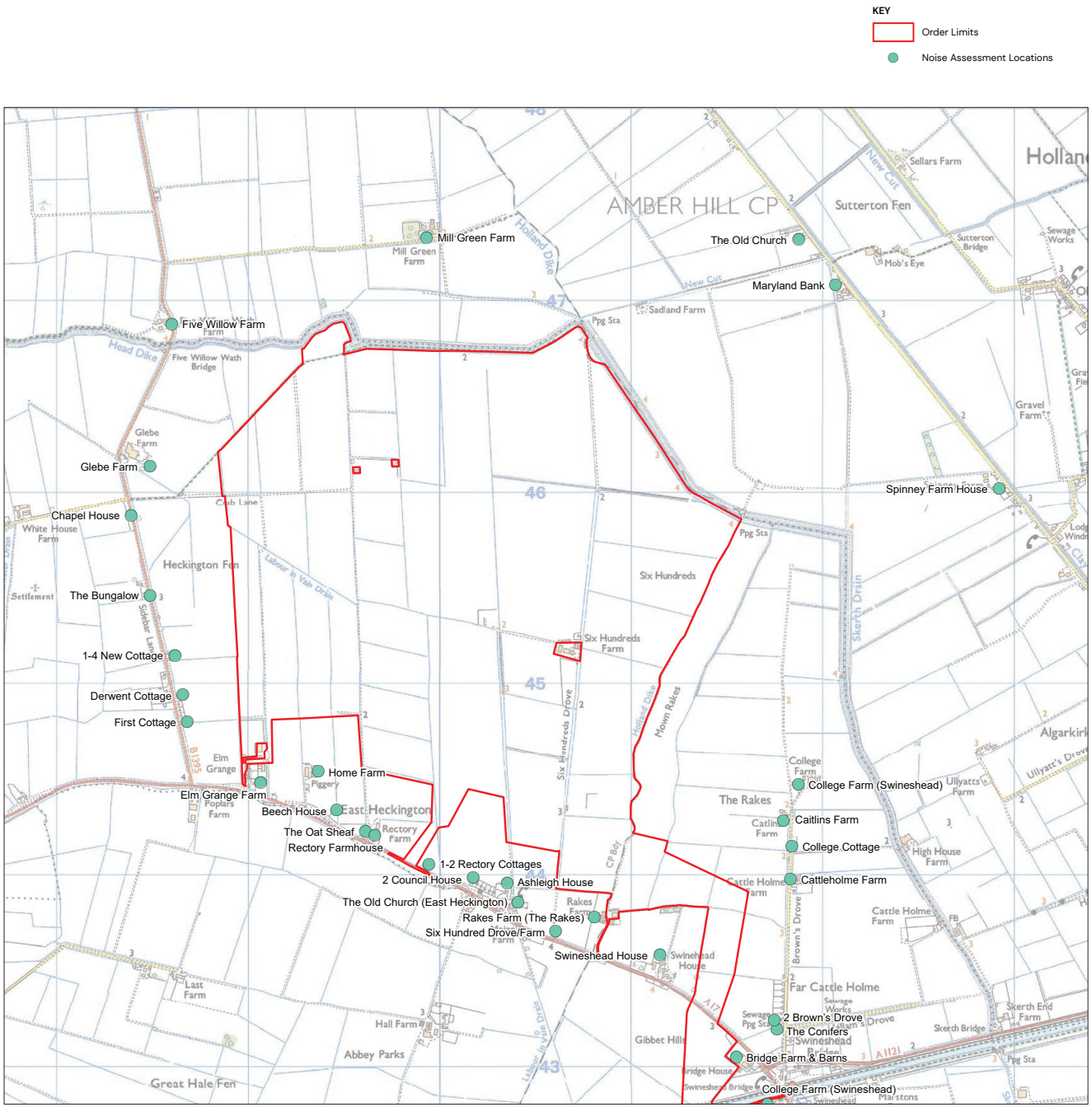


FIGURE 11: NOISE ASSESSMENT LOCATIONS – ENERGY PARK

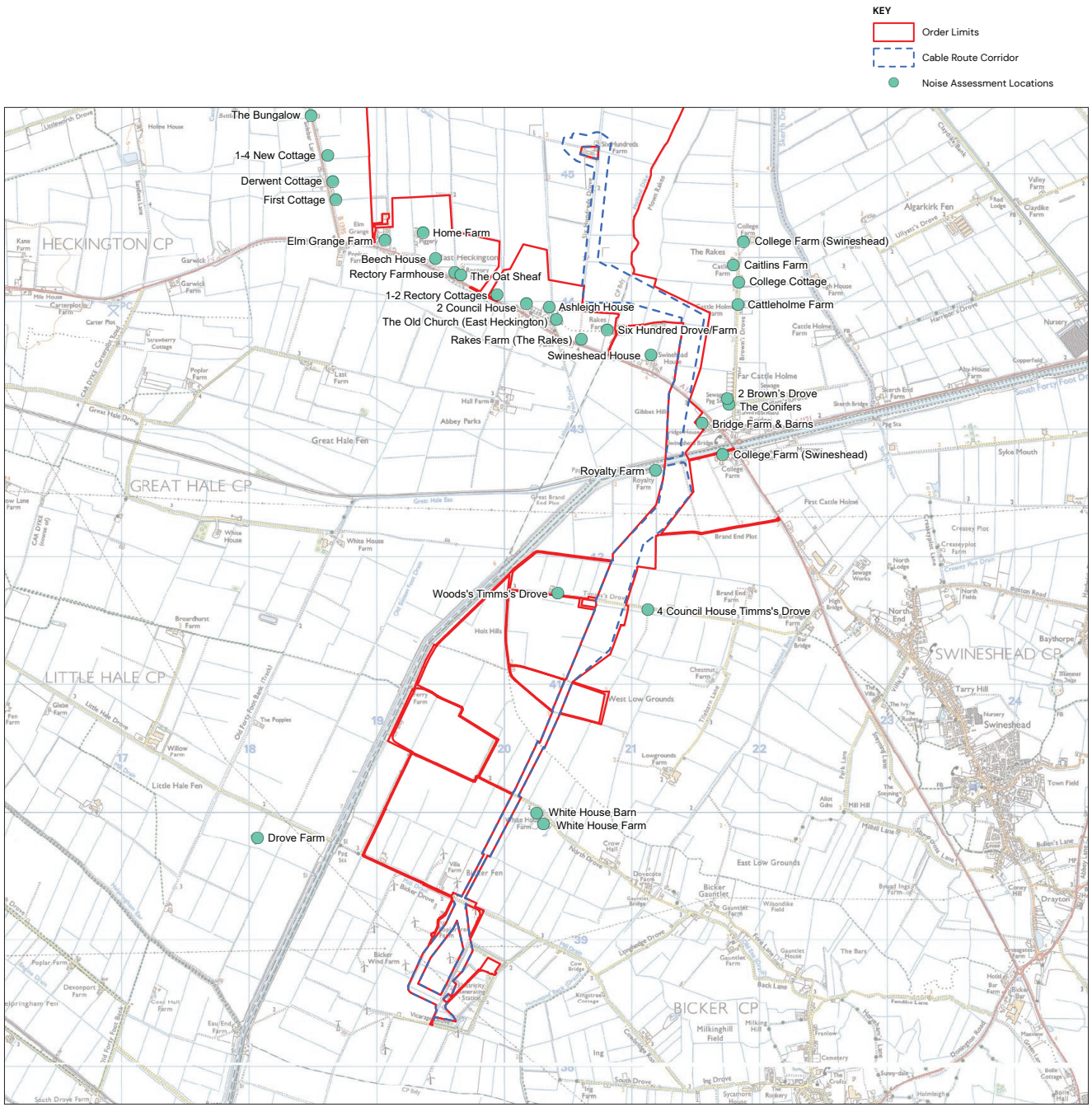


FIGURE 11: NOISE ASSESSMENT LOCATIONS – CABLE ROUTE CORRIDOR

CLIMATE CHANGE – EMISSIONS REDUCTION

To reflect the requirements of the 2017 EIA Regulations, an assessment has been undertaken of the potential effects of the Proposed Development on greenhouse gas (GHG) emissions reduction, in accordance with recognised guidance.

BASELINE CONDITIONS

The land within the Energy Park site consists mainly of agricultural land and trees. The baseline conditions include the existing carbon stock (e.g. carbon sequestered within vegetation present) and sources of GHG emissions (e.g. from agricultural vehicles and machinery) from the existing activities on-site. Whilst the growing of crops will sequester carbon in the short term for the duration of a growing cycle, this carbon would be subsequently released in a relatively short cycle during the agricultural practices of management, harvesting and consumption.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The greatest volume of GHG emissions during the construction phase is as a result of the embodied carbon in construction materials which accounts for over 96% of the total emissions. The remaining emissions relate to the transportation of materials, waste and workers. Total GHG emissions from the construction phase are estimated to equate to 269,000 tCO2e, which when compared to applicable national carbon budgets, in line with accepted guidance, equates to an effect that is not significant.

The greatest volume of GHG emissions during the operational phase is as a result of maintenance activities, associated with embodied carbon and the transport of replacement parts and equipment, which account for 93.1% of the total emissions. Total operational GHG emissions equate to 292,000 tCO2e over the 40-year design life. Emissions associated with the land use change from intensive arable to solar energy generation have been calculated on the basis of the carbon footprint that would arise from the necessary transport and import of food and crops from elsewhere, which could otherwise have been grown on this land.

The average operational GHG intensity of both the Proposed Development (including Energy Storage aspects) and just the Energy Park (excluding Energy Storage aspects) have been calculated by dividing the corresponding total operational GHG emissions (outlined above) by the total energy generation of the Energy Park. When considering the Proposed Development as a whole, this gives an average operational GHG intensity of 20.4 grams of CO_2 equivalent per kWh (gCO2e/kWh). This