

MERIDIAN SOLAR FARM PRELIMINARY ENVIRONMENTAL INFORMATION REPORT NON-TECHNICAL SUMMARY

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Introduction

Background

This Non-Technical Summary (NTS) of the Preliminary Environmental Information Report (PEIR) has been prepared on behalf of Meridian Solar Farm Ltd (from here on referred to as 'the Applicant') for the proposed Meridian Solar Farm near Spalding in Lincolnshire (the 'Scheme'). For context on the location of the Scheme, please see Figure 1-2: The Site in Volume II of the PEIR. The NTS provides a high-level summary of the PEIR in non-technical language for consultation purposes. For a complete understanding of the Scheme, it should be read alongside the PEIR.

The Applicant intends to submit an application to the Secretary of State for Energy Security and Net Zero for a Development Consent Order (DCO). If approved, this will give consent for the construction, operation and decommissioning of the Scheme. The key components of the Scheme include:

- The '**PV Area**', the land parcels (A, B, C and D) which would host the solar generation facilities (and associated supporting infrastructure) and Battery Energy Storage System (BESS) and On-Site Substation Compounds;
- The '**Inter-Array Connection**', overhead lines up to 132kV (via wooden poles with a standard height of approximately 15 metres) and/or underground cabling within the land that separates the land parcels of the PV Area. The '**Inter-Array Areas**' are the areas from which the route of the Inter-Array Connection will be identified; and
- The '**Grid Connection**', a 400kV overhead line (via steel lattice style towers with a standard height of approximately 50m) up to approximately 13km long, to the National Grid's planned Weston Marsh Substation,¹ east of Spalding. The '**Grid Connection Corridor**' is the areas from which the route of the Grid Connection will be identified.

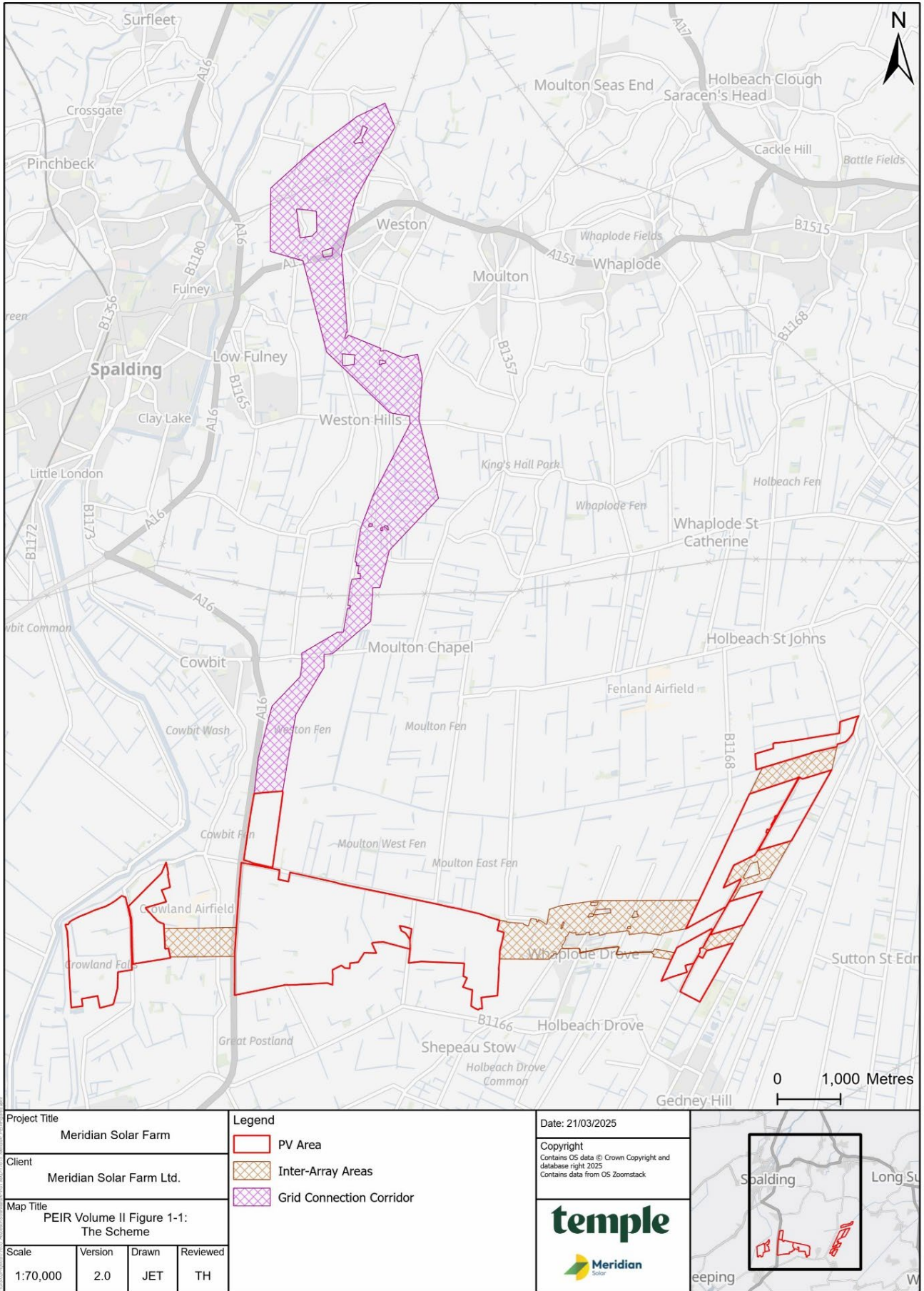
Because of its scale and nature, the Scheme has to complete an Environmental Impact Assessment (EIA) in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017² (from here on referred to as the 'EIA Regulations'). The assessment includes a range of environmental surveys and studies to identify the potential significant environmental effects that may result from the Scheme.

The PEIR represents the interim findings of the EIA the Applicant has completed to date. It will assist the statutory consultation process for the DCO application. The Scheme would be located within the Site as shown within Plate 1 below.

¹ The proposed Weston Marsh substation forms part of National Grid's Grimsby to Walpole project, a proposed 400kV overhead line between Grimsby West and Walpole. A DCO application for this is currently being prepared. National Grid and the Applicant have a connection agreement in place for connection to Weston Marsh.

² *The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017*. Available at: <https://www.legislation.gov.uk/uksi/2017/572/data.pdf>.

Plate 1 The Site



The Applicant

The Applicant promoting the Scheme is Meridian Solar Farm Ltd, a subsidiary of United Kingdom-based investment manager Downing Renewable Developments LLP (DRD) founded by Downing LLP.

Purpose of the PEIR and NTS

The PEIR presents an overview of the preliminary environmental information available about the Scheme based on design information available at this stage. Technical assessments have followed an EIA approach, adopting a reasonable precautionary approach to assessments in the context of ongoing design refinement.

The information presented in the PEIR is 'preliminary' and does not represent a final Scheme design or include final environmental assessment conclusions. Further consultation responses will contribute to the Scheme design and additional information on the impacts of the Scheme will be included in the Environmental Statement (ES) that will accompany the DCO Application. This may result in a revision of the significance of effects in the final ES. The ES will present the detailed findings of the EIA.

The purpose of the NTS is to provide a concise summary of the PEIR in non-technical language.

Consultation Strategy

Effective and ongoing consultation is crucial to the development of a comprehensive and balanced ES. It is also a requirement for DCO application processes.

Consultation will be, and has been, undertaken with both statutory and non-statutory bodies, including those with an environmental remit, together with public consultation prior to submission of the DCO application. Consultation will continue to take place in line with the relevant regulatory and legislative requirements of the planning process.

Effective consultation is essential to understanding stakeholders' varying independent interests in the Scheme and tailoring activities accordingly. The intention is for consultees to be involved in the evolution of the design and the assessment of environmental effects.

The Scheme

Need for the Scheme

Decarbonisation is a UK legal requirement and is of global significance. The Government has designated a critical national priority for low carbon and renewable energy infrastructure at a national scale, including solar development (and associated transmission infrastructure), which will also contribute to energy security.

The Government's target of achieving a zero-carbon electricity system by 2030 will require tripling the existing level of energy generated by solar photovoltaics (PV) electricity generating facilities in the UK to 50GW by 2030.

The Scheme has the potential to accelerate the transition to Net Zero, improve energy security, and contribute to the decarbonisation of the UK through the deployment of a large-scale and low-carbon generation Scheme.

A description of the need which the Scheme addresses will be outlined in full within a Statement of Need to be submitted as part of the DCO application.

Site Context

The Site would be located within the administrative boundaries of Lincolnshire County Council and South Holland District Council.

The Site and its surrounding area are characterised by flat, open arable farmland with scattered villages, hamlets and individual properties. The town of Spalding is located nearby, to the north and west of the Scheme. Agricultural Land Classification (ALC) surveys have been completed within the fields that would contain the proposed PV Area. These indicated a mix of Grades 1, 2, 3a and 3b on a scale of Grade 1 (excellent) to Grade 5 (very poor).

A number of linear watercourses and drainage ditches cross the Site. The largest watercourses nearby are the River Welland and the South Holland Main Drain. Most of the PV Area would be located within Flood Zone 3 (high risk of flooding).

The A16 is the main highway in the area and runs between land parcel A and land parcel B of the PV Area (see Plate 3). A number of smaller local roads connect settlements throughout the area. No Public Rights of Way (PRoW) are within the PV Area, however some run adjacent to its boundaries within the Inter-Array Areas. A single PRoW is located within the Grid Connection Corridor.

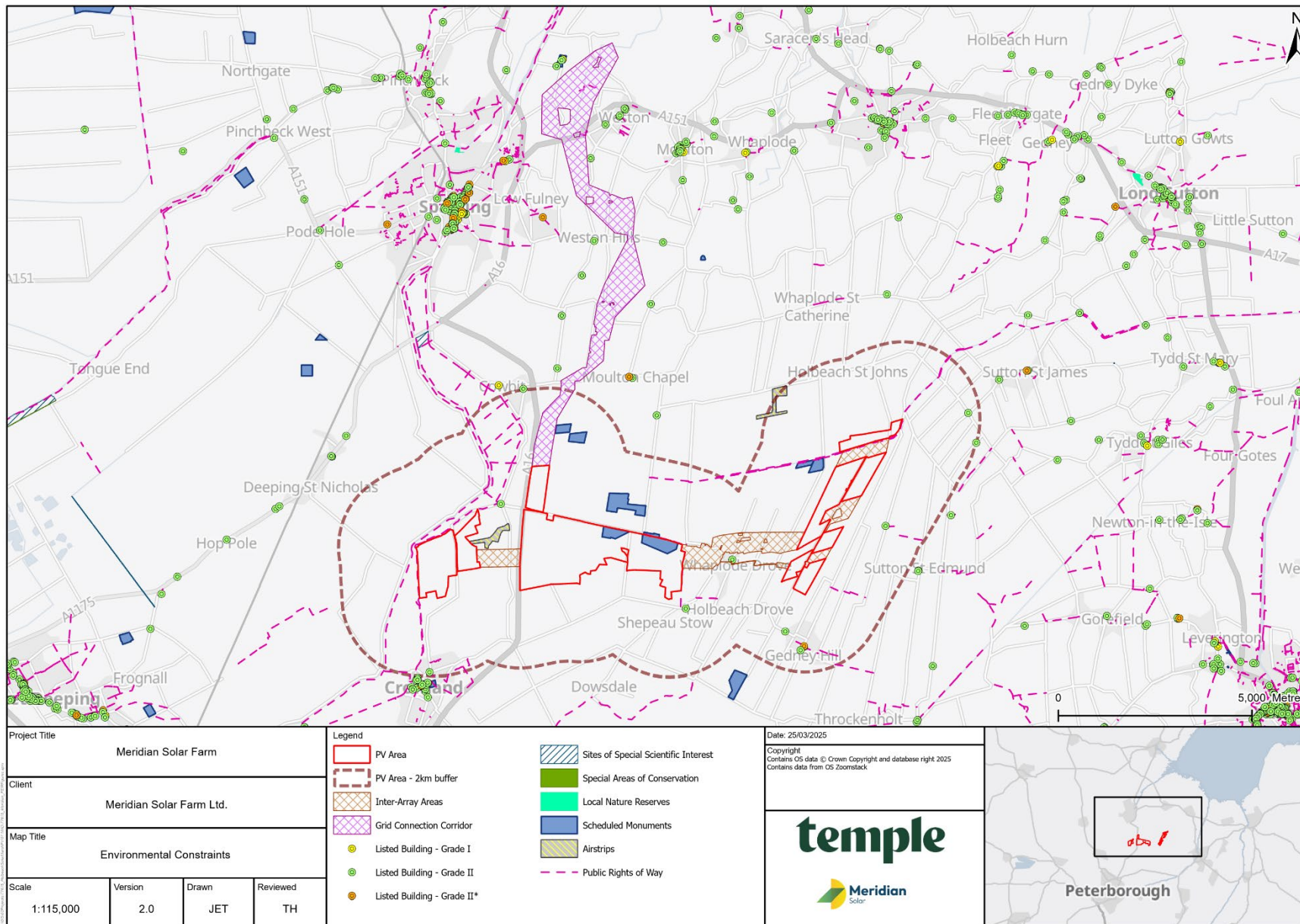
The Scheme is located within the Fens national and historic landscape character area. However, there are no statutory landscape designations within the Site, such as National Parks, National Landscapes or Green Belt. The closest statutory designated site for nature conservation is Cowbit Wash Site of Special Scientific Interest (SSSI), located approximately 4km to the west of the Grid Connection Corridor. There are two internationally designated sites for nature conservation located within 15km of the Scheme, Nene Washes and The Wash.

Three conservation areas are located within 3km of the Scheme, namely Moulton Conservation Area, Crowland Conservation Area and Spalding Conservation Area.

No World Heritage Sites or registered parks and gardens would be located within the Site. Three Scheduled Monuments would be within, or would border, the proposed PV Area, with a further five within 2.5km of the Scheme.

Plate 2 shows the key environmental features of the area within and surrounding the Site.

