Glossary

Term	Description
33kV Sub-distribution Switch Rooms	Switch rooms within the Solar PV Site that collect the generated power from the Solar PV Arrays and convert it to 33kV.
Access Tracks	The tracks either existing or proposed, within the Site, which provide access around the Scheme.
Ancillary Buildings	The office, storage and plant buildings or containers which may be located within the Solar PV Site.
Ancillary Infrastructure	Works that are ancillary to the Scheme, including enclosure and boundary treatment, security and monitoring infrastructure, landscaping and biodiversity measures including planting, drainage and irrigation works, signage, earthworks, and access including Permissive Paths.
Applicant	The Droves Solar Farm Limited.
Associated Development	Development associated with the Scheme including but not limited to the BESS, Customer Substation, National Grid Substation, Grid Connection Infrastructure and Ancillary Infrastructure, and any other works integral to the construction, operation, maintenance and decommissioning of the Scheme.
Battery Energy Storage System (BESS)	Battery Energy Storage System (BESS), is used to describe the battery storage installation to allow for the storage, importation, and exportation of energy to the National Grid. For the purposes of the Environmental Impact Assessment, it has been assumed battery technology will be adopted for the BESS.
BESS Units	Individual battery units that are grouped together to form the BESS.
Cable Circuit	An electrical conductor necessary to transmit electricity between two points within the Scheme and may include one or more auxiliary cables for the purpose of gathering monitoring data, earthing cables, cables for auxiliary supply, optical fibre and other types of communication cables, cables connecting to direct current boxes.
Cabling	The low or medium voltage cables within the Scheme, which transmit electricity between PV Panel to Conversion Units and from there to the Customer Substation and BESS. These cables consist of 33kV (kilovolt), and 400kV cables, as well as earthing cables and optical fibre cables.

THE DROVES
SOLAR FARM

The Droves Solar Farm

Non-Technical Summary (Clean)

Prepared by: LDA Design
Date: January 2026
PINS reference: EN0110013
Document reference: APP/6.5.1 (Revision 1)
APFP Regulation Reg 5(2)(a)
Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Construction Compound	An area within the Site where deliveries will be set down, managed and redistributed throughout the Construction Phase.
Conversion Units	Conversion Units incorporate the inverters, transformers and switchgear and are required to manage the electricity generated by the PV Panels. These would either be standalone equipment, or they would be housed ('integrated') together within a container.
Customer Substation	The Scheme substation comprising electrical infrastructure such as the Transformers, Switchgear and metering equipment required to facilitate the export of electricity from the Scheme to the National Grid Substation. The Customer Substation will also provide Ancillary Buildings for staff welfare and storage facilities. The Customer Substation will convert the electricity transmitted along the Cable Route Corridor up to 400kV (kilovolt) for onward transmission to the National Grid Substation via the Grid Connection Cables.
Development Consent Order (DCO)	Development consent is required pursuant to the Planning Act 2008 for Nationally Significant Infrastructure Projects. A development consent order is a statutory instrument containing powers that enable the applicant to carry out the construction, operation, maintenance and decommissioning of the Nationally Significant Infrastructure Project. Applications for DCOs are made to, and decided by, the relevant Secretary of State.
Development Consent Order (DCO) Application	The application for a Development Consent Order (DCO) to be submitted by the Applicant for the Scheme.
Fixed South Facing PV Arrays	Solar photovoltaic (PV) tables that face south and are mounted to fixed Mounting Structures in an east/west configuration.
Grid Connection Cables	The 400kV (kilovolt) cables connecting the Customer Substation to the Point of Connection.
Grid Connection Infrastructure	Underground and/or overhead lines including new pylons between the National Grid Substation and the Point of Connection.
Ground Mounted PV Modules	Solar photovoltaic (PV) modules attached to structures that are fixed to the ground which include Single Axis Tracker PV Arrays or Fixed South Facing PV Arrays.
Highway Works	Any works associated with the temporary or permanent amendments to the highway and/or highway verges to facilitate the Construction Phase, Operational Phase and Decommissioning Phase of the Scheme.
Inverter	Inverters convert the Direct Current (DC) electricity generated by the PV Panels into Alternating Current (AC), which allows the electricity generated to be exported to the national grid.

Mounting Structures	The metal frames onto which the PV panels are attached.
National Grid Substation	The 400kV (kilovolt) substation operated by National Grid Electricity Transmission.
Nationally Significant Infrastructure Project (NSIP)	A NSIP is a large-scale development (as defined in sections 14-30A of the Planning Act 2008) such as certain new harbours, power generating stations (including wind farms), highways developments and electricity transmission lines, which require a type of consent known as 'development consent' which is governed by the Planning Act 2008.
Order limits	The land shown on the Works Plans within which the Scheme can be carried out.
Point of Connection (POC)	The National Grid Substation and associated connection into the 400kV overhead lines located at The Droves Solar Farm, which the Scheme connects to, to transfer the energy generated to the national grid system.
PV panel	Solar photovoltaic panel designed to convert solar irradiance to electrical energy. The PV panel is attached to a Mounting Structure.
PV Tables	PV panels mounted onto the Mounting Structure, forming tables, which are set out in rows either in an east/west or a north/south configuration.
Relay and Control Room	A building housing monitoring equipment for the Solar PV Site.
Scheme	A Nationally Significant Infrastructure Project (NSIP) comprising a Ground Mounted solar photovoltaic generating station with a gross electrical capacity of over 50 megawatts, with Associated Development which would allow the generation, storage and export of electricity. The Scheme is known as "The Droves Solar Farm".
Single Axis Trackers	Mounting Structures in a north/south configuration, that allow the PV Table to rotate and track the movement of the sun.
Site	Area consisting of the Solar PV Site, Associated Development, Ancillary Infrastructure and Highway Works and any other element or component that forms part of the Scheme.
Solar PV Arrays	Rows or groups of PV Tables that are connected to one another to form a Solar PV Array.
Solar PV Site	A term used to describe the land that accommodates the Solar PV Arrays, Conversion Units and 33kV Sub-distribution switch rooms.

Switchgear	A combination of electrical disconnect switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment.
Temporary Construction Compounds	Temporary laydown areas used during construction, comprising areas of hardstanding, car parking, areas to store materials and equipment, waste management, security infrastructure including fencing, lighting and cameras.
Transformers	Transformers increase and decrease the voltage of the electricity. There would be 33kV Transformers and 400kV Transformers within the Scheme.

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1 Non-Technical Summary

1.1 Introduction

Background

1.1.1 This document has been prepared on behalf of The Droves Solar Farm Limited, and provides a non-technical summary of the Environmental Statement (ES) for The Droves Solar Farm (hereafter referred to as 'the Scheme').

1.1.2 As the Scheme would have a generating capacity in excess of 50 megawatts (MW), it is considered to be a Nationally Significant Infrastructure Project (NSIP) under sections 14(1)(a) and 15(2) of the Planning Act 2008 and, therefore, requires a Development Consent Order (DCO) under the Planning Act 2008.

1.1.3 The operational phase of the Scheme will be up to 60 years after which the Scheme will be decommissioned, with the exception of a new National Grid Substation and Grid Connection Infrastructure.

The Applicant

1.1.4 The Scheme is being developed by The Droves Solar Farm Limited (the Applicant). The Droves Solar Farm is a 100%-owned subsidiary of Island Green Power UK Projects Limited, which is in turn a 100%-owned subsidiary of Island Green Power's UK group holding company, Island Green Power Group Limited (IGP). is the Applicant is part of IGP, who are a leading international developer of utility scale solar projects and battery storage systems, established in 2013.

1.1.5 IGP has successfully delivered nearly 40 solar projects worldwide that have generated more than 3 GW of energy capacity. This includes 21 solar projects in the UK. These range in size from below 5 MW to Nationally Significant Infrastructure Projects (NSIPs) such as Cottam, currently the UK's largest consented solar project. Cottam will generate 600 MW of clean, renewable and secure electricity and includes 600 MW of Battery Storage that will store then release energy as needed.

1.1.6 Their mission is to deliver renewable energy solutions that create lasting value for the communities they serve, protecting the environment while fostering economic growth and energy independence.

The Site

1.1.7 The Site is situated to the north of Swaffham, to the south-east of King's Lynn, and to the south of the settlements of Castle Acre, South Acre, and West Acre, in the county of Norfolk.

1.1.8 The extent of land for which the DCO is being sought is referred to as the Order limits and covers approximately 840 hectares (ha) in total. The Order limits are located within the administrative areas of Norfolk County Council (NCC) and Breckland Council (BC), who are the host authorities.

1.1.9 Figure 1.1 Scheme Location appended to the NTS shows the location and Order limits of the Scheme.

The Purpose of the ES and NTS

1.1.10 An ES has been prepared to present the findings of the Environmental Impact Assessment (EIA) conducted for the Scheme. The ES is submitted as part of the DCO application.

1.1.11 The Scheme is considered to be EIA Development as defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations), and as such requires an EIA to be undertaken.

1.1.12 The purpose of this NTS is to summarise information provided in the ES and to communicate it in non-technical language.

1.1.13 This document has been updated at Pre-examination Additional Submission to correct Figure 2.1 Concept Masterplan. The document references have not been updated from the original submission. Please refer to the **Guide to the Application [APP/1.3.1]** for the list of current versions of documents.

2 EIA Process and Methodology

2.1 Introduction

2.1.1 **ES Chapter 2: EIA Process and Methodology [APP/6.1]** describes the approach that has been taken to assessing the impacts associated with the Scheme, including the significance criteria against which effects have been assessed.

2.1.2 EIA is a process of compiling, evaluating and presenting the likely significant environmental effects of a proposed development and identifying measures to mitigate or manage any significant negative effects.

2.1.3 The key matters for ensuring a robust EIA process relating to Nationally Significant Infrastructure Projects (NSIPs) are:

- Establish the baseline – collate and review available data and undertake baseline surveys
- Scoping – identify likely significant effects to determine the scope of the EIA

- Consultation – seek feedback from consultees and the public in relation to key environmental issues, methodology and design approaches

- Assessment and design response – finalise methodologies using topic specific guidance and best practice techniques and assess the likely significant effects of the Scheme, identify and evaluate alternatives, provide feedback to the project design team, incorporate any necessary mitigation measures and assess residual effects; and

- Preparation of the Preliminary Environmental Information Report (PEIR) and subsequent ES (following Statutory Consultation).

2.1.4 The EIA process is designed to produce an environmentally sensitive development by considering and assessing the effects of the Scheme against existing environmental baseline conditions.

2.1.5 To date of submission, the EIA team has undertaken a review of both the environmental sensitivities within and surrounding the Site boundary, and the study areas of the respective topic chapters, to identify any potential environmental effects. Where the environmental baseline has been informed by site visits and environmental surveys, these are detailed in the relevant topic section of this ES.

2.1.6 The EIA process is undertaken in accordance with the EIA Regulations, guidance produced by the Planning Inspectorate (PINS) and the Institute of Environmental Management and Assessment (IEMA, now known as the Institute of Sustainability and Environmental Professionals (ISEP))) and other environmental topic-specific guidance.

2.1.7 The ES sets out details on the methodology and approach, along with the overall conclusions of the EIA process. It also outlines the main parameters and detailed design aspects of the Scheme against which the assessment has been undertaken.

2.1.8 Development parameters have been determined and fixed for the purposes of the ES assessment through an iterative approach taking into account baseline environmental information, the evolving design and any associated technical requirements.