operational GHG intensity is well below the 2022 GHG intensity of the grid (136 gCO2e/kWh), as published by the Department for Business Energy and Industrial Strategy. When considering only the aspects relating to the solar energy generation from the Energy Park, this gives an average operational GHG intensity of 6.1 grams of CO_2 equivalent per kWh (gCO2e/kWh). Importantly, without low-carbon energy generation projects such as the Proposed Development, the average grid GHG intensity will not fully decrease as projected, which would also adversely affect the UK's ability to meet its carbon reduction targets. Therefore, the Proposed Development is considered to have a significant beneficial effect on emissions reductions during its operational phase.

GHG emissions from decommissioning activities are estimated to equate to 3,080 tCO2e and are associated with the transportation of materials, waste and workers. Whilst these emissions cannot be compared to a relevant national carbon budget as these do not yet extend to cover the date of likely decommissioning,

these are considerably lower than construction related emissions, and are considered to equate to an effect that is not significant.

MITIGATION AND ENHANCEMENT

Whilst mitigation measures will be included such as designing to reduce waste and maximise the use of materials with lower embodied carbon, effects will remain as outlined above, i.e., not significant.

CUMULATIVE AND IN-COMBINATION EFFECTS

When considering the generation capacities of other planned solar energy projects within Lincolnshire County Council area (where known), these collectively represent an estimated 2,050 MW of solar energy generation. This is also considered to have a significant beneficial effect on emissions reductions during their corresponding operational phases.

In-combination effects are considered below under 'climate change adaptation'.

CONCLUSION

No significant adverse residual effects have been predicted with respect to GHG emissions during the construction and decommissioning phases. A **significant beneficial effect** has been predicted during the operational phase both for the Proposed Development in isolation and cumulatively.

CLIMATE CHANGE – ADAPTATION

To reflect the requirements of the 2017 EIA Regulations, an assessment has been undertaken of the potential effects of the Proposed Development on climate change adaptation. In accordance with recognised guidance, this has included both the vulnerability of the Proposed Development to climate change and also any implications of climate change for the predicted effects of the project, as assessed by the other topic specialists ('in-combination climate effects').

