Peartree Hill Solar Farm

Non-Technical Summary of the Environmental Statement

Revision 2

Planning Act 2008

Infrastructure Planning

(Applications: Prescribed Forms

and Procedure) Regulations 2009 –

Regulation 5(2)(a)

Application Document Ref: EN010157/APP/6.4

November 2025

Prepared by RSK on behalf of RWE Renewables UK Solar and Storage LTD

Contents

1 Introduction

1.1.1 This is a Non-Technical Summary for the Environment Statement that has been prepared for Peartree Hill Solar Farm (referred to in the Environmental Statement as the 'Proposed Development'). Peartree Hill Solar Farm is a proposed solar photovoltaic electricity generating and battery storage facility with associated infrastructure which would allow for the generation and export of electricity exceeding 50 megawatts.

1.1.2 Peartree Hill Solar Farm is essential to the United Kingdom's plan to rapidly decarbonise its electricity sector. Solar generation contributes significantly to energy security and is one of the most affordable renewable energy technologies in the United Kingdom. The need for solar energy is urgent, as the United Kingdom requires significantly more energy capacity from projects than is currently in development to meet its energy goals.

1.1.3 Solar energy supports key government energy policies, promoting decarbonisation, stabilising energy prices, and offering opportunities for biodiversity improvements. Peartree Hill Solar Farm would play a critical role in addressing climate change on both a national and global scale.

1.1.4 The Applicant, RWE Renewables UK Solar and Storage Ltd, is one of the top three largest solar developers in the United Kingdom with over 125 years of energy expertise, through design, construction, and operation. It is the Applicant's ambition to have a carbon neutral energy portfolio by 2040, providing clean, secure, and affordable energy to millions of households.

1.1.5 Peartree Hill Solar Farm is a Nationally Significant Infrastructure Project which means to build it, the Applicant needs to apply for a Development Consent Order, which will be examined by the Planning Inspectorate and approved by the Secretary of State for Energy Security and Net Zero for the United Kingdom.

1.1.6 As part of the Development Consent Order process, an Environmental Impact Assessment has been undertaken for Peartree Hill Solar Farm as required by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

1.1.7 Environmental Impact Assessment is the process that identifies the key environmental effects resulting from the construction, operation and, where relevant, decommissioning of a proposed development. It suggests ways that these effects can be avoided, reduced or managed.

1.1.8 The findings of the Environmental Impact Assessment are presented in the Environmental Statement.

1.1.9 The Environmental Statement is made up of a number of volumes (as set out in **Plate 1**, below).

Non-Technical Summary	Summarises the Environmental Impact Assessment and the Environmental Statement in non-technical language
Volume 1: Introduction Chapters	Introduces the environmental assessment and Peartree Hill Solar Farm
Volume 2: Factor Chapters	Presents the main findings of the Environmental Impact Assessment
Volume 3: Figures	Comprises figures to support the information detailed in Environmental Statement Volume 1 and Environmental Statement Volume 2
Volume 4: Appendices	Provides the accompanying appendices to Volumes 1 and 2 of the Environmental Statement, together with the Committments Register and this Non-Technical Summary

Plate 1: Structure and content of the Environmental Statement

2 Location of Peartree Hill Solar Farm

2.1 The Site

2.1.1 Peartree Hill Solar Farm is located within the administrative area of East Riding of Yorkshire Council, north of the city of Hull and east of the town of Beverley, on land between the villages of Tickton, Routh, Leven, Long Riston, Arnold, Wawne, Woodmansey and Weel.

2.1.2 The site comprises approximately 893 hectares of land (the 'Site') and this is the maximum area of land required for the construction, operation (including maintenance) and decommissioning of Peartree Hill Solar Farm. It includes the infrastructure as well as any land set aside for landscaping and biodiversity enhancements, recreational connectivity and access. The extent of the Site is presented in **Figure 1: The Site**. The term "Site" is used in this context as it represents the area within the "Order Limits." The term "Order Limits" is specifically used in the Development Consent Order and is consistently applied throughout the Environmental Statement.

2.1.3 The land within the Site predominantly consists of agricultural fields interspersed with hedgerows, small woodland blocks, farm access tracks, wet ditches and some of the many drains and dykes in the area **(Plate 2)**.

Plate 2: Agricultural fields and ditches within the Site

2.1.4 The Site is divided into five parcels of land (see **Figure 1: The Site**):

- **Land Area B:** Land north-west of Long Riston;
- **Land Area C:** Land west of Arnold;
- **Land Area D:** Land south of the A1035;
- **Land Area E:** Land east of Weel; and

- **Land Area F:** Land north of Wawne.

2.1.5 There is no Land Area A. This Land Area was removed as part of the design process.

2.1.6 Each Land Area contains several fields and each field has been given a unique reference (for example, B1), as shown on **Figure 3: Indicative Environmental Masterplan**.

2.1.7 The Peartree Hill Solar Farm would connect to the existing National Grid Creyke Beck Substation, located approximately 5.6 kilometres south-west of the southern extent of the Land Areas, known as the 'grid connection cable route'.

2.1.8 The interconnecting cables between Land Areas are identified as follows and are shown on **Figure 1: The Site**:

- Cable B-B;
- Cable C-D;
- Cable E-E; and
- Cable E-F.

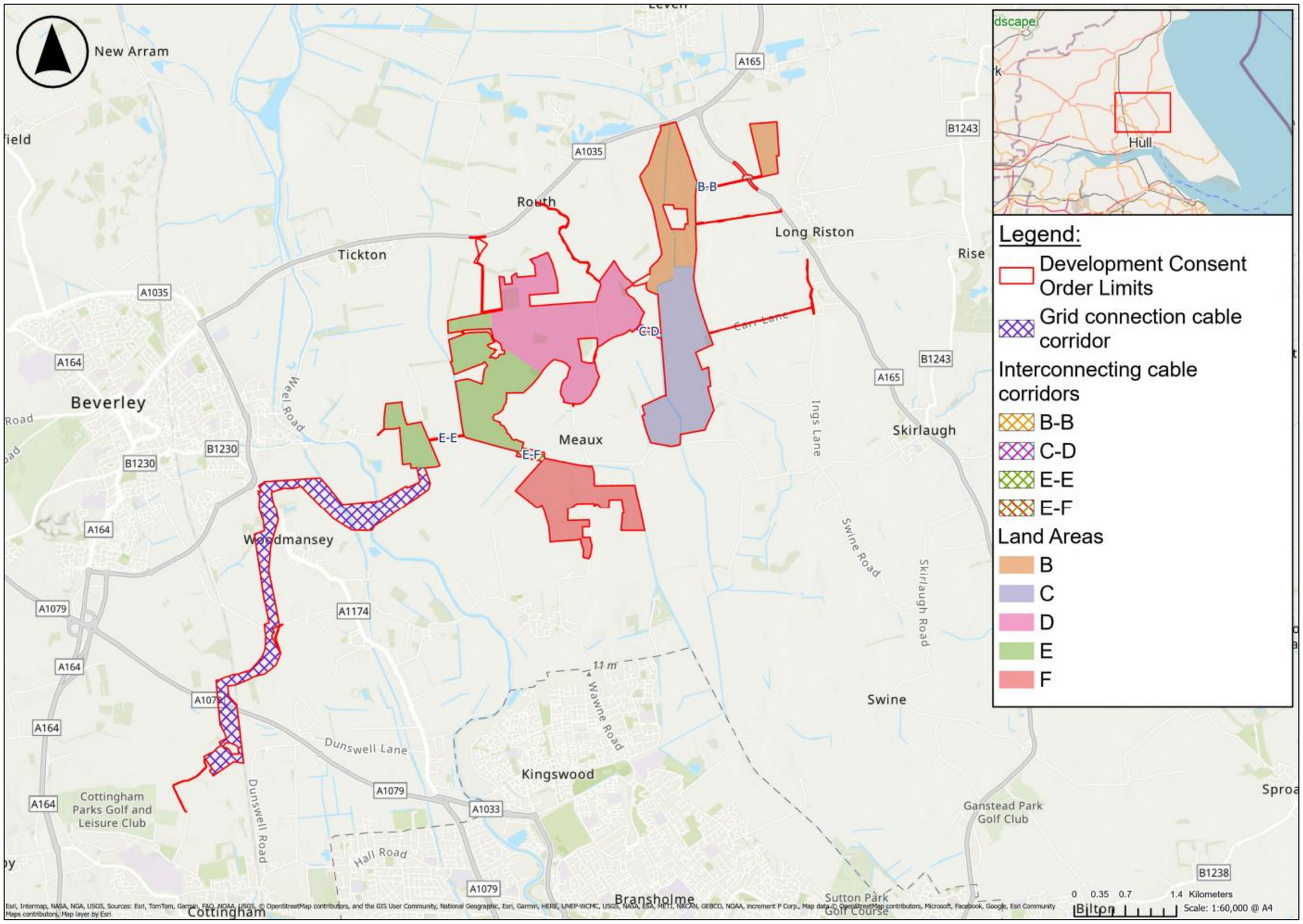


Figure 1: The Site

2.2 Designated, historic and natural assets

2.2.1 No statutory ecological sites (areas of land that are protected for their ecological importance at international, national, regional and local levels) lie within the Order Limits. The closest ecological sites designated by European law to the Order Limits are:

- Hornsea Mere Special Protection Area, approximately 7 kilometres from the closest edge of the Order Limits;
- Humber Estuary Ramsar/Special Protection Area/Special Area of Conservation, approximately 8 kilometres to the closest edge of the Order Limits; and
- Greater Wash Special Protection Area, approximately 11 kilometres from the closest edge of the Order Limits.

2.2.2 There is one statutory nationally designated site within 2 kilometres of the Order Limits:

- Leven Canal Site of Special Scientific Interest (approximately 1 kilometre from the closest edge of the Order Limits).

2.2.3 There is one non-statutory designated site (Local Wildlife Site) within the Order Limits:

- Figham Pastures Local Wildlife Site (which is crossed by the grid connection cable route).

2.2.4 There are a further three non-statutory designated sites within 1 kilometre of the Order Limits:

- Cote Wood Local Wildlife Site/ancient semi-natural woodland (borders Fields D11 and D17 in Land Area D, abutting the Order Limits);
- Meaux Local Wildlife Site (the northern end directly abuts the Order Limits and the southern end is 20 metres north of Field F6 within Land Area F); and
- Arnold Drain Local Wildlife Site (approximately 50 metres from the Order Limits as its closest point (Field C7 in Land Area C)).

2.2.5 There are also two veteran trees adjacent to the Order Limits. There is no ancient woodland within the Order Limits. Cote Wood Local Wildlife Site/ancient semi-natural woodland is located adjacent to the Order Limits.

2.2.6 Other Habitats of Principal Importance that are within or adjacent to the Order Limits include areas of priority deciduous woodland and areas of floodplain grazing marsh.

2.2.7 There are no known designated heritage assets (as designated by Historic England) within the Order Limits. However, there are a number of Scheduled Monuments, Grade II Registered Parks and Gardens, Conservation Areas and Listed Buildings (Grade I, II and II*) within 5 kilometres of the Order Limits.

2.2.8 A large zone 1 source protection zone, with respect to a groundwater abstraction source, is present close to Cottingham, with large sections of the Order Limits being within the zone 1 (inner protection zone), zone 2 (outer protection zone) and zone 3 (total catchment) sections of the source protection zone.

2.2.9 The Order Limits are not covered by any statutory landscape designations, nor are there any within 3 kilometres of the Order Limits. The Order Limits are located in the National Character Area 40 Holderness.

2.2.10 There are five watercourses within or in close proximity to the Order Limits that are shown as 'Main Rivers' on Environment Agency mapping:

- River Hull, which runs to the west of Land Area E and crosses the Order Limits at the grid connection cable route;
- Beverley and Barmston Drain, which runs to the west of the River Hull and crosses the Order Limits at the grid connection cable route;
- Holderness Drain, which runs adjacent to Land Areas E and F and crosses the Order Limits at Cable E-E and Cable E-F;
- Monk Dike, which runs within the Order Limits through Land Areas B and C; and
- Meaux and Routh East Drain, which runs outside of the Order Limits beside Land Areas B and C and crosses the Order Limits where Land Area B connects to Land Area C and at Cable C-D.

2.2.11 The Order Limits occupy predominantly low-lying land, which relies on a network of drainage systems including ditches, culverts and pumping stations.

2.2.12 The Order Limits are predominantly located in flood zones 2 and 3. Flood zone 3 indicates an area that has a high probability of flooding.

2.3 Access

2.3.1 The sections of the Strategic Road Network closest to the Order Limits are the A63 and M62.

2.3.2 The major roads in the vicinity of the Peartree Hil Solar Farm are as follows:

- The A1035;
- The A164;
- The A165; and
- A1174.

2.3.3 The following other minor roads can be found within and/or surrounding the Peartree Hill Solar Farm:

- Meaux Lane (named Meaux Road south of Holderness Drain), Meaux;
- Carr Lane, Long Riston;
- Arnold Lane West, Arnold/Long Riston;
- Black Tup Lane, Arnold/Long Riston;
- Carr Lane, Arnold;
- Woodhouse Lane, west of Skirlaugh;
- Kidhill Lane, west of Skirlaugh;
- Ings Lane, west of Skirlaugh;
- Long Lane, Woodmansey; and
- Park Lane, Cottingham.