Plate 2: Key Environmental Features in Relation to the Site



Scheme Description

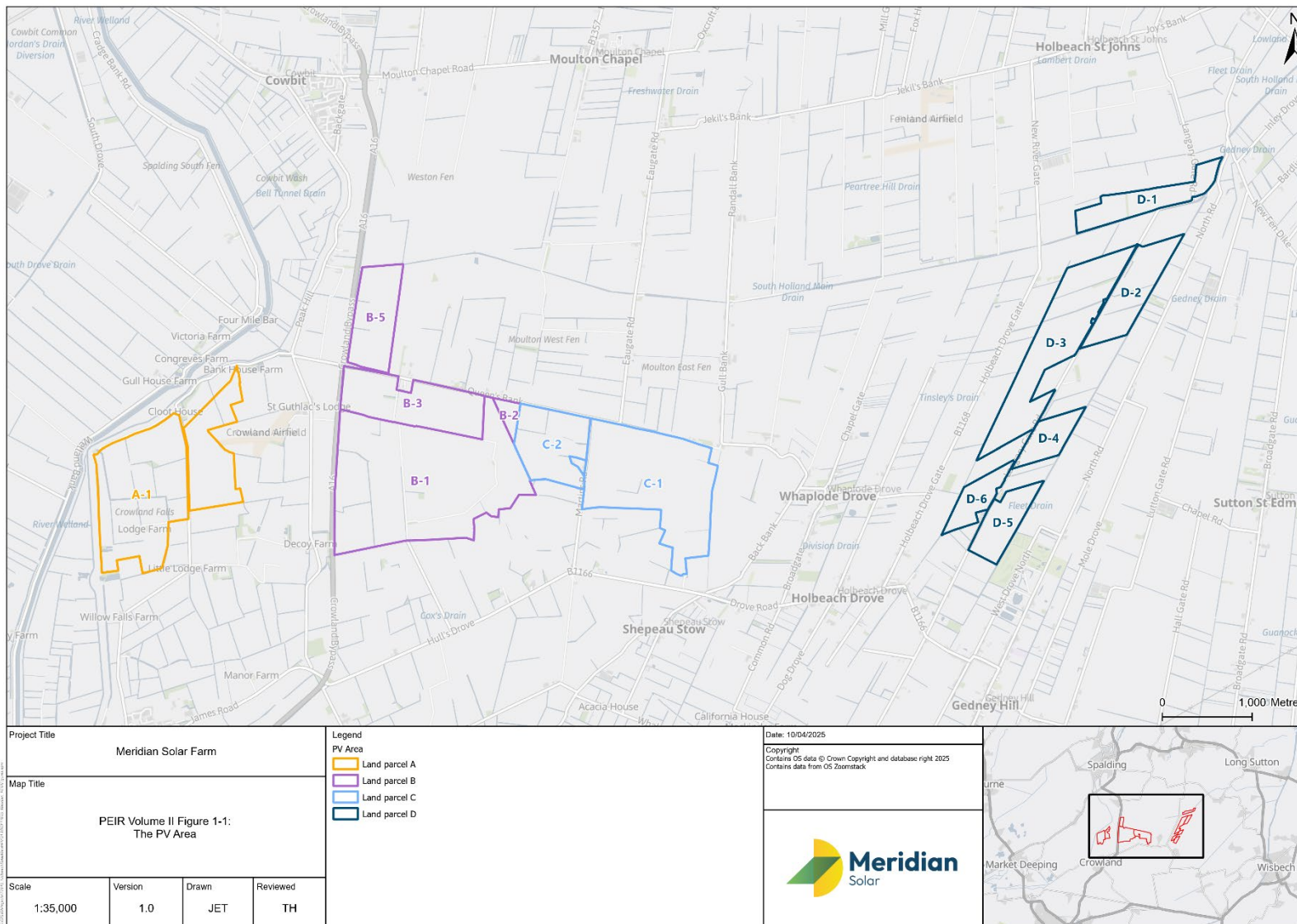
The Scheme would include the construction, operation and decommissioning of a solar PV electricity generating facility with co-located BESS, Inter-Array Connection (to link the land parcels that form the PV Area) and an overhead line Grid Connection from the PV Area to a point of connection at the proposed Weston Marsh National Grid substation to the north of Weston. The Scheme would have capacity to generate approximately 750 megawatts (MW) of electricity for export to the National Electricity Transmission System (NETS).

As with other schemes of this scale and nature, flexibility is required for elements of the Scheme up to the point the DCO application is made. This is to allow the design of the Scheme to take advance of the results of ongoing environmental investigations and surveys, evolutions in technology, and ongoing consultation and engagement. For the purposes of the PEIR, conservative parameters have been applied against elements of the Scheme where flexibility is sought at this stage. The design parameters from which the preliminary assessment has been completed are outlined in full within PEIR Volume I Chapter 2: The Scheme, as well as within specific topic chapters where relevant (PEIR Volume I Chapters 5 to 14).

PV Area

Plate 3 shows the land parcels within the PV Area.

Plate 3: The PV Area



Solar PV Modules and Mounting Structures

Solar PV modules convert sunlight into direct current (DC) electricity. Solar panels are typically formed from a series of PV cells behind toughened frontal glass housed within a fixed metal frame.

Each row of solar PV modules would be mounted on a rack supported by galvanised steel poles, either driven into the ground or on feet mounted on concrete pads. It is anticipated that the solar panels would face predominantly south.

For the purposes of the PEIR, the height of solar PV modules has been assumed to reach a maximum of up to 5.7m within land parcel A, and 5.2m within land parcels B, C and D. These are considered conservative estimates as they are required to account for the maximum upwards tilt of panels as well as the raising of infrastructure above the peak water level associated with a breach of flood defences or pumping station failure during a 1 in 1,000 year plus climate change flood event.

To date, information regarding anticipated flood heights has been based on data available within the Southeast Lincolnshire Strategic Flood Risk Assessment (2017). The configuration of flood mitigation measures will be subject to further design refinement based on the results of site-specific modelling and continued engagement with relevant consultees, including the Environment Agency and has thus required the maximum degree of flexibility regarding the height of infrastructure.

On-site Cabling

Low voltage on-site electrical cabling would connect the solar PV modules and BESS to electrical equipment to allow for the export and import of power via the Grid Connection. Data cables would typically run alongside these electrical cables to allow for monitoring during operation. On-site cabling would be buried in trenches.

Solar Stations

Solar Stations would be positioned across the PV Area. These consist of container style units housing equipment required to convert electricity generated by the Scheme onwards to the Grid Connection.

As with the solar PV modules, a conservative estimate in regard to the maximum height and profile of the Solar Stations has been made within the PEIR account for a variety of configurations being considered in relation to flood mitigation. The Solar Stations are anticipated to be 12.5m wide, 2.5m in length, and up to 5.4m above ground level in land parcel A, and 4.9m within land parcels B, C and D.

BESS and On-Site Substation Compounds

Four compounds would house both BESS units and an On-Site Substation. These would be located across the PV Areas, one in land parcel A, two in land parcel B and one in land parcel D. Two options are being considered for the specific location in land parcel D, and the decision will largely depend on the chosen route of the Inter-Array Connection across the Inter-Array Area between land parcels C and D.

The configuration of equipment within each BESS and On-Site Substation Compound is still to be determined. Therefore, within each assessment in the PEIR, the maximum height and

footprint for each compound has been applied to ensure all potential configurations have been accounted for. Though only four BESS and On-Site Substation Compounds would be built forward, all five options have been considered as part of the PEIR.

The BESS primarily provides energy storage for the Scheme and gives operational flexibility by allowing for a balance between peak generation and grid balancing, that is, matching electricity supply with the demand of the wider electricity transmission network. The BESS would be able to store both electricity generated from the solar PV modules and excess energy imported from the grid.

On-Site Substations would contain the electrical equipment to control, manage and meter electricity transmitted and distributed across the Scheme. The On-Site Substations would facilitate the transfer of electricity between land parcels via the Inter-Array Areas and the export of electricity from the PV Area to the Weston Marsh Substation (and the Grid beyond) via the Grid Connection.

It is anticipated that the On-Site Substation within parcel B-5 would be up to 400kV, while all others would be up to 132kV. Fencing up to 2.4m in height would enclose each BESS and On-Site Substation Compound, with further fencing up to approximately 2.8m in height further enclosing electrical equipment within each compound where required.

In considering the potential raising of infrastructure within the PV Area to account for a 1 in 1,000 year plus climate change flood event, the BESS and On-Site Substation Compounds have been assumed to reach a maximum height above ground level of 17.5m within land parcel A, and 17m within land parcels B, C and D. It should again be noted that the design of flood mitigation measures will be refined based on site-specific flood modelling to be completed, as well as ongoing consultation with relevant stakeholders, including the Environment Agency. It has therefore been necessary to apply conservative parameters to account for a variety of configurations being considered.

Fencing and Security

A deer-wire mesh and wooden post security fence would form the perimeter of the PV Area. It is assumed that fence posts would be driven into the ground using a standard post driver with no excavation of foundations. 'Concreting in' of posts would be used in limited circumstances such as tension posts and/or corners.

Closed-circuit television (CCTV) cameras and non-continuous sensor-triggered infrared lighting would be positioned along the perimeters of the PV Area and around critical electrical infrastructure.

Inter-Array Areas

The Inter-Array Areas are the areas electrical cables (the Inter-Array Connection) would run through to connect infrastructure across the PV Area. Cables up to 132kV, would be via overhead lines (wooden poles with a standard height of approximately 15 metres) and/or underground cables.

Grid Connection Corridor

The electricity generated by the Scheme would be exported to National Grid's proposed Weston Marsh Substation near the village of Weston. This new substation is subject to a separate DCO application by National Grid which will also include their proposed new Grimsby to Walpole overhead energy transmission line. The connection proposed in the Meridian DCO application would likely be installed as 400kV overhead lines via steel lattice style towers (approximately every 350m) with a standard height of approximately 50m.

At this stage, a broad area has been identified for the routing of the Grid Connection referred to as the Grid Connection Corridor. A more defined route is still to be developed and will be assessed and presented in the ES.

Access and Access Tracks

All access, including temporary access for the construction phase and the decommissioning phase, will be confirmed as the Scheme design progresses and in consultation with the Lincolnshire County Council highways team and National Highways where required.

It is anticipated that construction access will be via the A16, which is managed by Lincolnshire County Council as the local highway authority. For the PV Area, construction access would use existing access to Clout Drove, Queen's Bank, Martins Road and Langary Gate Road. Access locations for the Grid Connection Corridor and Inter-Array Areas will be determined by the ongoing design process. The preliminary assessment has been completed using the indicative locations outlined in the PEIR (Volume I Chapter 13: Traffic and Access).

Access tracks would be constructed across the PV Area. These would typically be 3.5 to 5m wide, with some localised areas being wider to accommodate the turning circles of larger vehicles. These would facilitate maintenance access to key areas of infrastructure such as the BESS and On-Site Substation Compounds.

An outline Construction Traffic Management Plan (CTMP) will be developed and submitted alongside the ES which will contain measures in relation to the control and routing of construction traffic, pedestrian safety, appropriate signage, among other matters.

Where abnormal indivisible loads (loads which cannot be divided into two or more loads to be transported by road) are required, a detailed review of the respective potential route would be undertaken to identify any road works which may be necessary.

Surface Water Drainage

Solar developments are not typically associated with significant flood impacts. However, some elements of the Scheme, such as the Grid Connection, Inter-Array Connection, BESS and On-Site Substation Compounds, may lead to surface water run-off and flood effects. Their effect on flood sensitivity should therefore be considered.

An outline Drainage Strategy will be developed alongside the EIA to establish how surface water from the Scheme will be managed in relation to flood risk. The Scheme drainage design will consider the results of the hydrological assessment and associated Flood Risk Assessment (FRA) which will be presented within the ES. The Drainage Strategy will be agreed before construction starts and followed throughout the operational phase.

Biodiversity and Landscape

The Scheme would include biodiversity enhancements to increase the diversity of habitats currently within the Site. Landscape planting and screening would be provided, in keeping with the existing landscape character. This would assist in providing visual screening for the Scheme, helping it to be absorbed into the wider landscape while providing benefits to biodiversity. Landscape enhancements would increase biodiversity across the Scheme and contribute to Biodiversity Net Gain (BNG). Provisions to manage the temporary loss of habitats during the operation of the Scheme will continue to be considered in accordance with relevant guidance and industry best practice. This may include the provision of habitat for ground nesting birds, notably in relation to sky lark.

An illustrative plan of landscape measures under consideration are outlined within PEIR Volume II Figure 10-16: Illustrative Landscape and Visual Mitigation Plan.

Construction Phase

Subject to development consent being granted, the earliest construction is assumed to commence is 2027. It is estimated that construction will take between 24 and 36 months for the whole Scheme. Details on the construction programme will be further refined alongside the ongoing Scheme design process and will be outlined in the ES.

The construction activities required may include (not necessarily in order):

- preparation of the Site (including materials import, establishing compounds, marking out, etc.)
- PV Area construction (including erection of solar PV modules, transformers, BESS units, etc.)
- installation of the Grid Connection (overhead lines) and Inter-Array Connections (overhead or underground cabling) (including creation of temporary haul roads and compounds; import and installation of pylons, construction of foundations and stringing of wires; and/or trenching and installation of buried cables)
- testing and commissioning of Scheme infrastructure; and
- site reinstatement and habitat creation around PV Area equipment.

Construction of the Scheme would be carried out in accordance with a Construction Environmental Management Plan (CEMP) The CEMP will include measures in relation to the risk management of construction activities, site-specific environmental control and monitoring measures, working hours and pollution prevention practices among other matters. An outline CEMP will be prepared to accompany the DCO application.

A post-construction plan for site reinstatement and habitat creation will be part of the ongoing development of the Scheme design. The measures required will be defined in the CEMP and Soil Management Plan (SMP). An outline Landscape and Ecological Management Plan (LEMP) will be included as part of the DCO application to define the measures for managing land across the Site.

Operational Phase

Once constructed, the Scheme would be operated for 40 years before being decommissioned. For the purposes of the PEIR, the earliest construction is anticipated to be completed is 2029. Activity during the operational phase would be limited and would principally relate to vegetation management, equipment maintenance, servicing of any components that fail, periodic fence inspection and monitoring to ensure the continued effective operation of the Scheme.

It is anticipated that a workforce of up to 20 people would support operation of the Scheme (predominantly based within the PV Area). Additional visitors may visit the Scheme for deliveries and to replace any components that fail. Staff vehicles and those used for maintenance would primarily be four-wheel-drive vehicles and vans.

Traffic generated as a result of the requirement to replace components during the operational phase of the Scheme is currently anticipated to be below the threshold that would require detailed assessment. This will be reviewed and updated within the ES as appropriate as the design of the Scheme is further developed.

Decommissioning Phase

Once the Scheme has operated for 40 years, all components would be dismantled and removed from the Site in what is referred to as the decommissioning phase. For the purposes of the PEIR, the earliest the decommissioning phase is anticipated to begin is 2069. It is expected that decommissioning of the Scheme may take up to approximately 24 months.

Due to the similarity of the construction and decommissioning activities for the Scheme, many effects that would arise from decommissioning are predicted to be similar to, or less significant than, those likely to arise during the construction phase of the Scheme.

An outline Decommissioning Environmental Management Plan (DEMP) will be prepared alongside the EIA to outline the general principles to be followed before starting decommissioning.

When the decommissioning phase starts, above-ground physical infrastructure across the Site will be dismantled and removed. This would include all components described within the PV Area, as well as the overhead lines and associated pylons or wooden poles within the Grid Connection Corridor and Inter-Array Areas (if this configuration is sought). It is assumed that any below-ground infrastructure will be left in place following decommissioning, subject to industry best practice, obligations to landowners and the relevant statutory requirements. This may include low-voltage cabling within the PV Area, and underground cabling within the Inter-Array Areas (should this configuration be adopted).

Land within the Site would be returned to the relevant landowners when the decommissioning phase is complete. The Site would then be out of the control of the Applicant.

Alternatives and Design Evolution

Introduction

PEIR Volume I Chapter 3: Alternatives and Design Evolution describes the evolution of the design as a result of the iterative process undertaken to-date and outlines how alternatives have been identified and considered.