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 future baseline conditions, the assessment uses the UKCP18 climate projections for the 2080s which suggest that, in future, the Energy Park site and its surroundings will experience warmer, drier summers and milder wetter winters. Whilst heavy rain days are likely to increase throughout the year, there is still considerable uncertainty with respect to likely changes in both wind speed and storm frequency/ intensity. All other ES topic area authors were provided with a summary of the climate change projections and were asked to consider the relevance of this for their baseline descriptions. Whilst some possible changes were noted, it was not felt that baseline conditions would be materially altered to such an extent that this would need to be reflected in the subsequent assessments of effects.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

With respect to the vulnerability of the Proposed Development, 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.

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.

CUMULATIVE AND IN-COMBINATION EFFECTS

With respect to climate change adaptation, this is a project specific consideration, namely the resilience of the project in question to climate change and the extent to which projected climate change could alter other predicted impact judgements. More widely, in relation to potential interactions with other developments, and following the same logic with respect to required compliance with regulatory standards and accepted good practice mitigation measures, no significant cumulative effects are anticipated.

CONCLUSION

No significant residual effects have been predicted in relation to climate change adaptation, either for the Proposed Development in isolation or cumulatively.

TRANSPORT AND ACCESS

The Transport and Access Chapter of the ES document reference 6.1.14) assesses the potential effects relating to transport and access. It considers the potential effects on vehicular traffic flows, accidents and safety, severance, driver delay, hazardous and dangerous loads and dust and dirt.

This chapter of the ES has been prepared alongside a supporting Outline Construction Traffic Management Plan (OCTMP) (document reference 7.10), this document secures the mitigation and provides traffic transport information relating to the construction phase of the Proposed Development.

BASELINE CONDITIONS

The Energy Park site is located to the immediate north of the A17, approximately 3.7km to the east of Heckington and around 8.9km to the west of Boston.

Access to the Energy Park during the construction and operational phases is proposed with the A17 to the south of the Energy Park site, approximately 900m northwest of the junction with Six Hundreds Drove. Whilst the proposed new access is under construction, a temporary construction access will be provided via an existing junction with the A17, approximately 600m southeast of B1395 Sidebar Lane junction. The cable route within the Off-site Cable Route Corridor will be accessed using existing junctions with the A17.

Access for the construction of the cable route is proposed in three locations. Access from the north of the South Forty Foot Drain is proposed via an existing junction with the A17 located approximately 430m north of the junction with the A1121; and access to the south of the drain is proposed via the Triton Knoll access with the A17. Localised access is also proposed via Royalty Lane and Timms Drove. However, the Triton Knoll access will predominantly form the southern access.

Baseline surveys from 2022 confirm that daily (24 hour) traffic flows past the Energy Park site on the A17 are up to around 21,307 vehicles with around 16 percent HGVs. Data from the most recent five-year period show that there are not any existing highway safety issues on the local highway network that would be exacerbated by the Proposed Development.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Impact Magnitudes have been defined for the construction phase with regard to 'Guidelines for the Environmental Assessment of Road Traffic', which states that a significant environmental impact may occur when traffic flows increase by more than 10% where the study area is of high sensitivity significance. This has, for the purposes of this assessment, been considered to represent a negligible impact significance.

During construction of the Energy Park an estimated 107 Abnormal Indivisible Loads (AIL) (comprising seven movements for the substation transformers, and 100 crane movements) are anticipated, the deliveries will be planned with an AIL route assessment and will be escorted and managed along the route from the port of entry into the UK and the site. With these measures in place no significant impacts are anticipated.

There will be an increase in vehicles using the local highway network during the construction period from both HGV movements and construction staff accessing the Energy Park site. The impact of the construction phase traffic for the Energy Park, the cable route and the National Grid Bicker Fen Substation Extension is considered to be of Negligible significance, and therefore in EIA terms is Not Significant.

The assessment of construction phase impacts has also taken into account accidents and safety, severance and

driver delay which concluded no significant impacts in EIA terms are anticipated as a result of the Proposed Development.

Once the development is operation it is anticipated there will be around five visits to the Energy Park site per day for maintenance, this is considered to have a Negligible impact on the local highway network.

MITIGATION AND ENHANCEMENT

Mitigation has been provided in the form of an OCTMP (document 7.10) to reduce the impacts of the construction phase. Mitigation measures detailed in this document include:

- A "left in – left out" arrangement at the permanent Energy Park site access;
- Provision of contractor's compound within the site, providing an area on site for HGV to park and manoeuvre;
- Arrival and departure of HGVs will be managed to ensure no HGVs are waiting on the public highway;
- Limited hours of site operation and the routing of construction traffic to protect local residential areas from construction traffic;
- Wheel washing facilities;
- It is envisaged that the construction working hours will generally be 08:00 – 18:00 Monday to Friday and 09:00 – 13:00 on Saturdays;
- Temporary signage in the vicinity of the Energy Park and cable route during construction; and
- The contact details of the contractor and those of the highway department at Lincolnshire County Council will be exchanged before commencement of works on site.

CUMULATIVE AND IN-COMBINATION EFFECTS

The assessed cumulative sites are located some distance from the Energy Park site. Based on the temporary nature of the Site's construction phase and the insignificant changes in annual average daily traffic (AADT) flows, it is not considered necessary to assess the cumulative transport and access impacts. There are therefore no cumulative effects relating to transport and access that need to be considered.

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**.

There are therefore no highways or transportation reasons which should prevent the Proposed Development.

AIR QUALITY

The Air Quality Chapter of the ES (document reference 6.1.15) focuses on the potential air quality effects at existing sensitive receptors during the construction phase, shown in **Figure 12**.

BASELINE CONDITIONS

The Proposed Development is not located within or near to an Air Quality Management Area (AQMA).

Monitored concentrations in the vicinity of the Proposed Development show pollutant concentrations have been below the Air Quality Objectives (AQO) for the last five years of representative monitoring data.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Predicted construction traffic flows have been screened against Environment Protection UK (EPUK) and Institute of Air Quality Management (IAQM) guidance and considered to be not significant.

In addition, dust and non-road mobile machinery emissions during the construction phase will be controlled via an Outline Construction Environmental Management Plan (CEMP) (document reference 7.7) and as such are considered to be negligible and therefore the effects are not significant.