2.2 EIA Scoping

2.2.1 EIA Scoping is the process of identifying expected key environmental issues at an early stage, to determine which elements of the Scheme are likely to result in likely significant effects on the environment and to establish the extent of survey and assessment requirements for the EIA, including identifying which topics should be included in the EIA and the level of detail to which they should be assessed.

2.2.2 On 8 November 2024, the Applicant submitted a Scoping Opinion Request to PINS (see **ES Appendix 2.1: EIA Scoping Opinion Request [APP/6.4]**) in support of a request for a Scoping Opinion from PINS on behalf of the Secretary of State, pursuant to Regulation 10 of the EIA Regulations.

2.2.3 A Scoping Opinion (see **ES Appendix 2.2: Scoping Opinion [APP/6.4]**) was adopted by PINS on 18 December 2024. This Scoping Opinion represents the formal response from PINS regarding matters to be assessed further as part of the EIA. Within the ES, tables have been included within each technical chapter that outline how and where comments from the Scoping Opinion are addressed.

2.3 Preliminary Environmental Information Report (May 2025)

2.3.1 A Preliminary Environmental Information Report (PEIR) was prepared and published in May 2025 as part of the statutory consultation exercise undertaken by the Applicant. The purpose of the PEIR was to:

> *"enable the local community to understand the environmental effects of the proposed development so as to inform their responses regarding the proposed development".*

2.3.2 It was prepared to meet the requirements of Regulation 12(2) of the EIA Regulations. The PEIR outlined the preliminary findings of the environmental assessments undertaken by the Applicant at that time in the Scheme design development. Upon completion of the PEIR, the various assessments were at differing stages of completion due to ongoing design work and continued collection of baseline information.

2.4 Consultation to Date

2.4.1 The process of consultation is critical to the development of the Scheme design as well as informing the development of a comprehensive and balanced ES. The Scheme has a wide range of stakeholders (including landowners, statutory consultees, local communities and special interest groups) with potentially differing interests. Consultation activities have been designed to be accessible and to allow differing stakeholders the ability to engage with the Scheme in a way that is appropriate to them.

2.4.2 Where appropriate, the design of the Scheme has been updated to incorporate amendments suggested through the consultation process (see **ES Chapter 4: Reasonable Alternatives and Design Evolution [APP/6.1]**). A three-stage approach to pre-application consultation was undertaken by the Applicant, in accordance with the Planning Act 2008 which sets out the statutory requirements for consultation when preparing an application for development consent:

- Non-statutory consultation was carried out during Summer and Autumn 2024
- Statutory consultation was undertaken from May to July 2025; and
- Targeted consultation was undertaken between 2 September and 1 October 2025.

2.4.3 The Applicant also carried out meetings with a range of statutory and non-statutory consultees throughout the design process for the Scheme.

2.4.4 The website for the Scheme can be found here: https://drovessolarfarm.co.uk/.

2.4.5 The website has been regularly updated with information about the Scheme and has been utilised throughout the pre-application process as a resource to allow local residents and community groups to easily access and view the information and make comments.

2.4.6 The Applicant has prepared a **Consultation Report [APP/5.1]** which provides an account of the consultation methodology and extent of engagement and participation over the consultation period. The Report also provides an overview of the issues raised in feedback submitted during consultation, and that the Applicant has had regard to consultation responses including any responses to the feedback.

2.4.7 The Applicant undertook a targeted consultation across September - October 2025 engaging relevant consultees on a number of updates to the Scheme, during which feedback was encouraged on four localised changes to the Scheme boundary, now the Order limits for the DCO Application. Targeted consultation undertaken by the Applicant is further documented in **Appendix 1: Targeted Consultation – Overview and Supporting Materials**, of the Consultation Report **[APP/5.2].**

2.5 Rochdale Envelope

2.5.1 In order to maintain flexibility in the design and layout included in the DCO Application, address uncertainties in the Scheme design and allow for advancements in technology from now to the time of construction, the Scheme has adopted the Rochdale Envelope approach.

2.5.2 This approach allows for a project to be assessed on the basis of maximum parameters (which have been considered in detail by technical authors in the ES), i.e. to ensure the realistic worst-case effects of the Scheme have been assessed for each potential receptor.

2.5.3 In order to establish parameters for assessment within the Rochdale Envelope, a set of maximum parameters and Design Principles have been established and are presented in **Design Principles, Parameters and Commitments [APP/5.8]**.

2.5.4 The illustrative layout of the Scheme is outlined in NTS Figure 2.1 Concept Masterplan appended to the NTS, identifying potential areas for the Solar PV Arrays, Associated Development and mitigation and enhancement opportunities. The masterplan has been used to undertake the assessment of likely significant environmental effects, for aspects where the nature of the assessment methodology requires a specific level of detail, namely the landscape and visual, cultural heritage, and noise assessments.

2.5.5 The **Works Plans [APP/2.4]** set out the limits of deviation for each of the Works Areas within the Order limits.

2.6 EIA Assessment Scenarios

2.6.1 The EIA assesses the effects of the following scenarios:

- Construction phase (2031 – 2033)
- Operational phase (including maintenance) (2033 – 2093); and
- Decommissioning phase (2093 – 2095).

3 Order limits and Context

3.1 The Order limits

3.1.1 The total area extent of the Order limits is approximately 840 hectares (ha) of land located within the administrative boundaries of BC and NCC, who are the host authorities.

3.1.2 The Order limits are situated to the north of Swaffham, to the south-east of King's Lynn, and to the south of the settlements of Castle Acre, South Acre, and West Acre, in the county of Norfolk.

3.1.3 The land within the Order limits is predominantly in agricultural use, being utilised in part for pig farming, chickens, sheep and other livestock, and in part for arable crop production across agricultural fields. Fields within the Site are bounded by grassland margins, hedgerows, tree belts and agricultural tracks. Single trees, copses and Marl Pits (former pits for clay extraction) are located within the Order limits. Several woodlands are present, but these are excluded from the Order limits.

3.1.4 Existing agricultural tracks and a series of three droves, namely Fincham Drove, Petticoat Drove and Washpit Drove, (former routes for movement and driving of agricultural livestock) extend within the Order limits.

3.1.5 An existing 400kV overhead line (OHL) (the Necton to Walpole line) and several existing pylons route east-west through the centre of the north-east portion of the Site, with additional below and above ground utilities within the Order limits.

3.1.6 The area identified for Highways Works, as shown on NTS Figure 3.2 Order limits appended to the NTS**,** lies directly adjacent to a Managed Traveller site, and in nearby proximity but separated from the Site, residential dwellings off New Sporle Road and Castle Acre Road, primarily associated with Swaffham.

3.2 Environmental Context

3.2.1 There are no statutory designated heritage assets located within the Site. There is one Registered Historic Park and Garden; Narford Hall (NHLE Reference:1000337), located approximately 380m west of the Site. There are no Conservation Areas within the Site. South Acre Conservation Area is located approximately 146m north of the Site. The nearest Listed Building to the Site is the Grade I Church of St George (NHLE Reference: 1306357) located approximately 316m north of the Site. The Double moated site of Old Hall, 250m north-west

of Church Farm Scheduled Monument (NHLE Reference: 1015269) is located approximately 576m north of the Site

3.2.2 The Site does not contain, nor is located immediately adjacent to, any statutory ecological designations. The closest statutory designation is the River Nar Site of Special Scientific Interest (SSSI), which is located approximately 0.5km north of the Site. The Site itself does not contain any non-statutory ecological designations; however, a single Roadside Nature Reserve (RNR, Norfolk Biodiversity Information Service Reference: U33086) is located along River Road adjacent to the Site boundary along River Road.

3.2.3 There are no Registered Parks and Gardens within the Site. Narford Hall (NHLE Reference: 1000337) is the nearest Registered Historic Park and Garden; located approximately 380m west of the Site. The Site is not within a National Landscape (formally known as Area of Outstanding Natural Beauty) or within The Broads National Park. No Ancient Woodland is present within the Site. The nearest block of Ancient Woodland is Sporle Wood (Ancient Replanted Woodland), located approximately 3.4km east of the Site.

3.2.4 The entirety of the Site is located in Flood Zone 1, with the exception of a small area of land (approximately 1.1ha) within the north-eastern extent of the Order limits, which is in Flood Zones 2 and 3. This part of the Order limits is allocated for Skylark Mitigation only.

4 Scheme Description

4.1 Overview

4.1.1 The Scheme comprises the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating station and associated development comprising a Battery Energy Storage System (BESS), a Customer Substation, and Grid Connection Infrastructure, including a new National Grid Substation.

4.1.2 The Scheme would allow for the generation and export of over 50MW Alternating Current (AC) of renewable energy, connecting into the National Electricity Transmission System (NETS) overhead line that passes through the Site.

4.1.3 The PV panels will convert the solar energy into electricity which will be exported to the National Grid at the point of connection (PoC) for the Scheme via the new National Grid Substation, which is proposed to be located within the Site. The National Grid Substation will be connected to the existing NETS overhead line that passes through the Site.

4.1.4 The operational life of the Scheme is anticipated to be 60 years. Once the Scheme ceases operating, the Scheme will be decommissioned with the exception of the National Grid Substation and Grid Connection Infrastructure.

4.2 Proposed Components of the Scheme

4.2.1 **ES Figure 5.1: Concept Masterplan [APP/6.4],** also appended to the NTS, shows the indicative layout of the Scheme. It has been based on various environmental assessments and consultation with non-statutory and statutory consultees undertaken to date. **ES Chapter 4: Reasonable Alternatives and Design Evolution [APP/6.1]** outlines the iterative design process for the Scheme.

4.2.2 The Scheme will comprise the following principal components as described above and in further detail below:

PV panels

4.2.3 PV panels will convert sunlight and daylight into electrical current.

4.2.4 Two options for the PV panels have been considered: Single Axis Trackers (Option A shown in **Image 4-1** and **Image 4-2**) and Fixed South Facing PV Arrays (Option B see **Image 4-3**).

Image 4-1 Typical Tracker Solar PV Panels in an Angled Orientation

Image 4-2 Typical Tracker Solar PV Panels in a Near Flat Orientation

Image 4-3 Typical Fixed South Facing Arrays (with Conversion Unit/Inverter)

4.2.5 The PV panels will be attached to Mounting Structures, which form PV Tables and are arranged in rows. The metal frames upon which the PV panels will be mounted will be pile driven or screw mounted into the ground, subject to ground conditions. This installation method, to a maximum depth of 4m (dependent on ground conditions), will be used other than in areas where archaeological protection is required, where concrete feet or other non-ground penetrative techniques will be used to secure the Mounting Structures.

4.2.6 The maximum height of the highest part of Fixed South Facing PV Array will be 3.5m above ground level and the maximum height of the highest part of Single Axis Trackers will be 4.5m above ground level.