Selection of the PV Area

The selection of the PV Area had three key stages:

- Stage 1: identifying the search area through consideration of topography, irradiance (sunlight intensity) and a suitable connection point. The availability of a connection point at the proposed Weston Marsh Substation was a key factor in choosing this area.
- Stage 2: a desk-based review of the key environmental features within the area surrounding the identified point of connection. A review of relevant national and local planning policies was also completed. This resulted in the identified of the following key considerations for use in reducing and refining the search area for the potential PV Area:
 - Solar irradiation levels;
 - Urban areas and proximity to large residential zones;
 - Access for construction;
 - Archaeological and heritage interests;
 - Agricultural land classification (from national-scale mapping);
 - landscape designations;
 - Nature Conservation designations;
 - Flood risk level; and
 - Watercourses.
- Stage 3: a search was completed to identify land considered suitable to accommodate the Scheme, including an adequate space for potential mitigation and enhancement measures. Commercial terms were agreed with landowners of the PV Area for the duration of the construction, operation and decommissioning phases of the Scheme.

Alternative PV Area Layouts

The PV Area design has been refined as part of an iterative process that has accounted for environmental and technical considerations while incorporating feedback from statutory and non-statutory consultees.

Changes to the PV Area design include:

- removal of solar PV modules from land parcel A to the west of Crowland Airfield following consultation with Peterborough and Spalding Gliding Club;
- Exclusion of solar PV modules from areas where agricultural land surveys and heritage investigations indicated high concentrations of heritage features in an area likely to be

classed as Agricultural Land Classification (ALC) Grade 1. Further refinement to the layout of solar PV modules will be considered based on the results of ongoing surveys;

- Inclusion of buffer zones around properties and within the Scheduled Monuments in the north of the PV Area;
- Consideration of potential locations for BESS and On-Site Substation Compounds in relation to environmental features; and
- The development of a series of design principles to help guide the layout. This will continue to evolve as more environmental study information becomes available.

Selection of the Grid Connection Corridor

The selection and refinement of the Grid Connection Corridor has followed a three-stage process to date. The process has followed the principles of the Holford Rules, which are industry standard guidelines that National Grid uses to try to avoid adverse impacts through considerate routing of overhead lines. To identify a study area where corridor options would be identified, straight lines were drawn from the easternmost and westernmost points of the PV Area to the planned Weston Marsh substation's provisional location, provided by National Grid. Land considered of the highest amenity value and/or technically unfeasible for the Scheme was then removed from this area. This was mostly land around build-up areas north of the PV Area, including Moulton Chapel, Cowbit, Moulton and Weston.

The remaining area was then divided into seven corridors for further appraisal against a list of key environmental constraints and indicators identified within the study area. This included designated heritage features and buildings, priority habitats, main rivers and watercourses, public rights of way (PRoW), residential properties and existing development, among others. Each corridor was given a relative scoring against each environmental topic considered. This was used to identify the preferred corridor options to progress. This process identified four corridor options that were subsequently consulted on as part of non-statutory consultation events held in summer 2024 and the EIA Scoping process (as discussed below).

Following receipt of feedback from the EIA Scoping process and non-statutory consultation events, corridors from the north and south sections of the study area were combined to form a preferred Grid Connection Corridor. To ensure the indicative corridor identified for consideration in the PEIR was a reasonable representation, a review was conducted to exclude residential properties and associated land (curtilage).

The outcome of this process forms the Grid Connection Corridor presented in PEIR Volume II Figure 1-2: The Site. The extent and configuration of infrastructure within the preferred Grid Connection Corridor will be subject to further refinement following statutory consultation.

Selection of the Inter-Array Areas

Land parcels of the PV Area would be connected via either overhead lines or underground cable across the Inter-Array Areas. The Applicant is seeking flexibility to account for potential changes following continued stakeholder engagement, environmental surveys and feedback received from statutory and non-statutory consultees. The ES and DCO application will identify the refined routes. The Inter-Array Areas were selected by establishing the shortest

routes between land parcels and have been refined by reviewing environmental and engineering constraints.

Overview of the EIA Process

Purpose of the EIA Process

EIA is the process undertaken to present a clear and impartial assessment of the likely significant environmental effects resulting from the Scheme and the potential mitigation measures for avoiding, preventing, reducing or, if possible, offsetting likely significant effects. As well the completion desk-based investigations and surveys within and around the Site, the EIA process is informed by consultation with statutory consultees, other interested bodies and members of the public. The EIA should provide decision-makers with the environmental information necessary to make informed decisions for determining an application for development consent.

The Applicant has developed a series of design principles to inform the design process, assist with mitigation and reduction of potential environmental effects and, where appropriate, inform wider-ranging enhancements or improvements for local stakeholders. Where practicable, environmental effects identified as part of the EIA process have been avoided in line with the Applicant's aim to develop a Scheme that responds to the characteristics of the surrounding area.

EIA Scoping

An exercise was completed in Spring 2024 to identify the key environmental issues that might result from the Scheme. This process, referred to as EIA Scoping, was undertaken to determine the environmental topics to be covered as part of the EIA and specifically which elements should be assessed and how. The findings of this exercise were formally presented within an EIA 'Scoping Report' which was submitted to the Planning Inspectorate in May 2024. The Planning Inspectorate is the independent body that manages the application, examination and decision-making process for NSIPs. The Scoping Report was provided to relevant consultation bodies for comment by the Planning Inspectorate. These consultation bodies included Natural England, Environment Agency, Historic England, Lincolnshire County Council, South Holland District Council, parish councils among others.

The responses of consultation bodies were formally compiled by the Planning Inspectorate in what is referred to as a 'Scoping Opinion'. This was received from the Planning Inspectorate on 30 July 2024 and indicated agreement or otherwise to the Scoping Report. Further engagement was undertaken with these consultation bodies to finalise agreement on the approach to the assessment of each environmental topic. The key issues raised in the Scoping Opinion, and corresponding responses and actions, are set out in the technical chapters of the PEIR.

The EIA (and the PEIR) have considered the following environmental topics:

- Climate change;
- Cultural heritage;
- Ecology and biodiversity;

- Hydrology, Flood Risk and Water Framework Directive (WFD);
- Agriculture and soils;
- Landscape and visual;
- Noise and vibration
- Socio-economics and land use;
- Traffic and access;
- other environmental topics (air quality, human health, glint and glare, waste, and major accidents and disasters).

Assessment Methodology

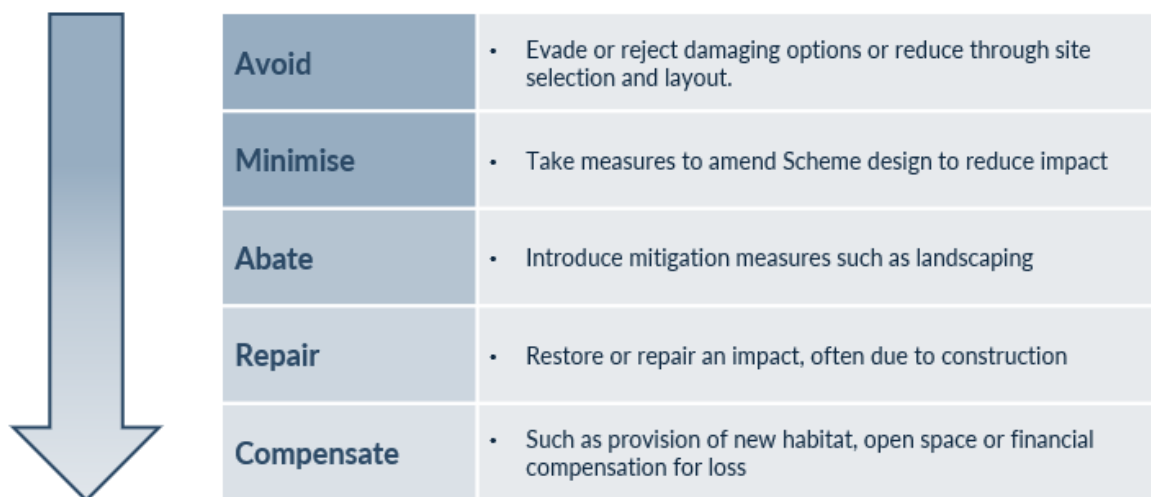
For each environmental topic, a review of the environmental conditions within the Site relevant to the technical assessment was completed. Referred to as the 'baseline', this provided a reference point from which the predicted impacts of the Scheme could be compared. The baseline was then reviewed to identify 'receptors' per topic-specific assessment - the physical or biological resources or user groups considered likely to be impacted by the Scheme. The sensitivity to change of each identified receptor was then determined. An assessment is then undertaken to predict the potential likely impacts on the receptors during the construction, operational and decommissioning phases of the Scheme, considering their relative sensitivity to change. The likely significant effects resulting from the Scheme were then assessed per receptor by comparing the relative impact they experienced against the sensitivity to change they were each assigned.

The PEIR presents the preliminary conclusions of these assessments based on information available to date. The assessment of the likely significant effects resulting from the Scheme will be updated within the ES as further engagement is held and the design of the Scheme continues to be developed.

Design and Mitigation Processes

The Scheme will adopt a standard approach to identifying mitigation requirements. The mitigation hierarchy outlined in Plate 4 sets out how the design process, informed by the EIA, can address the likely adverse effects of the Scheme.

Plate 4 Mitigation Hierarchy



Assessment of Cumulative Effects

In accordance with the EIA Regulations², a preliminary assessment of cumulative effects has been considered within the PEIR. An individual environmental impact may not be significant on its own, but it may become significant when it is combined with other environmental impacts from the same scheme or other developments.

PEIR Volume I Chapter 15: Cumulative Effects provides further details about the assessment of cumulative effects. In accordance with the EIA Regulations², two types of cumulative effects have been assessed and reported on as part of the EIA:

- The intra-project cumulative effects (i.e. where multiple different types of effect from the Scheme can affect an individual receptor)
- The inter-project cumulative effects (i.e. the combined effects of the Scheme and other relevant planning proposals in the area, e.g. National Grid’s Grimsby to Walpole proposal).

Each of the topic-specific assessments in the PEIR contains a preliminary assessment of inter-project cumulative effects, where relevant. These are preliminary findings and conclusions on the significance of cumulative effects and any mitigation required will not be reached at this stage. The assessment of intra-project cumulative effects is included in PEIR Volume I Chapter 15: Cumulative Effects.

Assumptions and Limitations

Potential impacts and their effects cannot be predicted with absolute certainty. Predictions are limited by the quality and certainty of the information available and the accuracy of the predictive techniques employed. The preliminary assessment has therefore indicated the likely magnitude of impacts and significance of effects to a reasonable degree. Where uncertainty exists, a precautionary approach assuming a reasonable worst-case impact has been adopted for the assessment. The assumptions and limitations of each topic-specific assessment is outlined within PEIR Volume I Chapters 5 to 15 where relevant.

Environmental Management Plans

A number of outline management plans will be produced for the DCO application, in alignment with the EIA. The outline plans will set appropriate mitigation principles and strategies for each phase of the Scheme. Following consent, a detailed final version of each management plan that applies the measures described in the outline version would be produced and submitted to South Holland District Council for approval (and Lincolnshire County Council where necessary). Multiple versions of each management plan may be produced, if required, for individual elements of the Scheme, such as the PV Area.

The DCO application would set out the following outline environmental management plans as outlined within Table 1 below.

Table 1 Outline Environmental Management Plans to be Submitted with the DCO Application

Environmental Management Plan	Description
Construction Environmental Management Plan (CEMP)	A plan of the overarching principles for avoiding, reducing and mitigating the environmental effects resulting from the construction of the Scheme.
Construction Traffic Management Plan (CTMP)	A plan of the overarching measures to mitigate adverse effects of the construction generated by the Scheme to prevent or limit potential disruption.
Site Waste Management Plan (SWMP)	A plan of the overarching measures in relation to the management of materials and waste.
Battery Storage Safety Management Plan (BSMP)	A plan of the overarching measures for battery fire prevention and detection, including in relation to the design and operation of the BESS.
Soil Management Plan (SMP)	A plan of the overarching soil management principles to maintain, and where practical, enhance the quality of soils within the Site.
Landscape and Ecological Management Plan (LEMP)	A plan of the overarching measures to manage, and where practical, enhance landscape, heritage and biodiversity features within the Site.
Operational Environmental Management Plan (OEMP)	A plan of the overarching measures in relation to control of operational activities, including maintenance. The OEMP would secure the following plans to be prepared post-consent by the appointed contractors: <ul style="list-style-type: none"> • Emergency Response Plan (ERP); and • Health and Safety Plan (H&SP).
Decommissioning Environmental Management Plan (DEMP)	A plan of the overarching principles for avoiding, reducing and mitigating the environmental effects resulting from the decommissioning of the Scheme.

Identification of Preliminary Environmental Effects

This section summarises the preliminary environmental effects of the Scheme identified in the PEIR. For each topic, effects are identified for each stage of the Scheme, i.e. the construction, operation and decommissioning phases. Embedded mitigation (mitigation that has already been built in to the design) has been taken into account when determining the significance of effects. In each case, as the design is refined, the assessments will be updated and presented at the Environmental Statement (ES) stage.

Climate Change

Introduction

PEIR Volume I Chapter 5: Climate Change presents the preliminary findings of the assessment of potential effects associated with the proposed Scheme on climate change. Assessments completed in relation to Climate Change include:

- Life-cycle Greenhouse Gas (GHG) impact assessment: the impact of GHG emissions arising from the Scheme on the climate over its design life;
- Climate Change Risk (CCR) assessment: the resilience of the Scheme to future projected climate change impacts, including damage to the Scheme caused by accidents resulting from climate change; and
- In-Combination Climate Change Impact (ICCI) assessment: how the resilience of receptors in the surrounding environment is affected by the combined impact of future climate conditions and the Scheme.

Baseline Conditions

GHG Impact Assessment

For the life-cycle GHG impact assessment, the current baseline is represented the GHG emissions currently emitted or sequestered within the Site in the absence of the Scheme. Current baseline GHG emissions are dependent on the types of soil and vegetation present, and the fuel used for the operation of vehicles and machinery associated with agricultural practices (the predominant land use function within the Site). For the purposes of the assessment, the change in GHG emissions from current conditions has been measured against a worst-case baseline of zero emissions.

The future baseline for the lifecycle GHG impact assessment represents the anticipated GHG usage within the Site for the duration of the lifetime of the Scheme, should the Scheme not be implemented. Current agricultural activities are anticipated to have minor levels of associated GHG emissions and minor carbon sequestration from existing vegetation during the life cycle of the Scheme. For the purposes of the assessment, the net change in GHG emissions has been measured against a worst-case baseline of zero emissions during the life cycle of the Scheme.

CCR Assessment

The current baseline for the CCR assessment is represented by the average climate within the Site for the 30-year historical period of 1981 to 2010 provided by the Met Office. The climate-related risks to the Scheme associated with an increased frequency of extreme weather events have been assessed. This includes effects in relation to the workers within the Site and physical components of the Scheme during the construction, operational and decommissioning phases.

The future baseline for the CCR assessment has used United Kingdom Climate Projections 2018 data (UKCP18) from 2020 to 2079. Data have been obtained in relation to the projected changes of temperature, precipitation and wind speed.

ICCI Assessment

The ICCI Assessment has used the same current and future baseline conditions as the CCR assessment. It has been developed in accordance with Institute of Environmental Management and Assessment 'EIA Guide to Climate Change Resilience and Adaptation' (2020) guidance.