Operational and decommissioning effects are likely to be minimal due to the small number of vehicle movements associated with the Energy Park and as at the time of decommissioning the baseline air quality conditions are anticipated to be much improved due to enhanced technology. As such these have not been considered further within the assessment.

MITIGATION AND ENHANCEMENT

Construction phase emissions to air will be controlled by an Outline CEMP (document reference 7.7) and Outline Construction Traffic Management Plan (CTMP) (document reference 7.10).

CUMULATIVE AND IN-COMBINATION EFFECTS

There are not expected to be any significant cumulative and in combination effects.

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.

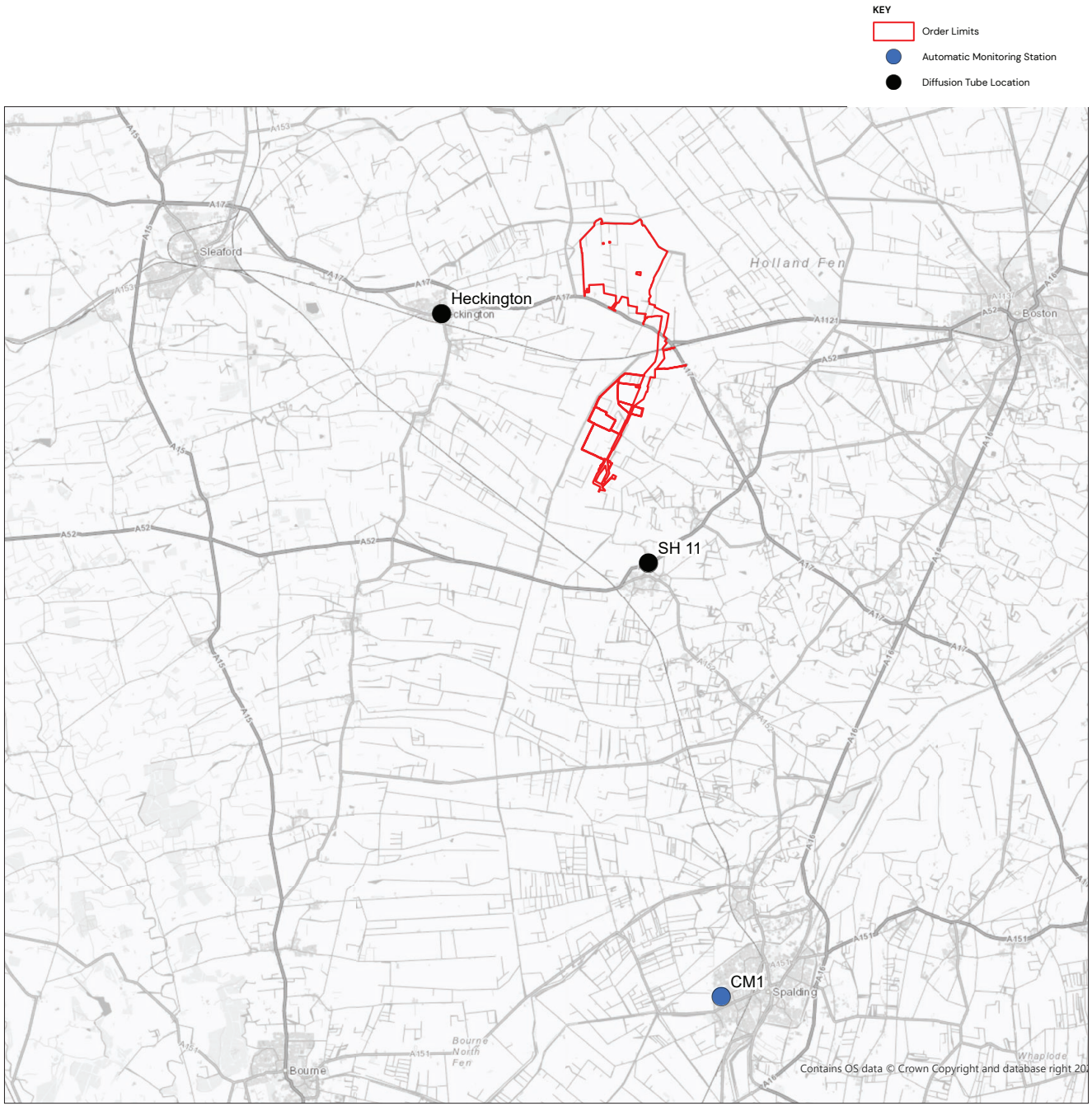


FIGURE 12: NOISE ASSESSMENT LOCATIONS – ENERGY PARK

LAND USE AND AGRICULTURE

This Chapter of the ES (document reference 6.1.16) considers the potential effects of the Proposed Development on the agricultural land use of the Energy Park, and the potential effects on agricultural land quality and soil resources.

BASELINE CONDITIONS

Agricultural land quality is assessed by use of the system of Agricultural Land Classification (ALC) devised by the Ministry of Agriculture, Fisheries and Food (MAFF). The ALC system divides land into five grades 1 to 5, with grade 3 divided into subgrades of 3a and 3b. The National Planning Policy Framework (NPPF) (2021) places Grades 1, 2 and 3a within the definition of the 'best and most versatile agricultural land' (BMV). The Energy Park is composed mainly of ALC Grade 3b (50.6%) and 3a (30.5%) with a smaller area of Grade 1 (11.1%) and Grade 2 (7.4%), shown in **Figure 13**. The Energy Park does not include any fields which are wholly Grade 1 or 2, the Grade 1 and 2 land within the Energy Park forms a complex mix and pattern, usually mixed with Subgrade 3b moderate quality land.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

The Proposed Development has been designed to minimise the impact on BMV agricultural land. The tracks and fixed infrastructure, where BMV land cannot be avoided, will affect approximately 1 ha of Grades 1 and 2 land, and less than 2 ha of Subgrade 3a. This results in a moderate adverse effect, which is not significant in EIA terms.