Conversion Units/Inverters

Conversion Units

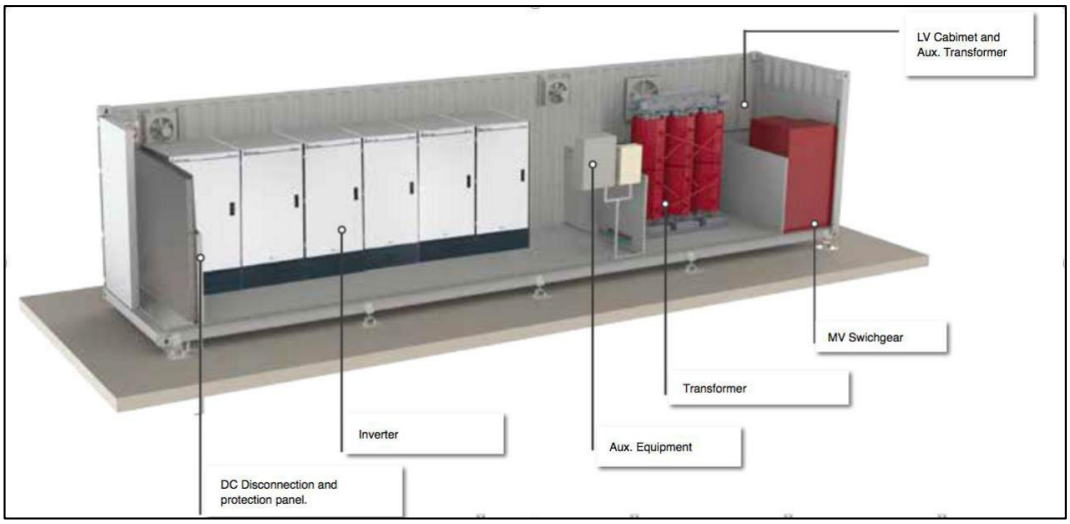
4.2.7 The Conversion Unit is a collective term used for the combination of electrical components, including inverters, transformers and switchgear, which are required to manage the electricity generated by the PV Panels. These would either be standalone equipment or they would be housed ('integrated') together within a container. A container would measure approximately 3.5m (H) x 5m (W) and 15m (L). An alternative option is for the individual electrical components to be housed in standalone cabinets, which are described below.

4.2.8 If the Conversion Unit is configured as standalone cabinets, the Conversion Unit compound would be surrounded by 3m high palisade fencing, with integrated gates for access. The compound will be levelled and covered in a layer of gravel, with the equipment mounted on a concrete slab or footings, with a depth of 1m. The containers and / or cabinets are typically

externally finished in keeping with the prevailing surrounding environment, often utilising a green or grey painted finish. The containers or cabinets would typically be mounted on adjustable legs on a concrete foundation surrounded by an area of hardstanding.

4.2.9 The configuration of equipment within the Conversion Unit compounds will depend on the iterative design process influenced by technical and environmental factors as well as technology available at the time of procurement.

Image 4-4 Typical Integrated Conversion Unit



33kV Sub-distribution Switch Rooms

4.2.10 33kV Sub-distribution Switch Rooms would be located throughout the Solar PV Site to collect the generated power and manage its delivery to the Customer Substation. The 33kV Sub-distribution Switch Rooms would be similar in appearance to the Conversion Units (refer to **Image 4-6**) and be contained within the same design parameters.

Image 4-5 Typical Conversion Unit / 33kV Sub-distribution Switch Room.

Substations

4.2.11 There are two different types of substations required across the Scheme. These comprise the Customer Substation, and the National Grid Substation. Further details of which are set out in the sub-headings below.

Customer Substation and Ancillary Buildings

4.2.12 One Customer Substation would be located within Field 27 of the Solar PV Site, as shown on **ES Figure 5.1: Concept Masterplan [APP/6.4],** also appended to the NTS.

4.2.13 The Customer Substation would comprise electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from the Scheme to the National Grid. The Customer Substation is also expected to include Ancillary Buildings, which will include office space and welfare facilities, as well as operational monitoring and maintenance equipment. The switchgear within the Customer Substation will either be air insulated switchgear or gas insulated switchgear substations. An example of an air insulated substation is shown in **Image 4-6**.

4.2.14 The indicative maximum size of the Customer Substation compound is 4ha, with an approximate height of 13m that allows for the associated electrical infrastructure, control buildings and office/storage buildings.

Image 4-6 Air insulated Substation

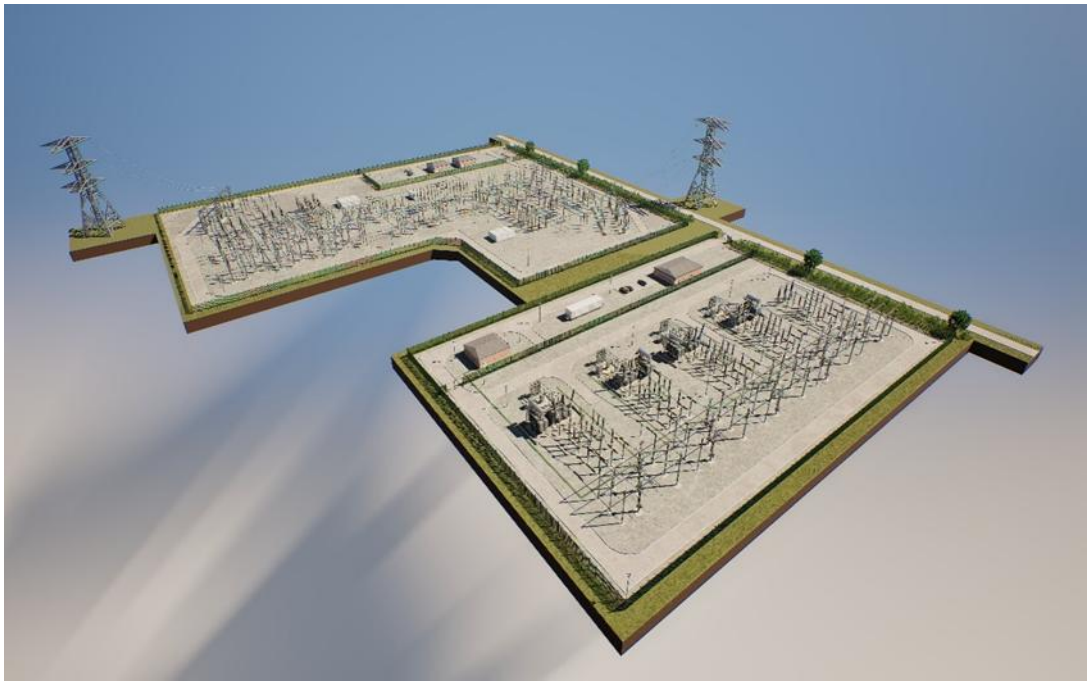
National Grid Substation

4.2.15 A new National Grid Substation will be required to connect the Customer Substation to the National Grid. The National Grid Substation will monitor and manage the export and import of electricity between the National Grid and the Scheme and will be operated by National Grid Electricity Transmission plc (NGET).

4.2.16 The National Grid Substation is proposed to be located within Field 27 of the Solar PV Site, as shown on NTS Figure 2.1: Concept Masterplan appended to the NTS.

4.2.17 The National Grid Substation is assumed to have a maximum height of 13m and a footprint of approximately 4ha. The National Grid Substation is expected to include Ancillary Buildings and car parking. The National Grid Substation would be enclosed by a palisade fence in line with National Grid standards.

Image 4-7 Typical National Grid Substation



Grid Connection Infrastructure

4.2.18 The Scheme proposes diverting the existing dual circuit 400kV overhead line (OHL) into a newly constructed double busbar substation (the National Grid Substation). The works will be delivered in carefully planned stages to maintain safety, minimise disruption, and ensure continuity of supply throughout.

4.2.19 Before any electrical work begins, up to 10 new pylons will be built along the proposed diversion route leading into the new National Grid Substation. These pylons will eventually carry the circuits away from the old alignment and into the new infrastructure. Temporary pylons may also be installed to help maintain the flow of electricity during the transition.

4.2.20 Where the route crosses public roads, footpaths, or rights of way, scaffolding and protective netting will be erected to ensure public safety during overhead works. Fibre optic cables, will be rerouted or extended to match the new alignment. This ES assumes one temporary pylon is required to facilitate the replacement of a tower.

4.2.21 The existing OHL and associated pylons may not be decommissioned once the new line of pylons is installed, the detail of this decision will be made by NGET at the detailed design stage, post consent.

Cabling

On-Site Cables

4.2.22 Low voltage distribution cabling between Solar PV panels and the Conversion Units / 33kV Sub-distribution Switch Rooms will typically be fixed to the Mounting Structures (above

ground), and then underground between the Mounting Structures and the Conversion Units / 33kV Sub-distribution Switch Rooms. High Voltage cables are required between the Conversion Units / 33kV Sub-distribution Switch Rooms, BESS Compound and the Customer Substation.

4.2.23 The high voltage cables will be routed alongside the Access Tracks and / or use existing gaps in hedgerows where practicable to minimize hedgerow loss.

4.2.24 Communication cables will be required throughout the Solar PV Site to allow for monitoring during operation. The communication cables would typically be installed within the same trench and alongside the electrical cables.

Interconnecting Cables

4.2.25 The Conversion Units would be connected to the 33kV Sub-distribution Switch Rooms, and on to the Customer Substation via underground Interconnecting Cables. The voltage of the Interconnecting Cables would be between 33kV and 400kV.

Grid Connection Cables

4.2.26 The electricity generated by the PV panels and/or stored by the BESS would be exported from or imported to the Customer Substation to the National Grid Substation via underground Grid Connection Cables. The voltage of the Grid Connection Cables would be 400kV.

Battery Energy Storage System (BESS)

4.2.27 The BESS would be situated within the BESS Compound within Fields 24 and / or 27 as shown on **ES Figure 5.1 Concept Masterplan [APP/6.4],** also appended to the NTS.

4.2.28 The BESS compound is anticipated to be up to 10.5ha. The Scheme is anticipated to include approximately 393 BESS Units. The precise number of BESS Units will depend upon the level of power capacity of energy storage that the Scheme will require.

4.2.29 The BESS is likely to comprise batteries which would be housed in Units, with each BESS Unit typically measuring 16 x 3m and 3.2m in height. The BESS Units will be separated from each other and surrounding infrastructure by a minimum distance that complies with any relevant National Fire Chief's Council (NFCC) or the National Fire Protection Association (NFPA) guidelines at the time of detailed design.

4.2.30 The BESS compound would be surrounded by 3m high palisade fencing, with integrated gates for access.

4.2.31 The BESS Compound would also include other apparatus such as water storage and / or fire suppression systems, Access Tracks and hard standing areas.

Image 4-8 Typical BESS

Mitigation and Enhancement Areas

4.2.32 The following ecological mitigation and enhancement measures will be implemented:

- Land between and under the arrays to be sown as grassland and meadow management with limited cutting and a mix of some areas being grazed and others not
- Gaps within existing hedgerows would be filled with additional native species to increase diversity, and hedgerows would be managed on a rotational basis to enable wildlife to benefit from them year-round
- Appropriate vegetated buffers would be maintained comprising native planting; and
- Installation of bird nest and bat boxes on trees would be located around the Solar PV Sites to provide opportunities for a range of species recorded within the local area.

4.2.33 The Applicant has identified 80.9 ha of land (Fields 35 – 38) within the northern part of the Order limits which is to provide mitigation land suitable for Skylark. This land would remain in agricultural use containing skylark plots at a rate of two plots per hectare, formed by 4m x 6m crop free areas to provide safe nesting areas for Skylarks. If plots cannot be created in a given year, for example, due to crop rotation, the land will be managed in a way that remains suitable for Skylarks, such as organic set-aside.