2.3.4 The following are the closest National Cycle Network cycle routes to Peartree Hill Solar Farm:

- National Cycle Network Route No. 1(runs through the Order Limits);
- National Cycle Network Route No. 164; and
- National Cycle Network Route No. 65.

2.3.5 There is also an extensive network of Public Rights of Way and a long distance path (Wilberforce Way) connecting the surrounding settlements, including groups of footpaths and bridleways around Riston, Tickton, Wawne, Skirlaugh and Catwick (See **Figure 2: Overview of Environmental Features**, below).

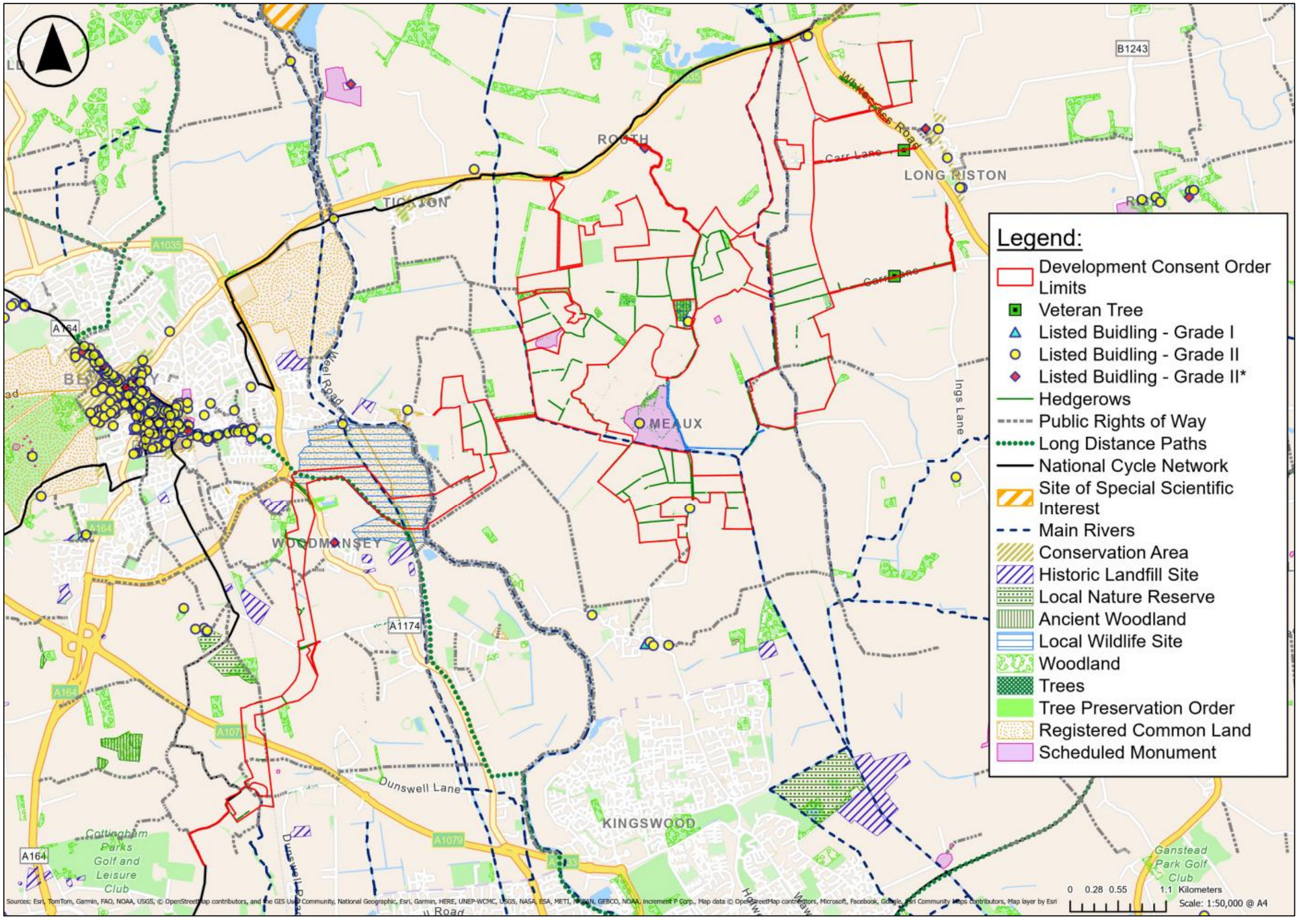


Figure 2: Overview of Environmental Features

3 Peartree Hill Solar Farm

3.1 Introduction

3.1.1 The design of Peartree Hill Solar Farm has evolved throughout the Environmental Impact Assessment process to avoid, reduce or manage environmental effects as well as in response to consultation and engagement feedback, where appropriate.

3.1.2 Peartree Hill Solar Farm includes the key components outlined below in **Plate 3**.

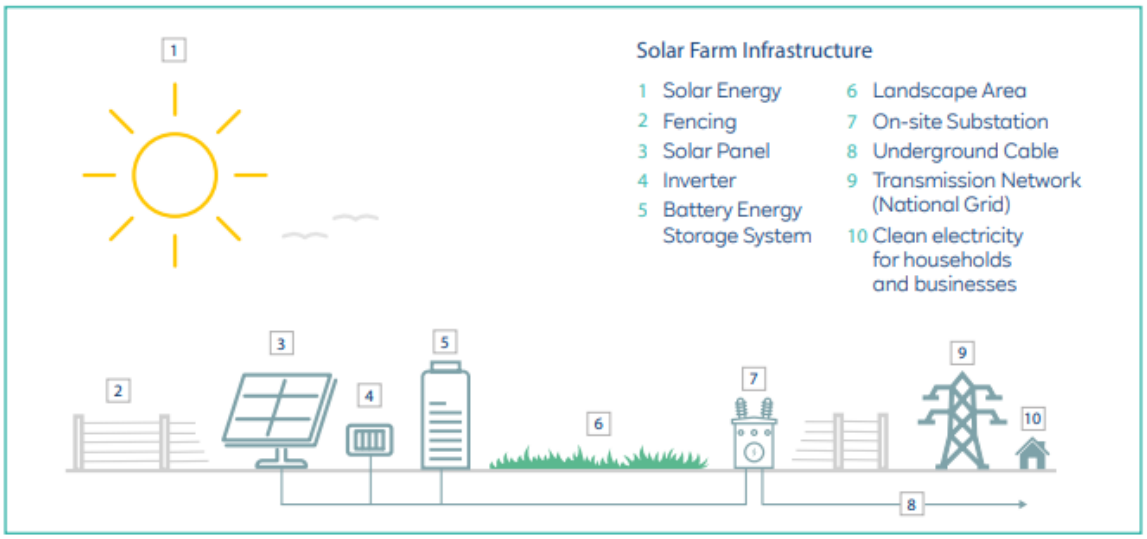


Plate 3: Key components of Peartree Hill Solar Farm

3.1.3 Peartree Hill Solar Farm will use energy from the sun (**Plate 3: Number 1**).

3.1.4 Solar panels would generate electrical power by converting sun light into electricity (**Plate 3: Number 3**), supported by battery storage and two on-site substations to feed the electricity into the national grid. The solar panels are set up in rows (known as 'strings'), connected to each other by cables to transfer the electricity generated by the solar panels to inverters.

3.1.5 Peartree Hill Solar Farm will be protected by fencing (**Plate 3: Number 2**) to keep the Proposed Development secure.

3.1.6 Inverters (**Plate 3: Number 4**) are needed to convert the direct current electricity generated by the solar panels into alternating current electricity, which is suitable for use in homes and businesses.

3.1.7 Inverters will be located underneath the solar panels or in areas sometimes referred to as the 'balance of solar plant'. The 'balance of solar plant' also includes switchgears (which control the electrical equipment), and transformers (which 'step up' the voltage to the required level for sending to the on-site substations).

3.1.8 Battery energy storage systems (**Plate 3: Number 5**), including batteries and associated inverters, transformers, switchgear, enclosures, monitoring systems, air conditioning, electrical cables and fire safety infrastructure will be installed. These will store electricity at times when demand is lower and releases it to the National Grid when it is most needed.

3.1.9 New landscape and biodiversity areas (**Plate 3: Number 6**) would be created to help screen Peartree Hill Solar Farm and increase biodiversity across the Oder Limits. A series of new permissive paths are also proposed, connecting to the existing Public Rights of Way Network.

3.1.10 The two on-site substations (**Plate 3: Number 7**) will receive the electricity from the solar panels, step up the voltage and send it to the National Grid Creyke Beck Substation via underground cabling to enter the electricity network (**Plate 3: Number 9**).

3.1.11 There would be several separate sections of underground interconnecting cabling proposed between Land Areas to connect all the different parts of Peartree Hill Solar Farm together, and an underground cable route (**Plate 3: Number 8**) would connect these to the National Grid Creyke Beck Substation.

3.1.12 The Peartree Hill Solar Farm has a connection agreement with Northern Power Grid, which would require a new infrastructure and cables to be installed at the National Grid Creyke Beck Substation. This would allow the connection between the Substation and the Peartree Hill Solar Farm and form part of the Proposed Development. However, it is expected that Northern Power Grid would carry out these works.

3.1.13 National Grid Electricity Transmission is proposing works at the National Grid Creyke Beck Substation to facilitate the connection of the underground cabling into the Substation. These works are part of a wider reinforcement of the National Grid Electricity Transmission network and are not directly related to Peartree Hill Solar Farm. For this reason, they do not form part of the Development Consent Order.

3.1.14 Highways works would also be required to facilitate access for construction vehicles, comprising passing places where necessary to ensure that heavy goods vehicles can be safely accommodated amongst existing traffic.

3.1.15 Construction compounds, parking and laydown areas would be established during the construction phase.

3.2 Construction of Peartree Hill Solar Farm

Programme

3.2.1 The indicative construction programme is based on a forecasted start of works in the second half of 2026 with the Peartree Hill Solar Farm opening in the second half of 2028. Construction is anticipated to be 24 months and to be phased, with Land Areas B-F constructed in stages, as outlined below;

- Phase 1: Land Area B;
- Phase 2: Land Areas B & C;
- Phase 3: Land Areas C & D and grid connection cable route;
- Phase 4: Land Areas D & E and grid connection cable route;
- Phase 5: Land Areas E & F and grid connection cable route; and
- Phase 6: Land Area F.

Working hours and construction staff

3.2.2 Working hours on-site would be from 07:00 until 19:00 Monday to Friday and 07:00 until 12:00 on Saturday. No working would take place on Sundays or Bank Holidays unless necessary and agreed with East Riding of Yorkshire Council.

3.2.3 It is anticipated that a maximum of 350 workers would be on-site during the peak of the construction period.

Preliminary works

3.2.4 Initial works likely to take place to prepare the Site for construction would include (but not limited to), vegetation clearance, installation of any internal access tracks, installation of temporary construction compounds and installation of security measures such as fencing.

Construction activities

3.2.5 Key activities that are likely to take place during the construction phase include (but not limited to):

- Upgrading and creation of field accesses
- Soil storage and management of waste;

- Solar panel development construction including pilling, installing mounting structures, foundation excavation for inverters, transformers and switchgear (where necessary);
- Cable installation and trenching;
- Construction drainage;
- Construction of the two on-site substations, including groundworks, foundations and installation of electrical components;
- Installation of control, monitoring and communication systems;
- Testing and commissioning; and
- Site reinstatement (returning any land during construction for temporary purposes to its previous condition).

Construction access

3.2.6 Vehicles would access Land Areas B and C via the A165, either from the north via the A1035 at the White Cross Roundabout or from Hull to the south. From the A165, Carr Lane (Long Riston) would be used to access Land Area B, while Arnold Lane West, Black Tup Lane and Carr Lane (Arnold) would be used to access Land Area C. Land Area B (west of Monk Dike) would also be accessed via internal tracks through Land Area D. Land Areas D and E would be accessed directly off the A1035. For Land Area F, vehicles would leave the A1035 at Routh to access the Land Area via Meaux Lane/Meaux Road. The grid connection cable route would be accessed via the A1174, Long Lane and either Park Lane or Dunswell Road.

3.2.7 Improvements to field accesses and some highways and well as new accesses would be required to enable access to the Peartree Hill Solar Farm during construction. Furthermore, a number of roads have been identified where it may be necessary to construct passing places for construction vehicles and deliveries accessing the Proposed Development. Passing places would be located on sections of public highways currently considered too narrow for passing vehicles and heavy good vehicles. The sections of road where passing places may be required are as follows:

- Carr Lane (Long Riston);
- Arnold Lane West (Arnold/Long Riston);
- Carr Lane (Arnold);
- Meaux Lane (Meaux); and
- Meaux Road (Meaux).

3.2.8 Proposed improvements to field accesses and highways are presented on the **Streets, Rights of Way and Access Plans [EN010157/APP/2.3]**.