The installation of frame legs and solar panels will not result in the sealing of agricultural land, and an agricultural use will continue. The installation process has the potential to affect soils in localised areas but this will be minimised through avoiding trafficking soils when conditions are not well suited to vehicle passage. The effect on soils overall is considered not significant in EIA terms.

The limited physical impact of inserting the frame legs, the limited and restorable effect of trenches, and with a combination of good practice and careful management and mitigation, the agricultural land quality will not be significantly adversely affected at the installation phase. The agricultural land classification of the land is not affected and the resource is retained. The overall effect on soils and agricultural land quality is not significant.

At decommissioning stage the panels can be unbolted and removed. The removal of the solar panel frame legs would not create any significant disturbance to the agricultural land. There would be no significant adverse effects on the land quality or soils.

There should therefore be no overall significant adverse effect on the agricultural land quality of the Energy Park or Offsite Grid Connection Route Corridor and, with carefully planned and well executed decommissioning works, the soil resource will not be significantly adversely affected by the Proposed Development.

There should be no additional adverse effects on soils or land quality during the operational stage, as any need for traffic to pass over agricultural land will generally be limited to normal land and grassland management practices and maintenance.

The potential to use the Energy Park for different arable or livestock uses will be reduced as a result over the operational lifetime of the Proposed Development. However, a reduction in flexibility of land use is neither a policy requirement nor an environmental impact.

With careful planning and practice any localised effects on farm businesses can be avoided or mitigated. There will be a change from arable to grassland farming, which

will require increased labour. The overall effect on farm businesses is minor, and potentially beneficial.

The land for the Energy Park is currently used for agricultural production. This land will continue to be used for agricultural production when the Energy Park is operational. The incremental difference between using the BMV land within the Energy Park for sheep grazing rather than for cereal or industrial oilseed production, compared to the crop growth were poorer quality land to be used instead, is less than 300 tonnes per annum. Planning policy does not require or protect intensive agricultural use, but the implications are in any case limited and not significant.

MITIGATION AND ENHANCEMENT

At the detailed design stage, the permanent sealing of BMV will be minimised as far as reasonably practicable, and where operational constraints enable, by locating access tracks and fixed equipment within Grade 3b land.

Good soil management practices such as avoiding trafficking or handling soils when wet and restoring soils into trenches in the same order they came out will be adhered to during the construction phase of the Proposed Development and would be implemented through a Construction Environmental Management Plan (CEMP). An Outline CEMP (document reference: 7.7) has been prepared as part of this application and contains a draft Soil Management Plan for both the Energy Park and the Offsite Grid Connection Corridor.

Whilst the potential impact on soils during the operational phase are expected to be minimal, good practice will be employed to ensure that any works (such as the maintenance of the solar arrays and the management of the land underneath them) will be undertaken in a manner that prevents damage to the soil resource, so far as possible.

Potential short-term effects on farm businesses and enterprises as a result of construction and decommissioning, such as closure or severance of field accesses at key times of the farming year, will be mitigated by timing and liaison with landowners, and a CEMP will be implemented to ensure effects are minimised.

CUMULATIVE AND IN-COMBINATION EFFECTS

The details of proposed construction techniques and timing for the identified cumulative schemes is not currently known. Were these proposals to result in the loss of BMV agricultural land, this would be of major adverse significance. However, it may be that, as with this proposal, the proposed developments are generally reversible and the loss of BMV agricultural land is more limited.

In reality this potentially significant impact is likely to be reduced when mitigations such as understanding the actual breakdown of BMV land on the sites, proposed construction and decommissioning works, and ongoing agricultural practices are considered.

CONCLUSION

With the implementation of the mitigation **no significant residual effects** are considered likely on agriculture and soils as a result of the Proposed Development.

KEY		Ha	%
	Grade 1	58	11.1
	Grade 2	39	7.4
	Grade 3a	160	30.5
	Grade 3b	265	50.6
	Grade 4		
	Grade 5		
	Non-agricultural	2	0.4
	Urban		
	Not surveyed		