4.2.34 The northern part of Field 33 will provide habitat suitable for Curlew, who prefer open areas away from tall vegetation and field boundaries. The area comprises approximately 8.9ha of agricultural land which will remain in agricultural use, providing suitable mitigation for Curlew, throughout the operational phase of the Scheme.

4.2.35 Both these areas will remain in agricultural use throughout the operational phase of the Scheme, and will be managed appropriately via measures as set out within the **outline Landscape and Ecological Management Plan (oLEMP) [APP/7.11].**

4.2.36 Minimum offsets/buffers from existing landscape features have been embedded within the design of the Scheme (Table 4-1) and are secured within the **Design Principles, Parameters and Commitments [APP/5.8]** by requirement of the DCO Application**,** see **Table 4-1**, with the exception of where Access Tracks, perimeter fencing, Cabling and / or Grid Connection Cables are required to cross an existing feature. These are secured within the DCO.

Table 4-1 Minimum offsets/buffers from existing landscape features

Hedgerows	8m
Hedgerows – with trees	10m
Woodland (Non-ancient)	15m
Ditches	6m
Badger setts (main)	30m
Badger sett (outlier)	20m
Individual trees and groups of trees	10m
Ponds	10m
Non-Statutory Designated sites and Local Wildlife sites	10m
Veteran and Ancient trees	15x width of tree stem diameter
Curtilage of residential properties	Bespoke Design Response based on Residential Visual Amenity Assessment
Public Rights of Way (PRoWs)	15m

4.2.37 These offsets/buffers will be used to deliver a combination of embedded mitigation and enhancement in the form of hedgerow planting and/or grass/wildflower planting. The buffers/offsets will be a minimum and for example may be increased to deliver further mitigation or enhancements and/or respond to root protection areas where required.

4.3 Construction, Operational and Decommissioning Phases

Construction Phase

4.3.1 The construction phase is anticipated to take up to 24 months, plus 6 months pre-construction prep. The final programme will be dependent on the detailed layout design and potential environmental constraints on the timing of construction activities. However, the Scheme is anticipated to energise in Q4 2033 or as early as NGET are able to offer. Based on Q4 2033 energisation, it is anticipated that the earliest the construction phase would commence would be Q3 2031. There is likely to be a pre-construction period preceding the construction phase of approximately six months (Q1 and Q2 2031) to allow site preparation works.

4.3.2 The final programme will be dependent on the detailed layout design and potential environmental constraints on the timing of construction activities.

4.3.3 The following activities would be required as part of the site preparation works:

- Preparation of land for construction, including localised site levelling (where required). The land level changes would be localised and minor
- Import of construction materials, plant and equipment to site
- Establishment of the perimeter fence
- Establishment of the Temporary Construction Compounds
- Construction of the internal Access Tracks; and
- Marking out the location of the Scheme infrastructure.

4.3.4 The following activities would be required as part of the enabling works (not necessarily in order):

- Construction of site entrance(s) and construction vehicle delivery holding area
- Establishment of the temporary construction compounds, which includes site offices/welfare area and parking area
- Upgrade, modification or improvement of highways where required for site construction
- Diversion and/or connection to existing 11kV and/or 33kV power lines as required for construction
- Preparation of land for construction, including localised site levelling (where required) and vegetation clearance
- Import of construction materials, plant and equipment to site
- Establishment of the Temporary Construction Compounds within the Solar PV Site; and

- Marking out the location of the operational infrastructure.

Installation of PV Panels

4.3.5 The following activities would be required to install the PV Panels:

- Import of components to site
- Piling and erection of Mounting Structures
- Mounting of PV panels undertaken using hand-held power tools
- Trenching and installation of Cabling
- Conversion Units foundation excavation and construction
- Installation of Conversion Units. Cranes would be used to lift equipment into position; and
- Installation of control systems, monitoring and communication.

Construction of Electrical Infrastructure

4.3.6 The following activities would be required to construct the onsite electrical infrastructure comprising the Cabling and Conversion Units:

- Site preparation and civils for the Customer Substation and the National Grid Substation and control buildings
- Trenching and installation of Cabling
- Pouring of the concrete foundations and plinths for the electrical equipment
- Import of components to site
- Cranes would be used to lift the components into position; and
- Installation of the Conversion Units / 33kV Sub-distribution Switch Rooms.

Energy Storage Construction

4.3.7 The following activities would be required to construct the BESS.

- Installation of electric cabling
- Construction of foundations
- Import of components to site
- Installation of transformers
- Installation of batteries, inverters and switchgear; and
- Installation of fire safety measures.

4.3.8 There will be Abnormal Indivisible Loads (AIL), Heavy Goods Vehicles (HGV) and Light Goods Vehicle (LGV) movements associated with deliveries and construction worker arrivals

and departures. Typical construction vehicles will include excavators, ramming machines, cable layers, low loaders, crane and waste vehicles, trenchers, telehandlers, forklift trucks and tractors/trailers. HGV and LGV movements have been assessed as part of this ES.

4.3.9 The core construction working hours (not including start-up and shut-down works) are defined as:

- Monday to Friday from 07:00 to 18:00 (daylight hours permitting)
- Saturday from 08:00 to 13:30 (daylight hours permitting); and
- No Sunday or Bank Holiday working unless crucial to construction (for example, for HDD, System testing and commissioning, which must be a continuous activity) or in an emergency.

4.3.10 Start-up and shut-down activities on site will involve low-noise tasks, including security checks, unlocking and locking gates, and conducting toolbox talks.

4.3.11 Where practicable, construction deliveries would be coordinated to avoid HGV movements during the traditional peak morning (08:00 to 09:00) and peak afternoon (17:00 to 18:00) hours.

4.3.12 Some activities may be required outside of these times such as the delivery of abnormal loads, concrete pours for foundations, night working for cable construction works in public highways and/or HDD activities.

Construction Management

4.3.13 An **outline Construction Environmental Management Plan (oCEMP) [APP/7.6]** has been prepared, which sets out the mitigation measures identified through the EIA assessments that form the ES.

4.3.14 Prior to the commencement of any phase of development a Construction Environmental Management Plan (CEMP) will be submitted to and approved by BC, and this will be secured by a requirement in the DCO. The CEMP for each phase will be substantially in accordance with the **oCEMP [APP/7.6]**. This will ensure the potential construction impacts are minimised.

4.3.15 An **outline Construction Traffic Management Plan (oCTMP) [APP/7.7]** including details on construction logistics and construction worker travel, has been prepared. The **oCTMP [APP/7.7]** includes information to guide the delivery of materials, plant, equipment and staff during the construction phase.

4.3.16 Prior to the commencement of any phase of development a Construction Traffic Management Plan (CTMP) will be submitted to and approved by BC, and this will be secured by a requirement in the DCO. The CTMP for each phase will be substantially in accordance with the **oCTMP [APP/7.7]**. This will ensure the potential construction impacts are minimised.

Operational Phase (including maintenance and replacement)

4.3.17 The operational phase of the Scheme is anticipated to be 60 years. During the operational phase of the Scheme, onsite activities would include routine servicing, maintenance activities, and the replacement of equipment such as PV panels and BESS Units as and when required, as well as management of vegetation.

Operational Management

4.3.18 During the operational phase, other than during the operational replacement of PV panels, there will be a small number of daily vehicle trips, with additional staff attending when required for maintenance and cleaning activities. Those arriving to undertake general operational maintenance activities would generally be expected to travel by car, appropriate 4x4 type vehicle or light van. The frequency of maintenance visits would reasonably be expected to be up to five visits per month to the Solar PV Site.

4.3.19 For the purposes of assessment and reporting of effects in the ES, as a reasonable worst case, it is assumed that vegetation will be managed with machinery and there will be no grazing at the Solar PV Site during the operation and maintenance phase. However, in the event that sheep grazing does occur, this would be managed on a rotational basis, so it is likely there will be a combination of grazing and mechanical management across the Site.

4.3.20 An **outline Landscape and Ecological Management Plan (oLEMP) [APP/7.11]** has been prepared in support of the ES. The management of the landscape and ecological features will be undertaken in accordance with a detailed Landscape and Ecological Management Plan (LEMP) which will be secured by a requirement in the DCO.

4.3.21 An **outline Operational Environmental Management Plan (oOEMP) [APP/7.8]** has been prepared, which includes control measures to ensure no significant impacts will arise during the maintenance and replacement activities. An Operational Environmental Management Plan (OEMP) will be secured by a requirement in the DCO.

Replacement Activities

4.3.22 During the anticipated 60-year operational life of the Scheme, it is expected that there will be a requirement for periodic replacement of some of the electrical infrastructure.

4.3.23 The assessments in the ES chapters confirm that, however the programme of replacements is conducted, the replacement activity would be considerably less intensive than during construction, and any environmental effects identified can be appropriately mitigated with similar measures to those identified for the construction of the Scheme.

4.3.24 The following assumptions have been made for the programme of replacement activities:

- It is expected that the operational life of PV panels is 40 years or more, and that all the PV panels will be replaced once during the operational phase. The PV panels are anticipated to be replaced over a maximum 12 to 24 month period

- It is expected that the BESS Units could be replaced up to five times during the operational phase
- Accesses to the Solar PV Site defined for construction would be used
- Components such as Mounting Structures, Cabling and the Customer Substation, National Grid Substation, and BESS Compound buildings are not anticipated to be replaced during the operational phase; and
- No intrusive ground works are anticipated to replace the PV panels or BESS Units.

Decommissioning Phase

4.3.25 Decommissioning is anticipated to take between 12 and 24 months.

4.3.26 When the operational phase ends, the Solar PV Site would be decommissioned and the land returned to the landowner. All PV panels, Mounting Structures, above ground cabling (not including the Grid Connection Infrastructure), Conversion Units / 33kV Sub-distribution Switch Rooms, BESS Units and the Customer Substation would be removed from within the Solar PV Site and recycled or disposed of in accordance with good practice and market conditions at that time. Foundations and other below ground infrastructure will be cut to 1.2m below the surface to enable future ploughing. Any piles would be removed.

4.3.27 The National Grid Substation, and the Grid Connection Infrastructure would remain in situ. Mitigation planting specifically required to support the location of the National Grid Substation would be handed over to NGET who would be responsible for its maintenance and management.

Decommissioning Management

4.3.28 An **outline Decommissioning Strategy (oDS) [APP/7.10]** has been prepared and submitted with the DCO Application. This sets out the general principles to be followed in the decommissioning phase of the Scheme. The **draft DCO [APP/3.1]** includes a requirement that a detailed Decommissioning Strategy would be prepared substantially in accordance with the oDS and approved by Breckland Council at that time of decommissioning, in advance of the commencement of decommissioning works, and would include timescales and transportation methods. The detailed Decommissioning Strategy would ensure that decommissioning was undertaken safely and with regard to the environmental legislation at the time of decommissioning, including relevant waste legislation.

5 Alternatives and Design Evolution

5.1 Introduction

5.1.1 **ES Chapter 4: Alternatives and Design Evolution [APP/6.1]** provides an overview of the site evaluation process that the Applicant has gone through, how the design has evolved and the alternatives that have been considered throughout the design process.

5.1.2 The following alternatives have been considered for the Scheme, and are summarised below:

- Site Evaluation; and
- Alternative design/layouts.

5.2 Site Evaluation

5.2.1 There is no standard approach for selecting sites for solar energy generating stations; however, a viable grid connection is an essential material consideration for proceeding with development and is instrumental in defining the search area.