3.3 Operation (including maintenance) phase

3.3.1 Peartree Hill Solar Farm will have an operational life of 40 years. During this phase, routine activities will include servicing, maintenance, replacement of solar and battery energy storage system equipment, cleaning of solar panels, and vegetation management. If operational equipment needs replacement, some heavy goods vehicle activity is likely to occur.

3.3.2 The land around the solar panels and associated areas will be managed according to the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]** which includes planting, screening and habitat creation to enhance the ecological value of the Site and support local wildlife. All operational activities will comply with the **Outline Operational Environmental Management Plan [EN010157/APP/7.3]**, covering working hours, lighting, parking, security, monitoring and waste management. Additionally, an **Outline Battery Safety Management Plan [EN010157/APP/7.6]** will ensure the safety of the battery energy storage system throughout its lifecycle, addressing design, operation, disposal and emergency planning.

3.3.3 Areas identified for solar development and environmental mitigation and enhancement are presented on **Figure 3: Indicative Environmental Masterplan**, below.

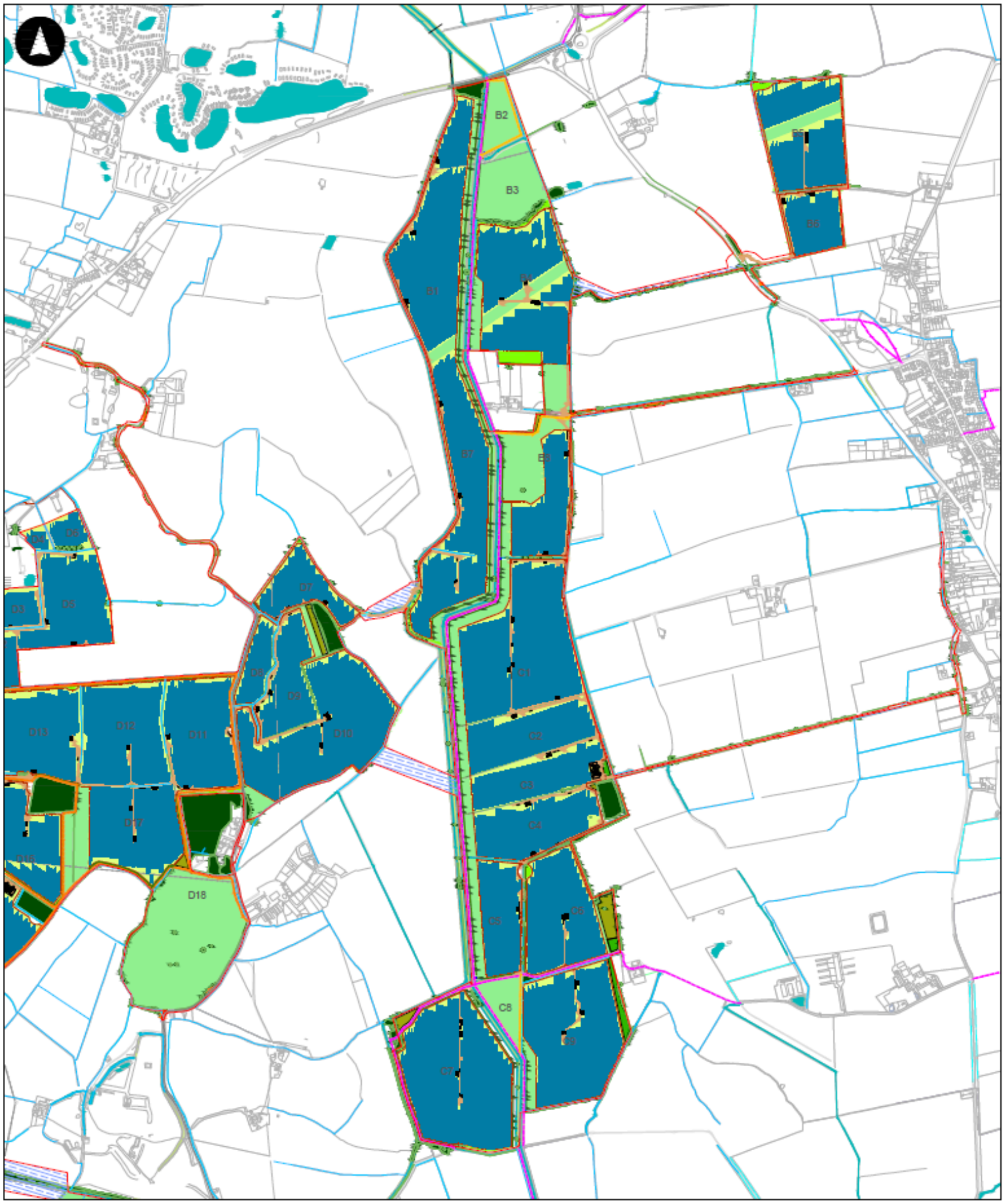
3.4 Decommissioning phase

3.4.1 Decommissioning of Peartree Hill Solar Farm will involve removing all solar photovoltaic infrastructure, including the battery energy storage system. Temporary compounds will be set up for equipment and staff parking, then removed post-decommissioning.

3.4.2 All above-ground infrastructure would be dismantled responsibly, with materials managed for reuse or recycling, where possible. Concrete and hardstanding would be removed, while below-ground cables would remain and would be disabled to avoid unnecessary ground disturbance. Any proposals to leave certain infrastructure, for example access tracks, would be discussed and agreed with landowners before decommissioning. If on-site substations are to be retained this will be discussed and agreed as necessary.

3.4.3 The land will be returned to the landowners, who are expected to restore the land to its current use. Established habitats would remain when the land is handed back to landowners. The Site would be restored according to the **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4].**

3.4.4 Decommissioning is expected to take between 18 and 24 months, and will be undertaken in phases.



Key

Development Consent Order Limits

Existing Features

Vegetation to be retained and protected

Public Right of Way

Watercourses and Waterbodies

Powerlines and Pylons

Proposed Development Features

Proposed Solar Panels

Proposed On-site Substation

Proposed Internal Access Tracks

Proposed Permissive Path (to be available for pedestrians only)

Proposed Permissive Path (to be available for horse riders)

Proposed Mixed Woodland/Scrub Planting

Proposed Species-rich Hedgerow Planting

Proposed Legume Rich/Field Margin Grassland

Proposed Flower Rich/Wet Grassland

Proposed Scrapes

Interconnecting cable routes and grid connection cable route (Habitats to be reinstated following cable installation)

Figure 3: Indicative Environmental Masterplan (Part 1 of 3)

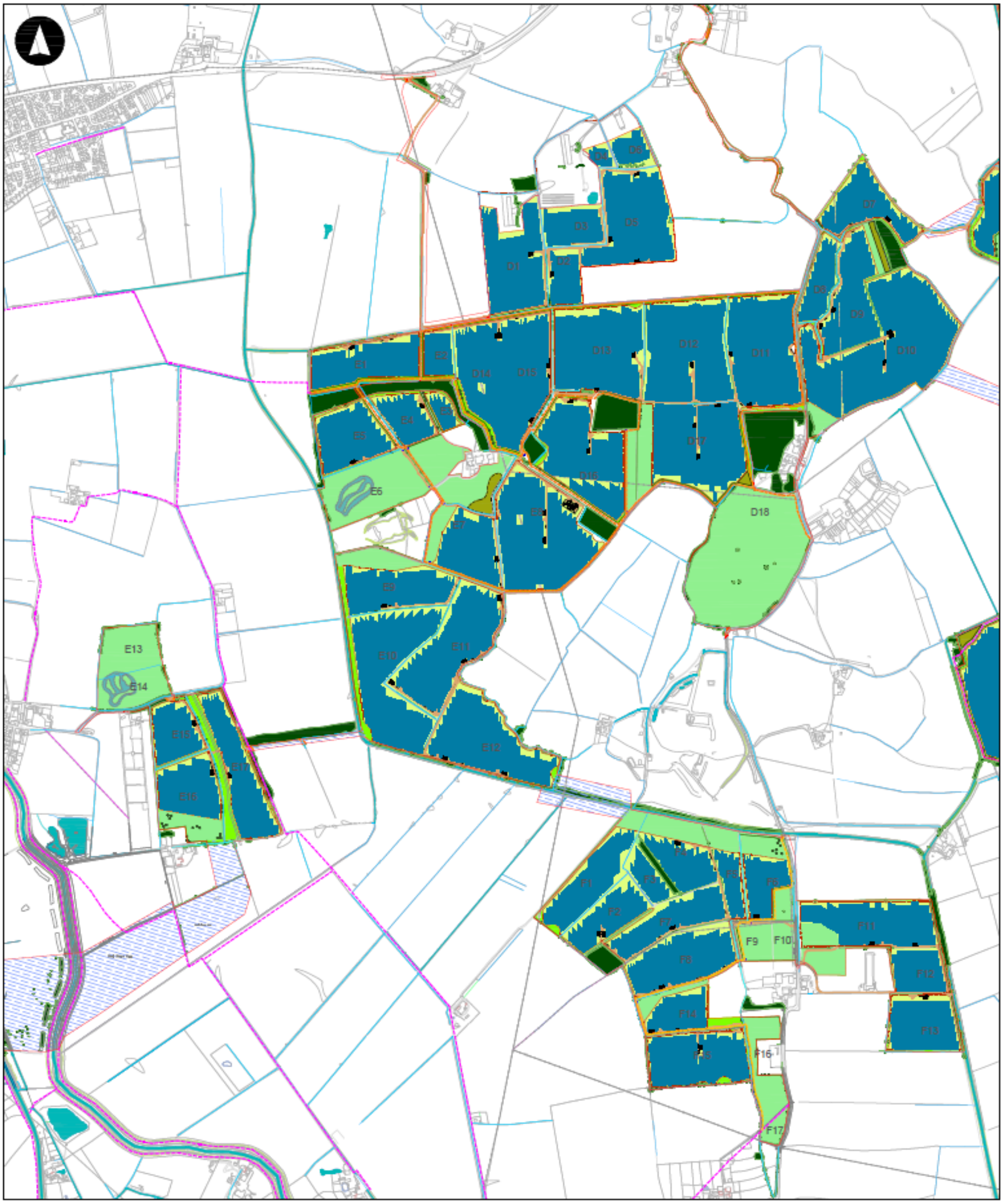
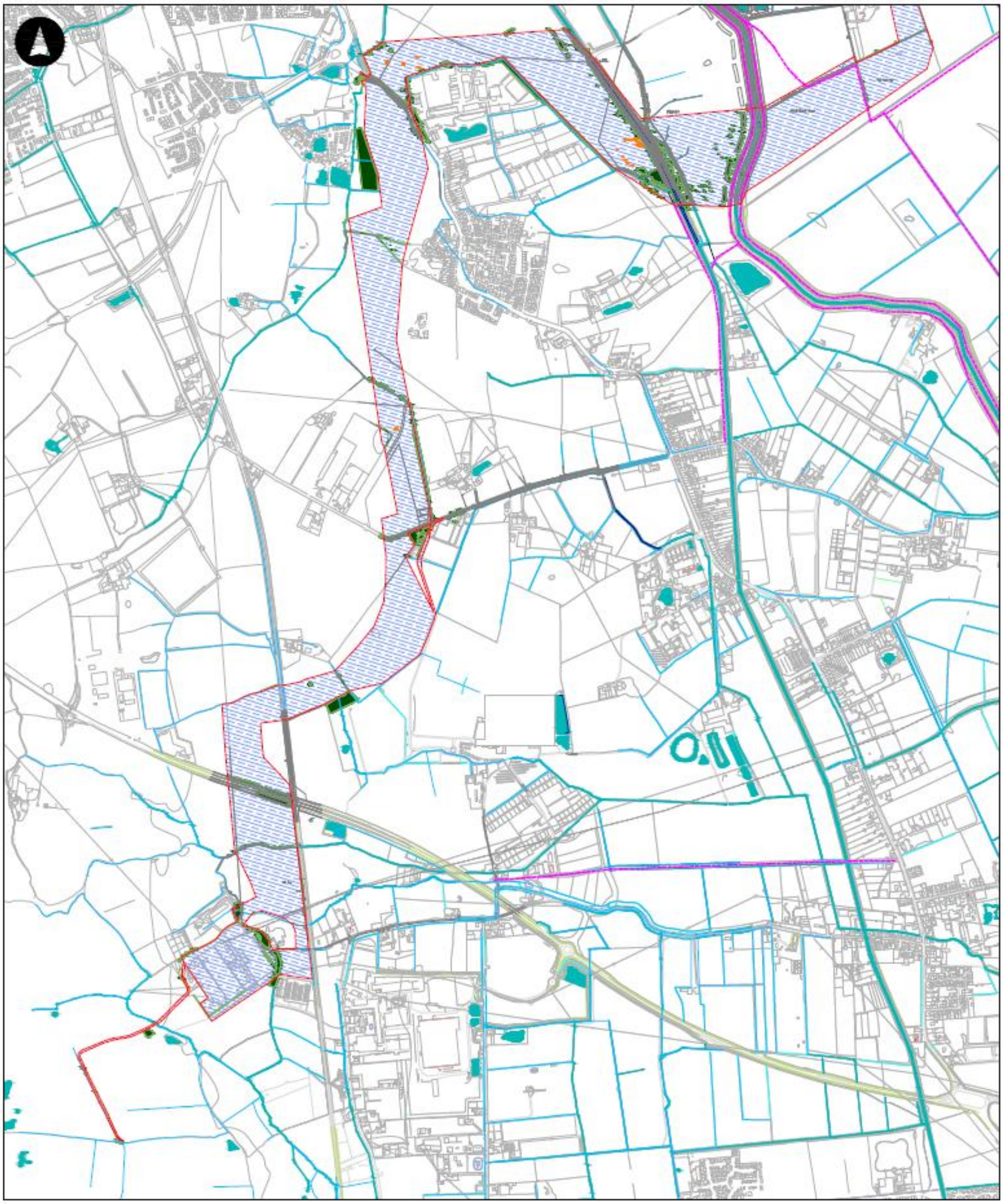


Figure 3: Indicative Environmental Masterplan (Part 2 of 3)



Key

Development Consent Order Limits

Existing Features

Vegetation to be retained and protected

Public Right of Way

Watercourses and Waterbodies

Powerlines and Pylons

Proposed Development Features

Interconnecting cable routes and grid connection cable route
(Habitats to be reinstated following cable installation)

Figure 3: Indicative Environmental Masterplan (Part 3 of 3)

4 Reasonable Alternatives Considered

4.1 Background and context

4.1.1 The assessment of alternatives has been framed within the context of the clear and pressing need for Peartree Hill Solar Farm. The consideration of alternatives has followed the guidelines set out in relevant national planning policies.