Preliminary Assessment of Likely Significant Effects

The preliminary assessment has considered the resilience of the Scheme to climate change, and adequate mitigation measures have been integrated into the Scheme design.

GHG Impact Assessment

The GHG effects of construction and decommissioning activities (e.g. as a result of construction vehicles and plant) are anticipated to be short-term, temporary, minor adverse and not significant.

GHG emissions savings are expected to be achieved throughout the lifetime of the Scheme, therefore operation of the Scheme would produce beneficial effects which are significant when compared to the future baseline 'business-as-usual' scenario. This is due to the development of a low-carbon energy source compared with alternative fossil-fuel energy generation. GHG emissions during the construction, operation and decommissioning of the Scheme can be considered to be 'offset' by the net positive impact of the Scheme on GHG emissions. The GHG savings achieved throughout the lifetime of the Scheme also demonstrate the role solar energy generation has to play in the transition to, and longer-term maintenance of, a low-carbon economy. Without low-carbon energy generation projects such as the Scheme, the average grid GHG intensity will not decrease as is projected, which could adversely affect the UK's ability to meet its carbon-reduction targets.

The Scheme is therefore, during the operational phase, assessed to have a long-term temporary beneficial effect on climate that is considered **significant**.

CCR Assessment

The preliminary assessment has considered the resilience of the Scheme to climate change, and mitigation measures are integrated into the Scheme design and relevant management plans. As a result, the Scheme is considered resilient to the identified projected changes to the climate during its life cycle, and no significant effects are anticipated.

ICCI Assessment

The key risks identified by the ICCI Assessment were climate hazards in relation to biodiversity, air quality, flooding and water resources. Through mitigation measures integrated into the Scheme design and relevant management plans, no significant residential effects have been identified.

The GHG, CRR and ICCI assessments will be updated as the Scheme design is refined, and will be presented in the ES to accompany the DCO application. The significance of residual effects is not predicted to change from those presented within the PEIR.

Mitigation and Enhancement Measures

GHG Impact Assessment

Embedded mitigation measures have been implemented to reduce GHG emissions that would arise from the Scheme. Specific measures that will be included in the outline Construction Environmental Management Plan (CEMP), outline Operational Environmental Management Plan (OEMP) and outline Decommissioning Environmental Management Plan (DEMP) include the use of alternative materials with lower embodied GHG emissions; the adoption of the Considerate Constructors Scheme and industry good practice measures; switching vehicles and plant off when not in use; and encouraging all staff to use low-carbon modes of transport.

CCR and ICCI Assessments

Embedded mitigation measures will be implemented through various plans (i.e. the CEMP, OEMP, Landscape and Ecological Management Plan (LEMP), Battery Storage Safety Management Plan (BSMP) and DEMP), including but not limited to, appointing a dedicated health and safety manager and the production of an Emergency Response Plan (ERP). Where practical, flood-sensitive infrastructure would be elevated above the predicted flood level associated with a breach of flood defences or pumping station failure during a 1 in 1,000 year plus climate change flood event, unless otherwise mitigated through configuration to the Scheme design. No additional mitigation measures have been identified at this stage due to the lack of significant adverse effects.

Cultural Heritage

Introduction

PEIR Volume I Chapter 6: Cultural Heritage presents the baseline and results of a preliminary assessment of the likely significant effects on Cultural Heritage.

This assessment considers the potential for physical impacts of the Scheme on the significance of heritage assets within the Site and for impacts on the significance of heritage assets as a result of effects on their settings.

Baseline Conditions

The Site lies entirely within the fenland basin of South Lincolnshire, the largest single area of wet lowland in the UK. There is evidence of both silt and peat fens in Lincolnshire, primarily in Crowland, the Deeping and Bourne Fens. The marine alluvium which overlies this peat consists of clay, which forms silty features known as roddons. Roddons are the remains of former creeks that form networks through the fens. Because they appear higher than the clay formation, archaeological remains such as settlements and saltern sites (salt works) are often found at the top and sides of roddons.

There are no World Heritage Sites, Conservation Areas, Registered Parks and Gardens, Registered Battlefields or Protected Wreck Sites within 1km of the PV Area, Inter-Array Areas or Grid Connection Corridor.

Three Scheduled Monuments are within, or border, the PV Area, while a further eight are located within 1km of the Site. None are located within the Inter-Array Areas or Grid Connection Corridor.

A total of approximately 276 listed buildings are located within 5km of the Site. These include 14 Grade I, 27 Grade II* and 235 Grade II listed buildings.

The assessment undertaken to date, informed through a desk-based assessment and a programme of geophysical survey, aerial photographic and light detection and ranging (LiDAR) analysis, have identified a high likelihood for archaeological remains of potentially high importance to survive within the Site. These archaeological remains likely date from the Romano-British period onwards, though there is some potential for remains of earlier date to survive.

Preliminary Assessment of Likely Significant Effects

Construction Phase

During construction of the PV Area, the following **significant** effects are likely to arise for cultural heritage assets:

- permanent moderate adverse effects on the physical feature and setting of the Scheduled Monument, 'Medieval boundary earthworks at Queens Bank (10090080)', located adjacent to the Site as a result of construction activities. This Scheduled Monument is deemed of high importance due to cultural significance derived from its archaeological and historic interest. There is high potential that a possible archaeological feature present in field B-5 is related to this Scheduled Monument and may experience similar effects.
- permanent moderate adverse effects as a result of construction activities, in land parcel D, on the physical feature and setting of field boundaries and potential trackways dating to

the Iron Age or Romano-British period. This feature was identified by aerial survey and is of potential high importance as it may relate to the Scheduled Monument of a Romano-British settlement south of Shell Bridge (1004982), which would add to the archaeological record of salt production.

- long-term temporary neutral to moderate adverse effects to the historic setting of Scheduled and Grade II Listed St Guthlac's Cross (1005052, 1359254).

During construction within the Grid Connection Corridor, the following **significant** effects are likely to arise for cultural heritage assets:

- permanent neutral to moderate adverse effects, at the location of each pylon and where access tracks are required, on potential non-designated archaeological deposits. These include a. A medieval grange, undated cropmarks, pottery and salt-making debris, linear features and enclosures.
- long-term temporary neutral to moderate adverse effects on the historic landscape arising from the introduction of pylons into the landscape
- long-term temporary neutral to moderate adverse effects on the settings of fifteen heritage assets within 1km which may be considered **significant**; however, no likely significant effects are anticipated for heritage assets more than 1km away.

Within the Inter-Array Areas, evidence of non-designated heritage assets dating to the Roman period and the post-medieval period have been recorded; however, no non-designated assets have been identified between land parcels A and B during aerial assessment. During construction of the Scheme, if the underground option is chosen, **significant** permanent moderate to neutral effects are likely to arise for buried archaeological deposits in the Inter-Array Areas.

If the overhead line option is chosen for the Inter-Array Connection, due to the limited height and design of the wooden poles, effects on settings are likely to be not significant. However, this will be confirmed in the ES.

Operational Phase

When the Scheme has been constructed, the primary remaining effect during operation will be the ongoing effect of the solar infrastructure on the setting of certain designated heritage assets and features. This is assessed as a long-term temporary neutral to moderate effect, which is considered **significant**.

Decommissioning Phase

Decommissioning would result in the removal of all above-ground infrastructure. This would remove impacts to the settings of historic assets and landscapes.

As underground infrastructure would be left in place and decommissioning works would be managed through a DEMP, effects on archaeological remains are likely to be not significant.

It is anticipated that impacts on the settings of designated heritage assets during the decommissioning phase would be similar to those in the construction phase and short-term temporary.

Further research, survey and archaeological evaluation excavation will be undertaken to support this assessment at the next stage. This work will be undertaken in consultation with Lincolnshire County Council and Historic England.

Mitigation and Enhancement Measures

Mitigation measures have been embedded in the Scheme design and relevant management plans. Detailed proposals and locations will be submitted with the DCO application. Embedded mitigation measures include:

- The layout of solar PV modules in the PV Area has been designed to avoid works inside the scheduled areas of the two Scheduled Monuments located within the Site;
- The design of the Scheme has been refined to avoid dense groupings of buried archaeological remains that have been identified within the PV Area;
- Non-intrusive installation techniques for solar PV modules will be implemented where practical in locations where sensitive archaeological deposits are identified through further fieldwork;
- Track matting will be used where practical to reduce the effect of temporary access tracks in areas of high archaeological potential where a risk of ground disturbance or rutting is identified; and
- The sympathetic use of fencing and landscaping, where practical to reduce visual effects on cultural heritage assets and the historic landscape.

Additional mitigation in response to identified significant residual effects continues to be considered as part of the ongoing development of the Scheme design. If required, archaeological mitigation would be implemented where practical in advance of construction and decommissioning works. The exact nature of archaeological mitigation is still to be determined as archaeological evaluation trenching to determine the nature, extent and significance of archaeological deposits is to be completed. The mitigation strategy is likely to require archaeological excavation and recording in specific areas. The methodology for subsequent archaeological mitigation would be approved by or in consultation with Lincolnshire County Council, South Holland District Council and Historic England.

Ecology and Biodiversity

Introduction

PEIR Volume I Chapter 7: Ecology and Biodiversity has considered the likely significant effects of the Scheme in relation to ecology and biodiversity. This includes potential effects on natural habitats and the species that rely on them, some of which are afforded statutory protection. The assessment follows standard guidelines and includes desk studies, a suite of field surveys, an assessment and proposals for mitigation. It also includes potential enhancement measures to achieve Biodiversity Net Gain (BNG). Consultation and engagement have taken place with Natural England throughout.

Baseline Conditions

The current baseline has been determined through desk studies and dedicated habitat and protected species surveys, some of which are ongoing. Surveys are broadly more complete within the PV Area, with further investigations to be completed within the Inter-Array Area and Grid Connection Corridor. To date, baseline habitat, breeding bird, wintering bird, badger, bat, water vole and otter surveys have been completed in the PV Area. A desk study has been undertaken to establish the presence of local and statutory designated sites, and to find third-party records of protected species. Further surveys are set to be carried out within all areas of the Scheme in 2025.

Land within the Site is typical of the wider fenland landscape. It consists of large agricultural fields in arable use (predominantly sugar beet, winter cereals, oilseed rape and bare fallow when surveyed), separated by a network of man-made drainage ditches and uncultivated field margins.

There are three statutory internationally designated ecological sites within 15km of the Site. The closest is The Wash, a Special Area of Conservation (SAC), Special Protection Area (SPA) and a Ramsar site (an internationally important wetland). This is located about 8.4km north-east of the Site. Nene Washes SAC, SPA and Ramsar site, and Baston Fen SAC are located about 11.8km south of the Site and 10km west of the Site, respectively.

There are no statutory nationally designated ecological sites within 2km of the Site. The closest, Surfleet Lows Site of Special Scientific Interest (SSSI) and Cowbit Wash SSSI, are located about 3.5km north-west and 3.6km west of the Site respectively.

There are 21 non-statutory designated sites, all of which are Local Wildlife Sites (LWS), within 2km of the Site. Most of these are associated with artificial watercourses or canalised drains, but there is also a site alongside the River Welland and a site containing small areas of woodland, neutral grassland and open water.

Species relevant to the assessment identified so far as a result of desk studies and surveys include:

- Bats (up to National importance);
- Great crested newts (up to Local importance);
- Otters (up to Local importance);
- Breeding birds (up to Local importance);
- Wintering birds (up to National importance);

- Plants (up to Site importance);
- Reptiles (up to Site importance);
- Water voles (up to Local importance);
- Invasive plants (up to Site importance);
- Badger (up to Site importance);
- Brown hare (up to Site importance);
- Hedgehog (up to Site importance); and
- Terrestrial invertebrates (up to Site importance).

The agricultural landscape is heavily managed. Therefore the future baseline in relation to ecology and biodiversity is expected to remain broadly similar to the composition of habitats and species currently identified within the Site. This would be subject to increases in mean summer and winter temperatures, and increases in extreme rainfall events and storms. These effects are likely to result in changes to the composition and growth of habitats, leading to habitat degradation, though these changes are not considered likely to result in a significant change to the current baseline.

Preliminary Assessment of Likely Significant Effects

Construction Phase

The construction phase of the Scheme is not considered likely to give rise to significant effects on the identified designated sites. It is expected that measures set out in the CEMP would reduce the impact of effects to a level that is not significant. This would include, but not be limited to, the appointment of an ecological clerk of works (ECoW) to provide advice during construction activities and manage environmental monitoring. Similarly, during the construction phase, negative effects on watercourses would be avoided through measures in the CEMP.

Should there be a requirement for the removal of habitat during the construction phase, this would result in the loss of small, isolated stretches of hedgerow. Although this would be negative at the Site level, the effect would not be significant because of the measures outlined in the CEMP and through further iterative design.

Some habitat for breeding and wintering birds may be lost, but this would not be significant at this scale and sufficient replacement habitat is available in the locality. Impacts associated with construction noise or light would be mitigated through adherence to the CEMP (including the implementation of working hours). The effects are not considered to be significant.

Great crested newts are assumed to be present within the Site and some suitable habitat may be lost. However, the effect would not be considered significant.

Bats are present and could be impacted by localised disturbance during construction. However, bat roosts would be avoided, foraging and commuting habitats would be retained in all but low-value cases, and adherence to the CEMP would prevent unacceptable light pollution. The effects would not be considered significant.

The design would avoid effects on otters and water voles by, for example, 10m standoffs from watercourses. Adherence to the CEMP would ensure any effects from noise, light and construction disturbance would not be considered significant.

Operational Phase

The presence of pylons and overhead cabling in the Grid Connection Corridor and Inter-Array Areas may pose a collision risk to bird species associated with The Wash (SAC, SPA and Ramsar site), and the Nene Washes (SAC, SPA and Ramsar site). On a precautionary basis, and in the absence of mitigation, it is assumed that the operation of the Scheme could result in long-term temporary negative effects at the Local level on the Nene Washes and The Wash (SAC, SPA and Ramsar sites) that are considered **significant**. Mitigation options are available and will be considered as part of the Habitats Regulations Assessment being undertaken and through liaison with Natural England.

The presence of pylons and overhead cabling along the Grid Connection Corridor and Inter-Array Areas may pose a collision risk to birds, including whooper swans, flying across the area. Mitigation measures are proposed but, on a precautionary basis, this is regarded as a long-term temporary negative effect at the local level that is considered **significant**.

There would be positive benefits to habitats, bats and great crested newts from new planting of grassland, hedgerows, shrubs and trees, and from a reduction in intensive agricultural use. These effects would be long-term temporary positive at the Local level, and are considered **significant**.

Decommissioning Phase

The net change to ecological receptors during the decommissioning phase is anticipated to be negligible as the land would be returned to baseline conditions.

Impacts such as disturbance, vibration and an increase in traffic movements would be the same or slightly less than those during the construction phase, as below-ground elements would be left in place during decommissioning and only above-ground impacts would be present. Following the implementation of the DEMP, it is expected that these impacts will be reduced to a level that is not considered significant.