5.2.2 During ongoing engagement, the Applicant and NGET came to an agreement for a connection offer into the existing OHL between Walpole and Necton. At the same time as NGET's offer, a land agent indicated to the Applicant that the landowner was willing to put forward the Site for a solar farm development.

5.2.3 A review of planning constraints along and near the OHL identified the land where the Scheme is proposed to be located as particularly good from a desktop review, notably appearing to contain land of a lower agricultural quality when compared to the land in the surrounding area. The Applicant then engaged with the landowner to agree on the most appropriate land within their estate on which to propose the Scheme.

5.2.4 The Applicant typically considers factors including, but not limited to, a large enough site area, topography, access, and a lack of designations. Having experience and understanding of the surrounding area and requirements for utility scale solar, it was clear to the Applicant that the Site met their environmental site selection criteria. This process confirmed the Site was suitable, and concluded the site evaluation process.

5.2.5 A Site Evaluation Report is submitted as an appendix to the **Planning Statement (see Appendix 1: Site Evaluation Report) [APP/5.5]** with the DCO Application. The Site's suitability for a National Grid Substation and solar development is due to the lack of landscape and environmental statutory designations, limited residential receptors, the absence of Best and Most Versatile (BMV) land on the published 'provisional' Agricultural Land Classification (ALC) maps, and accessibility from a major highway network.

5.2.6 NPS EN-3 relates specifically to Solar Photovoltaic generation and list factors influencing site selection. The site evaluation involved a balance of these factors, including:

- **Network connection** – Proximity to existing electricity transmission infrastructure
- **Irradiance and site topography** – Preference for south-facing aspect and/or flatter topography
- **Proximity of site to dwellings** – Avoidance of close proximity to residential dwellings or where it would not be possible to mitigate visual amenity and glint and glare appropriately
- **Environmental considerations** — Avoidance of environmental constraints, such as those containing a Site of Special Scientific Interest (SSSIs), Nature Reserves, Ramsar Sites, Special Area of Conservation (SAC), and Special Protection Areas (SPA)
- **Agricultural land classification and land type** – Minimise the impact on BMV agricultural land; and
- **Accessibility** – Suitability of the access routes to the Site.

5.3 Development Area and Alternative Layouts

5.3.1 The design, layout, and extent of the Scheme have been subject to an iterative process involving the Applicant, the design team and Design Principles, the environmental consultant team and is informed by feedback from statutory consultees, host authorities and local communities.

5.3.2 Preliminary layouts were produced to inform the early surveys and data collection, and the scoping of environmental topics and receptors.

5.3.3 The design principles and parameters developed by the Applicant have been used to shape the design of the Scheme.

5.3.4 Parameters such as offset distances from sensitive features were informed by the technical consultant team based on their professional judgement and experience of solar developments, as well as feedback from consultation. This helped to identify the 'developable area' of the Site, which allowed for areas to be made available for ecology and landscape enhancement measures.

5.3.5 The key stages of design iteration have been summarised below:

- **Stage 1**: Non-Statutory Consultation (Co:Design) Workshops (March to May 2024) – interactive masterplanning session to inform the first layout; feedback received informed the design
- **Stage 2**: EIA Scoping (July to August 2024) – PINS feedback on the EIA Scoping Report identified additional receptors to consider through design, as well as design measures that could mitigate potential impacts; feedback fed into the mitigation strategy of the evolving design; and

- **Stage 3:** Statutory Consultation (May to July 2025) – public and statutory consultation events in the area surrounding the Site; input received aided in refining the development parameters and siting of infrastructure in response to concerns raised.

5.3.6 Through these key stages, as well as through targeted consultation, the design of the Scheme has evolved to relocate areas of mitigation and enhancement land, refine the areas for the Customer Substation, National Grid Substation, and BESS, and remove areas of solar development in place of skylark and curlew mitigation, as well as other changes. The baseline and assessment work has been undertaken by the Applicant's professional environmental specialists, and has informed the extents of the 'potential area for solar and associated development' that the DCO Application is being submitted upon and forms the basis of the assessments within the ES, as summarised further within this NTS.

5.3.7 Each technical aspect chapter utilises the **Concept Masterplan (ES Figure 5.1) [APP/6.4]** and the **Works Plan [APP/2.3]** to guide its assessment, and ensures that both embedded and additional mitigation measures form part of their assessment.

5.3.8 To control the management of the Scheme, several management plans have been prepared which are:

- **Outline Construction Environmental Management Plan (oCEMP) [APP/7.6]**
- **Outline Construction Traffic Management Plan (oCTMP) [APP/7.7]**
- **Outline Operational Environmental Management Plan (oOEMP) [APP/7.8]**
- **Outline Operational Traffic Management Plan (oOTMP) [APP/7.9]**
- **Outline Decommissioning Strategy (oDS) [APP/7.10]**
- **Outline Landscape and Ecological Management Plan (oLEMP) [APP/7.11]**
- **Outline Public Right of Way and Permissive Path Management Plan (oPRoWPPMP) [APP/7.12]**
- **Outline Soil Management Plan (oSMP) [APP/7.13]**
- **Outline Battery Safety Management Plan (oBSMP) [APP/7.14]**
- **Outline Employment, Skills and Supply Chain Strategy (oESSCP) [APP/7.15]**

6 Energy Need, Legislative Context, and Energy Policy

6.1.1 Urgent and unprecedented actions are required on a global scale to halt climate change. A rapid increase in the supply of low carbon electricity is needed for the UK to meet its legally binding target of achieving Net Zero carbon emissions by 2050.

6.1.2 The government's Clean Power 2030 Action Plan, published in December 2024, reinforces the urgent need for additional low carbon generation schemes to come forwards to deliver a clean electricity system as soon as possible, and to keep the electricity system clean as power demand over the 2030s and 2040s rapidly grows due to the country pursuing the electrification of heat, transport, and industrial demand to reduce fossil fuel use. A clean electricity system is one where the vast majority of electricity used is supplied from UK-based low-carbon sources.

6.1.3 The Secretary of State must have regard to the current suite of National Policy Statements (NPSs) for energy as relevant NPSs and must decide the application for development consent for the Scheme under the Planning Act 2008 in accordance with those NPSs.

6.1.4 The NPSs establish a critical national priority for low carbon infrastructure, including for large-scale solar farms, because of the decarbonisation, energy security, and affordability benefits that they deliver. The NPSs confirm that substantial weight should be given to the need for low carbon generation schemes, and that large-scale ground mounted solar farms have a critical role to play in achieving the government's energy policy aims of delivering a secure, low carbon and low-cost electricity supply for consumers on the way to delivering Net Zero carbon emissions by 2050.

6.1.5 The Scheme will, if consented, help to address the climate change emergency that affects everyone's lives and the environment, by ensuring our energy supply is secure, low carbon and low-cost.

7 Landscape and Visual Impact Assessment

7.1 Introduction

7.1.1 **ES Chapter 6: Landscape and Visual [APP/6.2]** has considered the findings of the likely significant environmental effects of the Scheme in relation to landscape and visual receptors. Landscape effects relate to changes to the landscape as a resource, including physical changes to the fabric or individual elements of the landscape, its aesthetic or perceptual qualities, and landscape character. Visual effects relate to the potential for there to be changes to the composition of existing views, as experienced by people.

7.2 Study Area and Surveys

Overview

7.2.1 The Site comprises several agricultural fields of varying geometries, most of which are delineated by existing mature hedgerows and hedgerow trees. There are larger woodland blocks situated within or close to the Site, which form part of the wider landscape fabric. These are predominantly woodland plantations.

7.2.2 The Site is located to the north of the A47 and settlement of Swaffham. A number of smaller villages and hamlets are situated within the wider context of the Site, such as West Acre, South Acre, Castle Acre, Narford and Great Palgrave. An extent of the Site runs along West Acre Road and Narford Lane to the west before tracking eastwards along Three Sisters and Twenty Acre Plantation. The eastern extent of the Site largely aligns the A1065, with an additional area of agricultural land included within the Site to the east of the junction between the A1065 and South Acre Road.

7.2.3 Visibility towards the Site from its local context to the west and south is generally well contained due to a combination of the local plateau and valley topography, the presence of scattered woodland blocks within and close to the Site and the well vegetated nature of local lanes and highways; all of which serve to filter views and restrict direct visibility into the more central site areas. Along the periphery of the Site there are direct views towards existing development within the immediate context of the Site such as highway infrastructure and associated passing traffic along the A1065, to the east. There is sporadic isolated development close to the Site elsewhere, development at Walnut Grove to the west and development within South Acre to the north.

7.2.4 Within the centre of the Site, there is a relatively high degree of visual enclosure between the internal field parcels, predominantly due to the presence of existing mature woodland, hedgerow and hedgerow trees within the Site. The southern Site area also exhibits some degree of visual enclosure, south of Round Covert. The northern Site area is also generally visually well contained upon the plateau landscape due to the plantation woodland and taller mature hedgerows that align field boundaries, PRoW and various droves within the Site. The

plantation woodland shelter belts situated within the northern Site area form an effective visual screen and restrict intervisibility between the Site and the valley landscape to the north.

7.2.5 As such, intervisibility between the plateau landscape within the Site and existing settlements to the north of the Site, within the Nar Valley, such as Castle Acre, West Acre and South Acre is generally limited.

Study Area

7.2.6 For the purposes of landscape and visual assessment, the Study Area includes the Site itself and 3km from its boundary. No national or locally designated landscapes are situated within the Site or Study Area.

Landscape Character

7.2.7 The Landscape and Visual Impact Assessment (LVIA) has considered the National Landscape Character Area within which the Scheme is located, as well as the Regional and Local Landscape Character Type and Landscape Character Areas (LCA) in which the Sites are situated.

7.2.8 The assessment methodology follows the Guidelines for Landscape and Visual Impact Assessment Third Edition (2013). The methodology that underpins the landscape and visual impact assessment process is tailored to be proportionate to the assessment and nature and location of the Scheme. The assessment of landscape character and visual amenity is both a subjective and objective process. Whilst subjectivity can never be removed, by following a systematic and robust step by step process, rational and transparent conclusions can be drawn.

7.3 Mitigation Measures

Embedded Design Mitigation Measures

7.3.1 The avoidance of effects is always challenging when there is a physical change to land use. However, the landscape and visual sensitivities of the Site have influenced masterplanning of the Scheme through an iterative design process. Thus, the Site incorporates a degree of integral (or embedded) mitigation measures designed to avoid or reduce potential landscape and visual effects.

7.3.2 The following elements comprise key design landscape and visual mitigation measures embedded into the design of the Scheme:

- Retention of the existing landscape fabric within and around the boundaries of the Site
- Offset and buffering of the Scheme with new hedgerow and tree planting
- Retention, gapping up and enhancement of existing hedgerow within the Site

- Setting back the Scheme from key landscape features within and adjacent to the Site, such as trees, hedgerow and woodland; and
- Recreational enhancements.

Construction and Decommissioning Phase Mitigation Measures

7.3.3 Effects during the construction and decommissioning phases are likely to be perceived as temporary and adverse in nature due to the intermittent presence of construction/decommissioning activities including Site clearance, vegetation removal, traffic movements, ground engineering, stockpiling, cranes, lifting equipment and temporary lighting, etc.

7.3.4 Construction and decommissioning works will be undertaken in accordance with the **oCEMP [APP/7.6]** and **oDS [APP/7.10]** that have been submitted as part of the DCO Application.