4.1.2 The alternatives studied for Peartree Hill Solar Farm include alternative sites, other renewable technologies, other solar technologies, and other design/layout options. The 'no development' option has not been considered as it would not support the renewable electricity generation required to meet the United Kingdom's net zero targets.

4.2 Approach to Site selection

4.2.1 The Applicant conducted a site selection process, considering technical, environmental, and economic factors to identify a suitable location for a large-scale solar photovoltaic development.

4.2.2 The Applicant sought to develop a project which:

- Would contribute to meeting the United Kingdom’s urgent need for low carbon energy generation;
- Would be in close proximity to an available grid connection or part of the transmission network in which capacity exists;
- Would reduce impacts on sensitive landscapes and environments as far as practicable;
- Would be readily accessible from the existing strategic road network to facilitate construction; and
- Would be delivered on land which could be secured voluntarily thereby avoiding the need for large scale compulsory acquisition.

4.2.3 The key factors in the site selection assessment and why the Site is considered a suitable location for a large-scale solar farm, in accordance with national policy, are as follows:

- **Irradiance and site topography** – preference was given to sites with a south facing aspect and flatter topography. Irradiance (meaning the amount of light energy from the sun) is sufficiently high in East Riding of Yorkshire to support solar development and the topography of the Site is generally flat and therefore suitable for solar;

- **Network connection** – the site selection focused on a 12 kilometre radius around the National Grid Creyke Beck Substation where there was an available point of connection. A 12 kilometre radius being the commercially viable cable distance for a project of this capacity;
- **Proximity of site to dwellings** – the site selection sought to avoid sites in close proximity to residential dwellings or where it would not be possible, to appropriately mitigate visual amenity and glint and glare. The Site is located away from major settlements such as Hull and Beverley;
- **Agricultural land classification and land type** – the site selection sought to minimise the impact on best and most versatile agricultural land. The Site is located on land that is predominantly classified as poor quality agricultural land;
- **Accessibility** – the site selection considered the suitability of the access routes to the proposed sites, during construction, operation (including maintenance) and decommissioning. The Site is well serviced by the rural road network and benefits from access to the A1035, the A165, and the A1079.

4.2.4 Given the urgent need for renewable energy to address the climate crisis, and following consideration of the above factors, the Site location has been chosen as it is considered to have good potential for a large-scale solar site. The availability of significant capacity at the National Grid Creyke Beck Substation was the primary driver in identifying a site in this part of East Riding of Yorkshire.

4.2.5 The Site met the necessary conditions for the construction and operation of a large-scale solar project while minimising potential environmental impacts and maximising efficiency. The Order Limits is considered to be preferable due to a number of reasons, including the lack of availability of suitable previously developed land, relative distance from international and national environmental designations, distance to residential properties, and seeking to minimise additional land that would otherwise be required to create a longer cable connection route to the National Grid Creyke Beck Substation.

4.3 Alternative renewable technologies

4.3.1 The Applicant did not consider alternative types of renewable energy generation technologies such as wind or hydrogen for the Site. Onshore wind energy was deemed unsuitable for the local area due to the flat terrain.

4.4 Alternative site layouts

4.4.1 The design and layout of Peartree Hill Solar Farm have been part of an iterative process informed by environmental assessments, a site selection assessment, design principles and engagement with stakeholders and consultees.

4.4.2 This evolution includes three distinct design stages:

- **Design Stage 1** – Following identification of the Peartree Hill Solar Farm area, as outlined above, the land was assessed to identify land suitable for solar development and potentially suitable locations for associated infrastructure. The initial assessment focussed on the suitability of land parcels based on environmental, social and economic factors. Minimum offsets to avoid siting the development too close to environmental features, residential properties and business premises informed the design process.
- **Design Stage 2** – Following the Design Stage 2 process, a number of additional fields and partial fields were removed from the area of solar photovoltaic development.
- **Design Stage 3** – The design of Peartree Hill Solar Farm submitted in support of the Development Consent Order Application, as shown in **Figure 3: Indicative Environmental Masterplan**, includes a number of changes since Design Stage 2 that was presented in support of the statutory consultation, held May – June 2024. The key design change made to the solar development areas was the removal of Land Area A from the Order Limits. This was due to high risk of flooding in this area. Additionally, following suggestions from local residents to include new cycle and footpath routes, a new permissive path route was proposed and the preferred grid connection cable route was selected.

4.4.3 Engagement throughout this process involved consultations with various stakeholders, including local councils, environmental agencies, community organisations and landowners, with feedback informing the design development. Further details on the consultation process are available in the **Consultation Report [EN010157/APP/5.1]**.

5 Approach to the Environmental Impact Assessment

5.1 Environmental Impact Assessment process

5.1.1 Environmental Impact Assessment is a systematic process that examines the likely significant effects (beneficial or adverse) on the environment resulting from the construction, operation (including maintenance) and decommissioning of a proposed development.

5.1.2 The Environmental Impact Assessment process begins by assessing the existing conditions (“baseline”) of an area affected by a proposed development and predicts the potential changes (“impacts”) during construction, operation (including maintenance) and decommissioning. In assessing these impacts, the Environmental Impact Assessment considers both the scale of each impact and who or what might experience the impact ("receptor"), such as people, animals, landscapes, heritage sites, groundwater, or soil. The value/importance/sensitivity of each receptor is combined with the scale of the impact (“magnitude”) to reach a conclusion about the overall environmental "effect" (the result of a change or impact caused by the proposed development on a particular feature or receptor) and its "significance" (the importance or scale of the effect on the receptor), focusing on identifying significant beneficial or adverse effects.

5.1.3 Mitigation measures are considered following a mitigation hierarchy aiming first to avoid, then to reduce, and/or lastly to offset adverse effects. The remaining effects (“residual effects”) after the implementation of mitigation measures, are then assessed for significance.

5.1.4 The Environmental Impact Assessment also evaluates intra-project cumulative effects (multiple effects from Peartree Hill Solar Farm on the same receptor) and inter-project cumulative effects (effects from Peartree Hill Solar Farm in combination with other existing development and/or approved development).

5.1.5 The Environmental Impact Assessment evaluates a ‘worst-case’ scenario to ensure a robust analysis of likely significant effects. Establishing maximum or minimum parameters (for example heights) for Peartree Hill Solar Farm. Assessing a ‘worst case’ using parameter offers a degree of flexibility in the design to allow the Applicant to incorporate technological advancements at the time of construction.

5.1.6 The process is shown on **Plate 4: Main stages of the Environmental Impact Assessment process**, where the Environmental Statement is the last stage in this process.

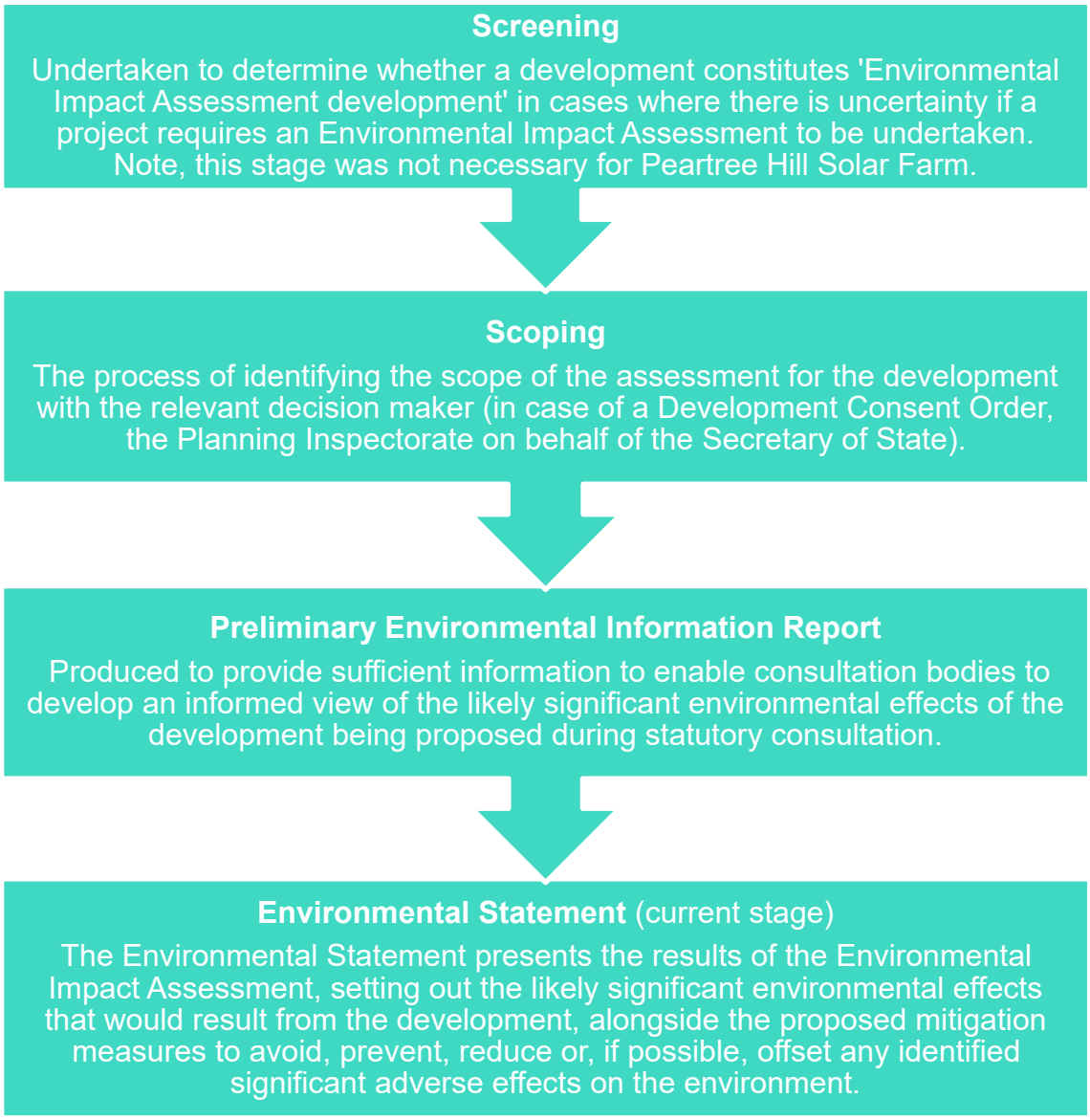


Plate 4: Main stages of the Environmental Impact Assessment process

5.1.7 An Environmental Statement has been submitted in support of the Development Consent Order Application. The Environmental Statement presents the results of the Environmental Impact Assessment undertaken for the Peartree Hill Solar Farm and sets out the likely significant environmental effects that would result from construction, operation (including maintenance) and/or the decommissioning, alongside the proposed mitigation measures to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects.

5.2 Scoping

5.2.1 An Environmental Impact Assessment Scoping Report was prepared by the Applicant in respect of Peartree Hill Solar Farm and submitted to the Planning Inspectorate (a government agency of the Ministry of Housing, Communities and Local Government that handles infrastructure projects in England).on 9 November 2023.

5.2.2 The aim of the scoping process is to agree on the approach, methodology and how to carry out the Environmental Impact Assessment while identifying the environmental factors to be considered within the Environmental Statement. It establishes the receptors/matters that will comprise the scope of the assessment. Furthermore, the scoping process helps to identify the main effects that a development is likely to have on the environment, taking into account responses from prescribed consultees.