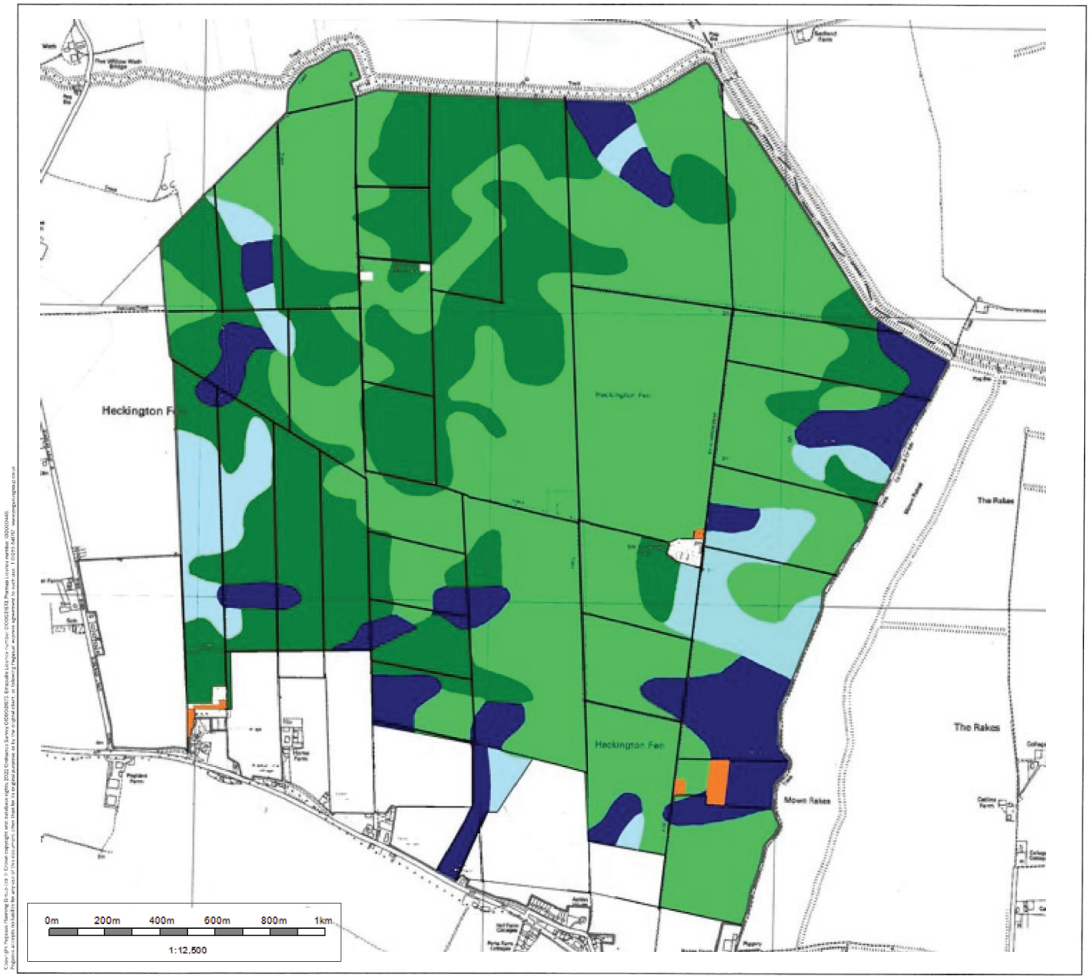


FIGURE 13: AGRICULTURAL LAND CLASSIFICATION

GLINT AND GLARE

The Glint and Glare Chapter of the ES (document reference 6.1.17) has assessed the possible glint effects that arise as a consequence of the sun's rays interacting with the solar panels that are proposed to be erected. Glint is a term used to describe specular reflection which is produced as a direct reflection of the sun on the surface of the solar panels. It occurs with the reflection of light from smooth surfaces such as glass, steel, and calm water. It is used interchangeably with 'glare'.

The computer model used to categorise glint does so by specifying whether glint is 'green' or 'yellow' and this represents the intensity of the glint event and the potential for after image. It is commonly accepted that levels of green glint are acceptable overall, and for flight approaches, however, is not acceptable at Air Traffic Control Towers (ATCT).

As the Energy Park will consist of fixed south orientated panels, only these types of panels have been assessed and modelled. The model was run three times to assess the impact of the panels at 10, 15 and 20 degrees to provide an assessment of the range of panel angles under consideration.

BASELINE CONDITIONS

For the purposes of this assessment, a presumption has been made that there is no baseline glint currently occurring at any of the receptors due to a number of factors. These include the fact that there are no operational solar farms in the immediate vicinity of the proposed Energy Park, the ones that do exist are greater than 10km away so at this distance they will not present any effects. Vicarage Drove is a consented, but not yet operational 49.9MW solar farm applicaiton directly next door to the Bicker Fen substation. This is approximately 4.5km south of the Energy Park site. This site is considered within the cummulative assessment

Furthermore, there is great interchangeability between potential receptors from more common materials such as glass in windows, moving vehicles, glasshouses and calm water so it is not possible to correctly quantify the full level of glint experienced.

ASSESSMENT OF POTENTIAL FOR LIKELY SIGNIFICANT EFFECTS

Construction

During the initial phase of ground preparation, there is not likely to be any reflections present other than possibly from the windscreens of vehicles used in the Energy Park site preparation works. It is anticipated that the Energy Park will be constructed sequentially in sections, with one part of being built out before the next is commenced. In this way completed sections will help provide screening from ongoing construction activities.

Some of the mounting frames, which will be manufactured from metal have the potential to cause reflections, until the panels are installed on them. Specific quantification of this type of reflection is not possible but it is short term and temporary.

The assessment has confirmed that, provided the above mitigation is applied, there are not expected to be any significant effects during this phase of development.

Operation

During the operational phase effects will vary during the course of each year as the sun attains different heights in the sky and weather patterns vary. The potential effects comprise glint effects at various receptors. These have been categorised separately as rail receptors, road receptors, aviation receptors and dwellings. Observation Points, shown in **Figure 14**, were

FIGURE 14: GLINT MAP

determined which are a representative of dwellings in the surrounding area to the Energy Park. Based on the methodology outlined in this Chapter of the ES (document reference 6.1.17), receptors to which intense glint effects could cause potential health and safety issues (i.e. aviation, road and rail) are classified as high sensitivity, while receptors such as dwellings, where glint would more likely cause nuisance would be classified as medium sensitivity.

Railways

There are two rail receptors in the area, the first runs outside the 5km study area (Rail 1), and the second runs to the south of the Energy Park, between Sleaford and Boston, at a distance of approximately 1.3km at its closest point (Rail 2). It passes to the south of Heckington, before converging with and then running adjacent to the A1121, to the east of the Energy Park.

The two sections of track considered in the glint assessment, both running to the south of the Energy Park site are likely to have low to non-existent visibility, especially after the provision of onsite screening.

For Rail 1 the Significance of Effects is Negligible for all three panel angles.

For Rail 2 the Significance of Effects is Negligible for all three panel angles.

Roads

There are a number of roads within the study area comprising national, regional, and local roads. There are no motorways. Motorists are, as a matter of routine, used to driving towards the sun at certain times of the day, which provides a much more intense source of light than glint will. Notwithstanding this, roads within the immediate vicinity of the Energy Park have been assessed for glint effects.

For the roads assessed, when the panel angle is 15 degrees, the A1121, the A17, the B1395 and Littleworth Drove, have been assessed as having potential for Significant effects prior to mitigation, however this becomes Not Significant after mitigation is taken into account. When the panel angles are 10 degrees and 20 degrees, the A1121, the A17, the B1395 and Littleworth Drove, have potential for Significant effects prior to mitigation, however this becomes Not Significant after mitigation is taken into account.

For all three panel angles, Claydike Bank Road and Harrisons Drove, both have effects that are Not Significant, due to lack of visibility to the Energy Park and accessibility.