7.3.5 The **oCEMP [APP/7.6]** and **oDS [APP/7.10]** include (but are not limited to) the following mitigation measures in relation to landscape and visual effects:

- A pre-construction Tree Survey and Arboricultural Method Statement (AMS)
- The use of visual screening, such as hoardings
- Ensuring a tidy and neat working environment and covering stockpiles; and
- Temporary construction lighting.

7.4 Assessment of Effects

Overview

7.4.1 The assessment of effects within this section considers the potential effects resulting from the reasonable worst-case scenario following the implementation of embedded mitigation.

Construction and Decommissioning Phase

7.4.2 Effects during the construction and decommissioning phases are considered to be temporary and short term and would be of notably lower magnitude than those during the operational phase.

Landscape Effects

7.4.3 Within the Site itself, the construction and decommissioning effects upon Swaffham Heath LCA are considered **significant**, although this will be temporary and limited to the LCA landscape within the Site itself. Beyond the Site extent, effects upon the landscape situated within the wider LCA would be **not significant**.

7.4.4 Similarly, within the extent of the Site itself, the effect upon Noth Pickenham Plateau LCA is considered **significant,** although this will be temporary and limited to the LCA landscape

within the Site itself. Beyond the Site extent, effects upon the landscape situated within the wider LCA would be **not significant**.

7.4.5 Effects on the River Nar Tributary Farmland LCA, which lies to the northeast of the Site, the River Nar Valley LCA, which lies to the north of the Site, Gayton and East Winch LCA, which lies to the north and northwest of the Site, and Little Massingham and Castle Acre LCA, which lies to the north of the Site, are considered **not significant**.

Visual Effects

7.4.6 Direct views on construction are anticipated to result in a short-term effect on two groups of visual receptors situated within the central Site area and the north-eastern Site area; these effects are considered **significant**. Visibility of construction and decommissioning activities (between gaps in existing woodland, hedgerow and trees) would also be possible for a third group of visual receptors situated at the Nar Valley southern slope and settlement edge of South Acre. This effect is also considered **significant**.

7.4.7 Effects on all other visual receptor groups as well as effects on roads and rail are considered **not significant**.

7.4.8 Construction and decommissioning activities would be at least partly visible from the Peddars Way and Norfolk Coastal Path (long-distance walking route) and from the Rebellion Way (cycle route). Effects on these receptors are considered **significant**. Effects on the Nar Valley Way (long-distance walking route) are considered **not significant**.

Operational Phase

7.4.9 The assessment of operational phase effects in **ES Chapter 6: Landscape and Visual [APP/6.2]** has been presented for the Short Term (0-5 years), the Medium Term (5-10 years) and the Long Term (10+ years).

Landscape Effects – Short-Term

7.4.10 Short-term operational effects on Swaffham Heath LCA are considered **significant**, but these are limited to the landscape within the Site itself. The effect is **not significant** for the wider LCA.

7.4.11 Effects on all other landscape receptors in the Short Term are considered **not significant**.

Visual Effects – Short-Term

7.4.12 In the short term, the Scheme would be directly visible to the visual receptor groups located within the central Site area and the north-eastern Site area. The visual receptor group at the Nar Valley Southern Slope and Settlement Edge of South Acre would also have visibility of the Scheme glimpsed between gaps in existing woodland, hedgerow, and trees. For all three receptor groups, the effect is considered **significant**.

7.4.13 The visual effect upon the Peddars Way and Norfolk Coastal Path (long-distance walking route) would be **significant** where it runs through the Site and up to approximately 300m beyond the Site. Similarly, the effect on the Rebellion Way (local cycle route) would be **significant** where there would be major alterations to elements of the view along the cycle route.

7.4.14 Effects on all other visual receptors in the Short-term are considered **not significant**.

Landscape Effects – Medium-Term

7.4.15 Medium-term operational effects on both Swaffham Health LCA and North Pickenham Plateau LCA are considered **significant**, but these are limited to the landscape within the Site itself. The effect is **not significant** for the wider LCA.

7.4.16 Effects on all other landscape receptors in the Medium-term are considered **not significant**.

Visual Effects – Medium-Term

7.4.17 In the Medium-term, it is expected that there will still be visibility of the Site for the visual receptor groups located within the central Site area and the north-eastern Site area, primarily in locations where new vegetation has not yet matured. This effect is considered **significant**.

7.4.18 The visual effect upon the Peddars Way and Norfolk Coastal Path (long-distance walking route) would be **significant** where it runs through the Site and up to approximately 300m beyond the Site. Similarly, the effect on the Rebellion Way (local cycle route) would be **significant** where there would be major alterations to elements of the view along the cycle route.

7.4.19 Effects on all other visual receptors in the Medium-term are considered **not significant**.

Landscape Effects – Long-Term

7.4.20 Long-term operational effects on both Swaffham Health LCA and North Pickenham Plateau LCA are considered **significant**, but these are limited to the landscape within the Site itself. The effect is **not significant** for the wider LCA. It is noted that mitigation measures would not reduce adverse effects on Pickenham Plateau LCA within the Site.

7.4.21 Effects on all other landscape receptors in the Long-term are considered **not significant**.

Visual Effects – Long-Term

7.4.22 Effects on all visual receptors in the Long-term are considered **not significant**, largely due to the establishment of mitigation planting over time.

7.5 Additional Mitigation

7.5.1 As mitigation for landscape and visual effects involves site planting and this is embedded within the Scheme design, further mitigation measures are not available.

7.6 Residual Effects

7.6.1 In the absence of any additional mitigation, the residual effects are the same as the potential effects set out in Section 6.4.

8 Ecology and Biodiversity

8.1 Introduction

8.1.1 **ES Chapter 7: Ecology and Biodiversity [APP/6.2]** has considered the findings of the likely significant environmental effects of the Scheme in relation to Ecology and Biodiversity receptors.

Survey Work

8.1.2 To inform the assessment of ecological impacts associated with the Scheme, and confirm the existing baseline conditions, ecological survey work has been undertaken during 2024 and 2025 to establish the baseline conditions present of the Order limits.

Study Area

8.1.3 For the purposes of ecology and biodiversity assessment, the presence of non-statutory ecological designations and records of protected and notable species within 2km of the Site have been obtained in line with best practice, with a Study Area of 25km for statutory designations of international importance and 5km Study Area for Statutory Designations of national importance from the Site.

8.2 Mitigation Measures

8.2.1 The Scheme has been designed to incorporate the retention of valuable habitats and ecological features, including those identified to be of importance for protected species. This will be achieved by implementing appropriate development buffers, which are to remain in-situ and undeveloped for the lifetime of the Scheme.

8.2.2 In addition, the cessation of intensive arable production across the Solar PV Site is expected to benefit ecological receptors (e.g. through a reduction in physical disturbance and a reduction in pesticide application) and would likely result in increased ecological diversity and reduced pollution and leaching to offsite areas.

8.2.3 In order to further address and mitigate potential adverse effects in regard to individual ecological receptors, the mitigation measures outlined below are proposed to be implemented as part of the Scheme.

Embedded Construction Phase Mitigation Measures

8.2.4 Embedded mitigation measures included as part of the construction Phase include:

- Pollution prevention measures as well as other general safeguards will be included within the detailed CEMP

- The retention of key ecological habitats (veteran trees, woodlands, hedgerows, and ponds) is embedded within the Scheme, and these habitats will be protected through use of temporary fencing
- Measures to avoid the spread of exotic invasive species will be detailed within the LEMP
- Habitat creation and enhancement will be implemented
- Specific construction safeguards designed to prevent disturbance to/accidental killing and injury of bats, Badger, other mammals, and birds will be detailed in the CEMP.

Embedded Operational Phase Mitigation Measures

8.2.5 Embedded mitigation measures included as part of the Operation Phase include:

- Ongoing management of habitats will be undertaken in order to maximise value for biodiversity; these management strategies will be set out within the LEMP
- A sensitive lighting strategy will be designed and implemented to minimise impact on bats
- Existing key movement corridors will be strengthened through the planting up of gaps along existing hedgerows and tree lines
- The detailed fencing strategy has been sensitively designed to allow permeability across the Site by Badger
- Mitigation and compensation measures in respect of skylark and curlew are proposed; the approach is set out within **ES Appendix 7.3: Proposed Mitigation Strategy for Ground Nesting Birds Requiring Open Habitats [APP/6.4]**

Decommissioning Phase Mitigation Measures

8.2.6 Embedded mitigation measures included as part of the Decommissioning Phase include:

- Pollution prevention measures and other specific measures and approaches will be contained within the oDS [APP/7.10], which will inform the Decommissioning Environmental Management Plan (DEMP) drafted and approved prior to the commencement of the decommissioning phase
- In order to ensure protection of features such as veteran trees and areas of woodland, measures such as the use of temporary fencing and working safeguards will be incorporated during the decommissioning phase
- Specific measures designed to prevent disturbance to/accidental killing and injury of bats, Badger, other mammals, and birds will be implemented, as referred to within the oDS **[APP/7.10].**

8.3 Assessment of Effects

Overview

8.3.1 The assessment of effects within this section considers the potential effects resulting from the reasonable worst-case scenario following the implementation of embedded mitigation.

8.3.2 Decommissioning activities are anticipated to generate effects of a similar or lesser extent, magnitude, duration, reversibility, timing, and frequency compared with the construction phase and therefore the construction phase represents a worst-case scenario.

Construction, Operational and Decommissioning Phase

Designated Sites – International, National and Local Sites

8.3.3 Following the implementation of embedded mitigation measures, it is considered there will be **no significant adverse effects** on designated sites as a result of the construction, operational and decommissioning phases.

Habitats

8.3.4 Following the implementation of embedded mitigation measures, it is considered there will be **no significant adverse effects** on habitats in relation to direct and indirect pathways as a result of the construction, operational and decommissioning phases.

Fauna

Bats – Roosting

8.3.5 **No significant adverse effects** on bats (roosting) are considered as a result of the construction, operational and decommissioning phases of the Scheme.

Bats – Foraging/Commuting

8.3.6 **No significant adverse effects** on bats (foraging/commuting) are considered as a result of the construction, operational and decommissioning phases of the Scheme.

Badger

8.3.7 **No significant adverse effects** on Badger in relation to direct and indirect pathways are considered as a result of the construction, operational and decommissioning phases of the Scheme.

Otter and Water Vole

8.3.8 **No significant adverse effects** on otters and water voles are considered as a result of the construction, operational and decommissioning phases of the Scheme.

Brown Hare and Hedgehog

8.3.9 **No significant adverse effects** on brown hare and hedgehog are considered as a result of the construction, operational and decommissioning phases of the Scheme.

Breeding Birds

8.3.10 During the operational phase, additional planting and habitat provision will likely improve the habitat suitability of the Site for breeding birds. Therefore, significant beneficial effects are anticipated on breeding birds other than Skylark and Curlew. Following the provision of new open grassland areas, favourable management of grassland margins and associated habitats, and long-term provision of Skylark plots within arable land outside of the proposed Solar PV Site, effects on Skylark and Curlew is expected to be **not significant**. Effects on breeding birds during the construction and decommissioning phases are expected to be **not significant**.