5.2.3 The following list presents the environmental factors that have been assessed in the Environmental Statement:

- Air quality;
- Biodiversity;
- Climate;
- Cultural heritage
- Land, soil and groundwater;
- Landscape and visual;
- Noise and vibration;
- Population;
- Transport and access; and
- Cumulative effects.

5.3 Consultation and engagement

5.3.1 The consultation and engagement process during the Environmental Impact Assessment is essential for developing a comprehensive and proportionate Environmental Statement. It ensures that views from statutory and non-statutory consultees are considered, helping to prioritise issues with potential significant environmental effects and identify areas requiring further investigation.

5.3.2 Early and targeted engagement with stakeholders such as East Riding of Yorkshire Council, Historic England, Natural England, and Historic England, among others has influenced the design of Peartree Hill Solar Farm and the Environmental Impact Assessment. A **Consultation Report [EN010157/APP/5.1]**, detailing how the Applicant has engaged during the different stages of the design and has taken into account feedback, has been submitted in support of the Development Consent Order Application.

6 Findings of the Environmental Statement

6.1 Introduction

6.1.1 An assessment of the environmental effects of Peartree Hill Solar Farm has been completed for each of the factors identified in **Section 5** above.

6.1.2 The conclusions on the likely significant environmental effects of Peartree Hill Solar Farm are described within the Environmental Statement. This section provides a brief summary of the overall assessment findings.

6.2 Air Quality

6.2.1 This section considers the likely effects of Peartree Hill Solar Farm on air quality across its construction, operation (including maintenance) and decommissioning phase.

What measures have been embedded into the design of Peartree Hill Solar Farm to reduce dust and emissions?

6.2.2 Peartree Hill Solar Farm has incorporated a range of mitigation measures based on industry recognised guidance for dust and particulate matter control in demolition and construction and incorporated into the design of Peartree Hill Solar Farm to minimise these impacts. The mitigation measures relevant to air quality that are embedded in the design of Peartree Hill Solar Farm are:

- Minimum offset distance of 50 metres from residential properties from solar photovoltaic modules and other infrastructure; and
- The two on-site substations will not be within 250 metres of residential properties or any environmental designated sites.

Would dust and emissions generated during construction and decommissioning affect nearby receptors?

6.2.3 During construction, there is potential for dust and emissions to affect local settlements including, the villages of Riston and Woodmansey, as well as ecological receptors (the Local Wildlife Sites). Therefore, site-specific mitigation measures have been proposed. The implementation of dust control measures and construction equipment emission controls can greatly reduce any adverse effects during the construction phase. Mitigation measures are detailed in and secured by the **Outline Construction Environmental Management Plan**

[EN010157/APP/7.2]. Dust effects during the construction phase are therefore expected to be **not significant**.

6.2.4 The impacts of road traffic emissions associated with the construction of Peartree Hill Solar Farm have the potential to affect existing human and ecological receptors. Impacts on local air quality as a result of road traffic emissions are expected to be confined to this timeframe and therefore be temporary. Any effects will be controlled through the implementation of mitigation measures, which are detailed in and secured by the **Outline Construction Traffic Management Plan [EN010157/APP/7.7]**. Therefore, impacts of road traffic emissions associated with the construction phase following the implementation of mitigation measures are expected to be **not significant**.

6.2.5 Decommissioning is expected to generate lower effects to those anticipated during construction and therefore the mitigation measures proposed for implementation during the construction phase will be appropriate for application during the decommissioning phase. Mitigation measures are detailed in and secured by the **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]**. The effect on existing human and ecological receptors during decommissioning phase following the implementation of mitigation measures is considered to be **not significant**.

Would Road traffic during construction, operation (including maintenance) and decommissioning phases affect nearby receptors?

6.2.6 No effects are expected to occur during the construction, operation (including maintenance) and decommissioning phases of as a result of the additional road traffic generated by the Peartree Hill Solar Farm

6.3 Biodiversity

6.3.1 This section considers the likely effects of Peartree Hill Solar Farm on designated sites, habitats, and protected or notable species — those that are ecologically important due to their rarity, declining populations, or significant role in local biodiversity— during the construction, operation (including maintenance) and decommissioning phases of the Peartree Hill Solar Farm.

Would Peartree Hill Solar Farm affect designated sites and habitats?

Designated sites

6.3.2 During construction, there would be temporary, short-term loss of agricultural land, suitable for foraging and roosting birds associated with the Humber Estuary Special Protection Area/Ramsar site. Mitigation for loss of functionally linked land for golden plover, lapwing, teal, mallard and black-headed gull is detailed in and

secured by the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]** and mitigation to reduce the effect of visual and noise disturbance on birds is detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**. Therefore, effects are considered to be **not significant**.

6.3.3 During the construction phase, there is potential for release of breakout contaminants, particularly bentonite during Horizontal Directional Drilling, which could lead to contamination of the River Hull which is considered to be functionally linked land for the river lamprey populations associated with the Humber Estuary Special Area of Conservation. A specific Horizontal Directional Drilling methodology, as well as a Horizontal Directional Drilling breakout plan specifically to manage the risk of bentonite breakout, will be detailed in and secured by the Construction Environmental Management Plan and therefore the effect on the River Hull and Humber Estuary during construction is considered to be **not significant**.

6.3.4 Figham Pastures Local Wildlife Site would be affected by construction works as one of the access pits for the Horizontal Directional Drilling under the River Hull would be located within Figham Pastures Local Wildlife Site. This would involve the temporary loss of grassland habitat for the duration of the Horizontal Directional Drilling works, which would be restricted to a 30 metre working width. A pre-construction habitat survey would be undertaken to confirm an accurate pre-construction baseline, but also to determine the final location of the Horizontal Directional Drilling pit. Control measures that would be implemented are detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**. Disturbance and short-term habitat loss is anticipated during the construction phase. The effect would be highly localised but despite the implementation of additional mitigation measures, there will be a residual effect whilst grassland recovers and re-grows following the disturbance works. The residual effect would be **adverse**, **short-term**, **small scale** but **reversible**, which is considered to be **not significant** at the **Local** level. A section of open cut trench work within Figham Pastures Local Wildlife Site to facilitate the installation of the grid connection cable route will result in temporary disturbance to the floodplain grazing marsh habitat, although turfs will be placed back in-situ within one week of removal.

Hedgerows and trees

6.3.5 Hedgerows and trees would be protected by a minimum 10 metre offset, except for sections which would need to be removed for installation of access and cable routes. After construction, hedgerows would be re-instated where possible or planted elsewhere within the Order Limits and therefore the effect is considered to be **not significant**. New tree and hedgerow planting proposals are detailed in and secured by the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**.

Sections of ditches

6.3.6 A number of ditches will require either a box culvert or a single span bridge to accommodate access routes. This would be a short-term impact for the duration of the construction phase and would result in the loss of short sections of ditch and bank habitat, the effect of which is considered to be **not significant**. Any required compensatory habitat creation, habitat re-instatement and improvement measures is detailed in and secured by the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**.

Sections of river habitat

6.3.7 There are nine watercourses within and directly adjacent to the Order Limits which are classified as Main Rivers according to the Environment Agency. All Main Rivers (apart from two) would be safeguarded and unaffected during construction, being protected through measures detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]** and **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**. Arnold West Carr Drain and Drewery's Sock Dike, both of which are classified as Main Rivers, would be impacted by proposed culvert works.

6.3.8 The culvert design would include a box specification which incorporates measures to allow species to easily pass through them, as secured in the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**, and therefore due to the small area of habitat and maintenance of connectivity, the effect is considered to be **not significant**.

Would Peartree Hill Solar Farm affect protected and/or notable species?

Great crested newt

6.3.9 Peartree Hill Solar Farm has the potential to impact great crested newt and associated terrestrial habitat. Prior to construction commencing, surveys will be undertaken on all suitable waterbodies. Should the presence of great crested newt be confirmed, the Applicant is likely to make use of either the East Riding of Yorkshire District Level Licensing Scheme for great crested newt or a low impact class licence from Natural England would be obtained and as a result, the effect is considered to be **not significant**.

Ground nesting birds

6.3.10 The Site is important for ground nesting birds, in particular species such as skylark which like to nest in large open fields. Ground nesting birds could be

adversely affected by habitat loss and disturbance during construction and decommissioning and displacement and breeding during the operation (including maintenance) phase due to the loss of potential foraging habitat.

6.3.11 Measures would be implemented during the construction, operation (including maintenance) and decommissioning phases to reduce the potential risk of impacts to ground nesting birds including timing of works and vegetation management and clearance; these are detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**, **Outline Operational Environmental Management Plan [EN010157/APP/7.3]**, **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]** and the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**

6.3.12 It is considered that with the additional mitigation outlined above, the existing ground nesting bird assemblage would be maintained with adverse effects during construction and decommissioning being temporary, which are considered to be **not significant**.

6.3.13 Once habitats are fully established during the operation (including maintenance) phase, there is anticipated to be a **significant beneficial** effect for ground nesting birds.

Bats (foraging, commuting and roosting)

6.3.14 The Site is considered to be of importance for bats due to the diversity of bat species found to be using the Order Limits and could potentially be affected through a temporary net loss and fragmentation of bat foraging and commuting habitat, on-site lighting and noise and vibration.

6.3.15 Lighting would be designed to minimise light spill into adjacent habitats to prevent disturbance to bats and other nocturnal animals.

6.3.16 Should any trees identified as being suitable for roosting bats require removal (considered unlikely), then further surveys would be carried out prior to construction works to determine if bats are present. In the unlikely event that roosting bats are identified, then works would cease, consultation with Natural England would occur and appropriate licences and mitigation would be agreed.

6.3.17 A variety of bat boxes would be installed in suitable locations on trees within hedges, individual trees or woodland, to improve roosting opportunities within the Order Limits, as detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]** and **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**. Mitigation measures to reduce the potential risk of impacts to foraging and commuting bats during decommissioning, such as controls on working hours and

lighting, are detailed in and secured by the **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]**.

6.3.18 Taking into account the embedded design and mitigation measures, the effect on bats is considered to be **not significant**.

Water vole and otter

6.3.19 A number of ditches that have been deemed suitable for otter and water vole will require either a box culvert or a single span bridge to accommodate access and cables routes across the Site.

6.3.20 Culverts will be designed appropriately for each watercourse and will be designed to provide as much light penetration as possible at the culvert inlets and outlets proposed to encourage use by water vole and otter.

6.3.21 Pre-construction surveys would be carried out to check for signs of water vole and otter. In the event water vole burrows or an otter holt or resting place is identified, appropriate mitigation would be implemented prior to works. Consultation with Natural England and appropriate mitigation licences would be obtained in addition to the riparian mammal Species Protection Plan, if required.

6.4 Climate

6.4.1 This section considers the likely effects of Peartree Hill Solar Farm on greenhouse gas emissions during construction, operation (including maintenance) and decommissioning and its contribution to climate change mitigation.

Would Climate be affected by Peartree Hill Solar Farm during the construction, operation (including maintenance) and decommissioning?

6.4.2 While Peartree Hill Solar Farm will produce some greenhouse gas emissions throughout its lifecycle (from construction, operation (including maintenance) and decommissioning), a whole lifecycle greenhouse gas assessment has been carried out in order to assess the net greenhouse gas impact. This assessment considers the potential emissions caused by Peartree Hill Solar Farm against the potential emissions savings by the renewable energy generated.

What mitigation measures will be implemented to avoid, prevent or reduce and, if possible offset significant adverse effects?

6.4.3 The design of Peartree Hill Solar Farm includes embedded mitigation measures to minimise the use of concrete, steel, aggregates, and other construction materials, secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**. Furthermore, any vegetation cleared for the purposes of the construction works will be compensated by a planting scheme that exceeds the current levels of vegetation, as secured by the **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**.

6.4.4 Additional mitigation measures including the use of infrared security lighting, the responsible sourcing of materials, segregating waste to be re-used and recycled where possible, and measures to decrease fuel use by maximising efficiency are detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**, **Outline Operation Environmental Management Plan [EN010157/APP/7.3]**, **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]** and **Outline Site Waste Management Plan [EN010157/APP/7.10]**.

What are the likely significant effects for climate?

6.4.5 Since the nature of Peartree Hill Solar Farm is to have a beneficial positive impact in terms of greenhouse gas emissions, the mitigation measures implemented are intended to maximise this beneficial impact.

6.4.6 Over its lifetime, Peartree Hill Solar Farm is expected to save the equivalent of over 4.1 million tonnes of carbon dioxide. It is expected that it will take 13 years to offset the greenhouse gases produced during construction, operation (including maintenance) and decommissioning, with all greenhouse gas savings beyond that point providing a net benefit. Peartree Hill Solar Farm is therefore overall considered to have a **significant beneficial** effect with regards to greenhouse gas emissions over its lifetime.

6.5 Cultural heritage

6.5.1 This section explores the likely effects of Peartree Hill Solar Farm on cultural heritage within the Order Limits during construction, operation (including maintenance) and decommissioning.

Would designated and non-designated heritage assets be affected by Peartree Hill Solar Farm during the construction, operation (including maintenance) and decommissioning?