Observation Points

Due to the size of the Energy Park it is necessary to consider a large number of observation points around the perimeter to properly assess the likely effects, shown in Figure 14. The Significance of Effects has been assessed for each of the representative Observation Points (OP):

- For all three panel angles, OP1-OP6, all have effects that are Not Significant.
- For all three panel angles, with OP7 to OP17 the effects are considered Significant prior to mitigation, but this is reduced to Not Significant after mitigation is implemented.
- For all three panel angles, OP18 can be ignored as it is not a residential receptor.
- For all three panel angles, OP19 is assessed as having Significant effects prior to mitigation but this is reduced to Not Significant after screening is taken into account.
- For all three panel angles, OP20 to OP28, all have No Significant effects.

- For all three panel angles, OP29 to OP38 present Significant effects prior to onsite mitigation which are reduced to Not Significant after mitigation is taken into account.
- For all three panel angles, OP39 and OP40 have No Significant effects.

Aviation

Aviation was scoped out which was agreed through consultation, however a brief assessment of the closest major aviation receptor, RAF Coningsby was carried out and effects were found to be Negligible.

Decommissioning

The decommissioning process will largely be the exact reverse of the construction process, with activities involving the removal of the Energy Park site infrastructure piece by piece. As panels are removed from the mounting frames the mounting structures will become more visible again and these will still have potential to reflect glint. It is anticipated that the Energy Park will be decommissioned in sections with panels being removed from one section, then the mounting structures, cabling (if required) and other site infrastructure being removed before the next section of the Energy Park undergoes the same procedure.

Whilst the mounting structures are visible there is some potential for glint to be reflected back towards receptors, but this will be a temporary effect for a short period of time, so it is not considered necessary to further mitigate against it.

The assessment has confirmed that, provided the above mitigation is applied, there are not expected to be any significant effects during this phase of development.

Mitigation and Enhancement

Mitigation measures have been developed and incorporated throughout the design process. The selection of fixed panels reduced the potential for any effects to be visible at OPs to the north of the Energy Park.

Screening in the form of hedgerow planting and improvement has been proposed which will significantly reduce potential effects. Due to this screening, for all the OPs and roads, the significance of effects will be considerably reduced.

Cumulative and In-combination Effects

There will be no cumulative effects as the potential cumulative solar developments that have been identified all lie further than 5km away and will not have an effect at this distance. The solar panels identified within 5km have screening to the receptors and so will have no effects.

Conclusion

The Proposed Development at the Energy Park could be made with the mitigation measures identified. They are acceptable and result in **no adverse significant effects**.

MISCELLANEOUS ISSUES

The Miscellaneous Issues Chapter of the ES (document reference 6.1.18) described and assessed the potential effects of the Proposed Development in terms of Major Accidents and Disasters, Waste, Electric magnetic and electromagnetic fields and telecommunications, Television Reception and Utilities. These topics are considered in turn in the following sections.

MAJOR ACCIDENTS AND DISASTERS

This section summarises the potential effects of the Proposed Development on the risks of major accidents and disasters occurring. '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 within the vicinity of the Proposed Development which could be vulnerable to major accidents and disasters, these include towns villages, farms and residential homes, commercial sites and buildings, roads, railways, ecological features and underground infrastructure services.

Assessment of potential for likely significant effects

The assessment has considered the following topics; health and safety at work, unexploded ordnance (UXO), design of equipment and fire risk, rail accidents, utilities failure and criminal damage. The assessment concluded that with the implementation of mitigation measures embedded in the design of the proposal no significant effects are anticipated for the construction, operation of decommissioning of the Proposed Development.

Mitigation and Enhancement

Mitigation measures for minimising the risk of major accidents during construction and decommission are addressed through appropriate risk assessments included in the Outline Construction Environmental Management Plan (oCEMP) (document reference 7.7) and Outline Decommissioning and Restoration Plan (oDRP) (document reference 7.9). Mitigation measures included within these documents include measures to reduce the risk of fire and measures to minimise risk to health and safety for all workers. During the operational phase proposed mitigation includes the production / use of an Outline Energy Storage Safety Management Plan (oESSMP) (document reference 7.11), this will be updated and maintained as a 'live document' throughout the operational phase of the Proposed Development. This has been produced following consultation with Lincolnshire Fire and Rescue Service.

Cumulative and In-combination Effects

No significant cumulative effects associated with major accidents and disasters would arise from the Proposed Development.

Conclusion

Given the nature of accidents and disasters, there is the potential for significant effects if an event does occur, however, the assessment has concluded that the risk of such events occurring is low for the Proposed Development, and **no significant residual effects** on the environment are therefore anticipated.

Taking into account the good industry practice and mitigation measures discussed above, the risk of accidents and disaster events at the Proposed Development is considered low. However, the assessment has concluded that the risk of such events occurring is low.

WASTE

This section of the ES 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. In practical terms, wastes include surplus spoil, scrap, recovered spills, unwanted surplus materials, packaging, office waste, wastewater, broken, worn-out, contaminated or otherwise spoiled plant, equipment and materials.

Baseline Conditions

Waste at the Proposed Development's site area is currently associated with agricultural practice. Potential waste streams currently could include left over crop and straw bales, fertiliser sacks and chemical containers.

The plastic waste associated with the Proposed Development's site area is currently sent to Lindum Waste Recycling Centre (c.39km north-west) for baling. Approximately 2.5 tonnes of plastic waste are removed from the Proposed Development's site area annually.

Assessment of potential for likely significant effects

The nature of the Proposed Development and the known construction and decommissioning processes indicate 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. With these in place and the appropriate control measures followed, no significant effects are anticipated.

During the operation phase of the Proposed Development waste arising is expected to be substantially less than during the construction phase. The operational phase effects associated with waste are anticipated to be not significant with waste generated during operation assessed that it will be adequately managed.

Mitigation and Enhancement

As part of the embedded mitigation, a CEMP and DRP will be secured through respective DCO requirements and will be applicable for the commencement of construction; similar measures will then be included in a decommissioning scheme.

Waste streams will be prevented from arising and designed out where possible. Opportunities to re-use material resources will be sought where practicable. Where re-use and prevention are not possible, waste arisings will be managed in line with the Waste Hierarchy.

Cumulative and In-combination Effects

It is assumed that for all the identified cumulative solar and energy storage schemes that waste would be appropriately managed through all phases of the development and therefore significant cumulative effects are considered unlikely.