Wintering Birds

8.3.11 During the operational phase, embedded mitigation provided for breeding Skylark and Curlew will also benefit Lapwing during the winter months; consequently, effects on Lapwing are considered **not significant**. Additional planting and habitat provision will likely improve the habitat suitability of the Site for other wintering bird species, resulting in a **significant beneficial effect** on these species. Effects on wintering birds during the construction and decommissioning phases are expected to be **not significant**.

Reptiles and Amphibians (Great Crested Newt (GCN))

8.3.12 **No significant adverse effects** on reptiles and amphibians (GCN) are considered as a result of the construction, operational and decommissioning phases of the Scheme.

8.4 Additional Mitigation

8.4.1 As no significant effects have been identified above for receptors during any phase of the Scheme once embedded mitigation is taken into account, no additional mitigation for the Scheme is required.

8.5 Residual Effects

8.5.1 As there are no significant adverse effects identified, the effects will remain unchanged as those reported above in the assessment of likely effects.

9 Cultural Heritage and Archaeology

9.1 Introduction

9.1.1 **ES Chapter 8: Cultural Heritage and Archaeology [APP/6.2]** presents the findings of the EIA with regard to effects on Cultural Heritage and Archaeology resulting from the Scheme.

Survey Work

9.1.2 The Site has been subject to baseline surveys and assessments that include:

- **Appendix 8.2: Stage 1 and Stage 2 Setting Assessment [APP/6.4]**
- **Appendix 8.3: Archaeological Desk-Based Assessment [APP/6.4]**
- **Appendix 8.4: Geophysical Survey Report [APP/6.4]**
- **Appendix 8.5: Air Photo Services Report [APP/6.4]; and**
- **Appendix 8.6: Archaeological Interim Report [APP/6.4].**

Study Area

9.1.3 There is no specific radius for the assessment of effects resulting from a proposed development on the historic environment; therefore, professional judgement has been used to identify appropriate Study Areas. Accordingly, the Cultural Heritage Study Area extends to 5km from the Site for higher grade heritage assets (i.e. World Heritage Sites, Scheduled Monuments, Grade I and Grade II* listed buildings); 2km for remaining dsesignated heritage assets (i.e. Grade II listed buildings and Conservation Areas); and 1km for non-designated heritage assets and Historic Environment Record (HER) entries.

9.1.4 A geophysical survey of the Site, undertaken in Autumn 2024, identified a number of anomalies that may be representative of Prehistoric, Bronze Age, Iron Age and/or Roman activity. No anomalies of clearly medieval origin were identified by the geophysical survey and there is no evidence to suggest that the Site contains any particularly intensive activity during this period.

9.1.5 A programme of archaeological trial trenching was undertaken in Summer 2025. The evaluation comprised the excavation of 109 trenches, designed to target anomalies identified by the geophysical survey. Archaeological remains were identified in 73 of the trenches, dating between the prehistoric and Romano-British periods.

Scenarios A and B

9.1.6 As part of the Scheme, the Applicant is required to establish a connection to the National Grid Substation. This can be achieved through a minimum of one overhead transmission circuit. The Applicant has proactively assessed and included the option to divert and connect both existing transmission lines, enabling either a single or double turn-in to the substation.

9.1.7 For the purposes of the Heritage assessment, two scenarios have been defined to allow an appropriate worst-case to be considered in the event that part of the existing 400kV overhead line cannot be decommissioned following the installation of the Grid Connection Infrastructure.

9.1.8 The worst-case scenario therefore comprises the installation of new pylons and overhead lines, and the retention in situ of part of the existing overhead line and associated pylons; this has been assessed as Scenario A.

9.1.9 The Applicant's preferred solution is the double turn in option which would allow for the decommissioning and removal of the existing section of overhead line (Scenario B), thereby reducing long term visual and heritage impacts on the local area.

9.1.10 For completeness, an assessment has been presented in this chapter which covers the removal of the decommissioned pylons and overhead line (Scenario B). The ultimate conclusions, though, are as assessed from Scenario A, as the worst-case assessment.

9.1.11 Further details of the ongoing engagement and flexibility required under the DCO Application are set out in **ES Chapter 5: The Scheme [APP/6.1]** and within the **Grid Connection Statement [APP/7.1].**

9.2 Mitigation Measures

Construction Phase

9.2.1 The following embedded mitigation measures have been incorporated into the Scheme design for the construction phase:

- Where possible, transportation routes will avoid additional traffic movements past sensitive heritage assets
- The landscape strategy will include the gapping up and reinforcing of historic hedgerows, as well as the use of planting to provide screening from heritage assets
- The locations of temporary construction compounds have been selected to avoid areas of known archaeological remains and to be unobtrusive to the settings of the heritage assets
- The locations of permanent above-ground assets have been selected to reduce/remove impact on heritage assets from construction works to the north; and
- There may also be the overgrounding of cable runs in areas known to contain significant archaeological remains.

9.2.2 All embedded mitigation relating to construction phase activities have been detailed within the oCEMP **[APP/7.6]**.

Operational Phase

9.2.3 The following embedded mitigation measures have been incorporated into the Scheme design for the operational phase:

- The landscape strategy will include the gapping up and reinforcing of historic hedgerows, as well as the use of planting to provide screening from heritage assets; and
- The locations of permanent above-ground assets have been selected to reduce/remove impact on heritage assets from construction works to the north.

9.2.4 Specific embedded mitigation measures during the operational phase should be maintained in line with the oOEMP **[APP/7.8].**

Decommissioning Phase

9.2.5 The following embedded mitigation measures have been incorporated into the Scheme design for the decommissioning phase:

- No vehicle or plant movements that could impact the archaeological horizon will take place in areas with archaeological assets
- A Decommissioning Strategy will be agreed with the relevant Archaeological Advisor prior to decommissioning taking place; this will include further measures for safeguarding archaeological remains during the decommissioning phase

9.2.6 Best practice embedded mitigation measures for the decommissioning phase, including those outlined by Historic England, will be included in the oDS **[APP/7.10].**

9.3 Assessment of Likely Significant Effects

Construction Phase

9.3.1 Archaeological remains have been identified that would be either substantially or wholly truncated by below-ground impacts required for the construction of the Customer Substation, National Grid Substation and BESS. This would be a high magnitude of impact to archaeological remains of low sensitivity which, prior to additional mitigation measures being put in place, results in a Moderate adverse effect, which is **significant** in EIA terms.

9.3.2 **No significant effects** are anticipated from piling for the PV panel mounting structures, excavations for cabling and other below-ground elements of the Scheme, and direct/indirect impacts on designated or non-designated heritage assets.

Operational Phase

9.3.3 Archaeological remains will be subject to a low beneficial magnitude of impact during the operational phase, resulting in a minor beneficial effect that is **not significant** in EIA terms.

9.3.4 Prior to additional mitigation, Scenario A would result in a low/negligible magnitude impact to a high sensitivity receptor resulting in a Minor Adverse effect which is **not significant** in EIA terms. Prior to additional mitigation, Scenario B would result in negligible magnitude impact to a high sensitivity receptor resulting in a Neutral effect, which is **not significant** in EIA terms. Indirect effects to all other designated and non-designated heritage assets are expected to be **not significant** under both of the scenarios detailed above.

Decommissioning Phase

9.3.5 **No significant effects** on archaeology and cultural heritage are anticipated as a result of the decommissioning phase.

9.4 Additional Mitigation

Additional Construction Phase Mitigation Measures

9.4.1 As the precise layout of the new assets is not yet available, the precise details of additional mitigation cannot yet be determined. It can, however, be said that the mitigation will take the form of one or more of the following methods:

- Further geophysical survey, targeting areas that are not presently available for survey
- Informative trenching in areas of the Site not subject to previous trenching
- Potential geoarchaeological assessment, as agreed with NHES
- Full archaeological excavation of certain areas of the Site
- Archaeological monitoring (a 'watching brief') in certain areas; and/or
- Preservation in situ of significant archaeological remains in certain areas.

Additional Operational Phase Mitigation Measures

9.4.2 Under Scenario A, which is the worst-case assessment of heritage impacts, the combined effect of both existing and new pylons will increase their prominence in the landscape from certain aspects of Castle Acre Castle, Castle Acre Priory and St George's Church. This will result in Minor effects (**not significant**) to all three designated heritage assets through changes to their settings and the impact on the ability to experience their significance. There is no further mitigation possible under this scenario to reduce this effect, and therefore, there would be a Minor residual effect, which is **not significant**.

9.4.3 Under Scenario B, due to the decommissioning of the existing overhead line, there are no significant effects identified for any receptors during the operational phase once embedded mitigation is taken into account. As such, under this scenario, no additional mitigation would be required.

Additional Decommissioning Phase Mitigation Measures

9.4.4 No significant effects have been identified for any receptors during the decommissioning phase, and therefore no additional mitigation measures are required.

9.5 Residual Effects

Construction Phase

9.5.1 Following implementation of the additional mitigation strategy detailed above, the residual effect on archaeological remains is neutral, which is **not significant**. During the construction phase, there are also **no significant effects** anticipated with regard to designated heritage assets.

Operational Phase

9.5.2 There are **no significant effects** anticipated with regard to designated heritage assets during the operational phase.

9.5.3 Prior to additional mitigation, there will be a low impact resulting in a minor beneficial effect on archaeological remains during the operational phase of the scheme through their removal from agricultural regimes (i.e. ploughing). This scale of effect remains unchanged following additional mitigation.

Decommissioning Phase

9.5.4 The residual effect on designated heritage assets during the decommissioning phase is neutral, which is considered **not significant** in EIA terms.

9.5.5 There will be no residual effects on non-designated heritage assets and archaeological remains during the decommissioning phase.

10 Transport and Access

10.1 Introduction

10.1.1 **ES Chapter 9: Transport and Access [APP/6.2]** presents the findings of the EIA with regard to effects resulting from the Scheme on transport and access.

10.2 Study Area and Surveys

10.2.1 The sources of information reviewed in preparation of this chapter are: topographical survey and Ordnance Survey (OS) mapping; site visits; Automatic Traffic Counter (ATC) surveys; and personal injury accident data.

10.2.2 The Study Area is defined as the routes from the Strategic Road Network (SRN) via the Local Road Network (LRN) required to facilitate traffic movements associated with the construction, operational and decommissioning phases of the Scheme, as well as any improvements or changes required to facilitate traffic access. The overall Study Area includes a total of 16 links.

10.2.3 **ES Chapter 9: Transport and Access [APP/6.2]** assesses the potential likely significant environmental effects of the Scheme during the construction and decommissioning Phases. Both motorised users and non-motorised users (NMU) are considered.

10.2.4 The effect of the decommissioning phase is anticipated to be equivalent to or less than the construction phase as decommissioning activities will utilise the same access points and routes as construction, but will generally require fewer vehicle movements since access tracks will already be in place and less specialist equipment will be needed for dismantling compared to construction and installation. Equipment can also be compressed or consolidated during the decommissioning phase as there is less of a need to coordinate the supply chain and logistics when compared to during the construction phase. Therefore, it is considered that the construction phase assessment represents a robust, reasonable worst-case scenario for the decommissioning phase as well, as the construction phase assessment provides an appropriate upper limit for potential traffic impacts.

10.2.5 The effects to be assessed during the construction and decommissioning phases are as required by the Institute of Environmental Management and Assessment (IEMA) Environmental Assessment of Traffic and Movement (EATM) Guidance, 2023, produced by IEMA, now known as the Institute of Sustainable and Environmental Professionals (ISEP) (hereafter referred to as the 'IEMA EATM Guidance'), which are as follows:

- Severance
- Driver Delay
- Pedestrian Delay

- Non-motorised User Amenity
- Fear and Intimidation; and
- Road Safety.