6.5.2 A total of five designated heritage assets have the potential to be impacted by Peartree Hill Solar Farm and have been assessed. These comprise three scheduled monuments (the site of Meaux Cistercian Abbey, Meaux Duck Decoy and Medieval Moated Tile Kiln) and two grade II listed buildings (Meaux Abbey Farm and Wawne Grange).

6.5.3 Several non-designated heritage assets have been identified which could be impacted by Peartree Hill Solar Farm, including the site of Meaux Deserted Medieval village, four post-medieval demolished or extant bridges and site of a World War II searchlight battery. Potential impacts to known and currently unknown non-designated heritage assets could arise from groundworks associated with the construction of Peartree Hill Solar Farm.

What mitigation measures will be implemented to avoid, prevent or reduce and, if possible offset significant adverse effects?

6.5.4 Embedded mitigation measures within Peartree Hill Solar Farm have been included to avoid development in areas of sensitive archaeological remains, for example, solar photovoltaic development will not be erected in parts of Fields B4, B8, F6 and F9-F11 where potential below ground archaeology is located. Additional mitigation measures to avoid physical and setting impacts to designated heritage assets include protective measures for dust which are detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2], Outline Operational Environmental Management Plan [EN010157/APP/7.3]** and **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]**. Therefore, effects resulting from physical impacts to designated heritage assets are considered to be **not significant**.

What are the likely significant effects for cultural heritage?

6.5.5 The design of Peartree Hill Solar Farm has been developed to minimise visibility of the Peartree Hill Solar Farm from designated heritage assets. As a result, effects resulting from changes within the setting of heritage assets are considered to be **not significant**.

6.5.6 An **Archaeological Management Strategy [EN010157/APP/7.11]** details a programme of archaeological investigation and/or mitigation that will be undertaken prior to or during the construction activities. Physical impacts to known and currently unknown archaeological remains within the Order Limits will either be avoided or the remains will be characterised and recorded prior to their

disturbance. The preservation, investigation and/or recording of the assets will ensure that their archaeological interest is retained even if their physical remains are disturbed during the construction of Peartree Hill Solar Farm. Taking into account this additional mitigation, effects on known and currently unknown non-designated heritage assets within the Order Limits are considered to be **not significant**.

6.6 Landscape and visual

6.6.1 This section assesses the likely changes to landscape character and visual amenity as a result of Peartree Hill Solar Farm during construction, operation (including maintenance) and decommissioning.

What would be the change to landscape character as a result of Peartree Hill Solar Farm?

6.6.2 No part of Peartree Hill Solar Farm or the land surrounding it falls within a designated landscape, which are afforded a higher level of protection. There are also no registered parks and gardens close to Peartree Hill Solar Farm.

6.6.3 Peartree Hill Solar Farm would be located across a flat landscape, with small undulations and wide, open views of exposed arable farmland and the sky. The relatively flat landscape means there can often be long-distance views, but also that fairly low-level planting, such as hedgerows, can reduce views and provide significant screening. The 12 wind turbines at Hall Farm Wind Farm, and individual turbines elsewhere within the study area, are prominent vertical features in the landscape.

6.6.4 Landscape effects are caused by changes in the landscape fabric, which may result in changes to the character of the landscape. The impacts on the fabric of the landscape considers impacts on existing vegetation and landscape features. Such as the potential damage or harm to existing features such as woodland, mature trees and hedgerows within the Order Limits during activities at the construction phase, or changes resulting from construction at the operational and maintenance phase.

6.6.5 Effects during operation (including maintenance) on landscape character would typically arise from:

- The introduction of new energy infrastructure into existing agricultural fields;
- Incremental growth of newly established mitigation planting (hedgerows and woodland);
- Establishment of new wildflower rich grassland in open fields and field margins;

- Regular maintenance visits and operations including habitat management;
- Change of land use from arable agriculture to renewal energy; and
- Increased access to, and within, the Site and surrounding area through the introduction of a network of new permissive paths that connecting with existing public rights of way.

6.6.6 Additional effects during the construction phase on landscape character would arise from:

- Short-term change of farmland to a construction site including the formation of temporary construction compounds (with associated temporary night time lighting) and access tracks;
- Short term closure of public rights of way during undergrounding of underground cabling;
- Increased vehicular movement and personnel in the landscape delivering and erecting the component parts of Peartree Hill Solar Farm;
- Highways works and management;
- Underground cable installation;
- Changes to landscape from vegetation removal; and
- The incremental increase in the infrastructure comprising Peartree Hill Solar Farm.

6.6.7 Effects during decommissioning would be similar to those during construction.

Would Peartree Hill Solar Farm have a visual impact?

6.6.8 People in the landscape surrounding the Site who are likely to experience views of Peartree Hill Solar Farm are:

- Residents (at isolated farmsteads and dwellings);
- Users of public rights of way (footpaths and bridleways); and
- Users of main roads and minor country lanes.

6.6.9 Settlement is concentrated around the large town of Beverley, which is 14 kilometres to the west of the Order Limits, and in the main villages of Catwick, Hull Bridge, Kingswood, Leven, Long Riston, Routh, Skirlaugh, Thearne, Tickton, Wawne, Weel and Woodmansey. Elsewhere throughout the landscape there are scattered farmsteads and a few isolated properties.

6.6.10 The settlements of Long Riston, Routh and Weel would have views towards the Peartree Hill Solar Farm. There would be heavily screened views from Catwick,

Hull Bridge, Skirlaugh, Tickton, Wawne and Woodmansey and no views from Beverley and Thearne.

6.6.11 Users of recreational routes, including public rights of way, formal cycle routes and long distance paths that are closest to Peartree Hill Solar Farm are the most likely to be impacted.

6.6.12 Users of the A1035, A165, and local roads Meaux Lane/Meaux Road, Black Tup Lane, Ings Lane and Kidhill Lane, which have views towards the Peartree Hill Solar Farm are the most likely to be impacted.

6.6.13 An assessment of residential visual amenity has also been undertaken for properties within 200 metres of proposed above ground infrastructure, as well as properties beyond 200 metres that were either centrally located within the study area or considered to have potential views of Peartree Hill Solar Farm in multiple directions. The assessment has considered not only the view from within the property but also its outside garden space, and also the impact on views when immediately approaching and leaving the property. This assessment focusses only on operation (including maintenance) phase effects.

6.6.14 Effects during operation (including maintenance) on visual amenity would typically arise from views of new energy infrastructure including solar panels, two project substations, Battery Energy Storage Systems, internal access tracks, fencing, security measures and ancillary structures being installed.

6.6.15 Effects during construction on visual amenity would typically arise from views of temporary construction compounds, highways improvements, heavy good vehicle movements and the movement of construction workers to and from the Site.

6.6.16 Effects during decommissioning would be similar to those during construction.

What mitigation measures will be implemented to avoid, prevent or reduce, and if possible offset significant adverse effects?

6.6.17 Landscape and visual considerations have been one of the critical drivers for design decisions at all stages. The placement and height of infrastructure within Peartree Hill Solar Farm has been considered carefully to mitigate potential significant effects as far as practicable.

6.6.18 The **Outline Construction Environmental Management Plan [EN010157/APP/7.2]** and **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]** secures new structure planting which has been proposed to mitigate landscape and visual effects. This includes extensive new hedgerow and native woodland planting. Specific attention has been focussed on soften views and provide screening of views from individual residential properties,

settlements and highways, as well as recreational routes, including public rights of way, formal cycle routes and long distance paths.

6.6.19 During the operation (including maintenance) phase, existing and newly established habitats and planting would be maintained in accordance with an approved Landscape and Ecological Management Plan. This would ensure, amongst other things, that any defective planting is replaced and that all new planting establishes successfully by year 10.

What are the likely significant effects for landscape and visual?

6.6.20 In conclusion, during the early years of operation, there would be a **significant adverse** effect on the existing vegetation structure of the landscape (trees and hedgerows) within the Order Limits. This would be due to the necessary removal of short sections of existing hedgerow during construction. However, once new hedgerow and woodland planting has established by year 10 of operation, this would more than offset the loss and there would be a **significant beneficial** effect on existing vegetation structure. The effect throughout the construction and decommissioning phases would be **not significant**.

6.6.21 During the early years of operation (including maintenance), and prior to the establishment of mitigating planting, there would be a **significant adverse** effect on landscape character across part of Landscape Character Area 19D: Central Holderness Open Farmland, which is located on the arable landscape between the villages of Tickton, Leven, Long Riston, Skirlaugh, Wawne and Weel. The effect on landscape character in this area would arise principally from a localised change in landcover through the introduction of new solar photovoltaic development and ancillary infrastructure such as deer-proof fencing and CCTV into fields which are currently in agricultural land use. The solar development would, however, be underlain by low maintenance species rich grassland maintaining a vegetative ground cover throughout the Order Limits. Peartree Hill Solar Farm would also introduce a series of permissive paths around the Site, which would connect with the existing public rights of way, and increase access to, and recreation within, this Landscape Character Area. This would be a beneficial effect on the landscape character.

6.6.22 By year 10, a considerable amount of new hedgerow planting is proposed throughout Landscape Character Area 19D: Central Holderness Open Farmland, particularly alongside public rights of way, and once established these would further restrict the extent of effects on landscape character, and residual effect would be reduced to **not significant**.

6.6.23 The effects that would occur within the other Landscape Character Areas are considered to be **not significant** during all phases.

6.6.24 As detailed in **ES Volume 4, Appendix 11.5: Residential Visual Amenity Assessment [EN010157/APP/6.4]**, the following properties were considered in the preliminary assessment of residential properties but were not included in the full residential visual amenity assessment as it was deemed residents would not be likely to experience significant effects. It is acknowledged, however, that residents of these properties would experience some visual effects that would be **not significant**:

- White Cross Cottage;
- Riston Grange and The Cottage (also known as Staal Smokehouse);
- Roslyn House, Catwick Lane;
- Stud Farm;
- Farm Cottage, Meaux Abbey;
- Meaux Abbey Farm;
- North Grange;
- 1 Stud Farm Cottages and Melsa;
- The Homestead;
- Carr House Farm (near Weel);
- Lakefield Grange and Bridge Farm;
- Bridge Cottage;
- Wawne Grange;
- The Bungalow; and
- Oriana Lodge.

6.6.25 In total, it is assessed that the residents of four dwellings would experience **significant** visual effects during year 1, three of which would remain as **significant** by year 10.

6.6.26 It is acknowledged that residents at the other properties considered in the assessment would experience some visual effects; however, such effects would be **not significant**.

6.6.27 Aside from residents, users of the Riston footpath no.2 (including Leven footpath no.5) and Riston footpath no.1 public rights of way would experience **significant adverse** visual effects during the construction, operation (including maintenance) and decommissioning phases.

6.6.28 Riston footpath no.2 (including Leven footpath no.5) is orientated north to south along the eastern bank of Monk Dike, Arnold West Carr Drain and Drewery's Sock Dyke. The path is on an embankment, around 2 metres higher than the surrounding fields, which means there are open views across the surrounding landscape. However, the height of the embankment varies and is occasionally almost level with the fields. The solar photovoltaic development would be openly

visible in all directions from the footpath. The introduction of new infrastructure and boundary fencing would be highly prominent. However, the raised location of the embankment mean that views would not be restricted.

6.6.29 New planting is proposed either side of Monk Dike which would heavily screen Peartree Hill Solar Farm in the foreground fields, though intermittent views would be possible as walkers moved along the footpath. The hedgerow planting would contain occasional trees. The new planting in itself would create a change to the visual baseline, but would soften the impacts and substantially filter views of the solar photovoltaic modules and ancillary equipment in adjacent fields. Although the planting would reduce the scale of the change to visual amenity, there would still remain a long term **significant adverse** effect on Riston footpath no.2 (including Leven footpath no.5).

6.6.30 Riston footpath no.1 is orientated broadly west to east; starting in the east at Woodhouse Lane, Arnold, it heads west and its passes Arnold Carr Farm and crosses Drewery's Sock Dyke. Views from the footpath are across a series of large, flat arable fields. The path passes through Land Area C, where there would be clear views of solar photovoltaic development to the north. New planting is proposed which would screen some views of the solar photovoltaic development. The proposed mitigation planting would noticeably reduce the adverse visual effects as it matures; however, the change would result in a long term **significant adverse** effect.

6.6.31 Tickton bridleway no.5, which is orientated north to south, from south of Tickton in the north, along North Carr Lane directly passes the eastern boundary of Land Area E for 650 metres. Solar photovoltaic development would be visible in relative close proximity to the bridleway to the north-west, together with longer distance views to the north-east, east and south-east and would be a new element in the rural landscape. Existing vegetation would partially screen Peartree Hill Solar Farm. Over a number of years, proposed mitigation planting would soften or screen many of these views, and it has been assessed that **significant adverse** visual effects would only occur during the early years of operation.

6.6.32 Road users on Meaux Lane/Meaux Road, a local road running broadly north to south from the A1035 at Routh in the north, to the centre of Wawne, would experience **significant adverse** effects on views during the early years of operation, as the solar photovoltaic development and boundary fencing would be openly visible, restrict views across the landscape. Proposed mitigation planting would provide screening benefits in the longer term.