Mitigation and Enhancement Measures

The Scheme has been designed, as far as practicable, to avoid and reduce impacts on associated ecological receptors. This includes measures that are embedded in the Scheme design such as the offset of infrastructure from watercourses, identified badger setts, ponds, hedgerow and trees. A CEMP will be prepared for the Scheme which will outline measures to ensure ecological receptors are protected during the construction phase. This will include implementing fencing and buffering around boundary features such as hedgerows, woodland edges and drainage ditches to reduce the risk of accidental damage, disturbance or injury to wildlife, as well as direct pollution or contamination events. This may also include the presence of an Ecological Clerk of Works (ECoW), the avoidance of works during sensitive seasonal events and the use of horizontal directional drilling.

Ecological improvements could include:

- Enhancement of watercourses, particularly to benefit of water voles;
- Increasing habitat diversity and opportunities for animal species through wildflower seeding and appropriate management of grassland areas in the PV Area;
- Enhancement of field margins for birds, including seeding to improve foraging resources and relaxed management to provide a more diverse habitat structure; and
- Enhancement of land within the Site.

Hydrology, Flood Risk and WFD

Introduction

PEIR Volume I Chapter 8: Hydrology, Flood Risk and WFD presents a preliminary assessment of the likely significant effects of the Scheme on hydrology, flood risk and Water Framework Directive (WFD) water body receptors³.

Baseline Conditions

The principal watercourses in the area are the River Welland (to the west of the Site) and the River Nene (to the east), and the South Holland Main Drain runs through the north of the PV Area. The River Welland and River Nene are both classified as Main Rivers and therefore fall under the jurisdiction of the Environment Agency. The water bodies included in the WFD assessment are the River Welland, South Holland Main Drain and Moulton River (which partially intersects the Site at the north of the Grid Connection Corridor).

Most of the Site is currently in agricultural use and surfaces are therefore permeable, so surface water run-off generally infiltrates into the ground or is routed to the various ditches and drains that cross the Site. The Site is characterised by wet, loamy, and clayey agricultural soils. Underneath the land are tidal flat deposits and West Walton, Ampthill Clay, and Oxford Clay geological formations. There are no groundwater abstractions within 1km of the Site.

Land parcels across the PV Area have a mixture of flood zone categories. Flood zones are defined by the EA as follows:

- Flood Zone 1: Low probability, land having a less than 0.1% annual probability of river or sea flooding
- Flood Zone 2: Medium probability, land having between a 1% and 0.1% annual probability of river flooding
- Flood Zone 3: High probability, land having a 1% or greater annual probability of river flooding.

The land parcels in the PV Area are predominantly in Flood Zone 3, with smaller sections in Flood Zone 1 and 2 (Plate 5). The Inter-Array Areas are predominantly in Flood Zone 3, with localised areas in Flood Zone 2 and 1 (Plate 5). The Grid Connection Corridor generally lies in Flood Zones 1 and 3, with limited and localised areas in Flood Zone 2 (Plate 6).

³ WFD water body receptor: Water bodies that are classified under the Water Environment Regulations 2017 (Water Framework Directive) (England and Wales).

Plate 5 Hydrological and Flood Risk Constraints (PV Area)

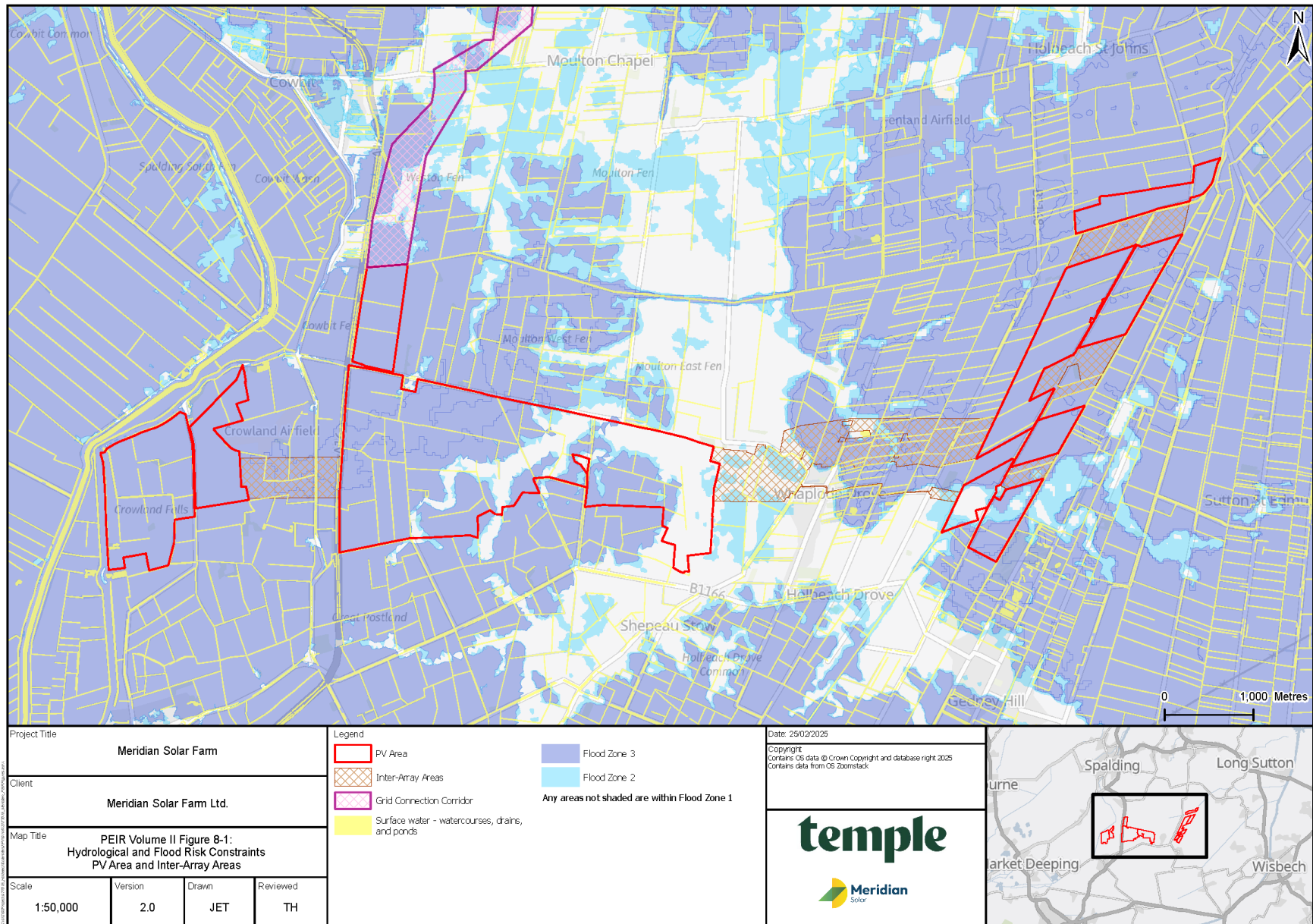
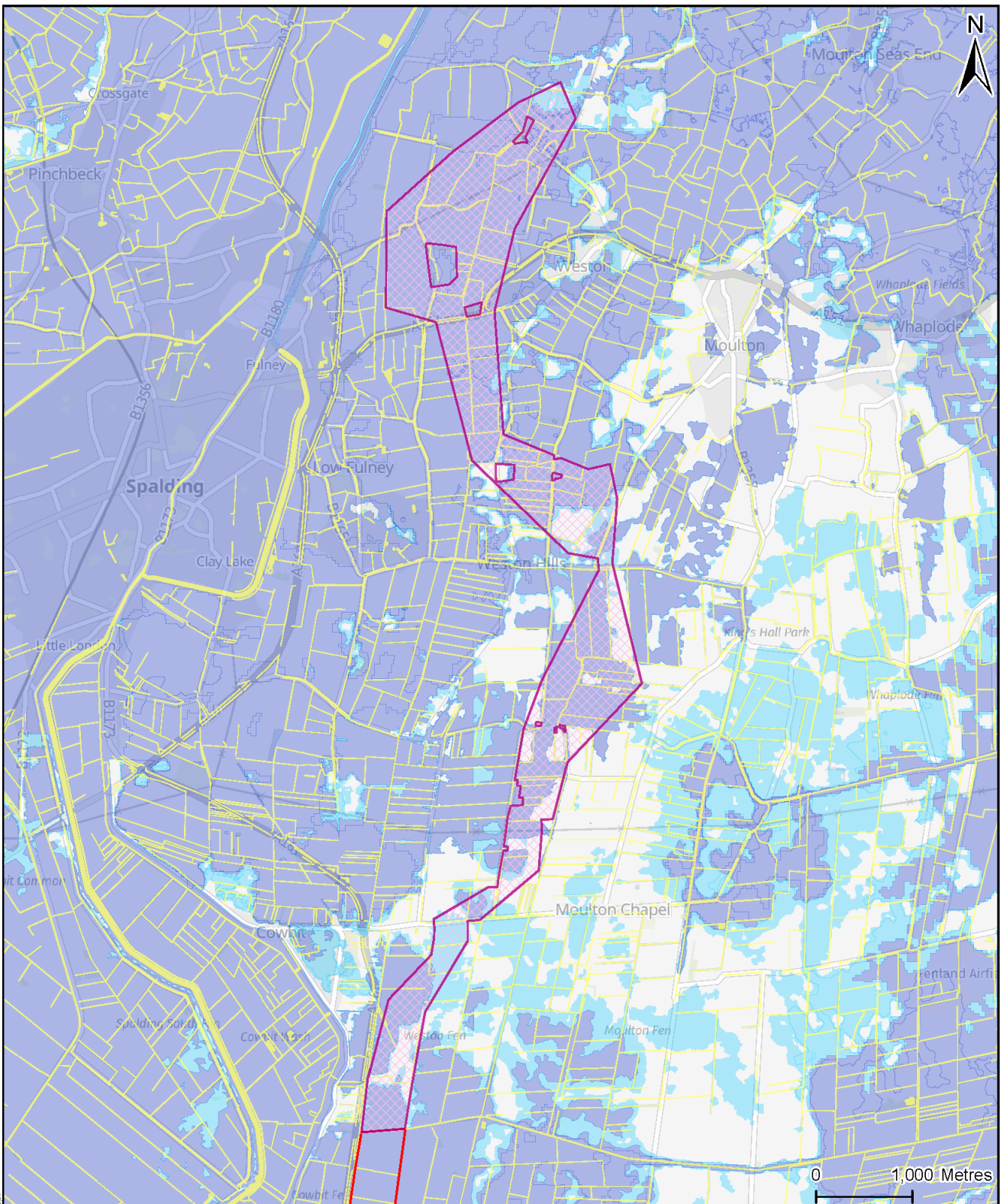


Plate 6 Hydrological and Flood Risk Constraints (Grid Connection Corridor)



Project Title Meridian Solar Farm				Legend PV Area Grid Connection Corridor Surface water - watercourses, drains, and ponds		Date: 25/02/2025 Copyright Contains OS data © Crown Copyright and database right 2025 Contains data from OS Zoomstack		
Client Meridian Solar Farm Ltd.				Flood Zone 3 Flood Zone 2 Any areas not shaded are within Flood Zone 1				
Map Title PEIR Volume II Figure 8-2: Hydrological and Flood Risk Constraints Grid Connection Corridor								
Scale	Version	Drawn	Reviewed					
1:50,000	2.0	JET	TH					

Preliminary Assessment of Likely Significant Effects

Construction Phase

The water environment factors identified as subject to Scheme impacts are:

- Surface water drainage – flow;
- Surface water drainage – water quality;
- Flood defences;
- Flood storage, flood flow and flood routing processes; and
- Surface water abstractions.

During the construction of the Scheme, effects for these factors would be negligible and not significant. Construction activities would include clearance of vegetation, topsoil stripping and stockpiling, excavation, and Site reprofiling, preparation of access tracks and construction of foundations. As a precautionary assumption, compaction of the ground caused by construction activities would be localised and temporary, and controlled by mitigation measures embedded in the CEMP.

At this screening stage, potential impacts have been identified that are associated with watercourse crossing points, including for WFD water bodies; the installation of overhead transmission lines or underground cabling near WFD water bodies; and overland flows to WFD water bodies. Access tracks and activities in the operational phase may affect surface material disturbance and fine sediment transport.

It is expected that potential impacts on WFD water bodies during the construction phase of the Scheme would be mitigated through embedded mitigation. Therefore, the construction phase would result in negligible effects on WFD water bodies that are considered not significant.

Operational Phase

Similar to the construction phase, impacts on the identified factors during the operational phase of the Scheme would also be negligible and not significant. Effects will continue to be managed and mitigated throughout the assessment through a drainage strategy plan set out in the Flood Risk Assessment (FRA) prepared alongside the EIA in support of the DCO.

During the operational phase, cable connections in the Grid Connection Corridor and Inter-Array Areas would not increase run-off and therefore would not further impact the surface water drainage regime or cause surface contamination. Therefore effects would be negligible and not considered significant.

Impacts on the WFD water bodies during the operational phase of the Scheme are considered to be low and would be mitigated by the embedded mitigation measures. Therefore the impact is considered negligible and not considered significant.

Decommissioning Phase

The decommissioning phase of the Scheme is anticipated to have similar effects on the water environment as those experienced during the construction stage and would be mitigated by measures set out in the DEMP. Therefore, the effects are deemed to be negligible and not significant.

Mitigation and Enhancement Measures

Potential effects arising from the construction of the Scheme are likely to be localised and temporary and controlled by embedded mitigation measures delivered through the CEMP. These would include a management system to control works on watercourses or drains near flood defences, appropriate storage of hydrocarbons and petrochemicals, and precautions to prevent silt-laden run-off, excavated materials (arising) or chemicals entering watercourses.

Flood effects would be mitigated by elevation and flood-resilient construction measures where practical. Subject to further investigation, as well as ongoing consultation with the Environment Agency, it is anticipated that, where practicable, flood-sensitive infrastructure within the Site would be elevated above the 0.1% annual probability flood level, as defined through modelling. A Soils Management Plan (SMP) would be implemented to prevent the release of fine sediments into watercourses.

The design of the Scheme would ensure that no infrastructure is within a minimum of 9m from surface water drains operated by Internal Drainage Boards. Appropriate management and mitigation would be implemented for the construction of watercourse crossing points (including potential temporary crossing points required for construction or decommissioning work).

Agriculture and Soils

Introduction

PEIR Volume I Chapter 9: Agriculture and Soils presents the likely significant effects of the Scheme on agricultural land quality and soils.

Agricultural Land Classification (ALC) surveys are ongoing. The PV Area was surveyed between 2023 and 2024 at a reconnaissance level and, in parts, at a semi-detailed level. Some areas have been surveyed in detail.

Baseline Conditions

The land within the PV Area is mostly level, arable farmland divided into fields with deep, straight watercourses. The cropping is principally winter-sown cereals (primarily wheat and barley), some oilseed rape, some sugar beet, field beans, energy crops and fallow or agri-environmental biodiversity land uses. The Applicant is liaising closely with the farm owners as part of the development of the Scheme proposals.

Soil mapping of all the areas shows Wallasea 2 Association with some areas of Wisbech Association (soil associations are groups of soil types that occur typically together in the landscape). These are typically deep stoneless calcareous silty soils.

Preliminary survey results have identified that the site is a complex mixture of different grades of soils and has found three main soil types:

- Fine silty soils;
- Coarse silty soils; and
- Clay soils.