Conclusion

During construction, operation, and decommissioning, the re-use or recycling of materials will be explored before resorting to landfill options. Waste during the construction, operation and decommissioning phase will be dealt with as part of a CEMP and DRP, which will be prepared in line with relevant legislation and guidance. Therefore, it is anticipated that there would be **no significant effects** on waste from the Proposed Development.

ELECTRIC MAGNETIC AND ELECTROMAGNETIC FIELDS

This section of the ES chapter 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. The earth has a magnetic field produced by currents deep inside the core of the planet; the earth is also subject to electric fields produced by electrical activity in the atmosphere such as thunderstorms.

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.

Baseline Conditions

A proposed connection point for the underground 400 kV cable system will be to the existing National Grid Bicker Fen Substation approximately 8.5km south of the Proposed Development, which connects to the existing 400 kV overhead transmission network. This infrastructure has the potential to generate EMFs as it includes equipment of greater than 132kV.

Assessment of potential for likely significant effects.

No significant effects are anticipated as a result of the construction or decommissioning of the Proposed Development as the underground cable will not be connected during these phases and will not produce any significant EMFs.

Once operational the underground cable would not produce any external electrical fields and there will therefore be no significant effects in EIA terms.

Mitigation and Enhancement

The relevant electrical infrastructure will comply with the current public exposure guidelines, and so no further mitigation is necessary.

Cumulative and In-combination Effects

Magnetic fields are not added together where they may be present from multiple sources, therefore there will be no significant cumulative effects with other developments.

Conclusion

During the construction and decommissioning phase no significant EMF effects are anticipated until the Proposed Development is operational and generating electricity. EMF's, specific to the 400 kV underground cable route are considered as the only relevant infrastructure to be assessed, and is demonstrated through the assessment work not to produce EMF exposure above public and occupational guidelines. Therefore, it is anticipated that there would be **no significant residual effect** on EMF from the Proposed Development.

TELEVISION RECEPTION AND UTILITIES

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

Baseline Conditions

There are understood to be no buried telecommunication infrastructure beneath the Energy Park. There are no phone masts present with the Order Limits. The nearest telecommunication mast is 350m west from the western boundary of the Order Limits, positioned adjacent to Sidebar Lane. Onsite utilities include water, sewers, a high-pressure gas pipeline and electrical cables.

Assessment of potential for likely significant effects

During the construction, operational and decommissioning phase no significant effects on telecommunication or television reception as the infrastructure is either not present in the Proposed Development or in close proximity, and the nature and scale of the infrastructure in the Proposed Development will not cause any effects. Embedded mitigation measures will minimise risk of damage to utilities during construction and decommissioning. No effects on utilities are predicted as a result of the operational phase of the Development because no below-ground works will be required during operation.

Mitigation and Enhancement

The risk of damage to utilities during construction would be minimised through embedded mitigation, which would involve measures such as a CEMP and DRP and mapping infrastructure that crosses the Proposed Development and avoiding utilities through the design.

Cumulative and In-combination Effects

Cumulative effects will not occur in combination with other projects as the Proposed Development is predicted to have no significant effect on telecommunication, television or utilities.

Conclusion

It is anticipated that there would be **no significant residual effect** on telecommunications, television reception and utilities from the Proposed Development

SUMMARY

The aim of this ES has been to assess the 'likely significant effects' of the Proposed Development in accordance with The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations). Feedback from the formal consultation process has been taken into account when preparing the DCO Application and in undertaking the EIA process. Detailed assessments with respect to pertinent environmental topics have therefore been undertaken in accordance with definitive standards and legislation where available.

The design process, including siting of the solar panels, has been informed by the detailed environmental assessments so to limit any adverse effects. As a result of this process, with mitigation in place, no significant adverse effects have been identified.

Residual adverse significant effects are identified on landscape character and visual amenity, however, these are an inherent consequence of a new development of this type and scale. These are judged to be considerably limited by the existing vegetation that characterises the close to medium range landscape. Furthermore, the proposed mitigation planting has the potential to considerably reduce these effects and whilst certain elements of the Proposed Development would, inevitably, be more visible, for a scheme of its scale the residual landscape and visual effects arising are considered to be highly limited.

The Proposed Development is also considered to provide beneficial effects, in particular the generation of renewable energy for distribution onto the National Grid through the utilisation of energy. This aims to address the local and national renewable energy targets and ultimately reduce the reliance on fossil fuel-based sources as a form of energy production. The proposal is also considered to provide beneficial effects for local ecology through allowing the land a temporary period of rest from intensive agriculture and through the creation of grassland habitat. This will also provide a significant beneficial effect on local watercourses through the elimination of the use of fertiliser, herbicides and pesticides.

A number of environmental impact avoidance, design and mitigation measures have been identified to mitigate and control environmental effects during the construction, operation and decommissioning phase of the Proposed Development. It is proposed that these will be secured through appropriate requirements and other controls within the DCO Application for the Proposed Development, should this be granted.

In conclusion, the ES demonstrates that the design of the Proposed Development and its construction has taken into account the potential environmental effects and where necessary mitigation measures form an integral part of the scheme so to ensure that the environment is suitably protected and any impacts from the Proposed Development are minimised.

It is therefore considered that there are no overriding environmental constraints which would preclude the Proposed Development.

REFERENCES

Reference 1 HMSO (2017) The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

Reference 2 HMSO (2008) The Planning Act 2008

Reference 3 DECC (2011) National Policy Statement for Energy (EN-1)

Reference 4 DECC (2011) National Policy Statement for Renewable Energy Infrastructure (EN-3)

Reference 5 DECC (2011) National Policy Statement for Electricity Networks Infrastructure (EN-5)

Reference 6 DLUHC (2015) Renewable and low carbon energy guidance

Reference 7 DBEIS (2020) Energy White Paper

Reference 8 HMSO (2021) The Carbon Budge Order

Reference 9 DBEIS (2021) Build Back Greener

Reference 10 DBEIS (2022) British Energy Security Strategy

Reference 11 DBEIS (2021) National Planning Policy Framework

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