6.6.33 Changes to views for road users of Kidhill Lane would also be **significant adverse** during the early years of operation. This road is broadly runs east to west through the south of the study area, from the junction with Ings Lane and Swine Road in the east, to Meaux Lane in the west. Solar development in Land Area F is likely to be visible above and through the vegetation present, albeit

reasonably well screened. As screening vegetation matures, the scale of the effect would be reduced in the long term.

6.7 Land, soil and groundwater

6.7.1 This section considers the likely effects of Peartree Hill Solar Farm on land, soil, and groundwater throughout construction, operation (including maintenance) and decommissioning phases.

Would Peartree Hill Solar Farm affect land and groundwater?

6.7.2 Since earliest publicly available historical mapping (1850s), the Site has undergone little change and has been predominately used for agriculture. Contamination may be present associated with agriculture, and in the locations of the three recorded landfill sites located within 500 metres of the Order Limits.

6.7.3 There are nine discharge consents within the Order Limits, two of which are trade discharges and seven are sewage discharges. There are no groundwater abstractions (either licensed or unlicensed) within the Order Limits.

6.7.4 Records indicate that there is a shallow groundwater table present within the Order Limits.

6.7.5 The soil across the Site is mainly used for agricultural purposes currently, with soil types varying across the Site, from clay-rich soils to sandy soils.

6.7.6 Water is present within the ground in most soil and rock units. Under the Site there are some areas of more sensitive groundwater, as defined by the Environment Agency. Where water is removed from the ground for human use (including as drinking water, or for use in agriculture) from a well or a borehole, there is a protection zone around the location to prevent contamination of the water. These zones are known as groundwater source protection zones, and are categorised as zone 1 (the inner, most sensitive, zone closest to the well or borehole), zone 2 (the outer protection zone), and zone 3 (the total zone, which is the largest area).

6.7.7 The western area of Land Area B is within a total catchment source protection zones (zone 3), alongside all fields within Land Areas D, E and F. The groundwater source protection zone 2 area (outer protection zone) encroaches into the south western corner of Field E16. The grid connection cable route passes through areas of groundwater source protection zone 1, zone 2 and zone 3. A drinking water safeguard zone (groundwater) is also present across areas of the Order Limits that are to the west of Holderness Drain and Monk Dike.

6.7.8 The impact on the surface water and groundwater regime has been minimised through the design of Peartree Hill Solar Farm by using existing tracks where possible. Additional mitigation that would ensure effects on land, soil and groundwater are controlled is detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**, **Outline Soil Management Plan [EN010157/APP/7.8]**, **Outline Battery Safety Management Plan [EN010157/APP/7.6]** and **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]**.

6.7.9 Taking account of the mitigation measures proposed, effects on land due to existing contamination or contamination during construction, operation (including maintenance) and decommissioning are considered to be **not significant**. Effects on groundwater quality due to leaks or spillages of fuel or chemicals during construction, operation (including maintenance) and decommissioning are considered to be **not significant**. Effects on groundwater quality due to potential contamination during piling or earthworks during construction are considered to be **not significant**.

What effects would Peartree Hill Solar Farm have on the existing agricultural land use and soil?

6.7.10 The agricultural land within the Order Limits has been categorised according to a system for soils in agricultural use known as the agricultural land classification system. Soils are separated into the following groups depending on their quality in terms of use for agriculture:

- Agricultural land classification grade 1 (excellent quality);
- Agricultural land classification grade 2 (very good quality);
- Agricultural land classification grade 3a (good quality);
- Agricultural land classification grade 3b (moderate quality);
- Agricultural land classification grade 4 (poor quality);
- Agricultural land classification grade 5 (very poor quality); and
- Non-agricultural land.

6.7.11 Soils of grade 1, grade 2 or grade 3a are classified as being 'best and most versatile' agricultural land. Soils of grade 3b, grade 4 or grade 5 are considered to be 'non-best and most versatile' agricultural land.

6.7.12 A survey of land within the Order Limits has been completed to determine the grades of agricultural land that are present, the results of which are presented in **Table 1**, with the area given for each classification in hectares, and as a percentage of the total surveyed area. The areas of 'best and most versatile' and 'non-best and most versatile' agricultural land within the Order Limits are also indicated in **Table 1**.

Table 1: Agricultural land classification results of the area surveyed within the Order Limits

Agricultural land classification grade	Area (hectares)	Percentage
Grade 1	8.8	1.2
Grade 2	96.6	13.5
Grade 3a	144.8	20.3
Grade 3b	331.5	46.4
Grade 4	125.1	17.5
Non-agricultural land	7.0	1.0
Total best and most versatile	249.9	35.1
Total non-best and most versatile	463.6	64.9
Total	**713.8**	**100.00**
All values rounded to 1 decimal place, so totals may not match values		

6.7.13 The impact on grade 1, grade 2, grade 3a and grade 3b land has been minimised through the design of Peartree Hill Solar Farm.

6.7.14 An **Outline Soil Management Plan [EN010157/APP/7.8]** is submitted in support of the Development Consent Order Application. This Plan outlines strategies to protect soil and farmland during construction, operation (including maintenance) and decommissioning. It aims to maintain soil quality and restore the land to its original condition after construction. The Plan includes rules for vehicle movements to prevent soil damage and carefully planned access routes to minimise impacts.

6.7.15 During operation (including maintenance), there will be less ground disturbance compared to the construction phase, as maintenance will primarily involve periodic visits to repair/replace equipment and clean solar panels while using existing paths to minimise impact. Soil will continue to be stored and managed properly to maintain its quality throughout this phase. Implementation of measures set out in the **Outline Soil Management Plan [EN010157/APP/7.8]** and **Outline Operational Environmental Management Plan [EN010157/APP/7.3]**, damage to soil resources would be minimised and effects are considered **not significant**.

6.7.16 During decommissioning, all concrete, hardstanding areas, foundations for the infrastructure will be removed to a depth of up to 1 metre. All the below ground cables will be left in-situ, therefore limiting the disturbance and impact to the soil quality.. The locations of the Battery Energy Storage System and access tracks are anticipated to be restored using soil retained on-site, which could have been retained in managed bunds, or with new topsoil that will be brought to the Site. With the implementation of the **Soil Management Plan** and **Decommissioning Environmental Management Plan**, the effects on soil and agricultural land during decommissioning are considered to be **not significant**.

6.7.17 During construction, some best and most versatile agricultural land (grade 1, grade 2 and grade 3a) will be temporarily affected. This temporary effect on grade 1 and 2 agricultural land is considered to be **significant adverse**. In contrast, this temporary effect on grade 3a, grade 3b and grade 4 agricultural land is considered to be **not significant**.

6.7.18 During decommissioning, effects on soil and agricultural land would be minimised by the adherence to the Soil Management Plan and Decommissioning Environmental Management Plan.

6.8 Noise and vibration

6.8.1 This section considers the likely effects of noise and vibration generated by the construction, operation (including maintenance) and decommissioning of Peartree Hill Solar Farm.

Would noise generated during construction, operation and decommissioning affect nearby properties?

6.8.2 The main factors which determine noise at residential properties are:

- The level of noise emitted by the source, and
- The distance to residential properties from the source.

6.8.3 Construction noise is temporary and variable, and due to the nature of the construction works, highest levels of noise from construction works or traffic movements may only exist for a matter of hours or days as the works move across the Site. Operational noise is generated by the Battery Energy Storage System and substations.

6.8.4 Baseline noise surveys have been completed to establish the existing noise climate at surrounding residential properties to help assess the impact of Peartree Hill Solar Farm during operation (including maintenance).

6.8.5 Noise levels at residential properties have been agreed with East Riding of Yorkshire Council, with the lowest noise level required during the night-time (11pm to 7am).

What mitigation measures will be implemented to avoid, prevent or reduce and, if possible offset significant adverse effects?

6.8.6 Mitigation measures, including a minimum 250 metre offset to substation equipment and construction compounds from residential properties and any environmental designated site, have been embedded into the design of Peartree Hill Solar Farm to minimise noise effects to sensitive receptors. Iterative design

of the layout has been modelled to achieve suitable noise levels at surrounding residential properties.

6.8.7 Further control measures, including temporary noise barriers to screen the works, maintenance of equipment and equipment being switched off when not in use, will help minimise construction noise. These measures, along with controlled working hours between 7am and 7pm on weekdays and 7am and 12 noon on Saturdays near residential properties are detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**, **Outline Construction Traffic Management Plan [EN010157/APP/7.7]** and **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]**.

6.8.8 As part of the proposed mitigation strategy, the noise emitting components of the Battery Energy Storage System would be re-orientated to face away from the most affected residential properties and an acoustic barrier would be constructed around the Battery Energy Storage System that falls within a 500 metre radius of nearby affected residential properties.

What are the likely significant effects for noise and vibration?

6.8.9 Given the distances between residential properties and construction works, as well as the duration of works and the use of construction mitigation methods like Best Practical Means detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**, construction noise levels are predicted to be **not significant**. Noise generated by construction traffic on the local road network is also predicted to be **not significant**.

6.8.10 Operational impacts are considered to be at or lower than noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life. Possible noise from the maintenance of Peartree Hill Solar Farm during operation, including traffic, is expected to be minimal, as these aspects are considered to occur in isolated instances. Taking into account the proposed mitigation strategies outlined above, noise effects during the operation (including maintenance) phase are considered to be **not significant**.

6.8.11 Noise impacts during decommissioning are not anticipated to be any greater than those during the construction phase, therefore, effects are predicted to be **not significant**.

6.8.12 Vibration would be controlled through the consideration and selection of appropriate techniques. Following the selection of working methods and plan, a detailed construction stage vibration assessment would be undertaken, as detailed in and secured by the **Outline Construction Environmental**

Management Plan [EN010157/APP/7.2]. Vibration impacts are not predicted to result in any notable impacts during either construction, operation (including maintenance) or decommissioning.

6.9 Population

6.9.1 This section considers the likely effects generated by Peartree Hill Solar Farm during construction, operation (including maintenance) and decommissioning in relation to population and the local economy.

What impact will Peartree Solar Farm have on walkers, cyclists and horse riders?

6.9.2 There will be no permanent closures of public rights of way during the construction, operation (including maintenance) or decommissioning of Peartree Hill Solar Farm.

6.9.3 However, it may be necessary to temporarily close sections of public footpaths for short periods of time to enable construction works. There are no suitable diversions for the above public rights of way and therefore any temporary closures will only be for a short duration.

6.9.4 Temporary closure of public rights of way will only occur if it is not possible for the public right of way to remain open with safety measures in place. The management of public rights of way during to ensure the safety of users is detailed in the **Outline Rights of Way and Access Management Plan [EN010157/APP/7.9]**.

6.9.5 The Applicant has also proposed to provide approximately 11.8 kilometres of permissive paths which will be available during the operation (including maintenance) phase.

6.9.6 These paths will help to increase connectivity between recreational opportunities across and around the Site and local residents and tourists may use the links as they have been designed to increase accessibility. Therefore, the effects to walkers, cyclists and horse riders using public rights of way during construction and operation (including maintenance) is considered to be beneficial and **not significant**.

What impact will Peartree Solar Farm have on agricultural land holdings?

6.9.7 There are seven farm operations located within the Order Limits. These businesses are mostly family run, but some also employ additional staff. Of the

seven farming operations within the Order Limits, five are farmed by the landowners whilst the other two are run by tenant farmers.

6.9.8 The landowners have signed up to an agreement with the Applicant for the lease of the land parcels for the duration of Peartree Hill Solar Farm. The respective landowners have also entered individual agreements with the two tenant farmers and agreed compensatory measures. Therefore, it is considered that effects to agricultural land holdings are **not significant**.

What impact will Peartree Solar Farm have on local businesses?

6.9.9 There are no businesses within the Order Limits itself, however, there are several businesses including an equestrian centre, vehicular repair business, caravan storage facility, holiday park, wedding venue, plant nursery and business park with various businesses, located within 500 metres of the Order Limits that could be impacted by Peartree Hill Solar Farm.

6.9.10 It is considered likely that Meaux Livery (equestrian centre), Tudor Springs (holiday park), The Beverley Barn (wedding venue) and Bay Horse (restaurant) businesses will be affected by the construction of Peartree Hill Solar Farm through impacts relating to noise emissions or a visual change during construction. However, considering the impacts would be temporary and taking into account mitigation measures such as best practice measures to reduce noise and landscape screening to minimise visual effects, as detailed in and secured by the **Outline Construction Environmental Management Plan [EN010157/APP/7.2]** and **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**, the effect is considered to be **not significant**.

What impact will Peartree Solar Farm have on employment?

6.9.11 The Office for National Statistics data from 2023 shows that the unemployment rate within East Riding of Yorkshire was 2.6%, which is slightly lower than across than the rate at the national level (3.7%). Between April 2023 and March 2024, the percentage of the population of East Riding of Yorkshire that was either in employment or unemployed but looking for work (also known as the 'economic activity rate') was 78.7%, which is very similar to the economic activity rate of Great Britain (78.6%).