National-scale provisional ALC mapping has been supplemented by on-site surveys. This has demonstrated that the PV Area contains a mix of Grades 1, 2, 3a (classed as Best and Most Versatile (BMV)) and 3b Agricultural Land. Some land parcels have a higher concentration of BMV soils than others, although the preliminary findings show a mosaic of grades. Higher-grade land is often associated with the historic former creek features called roddons (see Cultural Heritage section above). Additional surveys will be undertaken to further characterise the ALC. No surveys have been undertaken to date for the Inter-Array Areas or the Grid Connection Corridor. The published Provisional national-scale ALC mapping indicates the presence of Grade 2 soils in the Inter-Array Areas with some sections classified as Grade 1. Provisional ALC mapping indicates that the Grid Connection Corridor consists mainly of Grade 1 land, with smaller subsections designated as Grade 2.

Preliminary Assessment of Likely Significant Effects

Construction Phase

During the construction phase, land within the Site would be temporarily required for construction compounds and laydown areas. Through adherence to measures outlined within the CEMP and SMP in relation to good practice soil handling, reinstatement and reuse, permanent impacts are not anticipated. Effects in relation to soils are there considered not significant.

For agricultural land quality, the magnitude of impact of is assessed as minor due to the fact this would be temporary and there would be no permanent sealing of the land. This would however give rise to a **significant** short-term temporary effect on Grade 1 and 2 BMV land identified within the Site (given its very high sensitivity). The effect on all other agricultural land is considered not significant.

Operational Phase

Land within the PV Area would be managed by a OEMP during the operational phase with any required maintenance works expected to apply environmental management measures. Similarly there is the potential for localised impacts on soils if there is a need to access any of the Site for routine inspections. Works could be timed to avoid periods when soils most wet as well as the utilisation of temporary trackways to dissipate loads and reduce the potential for compaction. The effects are therefore assessed as neutral or slight and not significant.

There would be the potential for benefits to soil health and soil quality during the operational phase as a result of the change from arable farming practices within the PV Area to long-term temporary grassland (reduction in regular cultivation, grassland protecting soils from erosion). The benefits overall are likely to be minor and therefore not significant.

The physical presence of the Scheme during the operational phase would result in a minor impact as the loss of agricultural land for farming would be temporary as infrastructure would be dissembled and removed during the decommissioning phase. This would however give rise to a long-term temporary **significant** effect on Grade 1 and 2 BMV land identified within the Site given its very high sensitivity. The effect on all other agricultural land is considered not significant.

Decommissioning Phase

The impact of the decommissioning phase on soils would be similar, or less than that of the construction phase. The magnitude of impacts has been assessed as low, resulting in a short-term temporary slight adverse impact for all identified soil types. These effects are considered not significant.

Decommissioning would return BMV agricultural land and non-BMV agricultural land in the PV Area to pre-construction condition. Given the size of the area and the sensitivity of the agricultural land, decommissioning would result in the reversal of significant adverse effects introduced during the operational phase, so the effect is beneficial and significant, resulting in a long-term effect which is neutral.

Mitigation and Enhancement Measures

The Scheme has been designed as far as practicable to ensure that solar PV modules are sited outside of the areas of highest quality BMV. Where practical, the quality of agricultural land will continue to be considered when siting infrastructure in the PV Area. Other embedded mitigation measures include:

- An outline Soil Management Plan (SMP) to be produced to outline the key soil management measures during construction, operation and decommissioning of the Scheme;
- An outline LEMP to be produced for the Site to establish the overarching management and monitoring measures in relation to landscaping and ecological mitigation and enhancement;

- Sowing the land to grassland. This would be managed, including potentially by sheep grazing, for the duration of the operational phase. This is expected to have a positive benefit for the soils; and
- On decommissioning, loosening the soils across the solar PV Area with normal agricultural machinery and returning the land to the farmers for continued agricultural use.

Landscape and Visual

Introduction

PEIR Volume I Chapter 10: Landscape and Visual assesses the preliminary findings of the Scheme in relation to Landscape and Visual Amenity.

The preliminary assessment has considered potential significant effects on:

- Landscape character;
- Physical changes to the landscape fabric or individual elements of the landscape; and
- Visual effects in relation to the potential for change to existing views as experienced by people.

Baseline Conditions

Current baseline information concentrates on an initial 5km study area that includes the most likely significant effects. Reference is also made to key features and characteristics present between 5km and 10km from the site, as well as out to up to 15km away. The baseline will be reviewed in the ES to ensure it remains proportionate to the design of the Scheme.

The Site is located within National Character Area 46 The Fens, recognised by its large, low-lying, flat landscape with drainage ditches, dykes and rivers, as are present within the Site. The embankment on the eastern side the River Welland provides a rare, elevated view from a PRoW of the landscape surrounding the Site. There are other elevated points to the north of the Site, north of the A151 between Spalding and Weston.

The visual baseline currently has large, open views, where the horizon meets the sky. The minimal vegetation and lack of man-made infrastructure in the landscape provide a sense of remoteness. However, in the eastern section of the Site, notably within land parcel D of the PV Area, vegetation is more frequent, with linear planting along rural roads and arable fields. In some locations, there are views of wind turbines and existing pylon lattice towers, especially to the north of the Site.

There are no statutory landscape designations such as National Landscapes or National Parks within the Site. The nearest National Landscape is the Norfolk Coast, approximately 24km to the east of the Scheme, and the nearest National Park is The Broads, 86km to the south-east. The Site is not located within Green Belt. A Registered Park and Garden, Grade II Ayscoughfee Hall, is 4km to the west of the Grid Connection Corridor.

Preliminary Assessment of Likely Significant Effects

Construction Phase

Landscape

During the construction phase, effects on landscape character due to the degradation of key characteristics resulting from construction activities, notably within the Inter-Array Areas and the Grid Connection Corridor, are considered short-term temporary adverse and are therefore considered **significant**.

A long-term temporary **significant** adverse effect on landscape character is also assessed due to the physical presence of the Scheme. This effect would begin in the PV Area during the construction phase and end on decommissioning of the Scheme.

The loss of arable land and changes to key elements of landscape as a result of construction activities would result in a short-term temporary **significant** adverse effect, notably within the Inter-Array Areas and the Grid Connection Corridor, where the Site would be largely reinstated on completion of the construction phase.

A long-term temporary **significant** adverse effect would begin during the construction phase due to the loss of arable land and changes to key elements of landscape because of the physical presence of the Scheme. This is most notable in the PV Area, where most of the landscape would not return to its previous condition until the completion of the decommissioning phase.

The introduction of new trees, hedgerows, woodland and/or scrub would lead to a permanent **significant** beneficial effect during the construction phase. Further details in relation to planting will be outlined within the ES as the design of the Scheme continues to develop.

Visual

The relative effects to visual receptors identified in relation to the Scheme can broadly be grouped by the distance of the receptors from the Site.

Effects as a result of the visual presence of construction activities on a series of visual receptors within 0 to 5km of the Site (ranging from high to low sensitivity) are assessed as up to short-term temporary **significant** adverse in nature.

Effects as a result of the physical presence of the Scheme on the same receptors within 0 to 5km of the Site are assessed as up to long-term temporary **significant** adverse in nature. These effects would begin during the construction phase and not end until the Scheme was decommissioned.

Of the receptors identified within 5 to 10km of the Site, only those considered to be high sensitivity are anticipated to experience short-term temporary effects considered **significant** as a result of construction activities.

Only those same receptors identified within 5 to 10km of the Site considered to be high sensitivity are likely to experience long-term temporary effects considered **significant** as a result of the physical presence of the Scheme. These effects would begin during the construction phase and would not end until the Scheme was decommissioned.

Operational Phase

No significant residual effects in relation to Landscape and Visual, beyond the long-term temporary effects starting from the construction phase due to the physical presence of the Scheme, are identified during the operational phase.

Decommissioning Phase

Landscape

Decommissioning activities, notably in the Inter-Array Areas and the Grid Connection Corridor, would lead to short-term temporary adverse effects, considered **significant**, to landscape character as a result of the degradation of key characteristics.

The loss of arable land and changes to key elements of landscape as a result of decommissioning activities, notably in the Inter-Array Areas and the Grid Connection Corridor, would result in a short-term temporary adverse effect, considered **significant**.

Visual

Effects as a result of the visual presence of decommissioning activities on a series of visual receptors within 0 to 5km of the Site (ranging from high to low sensitivity), notably in relation to the Inter-Array Areas and the Grid Connection Corridor, are assessed as up to short-term temporary **significant** adverse in nature.

Of the visual receptors identified within 5 to 10km of the Site, only those considered to be of high sensitivity are likely to experience short-term temporary effects considered **significant** as a result of decommissioning activities, notably in relation to the Inter-Array Areas and the Grid Connection Corridor.

Mitigation and Enhancement Measures

Detailed mitigation proposals are being developed. Proposed mitigation measures currently embedded in the Scheme design are:

- Consideration of component placement to minimise effects, for example, placing components away from residential receptors where practical and positioning PV modules within field boundaries to retain the existing field patterns;
- Selection of the Grid Connection Corridor to reduce effects. The selected Grid Connection Corridor option reduces impacts by avoiding the most sensitive landscape and visual receptors where practical;
- Retention of hedgerows, trees and shrubs. Where possible, retaining existing vegetation in the design would minimise landscape and visual impacts and assist landscape integration. Planting of hedgerows with native vegetation will be considered, where appropriate, to provide visual screening of the PV Area, e.g. at fence boundaries; and
- creation of BNG. Although the primary benefit is for biodiversity, BNG activities also provide landscape benefits. This will feed into the mitigation process.

Additional mitigation and enhancement measures will continue to be developed as the Scheme design evolves. These will be presented in the ES.

Noise and Vibration

Introduction

PEIR Volume I Chapter 11: Noise and Vibration presents the preliminary assessment of likely significant effects from the Scheme in relation to noise and vibration.

Baseline Conditions

At this stage, baseline environmental noise measurements have been undertaken in the PV Area and Inter-Array Areas and in the areas surrounding them. The measurement locations are representative of noise-sensitive receptors surrounding the Site which could be impacted by noise during the construction, operation or decommissioning phases of the Scheme. Baseline noise surveys for the Grid Connection Corridor will be carried out after the PEIR is issued.

The dominant source of sound in the area, which is likely to control baseline noise levels at the identified receptors, is traffic on the surrounding local and wider road network.

Future baseline environmental noise may be higher than that represented by the current ambient sound levels measured during the noise survey. Without the Scheme, road traffic noise levels in the area may increase marginally over time, primarily due to road traffic growth or specific committed developments. Other factors, such as changes in car and road surface technology, may offset that increase to an extent. It is expected that these changes will have a negligible effect on the assessment.

Preliminary Assessment of Likely Significant Effects

The assessment has been undertaken with reference to relevant technical guidance outlined in the PEIR. The assessment of the effects of construction on noise and vibration includes on-site construction activities and offsite construction traffic along access routes.

Construction Phase

In relation to the noise effects associated with construction traffic, the preliminary assessment predicts short-term temporary minor to negligible effects, considered not significant, on all road links except Queen's Bank Road, where short-term temporary moderate adverse effects are identified, considered **significant**.

The assessment of noise and vibration generated by construction activity within the Site concludes that most receptors, including all those identified in relation to the Inter-Array Areas and the Grid Connection Corridor, may experience short-term temporary negligible to minor adverse effects, considered not significant. However, the assessment has determined that a series of residential properties adjacent to the PV Area may experience short-term temporary moderate adverse effects, considered **significant**.

It should be noted that the assessment has been conducted in accordance with worst-case assumptions in the absence of specific information regarding construction activities and plant equipment. It is anticipated that the detailed design, location and selection of infrastructure within the PV Area, as set out in the design submitted as part of the DCO application, would ensure the infrastructure meets relevant noise limits. The assessment and requirement for additional mitigation will be reviewed in the ES.

Operational Phase

As part of the operational phase assessment, the noise associated with these key noise-emitting components in the PV Area has been assessed:

- The On-site Substations (specifically the transformers that service them);
- The BESS (specifically the inverters that service them); and
- The Solar Stations.

The noise predictions for the operational phase have been based on all plant operating at full load at all times and are therefore likely to be overestimates. The assessment has been based on the night-time period, as this is in line with the assessment criteria. This is considered to represent a worst-case assessment. The preliminary assessment results indicate that noise levels from the PV Area infrastructure would likely result in long-term temporary moderate to major adverse effects, considered **significant**.

It should be noted that the assessment has been completed in the absence of additional mitigations such as noise barriers, which have been shown to be effective at greatly reducing such noise at source. These will be considered in further detail at the ES stage.

A preliminary (Tier 1) screening assessment has been undertaken to assess the likely significant effects of the Grid Connection during the operational phase of the Scheme. The preliminary information provided by the assessment indicates that there is potential for reversible, long-term, moderate effects due to airborne noise emissions from the proposed new overhead line. In the absence of a detailed (Tier 2) assessment of the operational noise resulting from the Grid Connection, long-term temporary **significant** effects are predicted during the operational phase of the Scheme. It should however be noted that the preliminary assessment was completed from the boundaries of the Grid Connection Corridor in the absence of a 'route'. The operational noise assessment will be reviewed and updated within the ES as appropriate.

Decommissioning Phase

Effects associated with the decommissioning are expected to be of a similar level or less than those experienced during the construction phase, and will have a shorter duration.

Mitigation and Enhancement Measures

Embedded mitigation during construction and decommissioning would include the use of measures to be identified in the CEMP, such as avoiding unnecessary revving of engines, shutting off equipment when not in use and appropriate routing of construction traffic on public roads. A construction noise monitoring programme will be developed as part of the consent for noise generating activities with the local authorities (Section 61 consent) and agreed with appropriate stakeholders before construction work begins. The effects of noise and vibration on nearby sensitive receptors can also be reduced through a good communication strategy before starting construction activities and the management of traffic routing, timing and access points to the Site.

The specific embedded and additional mitigation measures will be covered in detail in the ES.

Socio-Economics and Land Use

Introduction

PEIR Volume I Chapter 12: Socio-Economics, Human Health and Land Use presents a preliminary assessment of the likely significant effects of the Scheme in relation to socio-economics and land use.

The preliminary assessment considers the potential effects resulting from the Scheme on likely changes to:

- The local economy, employment markets and tourism; and
- Severance of community land and assets, development land, business premises, residential properties and farm holdings.

Baseline Conditions

The most recent Office for National Statistics (ONS) Census from 2021 assessed the population of the South Holland district at 95,122. This represents about 12.38% of the population of Lincolnshire, 1.95% of the population of the East Midlands and 0.17% of the population of England.

According to the latest Annual Population Survey⁴ (APS) data, the proportion of the population in South Holland between 16 and 64 years old who are economically active is 76.4%. This is similar to that of Lincolnshire (75.2%) but less than the national average of 78.7%.

In terms of occupation types, which are outlined in the most recent Business Register and Employment Survey (BRES), the occupation type with the highest occupation rate in the study area is Manufacturing (17.1%). In South Holland, 5% of occupation split is accounted for by the agriculture, forestry and fishing industry.

The most recent estimate available for overall Gross Value Added (GVA) in South Holland is £2,467.9 million for 2022. Based on the population figures, GVA per head would be £25,948, in comparison with £23,379 per head in Lincolnshire, £26,099 per head in the East Midlands and £33,227 per head in England as a whole.