6.9.12 The Applicant aims to, where reasonably practicable, use local construction and manufacturing businesses during the construction phase, which would help to support the creation of new direct job opportunities for local people. Should it not be possible to source workforce staff locally, there may be a need to recruit staff from other regions.

6.9.13 The anticipated 24 month construction phase of Peartree Hill Solar Farm is expected to create a maximum of 350 construction jobs during peak periods and

an average of 250 full time equivalent jobs on-site per day. During construction, the direct effects to employment are considered to be **beneficial** but **not significant**.

6.9.14 The operation (including maintenance) of Peartree Hill Solar is estimated to create 4 full time equivalent jobs in East Riding of Yorkshire. The direct effects of this to employment are considered to be **beneficial** but **not significant**.

6.9.15 The effects during decommissioning are expected to be equal to or less than those experienced in during construction; therefore, effects are deemed to be **not significant**.

What impact will Peartree Hill Solar Farm have on occupancy rates as a result of increased visitor numbers to the area?

6.9.16 During the construction phase, some construction staff may commute to Peartree Hill Solar Farm and therefore may stay in temporary accommodation such as hotels, bed and breakfasts and self-serviced accommodation. The increase in construction workers requiring temporary accommodation may reduce the provision of accommodation for tourists. According to research, an estimated 5% of construction workers typically stay in temporary accommodation whilst working on site.

6.9.17 Occupancy rates are not anticipated to reach maximum capacity during any months of the year and therefore are able to cater for the tourist population as well as temporary construction staff, whilst leaving spare capacity for additional people should it be needed. Effects on occupancy rates during construction are considered to be **not significant**.

6.9.18 Workforce staff would likely want to stay overnight throughout all times of year and therefore may provide more income during months that would normally see less occupants wanting to stay. Therefore, there is likely to be a temporary beneficial effect which is considered to be **not significant**.

6.9.19 During operation (including maintenance), some staff may be required to stay in temporary accommodation whilst working on site. As discussed above, there would be 4 full time equivalent jobs for staff living within the region during operation (including maintenance). The number of staff requiring temporary accommodation during operation is considered negligible when compared to occupancy rates in the region. Effects on occupancy rates during operation (including maintenance) are considered to be **not significant**.

6.9.20 The effects during decommissioning are expected to be equal to or less than those experienced in during construction.

What impact will Peartree Hill Solar Farm have on community land and assets (Figham Common)?

6.9.21 During the installation of the grid connection cable route (Horizontal Directional Drilling or open cut trenching), Figham Common will be temporarily affected by construction activity. It may be necessary to limit access to an area of Figham Common for a short duration of time whilst the grid connection cable route is installed. This may include short term temporary restrictions on the use of Wilberforce Way to enable access for the construction of the grid connection cable route. There is also likely to be disruption associated with construction workers and construction equipment during this period.

6.9.22 It is anticipated that, during construction, the areas of Figham Common that are not subject to construction activity will remain open and accessible to the general public.

6.10 Transport and access

6.10.1 This section considers the likely effects generated by Peartree Hill Solar Farm during construction, operation (including maintenance) and decommissioning in relation to transport and access.

What existing road links have been assessed?

6.10.2 The Strategic Road Network relevant to Peartree Hill Solar Farm comprises the A1(M), M62 and A63.

6.10.3 Local highway network assessments comprise the most detailed analyses where the A1035, A165, A1174 and minor roads are located within a rural setting, connecting small settlements to the wider network. The settlements local to Peartree Hill Solar Farm have potentially sensitive receptors along them, such as residential areas, schools and community facilities. The road links correspond with a rural character, with often limited and/or narrow footway provision, limited street lighting and speed limits of 60 miles per hour outside of built-up areas.

6.10.4 In total, there are ten vehicular accesses to the Land Areas (five on Meaux Lane/Meaux Road, one at the farm access off the A1035, two on the A165 White Cross Road to Land Area B, one at the A165 White Cross Road / Carr Lane (Long Riston) junction and one at the A165 White Cross Road / Carr Lane (Arnold) junction) and five accesses to the land required for the grid connection cable route works (one at Park Lane, two at Long Lane and two at A1174 Hull Road).

What mitigation measures will be implemented to avoid, prevent or reduce and, if possible offset significant adverse effects?

6.10.5 To mitigate the effects of construction and decommissioning traffic, specific measures and infrastructure have been embedded into the design of Peartree Hill Solar Farm to ensure heavy goods vehicles and other road users are able to travel safely. Such embedded mitigation, as displayed on the **Streets, Rights of Way and Access Plans [EN010157/APP/2.3]** and **Traffic Measures Plan [EN010157/APP/2.9]** includes:

- New access junction into Land Area B from A165 White Cross Road;
- Widening of Carr Lane (Long Riston)/A165 White Cross Road junction bell mouth;
- Passing places on Carr Lane (Long Riston);
- Passing places on Arnold Lane West;
- Widening of Black Tup Lane/Carr Lane (Arnold) junction bell mouth;
- Passing Places on Carr Lane (Arnold);
- Passing places on Meaux Lane/Meaux Road;
- Widening of the private farm access off the A1035 bell mouth;
- Widening on bends in the carriageway on Meaux Lane/Meaux Road;
- Provision of new access junctions into Land Areas B, D, E and F from Meaux Lane/Meaux Road;
- Temporary speed reduction on Meaux Lane/Meaux Road between junction with A1035 and a point immediately north of Wawne village; and
- Restriction for HGVs for all movements to be left turn only at the farm access track off the A1035.

6.10.6 Additional traffic management and construction vehicle management measures have been proposed to minimise the impact on existing users of the public highway and rights of way network. These are detailed in and secured by the **Outline Construction Traffic Management Plan [EN010157/APP/7.7]** and **Outline Public Rights of Way and Access Management Plan [EN010157/APP/7.9]**.

What are the likely significant effects for transport and access?

6.10.7 During construction, the daily two-way vehicle trips are not predicted to increase by more than 30% across any link, apart from Carr Lane, Arnold Lane West and Bluck Tup Lane where there is currently very low traffic volumes. However, heavy goods vehicle two-way trips are predicted to increase by more than 30% on a number of roads, although any potential effect would be temporary.

6.10.8 The relatively high percentage increase in heavy goods vehicle traffic on some roads reflects the low number of existing heavy goods vehicle movements, particularly along minor roads such as Carr Lane, Arnold Lane West and Bluck Tup Lane.

6.10.9 During construction, the effect of daily total traffic and driver delay is considered to be **not significant**, taking account of the embedded and additional mitigation outlined above.

6.10.10 A number of works will take place on the local road network, comprising construction of junction upgrades, new accesses to serve Land Areas and cable route crossings. These works may be undertaken using single lane closures and traffic management. These works are expected to be of short duration with formal traffic management measures in place to manage these activities, as outlined in the **Outline Construction Traffic Management Plan [EN010157/APP/7.7]**.

6.10.11 Limited traffic is anticipated to be generated during the operation (including maintenance) phase. Therefore, effects are considered to be **not significant**.

6.10.12 The decommissioning phase is anticipated to broadly represent a reversal of the process of construction of Peartree Hill Solar Farm. Therefore, it is considered reasonable to assume that the impacts during the decommissioning phase, while adopting similar mitigation measures, will be no greater than the construction phase and therefore **not significant**.

6.11 Cumulative effects

Intra-project combined effects

6.11.1 Intra-project cumulative effects consider the combined effects of Peartree Hill Solar Farm on a common sensitive receptor across different environmental factors. For example, how residents may be impacted by both noise and landscape effects, or how dust emissions and noise during construction may together impact on ecological receptors.

6.11.2 As assessment of the intra-project cumulative effects has concluded that the following receptors may have more than one effect upon them during the construction and decommissioning phases:

- Public right of way Riston footpath no.2 (including Leven footpath no.5) (construction and decommissioning) - due to the short-term changes in view across the entire length of the footpath and proposed temporary diversions.

- Public right of way Riston footpath no.1 (construction and decommissioning) - due to the short-term changes in view across the entire length of the footpath and proposed temporary diversions.
- Figham Common (in conjunction with Wilberforce Way regional trail and Figham Pastures Local Wildlife Site) due to the short-term changes in view across parts of the footpath, disturbance and short-term habitat loss and the decrease in the amount of land available for use by the public.
- Potential dust soiling during decommissioning and noise effects on the following receptors:
  - Carr House Farm, Long Riston;
  - Meaux Decoy Farm, Routh;
  - Meaux (North);
  - Arnold Carr Farm, Arnold; and
  - Springdale Farm, Carr Lane, Weel.

6.11.3 Mitigation measures to manage the individual impacts during construction and decommissioning are secured by the following:

- **Outline Construction Environmental Management Plan [EN010157/APP/7.2]**
- **Outline Decommissioning Environmental Management Plan [EN010157/APP/7.4]**
- **Outline Landscape and Ecological Management Plan [EN010157/APP/7.5]**
- **Outline Rights of Way and Access Management Plan [EN010157/APP/7.9]**

6.11.4 No intra cumulative effects were identified for any receptors during the operation (including) maintenance phase.

Inter-project cumulative effects

6.11.5 Inter-project cumulative effects are the combined effects of Peartree Hill Solar Farm and other existing development and/or approved developments on a single receptor/resource. For example, how residents may be impacted by noise during the construction of Peartree Hill Solar Farm and another development with overlapping construction programmes. Inter-project cumulative effects also relate to the operation (including maintenance) phase; for example, where the visual amenity of a receptor is impacted by both Peartree Hill Solar Farm and the final structure of other existing development and/or approved developments, and the cumulative effect becomes significant.

6.11.6 When considering the inter-project cumulative effects with other existing developments and/or approved developments, it has been assumed that standard and good practice mitigation measures will be applied to the developments (for example, use of construction environmental management plans for the development) and that such mitigation would be secured as part of any planning permission granted.

6.11.7 23 other existing development and/or approved developments within the 10 kilometre study area of Peartree Hill Solar Farm have been identified for inclusion in the assessment. These include residential developments, other solar farms, industrial and employment parks and infrastructure (e.g. road links).

6.11.8 When reflecting on the implementation of standard and good practice mitigation measures, the following inter-project cumulative effects have been identified in **Table 2** below:

Table 2: Inter-project cumulative effects

Topic	Name of other existing and/or proposed development	Description of inter-project cumulative effect
Biodiversity	N/A	There is the **potential** for a cumulative change in farmland habitat across the East Riding of Yorkshire, affecting statutory designated sites of international/European importance including qualifying species through loss of functionally linked land for qualifying bird species and disturbance/displacement of qualifying bird species using functionally linked land. However, these impacts would be mitigated through the implementation of the Landscape and Ecological Management Plan and Construction Environmental Management Plan.
Cultural Heritage	Creyke Beck Substation Extension	The application for Creyke Beck Substation Extension is at the early stages and the final grid connection route has not yet been finalised. Based on the outline proposed route, there is **potential** that inter-project cumulative effects could arise.
Cultural Heritage	North Humber to High Marnham	The proposed North Humber to High Marnham application is at the early stages and the final grid connection route has not yet been finalised. Based on the outline proposed route, there is **potential** that inter-project cumulative effects could arise.
Land, soil and groundwater	Creyke Beck Substation Extension	The application for Creyke Beck Substation Extension is at the early stages and the final grid connection route has not yet been finalised. Based

Topic	Name of other existing and/or proposed development	Description of inter-project cumulative effect
		on the outline proposed route, there is **potential** that inter-project cumulative effects could arise.
Land, soil and groundwater	North Humber to High Marnham	The proposed North Humber to High Marnham application is at the early stages and the final grid connection route has not yet been finalised. Based on the outline proposed route, there is **potential** that inter-project cumulative effects could arise.
Landscape	Kenley House Solar Farm Field House Solar Farm Turf Carr Solar Farm Carr Farm Solar Farm	There is potential for **significant** landscape and visual effects from Peartree Hill Solar Farm during the operation (including maintenance) phase on the following receptors: • Landscape Character Area 19D: Central Holderness Open Farmland • Public right of way Tickton bridleway no.5 • Wawne public right of way located between Weel and Wawne • Meaux Lane/Meaux Road • Public right of way Riston footpath no.2 • Public right of way Riston footpath no.1 • Springdale Farm

7 Next steps

7.1.1 Following submission of the application for Development Consent, the Planning Inspectorate will consider, on behalf of the Secretary of State for Energy Security and Net Zero, whether the application should be accepted for examination. If accepted, the documents accompanying the application will be publicly available on the Planning Inspectorate's website.

7.1.2 Interested parties will be able to make comments (relevant representations) on the Peartree Hill Solar Farm proposals and its potential impacts. Representations received by the Planning Inspectorate will be considered as part of the examination into the application.

7.1.3 Any comments on the application should be made directly to the Planning Inspectorate during the examination stage of the Peartree Hill Solar Farm via the Planning Inspectorate's website (below).

https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010157

7.1.4 The status of the Peartree Hill Solar Farm proposals through examination and determination will also be kept up to date through the above web page.

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