The largest concentration of residential properties adjacent to the Inter-Array Areas is in and around the village of Whaplode Drove and the northern area of Shepeau Stow. Although there are no residential properties within the PV Area, they can be found sparsely distributed in the areas bordering each land parcel and along several key roads.

The highest concentrations of residential properties, in relation to the Grid Connection Corridor, are in Weston, Weston Hills along the B1165 (Austendyke Road) and east of Cowbit on Moulton Chapel Road.

The highest concentrations of community land and assets are found in Whaplode Drove and to the north of Holbeach Drove and Gedney Hill, which are located between and below land parcels C and D. Further receptors are located in Cowbit, Moulton Chapel, Weston Hills, Weston and Spalding, all within 2km of the Grid Connection Corridor.

⁴ ONS (2024) Annual Population Survey Jul 2023 – Jun 2024. Available via NOMIS: https://www.nomisweb.co.uk/home/release_group.asp?g=16.

Business premises are mostly located in the same the villages and hamlets where higher concentrations of residential properties are identified. Several businesses are located in and around Baytree Garden Centre on the outskirts of Weston.

As of March 2024, the Grimsby to Walpole overhead line Nationally Significant Infrastructure Project (NSIP) is the only other development within the Site. Another NSIP, the Outer Dowsing Offshore Wind (Generating Station), would be located about 640m from the Scheme, based on the boundaries provided by the project promoter.

Two planning applications have been identified adjacent to the Scheme and another four within 500m of the Scheme.

A substantial proportion of land use within the Site consists of arable agriculture. Though there are no farm buildings or working farm infrastructure in the PV Area, the present use of the land parcels is almost exclusively for arable cropping.

The future Socio-Economics and Land Use baseline is expected to remain largely similar to the current baseline conditions.

Preliminary Assessment of Likely Significant Effects

Construction Phase

The sensitivity of the local workforce to employment changes is assessed as low, as economic activity rates in South Holland are higher than those in Lincolnshire overall. The employment gains caused by construction of the Scheme would result in a short-term temporary minor beneficial effect that is not significant.

The sensitivity of the local economy and labour market is assessed as low, as average weekly earnings are higher in South Holland than in either Lincolnshire or the East Midlands generally. By comparing the GVA generated by the Scheme to the GVA for South Holland, the overall impact of the Scheme can be assessed as having a minor beneficial and non-significant effect.

The following land-use impacts were identified as having minor adverse effects and therefore assessed as not significant:

- residential properties;
- community land and assets; and
- business premises.

Effects on development land during the construction phase were assessed as negligible and therefore not significant.

The Scheme would involve temporary land take of farm holdings. The land owners of farm holdings within the Site would receive compensation for any loss of crop and short-term temporary use of land during the construction phase. As a result of these measures, the change of land use during the construction phase is not considered to result in changes that might compromise the overall viability of the farm holding and therefore effects are assessed as short-term temporary minor adverse, and not considered significant.

Operational Phase

The effect on employment is, given the context provided by the baseline conditions section, beneficial and negligible, and therefore not significant.

The scale of impact on GVA is, in the context of GVA generated in the South Holland area, assessed as beneficial and negligible, and not significant.

The following land-use impacts were assessed as having negligible effects and therefore as not significant:

- Residential properties;
- Community land and assets;
- business premises; and
- development land.

The land use impact on farm holdings within the Grid Connection Corridor and Inter-Array Areas (if via overhead lines) would be localised to the bases of pylons. The Applicant would engage with landowners and will consider the land use implications during routing where practicable to ensure that agricultural practices can continue to function in their current condition. On this basis, a minor impact is predicted, resulting in a minor adverse effect considered not significant. For land owners within the PV Area, the hosting of the Scheme would provide a diversified source of income, leading to a minor beneficial effect considered not significant.

Decommissioning Phase

The decommissioning phase of the Scheme would involve activities similar to those in the construction phase. Therefore, the potential effects during decommissioning are expected to be comparable to those identified for the construction phase.

Impacts on residential properties, community land and assets, business premises, development land and farm holdings during the decommissioning phase are anticipated to be similar, if not less than those assessed during the construction phase and are therefore predicted as not significant. In regard to temporary works, the land owners of farm holdings within the Site would receive compensation for any loss of crop and the use of land during construction. With this considered, the temporary land use impacts on farm holdings are therefore assessed as negligible and therefore not significant.

Mitigation and Enhancement Measures

Primary mitigation measures to reduce or avoid construction and operational effects are embedded in the Scheme for each technical discipline. These will mitigate effects on existing facilities and on the health of the local community.

A Community Liaison Officer would be appointed as a designated point of contact for any public concerns, and regular community updates would be provided through multiple channels (including the project website, local newsletters and parish councils) to ensure residents are kept informed of any temporary changes to access arrangements.

No further mitigation or enhancement measures have been considered at this stage with respect to the Socio-Economics and Land Use effects resulting from the Scheme.

Traffic and Access

Introduction

PEIR Volume I Chapter 13: Traffic and Access presents a preliminary assessment of the likely significant effects of the Scheme in relation to transport and access, based on information obtained and Scheme design to date. This includes the assessment of effects relating to:

- Construction traffic generation;
- Severance;
- Non-motorised user (NMU) amenity and delay;
- Fear and intimidation;
- Road vehicle driver and passenger delay; and
- Road use and pedestrian safety.

Baseline Conditions

Local Highway Network

Major and minor access roads near to or running alongside the PV Area and the Inter-Array Areas are:

- Single carriageway: A16, B1040, Spalding Road, Barrier Bank, James Road, Postland Road, Stonegate, Backgate, Moulton Chapel Road and Roman Road; and
- Minor roads: Wash Bank, Clout Drove, Queen's Bank, Martins Road, Green Drove, Sheppard's Drove and Cox's Drove, and Langary Gate Road.

Two roads (both single carriageway) run in an east-west direction from intersections at the roundabout on the A16 to the west of the Grid Connection Corridor:

- A151 (Holbeach Road)
- B1165.

Existing Walking Facilities

PRoW near to the PV Area and the Inter-Array Areas are:

- PRoW Crow7/1 and Crow17/2, which run along the west and north sections of land parcel A;
- PRoW Crow11/1, which runs along the north section of land parcel C;
- PRoW Crow12/1, which runs adjacent the east section of land parcel C and inside the Inter-Array Area between land parcels C and D;
- PRoW Holb14/1, Holb15/1, Flee6/1, Flee7/1, Flee8/1, Flee2/1, which run adjacent to the north section of land parcel D and inside the Inter-Array Area to the north of land parcel D.

There is one PRoW near to the Grid Connection Corridor:

- PRoW Wstn3/1, which runs inside the north section of the Grid Connection Corridor.

Existing Cycling Facilities

There are no formal on- or off-road cycling facilities within the immediate vicinity of the Scheme where construction routes are proposed. However, the roads surrounding the Scheme are generally lightly trafficked and would not deter cyclists.

Existing Equestrian Facilities

The roads surrounding the Scheme are generally lightly trafficked and would not necessarily deter equestrians. There are also PRow designated as bridleways that pass through or near the Scheme:

- PRow DeeN/5/1, which runs along the north section of land parcel A
- PRow Crow17/2, which runs along the west and north section of land parcel A
- PRow Crow11/1, which runs along the north section of land parcel C
- PRow Moul/7/1, Whap/6/2, Whap/7/3, Holb/14/1, Holb/14/3, Holb/15/3, Flee/8/1 and Flee/8/2, which run adjacent to the north section of land parcel D and inside the Inter-Array Area to the north of land parcel D.

Public Transport Services

At present, there are no public transport services or bus stops located on the A16. The served bus stops nearest the Scheme are on Barrier Bank, Moulton Chapel Road and Farrow Road.

Spalding Station, managed by East Midlands Rail, is about 3.6km west of the Site. Services run between Peterborough and Doncaster. Passenger services calling at the station during a weekday are three services in morning peak hours, three services in the afternoon peak and an hourly service in the inter-peak hours.

Road Safety

A review of the safety record on the local highway network (2018 to 2022) revealed a relatively high number of collisions (shown in brackets) recorded on some junctions and links:

- the A16 junction with James Road and Hull's Drove (7)
- the A16 between the B1040 and the B1443 (16)
- Hull's Drove (16)
- the A151 (14)
- the B1165 (13).

Link Sensitivity

The roads identified have low to very low link sensitivity, except for the links between:

- Moulton Chapel Road, Roman Road and minor roads (medium sensitivity)
- Stonegate and Backgate (high sensitivity)
- B1166 (Drove Road), Dowdale Bank and minor roads (medium sensitivity).

The peak year for construction traffic movements is assumed to be 2029, which has been used as the future baseline assessment year. This provides a worst case in terms of daily construction vehicle trips across the whole construction phase.

Preliminary Assessment of Likely Significant Effects

Construction Phase

The preliminary assessment of effects has identified how many construction vehicle trips will be generated and how they will be distributed. Indicative access points to the Site and key routes have been defined.

During the construction phase, the impact would be temporary and managed through embedded mitigation measures, including an outline CTMP. The impact assessment is based on a peak figure for traffic required for construction activity. Impacts have been assessed with regard to construction traffic generation, severance of communities, NMU amenity, fear and intimidation, road vehicle driver and passenger delay, and road user and pedestrian safety. The assessment concludes that, with the implementation of embedded mitigation measures, impacts would be not significant except at the following links, which are predicted to experience short-term temporary adverse effects, considered **significant**:

- Link 5: Moulton Chapel Road, Roman Road and Jekil's Bank (construction traffic increase)
- Link 6: Stonegate and Backgate (construction traffic increase, NMU Amenity reduction, severance and driver delay)
- Link 15: B1166 (Drove Road) and Dowdale Bank (construction traffic increase).

Additional mitigation, where required, will be identified in the outline CTMP. Further details will be outlined in the ES as the Scheme continues to be developed.

Operational Phase

Given the limited amount of traffic required for operational and maintenance purposes, no significant effects are anticipated during the operational phase.

Decommissioning Phase

It is difficult to predict traffic conditions on the local roads 40 years into the future. However, based on worst-case assumptions, the predicted effects would be similar or less than those predicted during the construction phase. Additional mitigation will be identified in the DTMP (where required). Further details will be outlined in the ES as the Scheme continues to be developed.

Mitigation and Enhancement Measures

The Scheme has been designed, as far as practicable, to avoid and reduce impacts and effects on transport and access through the process of developing the Scheme's design and embedding the measures identified.

The delivery of these embedded mitigation measures will be ensured through the detailed CEMP, OEMP and DEMP.

For the construction and decommissioning phases, the relevant management plan (CTMP or DTMP) will be in operation to ensure safe management of traffic. This will set out:

- suitable access points to the Site, with route upgrades where necessary;
- control of heavy goods vehicles (HGV) and abnormal indivisible loads on site through time restrictions, a delivery management plan and appropriate routing;
- access points that require a 'bellmouth' design for the junction; and

- measures to encourage local construction workers to car share to reduce single-occupancy car trips and the implementation of a shuttle bus service to reduce vehicle trips.

Additional mitigation measures, where required, will be identified in the CTMP.

Other Environmental Topics

Air Quality

This section presents a preliminary assessment of the likely effects on Air Quality as a result of the Scheme. The preliminary assessment is based on information obtained to date and the status of the design.

There is currently no statutory guidance on the methodology for air quality impact assessments. The methodology used drew on a scoping exercise and published guidance from non-statutory bodies. This was then further refined with consideration of the Scoping Opinion.

Based on the nature of the works, assessment for the operational phase has been removed from the scope and will not be considered. The assessment, therefore, focuses on the construction and decommissioning phases.

The potential impact of the Scheme on local air quality has been determined for the sensitive receptors identified near the site. These are human and ecological receptors.

The most recently available data from monitoring networks in South Holland indicate that the study area is likely to be below the annual mean Air Quality Objectives (AQO) for nitrogen dioxide (NO₂) and particulate matter (particles with diameters of less than 10µm (PM₁₀) and less than 2.5µm (PM_{2.5})).

With the embedded mitigation in place, including good construction environmental management and adherence to the CEMP, the effects from work undertaken during the construction phase, which would include earthworks, construction and trackout (the potential transport of dust and dirt from the Site onto the public road network), are considered not significant.

Vehicle emissions associated with construction-related activities are considered to have direct, local and short-term temporary adverse effects on local air quality at human receptor locations. However, detailed dispersion modelling identified the magnitude of the impacts as slight to negligible, meaning that air-quality effects as a result of vehicle emissions are considered to be not significant.

The effects generated through the decommissioning phase are anticipated to be similar to, or less than, those as a result of the construction phase.

The proposed BESS has the potential to give rise to air quality effects in the extreme event of a fire. Data on hazards such as heat, smoke and the release of toxic gases has been collated from studies at schemes of a similar scale and nature. Based on an examination of air quality impact assessments of BESS fire incidents at schemes of a similar scale and nature, and given the distance between the source and nearest human and ecological receptors, no likely significant effects associated with a BESS fire at the Scheme are expected. As any fire is expected to be short-term and potential impacts are expected to be mitigated by the Battery Storage Safety Management Plan (BSMP) and the Emergency Response Plan (ERP), which is set out in the OEMP. in

For the ES, further assessment will be completed with further project-specific data from the design team as it becomes available. However, the significance of residual effects is not predicted to change from those presented in this assessment.

Human Health

This section presents a preliminary assessment of the potential impacts of the Scheme on Human Health during the construction, operational and decommissioning phases. Human Health has been assessed by looking at potential effects on health outcomes and other identified determinants of health for local communities.

The methodology for this assessment was established through a scoping exercise that considered relevant guidance and toolkits. These findings were communicated through a Scoping Report. This was then further informed by responding to the Scoping Opinion and additional consultation with the Public Health teams at South Holland District Council.

An assessment was undertaken for the following aspects:

- Social infrastructure;
- Noise and vibration;
- Air quality, dust and odour;
- Mental health;
- Access to PRow and active travel;
- Landscape and visual amenity;
- Traffic and access; and
- Employment and training.

For each Human Health aspect, effects have been considered in relation to the general population and vulnerable groups within 500m of the Site.

The vulnerable groups identified within the human health study area were:

- Elderly residents (higher than the national average);
- People with limiting long-term illnesses or disabilities (above regional and national averages);
- Children and young people (notably in relation to obesity rates above national averages);
- Residents in areas of high deprivation (notably in central Spalding, Holbeach Park and Sutton St. Edmund);
- Smokers (significantly higher than regional and national averages);
- Rural residents with limited public transport access; and
- Those reporting bad or very bad health.

During the construction, operational and decommissioning phases, for all aspects the effects are anticipated to be not significant for the general population.

Short-term temporary adverse effects are predicted during the construction and decommissioning phases for vulnerable groups in terms of access to services, community severance, and noise and vibration. The short-term temporary effects in relation to Human Health are considered minor adverse and therefore not significant. Mitigation measures continue to be developed, including in relation to Traffic and Access, and Noise and Vibration. The assessment will be reviewed in the ES as the design of the Scheme is further developed.

Glint and Glare

This section summarises the findings of the preliminary assessment of the likely effects on Glint and Glare as a result of the Scheme. Glint is defined as a bright light which flashes momentarily while Glare is a bright light that is continuous. The aspects considered in the Glint and Glare assessment process are:

- Road users within 1km;
- Occupants of residential properties within 1km;
- Community uses, e.g. equestrian facilities, such as stables and riding schools, and PRoW for all users (e.g. cyclists, equestrians and walkers) within 1km; and
- Aviation activity at airfields within 10km.

The most reflective components of the Scheme would be the glass surfaces of solar PV modules. Other infrastructure within the Site is not expected to be a source of Glint and Glare due to the lack of reflective materials present.

It is assumed that not all solar PV modules would be present simultaneously during the construction and decommissioning phases. It is therefore expected that the operational phase would represent a worst-case scenario in regard to the length and intensity of Glint and Glare resulting from the Scheme. As a result, and as confirmed by the Planning Inspectorate in the Scoping Opinion, the construction and decommissioning phases are not considered further.

In accordance with good practice guidance, technical modelling is not recommended for local roads where traffic densities are likely to be relatively low. The A16, B1166 and B1168 were therefore identified as within the screening distance of the PV Area and were considered for technical modelling.

Crowland Airfield (adjacent to land parcel A) and Fenland Airfield (north-west of land parcel D) were identified for technical modelling.

Embedded mitigation includes vegetation screening in key locations to reduce Glint and Glare for ground-based receptors. This will be further developed for inclusion in the ES.

As mitigation in relation to Glint and Glare continues to be developed, the assessment has been completed against a worst-case scenario where no screening is implemented. As a result, **significant** long-term temporary adverse effects are assessed for 40 out of 241 residential dwellings and a flight path in relation to Crowland Airfield. It is however anticipated that this effect can be reduced through the adoption of screening (details of which will be outlined within the ES).

No significant effects are predicted on identified road and aviation infrastructure, community and equestrian facilities or PRoW.

There will be further engagement with key stakeholders to ensure that Glint and Glare effects can be accommodated. The Glint and Glare assessment will be reviewed in the ES when the proposed mitigation measures have been further developed.

Waste

This section presents the waste streams likely to arise from the Scheme during the construction, operational and decommissioning phases, proposals for their management and the preliminary assessment of the likely significant effects of the Scheme.

The assessment of waste generation as a result of the Scheme considers impacts at both site and regional scale. The site-level assessment has considered waste generation resulting from the Scheme. The regional-scale assessment has considered the Scheme's impact on landfill capacity in the region, for inert and non-hazardous waste, and nationally, for hazardous waste.

A review of baseline conditions, and the expected provision of landfill capacity by local authorities, suggested that there will be sufficient landfill capacity to meet predicted waste management requirements in the region. There are no allocated or safeguarded mineral and waste sites, waste site applications or permitted wastes sites within the Site.

The waste hierarchy (Prevention, Preparing for re-use, Recycling, Other recovery and Disposal) would be applied throughout the construction, operational and decommissioning phases of the Scheme.

For the construction phase, an SWMP and a CEMP would detail the approach to construction materials and waste, such as concrete, steel and aggregates amongst others. During the operational phase, an OEMP covering waste management would be implemented to cover any wastes arising, for example any batteries or solar PV panels that might need replacement. For decommissioning of the Site, the DEMP would detail how to avoid and minimise waste and divert waste from landfill.

It is predicted that wastes arising during the construction, operational and decommissioning phases within the Site be considered not significant regarding adversely affecting regional inert and non-hazardous, and national hazardous, landfill capacity.

Major Accidents and Disasters

This section summarises the findings of the preliminary assessment in relation to Major Accidents and Disasters. Major Accidents are defined as uncontrollable events that threaten serious environmental effects beyond reasonable controls, and Disasters as natural or man-made hazards with the potential to cause an event that threatens serious environmental effects. The preliminary assessment has considered the potential for significant effects to occur in terms of the Scheme's vulnerability to risk of major accidents and/or disasters, the Scheme interacting with any sources of external hazards, and the Scheme's potential to exacerbate the risk that a major accident and/or disaster poses to nearby environmental receptors.

The baseline was developed by considering factors including potential major accidents or disasters that are considered likely to occur and environmental receptors that the Scheme may exacerbate risk to. Those events with a low likelihood of giving rise to significant effects and those that could readily be mitigated through management strategies embedded in the Scheme were removed from the scope and not assessed further.

A shortlist of potential Major Accidents and Disasters was then taken forward for further analysis. A high, moderate or low assessment score was assigned at this preliminary stage to indicate the likelihood of significant effects occurring in each of the following categories:

- Flooding;
- Road accidents;
- Aircraft disasters;
- Fire and explosions;
- Utilities failure and nearby manufacturing industries; and
- Unexploded ordnance.

The assessment uses findings from several other assessments presented in the PEIR. A preliminary assessment of cumulative effects has also been undertaken.

Key items of embedded mitigation considered included the preparation of a Safety Assessment as part of the DCO application and the development of a BSMP. The BESS would include automatic fire detection and suppression systems, and heating, ventilation and air-conditioning units, where appropriate. The Scheme has been designed to avoid flight paths into and out of Fenland Airfield, and after consultation with Crowland Airfield, solar PV modules were removed to provide a safe run-off area for aircraft, if required. An aviation obstruction assessment will also be undertaken and presented within the ES.

The preliminary assessment has concluded that the risk of a reasonable worst-case consequence of such events would be managed to an acceptable level, that is, such that an event would no longer be considered a Major Accident or Disaster leading to significant effects. This is due to the implementation of design assurances and safety controls. As a result, significant effects are not expected.

Major accidents in relation to aviation receptors will be reviewed in the ES when an aviation obstruction assessment has been completed, and glint and glare mitigation measures have been further developed (to be outlined within the ES).

Cumulative Effects

Introduction

PEIR Volume I Chapter 15: Cumulative Effects presents a preliminary assessment of the likely significant cumulative effects resulting from the Scheme. Two types of cumulative effects have been assessed and reported as part of the EIA: intra-project and inter-project cumulative effects. An assessment of the potential inter-project cumulative effects is provided in each of the topic chapters of the PEIR.

Intra-project cumulative effects relate to the potential for multiple effects resulting from the Scheme impacting a selected receptor (e.g. potential cumulative visual, noise, and glint and glare effects on a PRoW). Inter-project cumulative effects relate to the potential combined effects of the Scheme and other relevant committed developments on a selected receptor (e.g. the potential cumulative effect on landscape from the Scheme and the nearby National Grid Grimsby to Walpole overhead line). Published guidance recommends a four-stage approach to assessing Inter-Project effects that includes both long- and shortlisting of potential other committed developments using criteria based on their scale, location and stage of development.

A judgment is formed and justified as to whether cumulative effects are predicted to be experienced by identified receptors. This is informed by the value and sensitivity of associated receptors; the duration, extent, type and frequency of effects; as well as any proposed mitigation. The sensitivity of associated receptors and the magnitude of impact are taken from the topic chapters and assessments presented in the PEIR. Published guidance has been used to help evaluate the likely significance of effects, including consideration of the capacity of environmental resources and receptors to accommodate change.

An information-gathering exercise was undertaken for those developments identified on the shortlist. Where available, information has been gathered in relation to the design, location, expected timescales for construction and operation, and likely environmental effects of the shortlisted other developments. Information has been gathered from the following sources:

- Nationally Significant Infrastructure Project (NSIP) details listed on the Planning Inspectorate's projects page⁵.
- information in relation to major planning applications available through the relevant planning portals of relevant nearby local planning authority websites.

The relevant data is collated and presented in the PEIR and its accompanying appendices.

Preliminary Assessment of Likely Significant Effects

Intra-Project Cumulative Effects

Based on a precautionary assessment at this preliminary stage, Table 2 summarises the potential for significant intra-project cumulative effects on groups of receptors. This assessment will be refined at the Environmental Statement (ES) stage.

⁵ Planning Inspectorate (2024) *Projects*. Available at: <https://infrastructure.planninginspectorate.gov.uk/projects/>.

Table 2 – Summary of Potentially Significant Intra-Project Cumulative Effects

Receptor	Potential Intra-Project Impact	Duration	Potential Intra-Project Effect
Construction and Decommissioning Phases			
Agricultural land and farm holdings	Agriculture and Soils: Significant Socio-Economics and Land Use: Not Significant	Short-term temporary	Significant
Public Rights of Way and National Cycle Routes	Landscape and Visual: Significant Traffic and Access: Not Significant	Short-term temporary	Significant
Local road network	Landscape and Visual: Significant Noise and Vibration: Not Significant Traffic and Access: Significant	Short-term temporary	Significant
Residential properties	Landscape and Visual: Significant Noise and Vibration: Significant	Short-term temporary	Significant
Community land and assets	Landscape and Visual: Significant Noise and Vibration: Significant	Short-term temporary	Significant
Operational Phase			
Designated historic buildings and features	Cultural Heritage: Significant Landscape and Visual: Significant	Long-term temporary	Significant
Agricultural land and farm holdings	Agriculture and Soils: Significant Socio-Economics and Land Use: Not Significant	Long-term temporary	Significant
Local road network	Landscape and Visual: Significant Glint and Glare: Not Significant	Long-term temporary	Significant
Residential properties	Landscape and Visual: Significant Noise and Vibration: Significant Glint and Glare: Significant	Long-term temporary	Significant
Airfields	Landscape and Visual: Significant Glint and Glare: Significant	Long-term temporary	Significant

Inter-Project Cumulative Effects

Table 3 Summarises the shortlisted developments which have potential to have significant cumulative effects with the Scheme. These could occur at any or all of the construction, operational or decommissioning phases. The table identifies which of the EIA topics assessed require further investigation to establish the potential for significant cumulative effects. Further details are presented in PEIR Volume I Chapters 5–14, where the potential inter-project cumulative effects are discussed in regard to each environmental topic.

Table 3 Inter-Project Cumulative Schemes Identified, That Could Give Rise To Potentially Significant Cumulative Effects

Reference	Cumulative Development	PEIR Topic Where Potential Significant Inter-Project Cumulative Effects Identified									
		Cultural Heritage	Ecology	Hydrology, Flood Risk and WFD	Landscape and Visual	Noise and Vibration	Socio-Economics and Land-Use	Agriculture and Soils	Traffic and Access	Air Quality	Human Health
Nationally Significant Infrastructure Projects											
EN020036	National Grid Electricity Transmission Grimsby to Walpole	X	X	X	X	X	X		X	X	X
EN010130	GT R4 Limited (trading as Outer Dowsing Offshore Windfarm) Outer Dowsing Offshore Wind (Generating Station)	X	X	X	X		X		X	X	X
EN021003	National Grid Electricity Transmission Eastern Green Link 3 and Eastern Green Link 4		X	X							
EN010110	Medworth CHP Limited Medworth Energy from Waste Combined Heat and Power Facility		X								
WA010004	Anglian Water Fens Reservoir		X					X			
EN010151	Beacon Fen Energy Park Limited Beacon Fen Energy Park		X		X			X			
WA010003	Anglian Water Lincolnshire Reservoir		X					X			
EN010123	Ecotricity (Heck Fen Solar) Limited Heckington Fen Solar Park		X		X			X			
Planning Applications											
APP-SHDC-001 / H09-0501-23	G Sly Holdings Ltd. Erection of Agricultural Machinery Assembly Facility, Research and Training Facility, Ground Mounted Solar Array and Associated Infrastructure.	X		X	X	X	X		X		X

Reference	Cumulative Development	PEIR Topic Where Potential Significant Inter-Project Cumulative Effects Identified									
		Cultural Heritage	Ecology	Hydrology, Flood Risk and WFD	Landscape and Visual	Noise and Vibration	Socio-Economics and Land-Use	Agriculture and Soils	Traffic and Access	Air Quality	Human Health
APP-SHDC-025 / H20-1007-24	Integrum SPV 21004 Limited Construction and operation of a solar farm and battery energy storage system (BESS), vehicular access, internal access tracks, landscaping, boundary treatment, cabling and associated infrastructure	X	X	X	X		X	X		X	X
APP-SHDC-007 / H22-0415-22	Oldershaws of Moulton Ltd St Lamberts Farm Hallgate Weston Spalding Proposed Lined Reservoir.		X				X		X		X
APP-FDC-001 F/YR24/0457/F	Pathfinder Clean Energy UK Dev Ltd Land At Treading Field Treading Drain Tydd St Giles Cambridgeshire Installation of 49.9MW ground mounted solar photovoltaic panels with associated battery storage, substation and ancillary plant.		X		X			X			
APP-PCC-001 23/01746/FUL	Cambridge Power Ltd Land To the East and West Nutsgrove Farm Scolding Drove Thorney Peterborough PE6 0TP Installation of a solar array (up to 49.9MW) and BESS		X		X						
APP-KLWN-006 23/02080/F	Enso Green Holdings R Limited Land At East Marsh S of Gunthorpe Road W of Flowers Farm and Frenchs Road the Marsh Walpole St Andrew Norfolk Installation of a solar farm and battery storage facility with associated infrastructure.		X								
APP-KLWN-005 23/02302/FM	Walsoken Limited Land At E548414 N309503 Burrettgate Road Walsoken Norfolk The construction and installation of a BESS.		X								
South Kesteven District Council: S24/2191	Downing Renewable Developments LLP Installation of solar farm with associated battery storage.							X			

Reference	Cumulative Development	PEIR Topic Where Potential Significant Inter-Project Cumulative Effects Identified									
		Cultural Heritage	Ecology	Hydrology, Flood Risk and WFD	Landscape and Visual	Noise and Vibration	Socio-Economics and Land-Use	Agriculture and Soils	Traffic and Access	Air Quality	Human Health
APP-SKDC-009 / S24/2100	Integrum SPV 21014 Limited Home Farm Dyke Drove Bourne PE10 0AG Installation of solar farm, comprising ground mounted solar photovoltaic panels, including mounting systems, inverters and transformers.		X					X			
APP-SHDC-023	Mr H, W, M & B Halgarth c/o Studio 11 Architecture, H22-0077-25 Rural exception site of 24 affordable homes.			X			X		X		X
APP-SHDC-002 / H02-0875-22	Flo-Gro Systems Ltd King Prawn Hatchery, Grow Out and Processing Facility.								X		
APP-SHDC-011 / H09-0818-23	N & D Bacon Proposed 1,000 square metre grain store.			X					X		
H23-0471-23	VMM Properties Ltd Erection of 19 holiday lodges and associated buildings and landscaping			X							

Mitigation and Enhancement Measures

With regard to intra-project cumulative effects, no additional mitigation measures have been proposed over and above those identified in **PEIR Volume I Chapters 5–14**.

With regard to inter-project effects, where opportunities exist, The Applicant will look to coordinate activities (notably in the construction and decommissioning phases) with other developers to minimise cumulative effects.

Further work will be undertaken at the ES stage to refine the assessment of cumulative effects and to propose further mitigation measures as possible.

Next Steps

Following the statutory consultation period, the consultation feedback will be considered, and the Scheme design will be further refined. This will form the basis of the Scheme design that will be assessed within the ES and submitted to the Planning Inspectorate for the Development Consent Order (DCO) submission.

This Scheme will be subject to further environmental assessment building on the preliminary information presented in the PEIR and summarised in this document. This further assessment, together with the outputs of ongoing environmental surveys and fieldwork, will be presented in the ES. The ES is the legally required reporting output for the EIA which will also be submitted to the Planning inspectorate as part of the DCO submission. A Non-Technical Summary of the ES will also be submitted.