10.2.6 In accordance with the IEMA EATM Guidance, the following sensitive receptors are considered within the preliminary assessment:

- Non-Motorised Users
- PRoW users
- Motorists and freight vehicles
- Public transport users; and
- Emergency services.

10.2.7 The majority of the equipment required to construct, operate, maintain and decommission the Scheme is likely to be imported into the UK from abroad and as such will most likely arrive at an appropriately located port. Although the details of exactly where the equipment will arrive are not yet known, it is assumed that it will be transported from the relevant port via the SRN to the Site. On that basis, an initial feasibility exercise has been undertaken to determine potential access routes along the LRN to the Site from the SRN.

10.2.8 To access the Site from the SRN, three routes have been identified as follows:

- Route A: Access to/from the south from the A47, via the A1065
- Route B: Access to/from the north via A1065; and
- Route C: Access to/from the A47, from the west via Narford Road, Low Road, South Acre Road and A1065.

10.2.9 The proposed access routes to the Scheme from the SRN alongside the constraints on the LRN are shown in **ES Figure 9.1: Vehicle Routing and Constraints [APP/6.3]**.

10.2.10 Due to the rural nature of the Study Area, there is a limited provision of footways alongside the carriageways of the roads within the Study Area. There is no footway along the A1065 where it passes along the Site's eastern boundary.

10.2.11 There are no designated sections of the National Cycle Network within the Study Area, though there are some recreational cycle routes that include:

- The Peddars Way: A 46-mile route from Knettishall Heath, Suffolk to Holme-Next-The-Sea, Norfolk. It follows an ancient Roman road and is largely cyclable; and
- The Rebellion Way: A 232-mile cycling adventure around Norfolk, utilising quiet back roads, byways, cycle paths and bridleways.

10.2.12 There are a number of Public Right of Ways (PRoW) that pass alongside the boundaries between the fields that make up the Site.

10.3 Mitigation Measures

Construction Phase

10.3.1 The following embedded mitigation measures have been incorporated into the Scheme design for the construction phase:

- Construction Access Routes: the routes to the Scheme have been identified through a review of the LRN to identify suitable locations in highway safety terms, including being sufficient to accommodate HGVs and the provision of appropriate visibility splays. The routes to the Scheme will be secured by way of a requirement in the DCO through the **oCTMP [APP/7.7]**
- Compound Location and Consolidation: the use of internal Construction Compounds for the Scheme where deliveries can be made from the SRN, directly from the A1065, is proposed. From the compounds, deliveries will be distributed out via smaller, local vehicles to the area of works where possible. The strategy for consolidation is detailed in the **oCTMP [APP/7.7]** and will be secured by way of a requirement in the DCO
- Internal routing: internal access routes will be provided within the Site to minimise vehicles needing to use the LRN where possible
- Highway improvements within the Site: permanent improvements will be made to assist with the movement of vehicles within the Site, as outlined within the supporting **ES Appendix 9.2: Traffic Assessment [APP/6.4].** These improvements will be secured through the **Access and Right of Way Plan [APP/2.5];** and
- Staff Shuttle: the Scheme will seek to employ the use of a shuttle bus service for staff. Further details of the shuttle bus service will be secured via the Travel Plan (embedded in the **oCTMP [APP/7.7]**).

10.3.2 In addition, the following outline management plans have been prepared in support of the DCO Application alongside the ES in relation to the construction phase of the scheme:

- **oCTMP [APP/7.7]** sets out the management and mitigation strategy for construction traffic
- Outline Travel Plan: sets out the strategy for reducing the vehicular impact of construction staff trips on the highway network, as embedded in the **oCTMP [APP/7.7];** and
- **Outline Public Right of Way and Permissive Path Management Plan** (oPROWPPMP) **[APP/7.12]** places a focus on wider environmental management and mitigation measures during the construction phase.

Operation Phase

10.3.3 The following embedded mitigation measures have been incorporated into the Scheme design for the operation phase:

- **Outline Operation Traffic Management Plan (oOTMP) [APP/7.9]**: identifies the measures to be implemented during the Operation Phase to mitigate the effects associated with vehicles linked to replacement activities for the replacement of panels and infrastructure. The OTMP will be prepared in accordance with the **oOTMP [APP/7.9]** which accompanies the DCO Application, and will be secured via a requirement in the DCO
- **oPROWPPMP [APP/7.12]**: details the measures to be implemented during the operational phase to mitigate the impacts to PRoW users during the operational, maintenance and replacement activities associated with the Scheme. The detailed PRoWPPMP will be prepared in accordance with the **oPRoWPPMP [APP/7.12]**, which supports the DCO Application, and will be secured via a requirement in the DCO
- **Outline Operational Environmental Management Plan (oOEMP) [APP/7.8]**: places a focus on the maintenance aspects of the Scheme, including the ongoing maintenance and replacement of components during the lifespan of the Scheme. A detailed OEMP will be secured via a requirement in the DCO.

Decommissioning Phase

10.3.4 The following embedded mitigation measures have been incorporated into the Scheme design for the decommissioning phase:

- Decommissioning Traffic Management Plan (DTMP): focuses on the traffic impacts and traffic management measures to be associated with the decommissioning phase. The DTMP will be secured as part of the DS; and
- **Outline Decommissioning Strategy (oDS) [APP/7.10]**: in advance of the DS being prepared and in order to set out the principles for the mitigation and management of the decommissioning phase, an **oDS [APP/7.10]** is submitted with the DCO Application.

10.4 Assessment of Likely Significant Effects

10.4.1 This section describes the likely significant environmental effects of the Scheme on transport and access during the construction and decommissioning phases of the Scheme. Likely effects related to transport and access during the construction phase of the Scheme represent the worst-case scenario for the decommissioning phase.

10.4.2 **ES Chapter 9: Transport and Access, Table 9-8 [APP/6.3]** sets out the percentage increase of construction traffic associated with the Scheme across all links within the Study Area in the future baseline year of 2031, as the anticipated year of peak construction.

10.4.3 Overall, the effect on severance, driver delay, pedestrian delay, NMU amenity, fear and intimidation, road safety during the construction and decommissioning phases are considered **not significant,** in EIA terms.

10.5 Additional Mitigation

10.5.1 As **no significant effects** have been identified above for receptors during any phase of the Scheme once embedded mitigation is taken into account, no additional mitigation measures for the Scheme are required (and are therefore not proposed).

10.6 Residual Effects

10.6.1 In the absence of any additional mitigation, the residual effects are the same as the effects presented above – i.e. there are no likely significant effects.

11 Noise and Vibration

11.1 Introduction

11.1.1 **ES Chapter 10: Noise and Vibration [APP/6.2]** presents the findings of the EIA with regard to effects resulting from the Scheme in relation to Noise and Vibration.

11.2 Study Area and Surveys

11.2.1 The following sources of information were reviewed in the preparation of **ES Chapter 10: Noise and Vibration [APP/6.2]**: OS data and satellite imagery, used to identify Noise-Sensitive Receptors (NSR); a noise survey, used to establish the acoustic environment of the area **(ES Appendix 10.2 [APP/6.4])**; construction and noise modelling (ES Appendix 10.3 **[APP/6.4]**); and NTS Figure 2.1 Concept Masterplan appended to the NTS, used to inform indicative zones and locations for noise emitting plant.

11.2.2 The Noise and Vibration assessment considers NSR, such as residential receptors and PRoW, in the vicinity of the Site, and considers effects along the construction and operational traffic routes.

11.2.3 The assessment focuses on the nearest residential receptors surrounding the Site, with the understanding that, where effects are managed to acceptable levels at these closest high-sensitive receptors, then effects will also be acceptable at further away receptors. The Study Area for Noise and Vibration effects is therefore 1km from the Order limits and focuses on the effects at the nearest NSR with the understanding that these are key receptors for the assessment of effects and the level of effects on NSR at further distances would be lower.

11.2.4 The baseline noise environment, as established during the Baseline Noise Survey undertaken in November 2024, was observed to be varied but typical of the rural location of the Site, with a range of natural noise sources and a varying influence of road traffic from the A47 to the south and A1065 to the east of the Site. Residential properties located to the north of the Site near the village of South Acre and other residential properties located around the Site experienced reduced levels of traffic noise.

11.2.5 Traffic noise, in particular from the A47, also represents a notable influence in the area, which can be dominant for properties located in proximity to the A47 and to some extent the A1065, while more distant or minimal for other properties located further away.

11.2.6 It is considered noise from agricultural activities will also represent a contribution at times given the nature of the area, although this may be for limited periods particularly during evening and night-time periods.

11.3 Mitigation Measures

Construction Phase

11.3.1 The following embedded mitigation measures have been incorporated into the Scheme design for the Construction phase:

- Activities that may give rise to audible noise at the surrounding properties and heavy goods vehicle deliveries to the Site would be limited to the hours 07:00 to 18:00 Monday to Friday and Saturday 08:00 to 13:30 unless otherwise approved in advance by BC (except in case of an emergency)
- The embedded mitigation contained in the **oCEMP [APP/7.6]** includes a commitment to liaise directly with local residents and the wider community (e.g. notifying them when particular noisy activities will occur and their duration)
- The Site contractors shall be required to employ the Best Practicable Means (BPM) of reducing noise emissions from plant, machinery, and construction activities; and
- Users of the PRoW will be informed of any percussive piling or earthworks construction activities planned as part of the reporting of information to local residents.

11.3.2 The above measures will be included within the **oCEMP [APP/7.6]** which has been submitted with this DCO Application. The final measures and management plan for noise will be included as part of the detailed CEMP and is secured through a requirement of the DCO.

11.3.3 An **oCTMP [APP/7.7]** is included as part of this DCO Application, and a detailed CTMP is secured by a requirement for the DCO to control the movement of vehicles, access routes, hours of movement, and types of vehicles to and from the Site.

11.3.4 The mitigation and management measures above are detailed within the respective outline management plans, submitted with this DCO Application. The detailed management plans are secured by requirement of the DCO and would be produced in accordance with the mitigation/management measures detailed in the outline management plans.

Operational Phase

11.3.5 The following embedded mitigation measures have been incorporated into the Scheme design for the operational phase:

- Placement of National Grid Substation, Customer Substation, and BESS has been selected to maximise separation distances to residential receptors as far as reasonably possible
- Acoustic barrier of 3.5m height is proposed between the BESS and the PRoW
- Minimum separation distance of 15m between Conversion Units in the Solar PV Site and the PRoW has been incorporated; and

- Minimum separation distance of 250m between Conversion Units in the Solar PV Site and residential receptors have been incorporated.

11.3.6 An **oOEMP [APP/7.8]** is submitted with this DCO Application which includes measures to monitor and maintain the equipment, including noise production, and a complaints procedure for members of the public to report noise disturbance at residential properties, as well as the embedded mitigation measures above and additional measures presented in Section 10.5. The production of a detailed OEMP, in accordance with the **oOEMP [APP/7.8]**, is secured by a requirement of the DCO.

11.3.7 Maintenance during the operational phase, including ad-hoc replacements of defective PV panels, will be carried out on a small scale typically by using light service vehicles (e.g., 4x4 or Panel Vans); therefore, a negligible increase in HGV movements is expected for maintenance visits. Programmed replacements and upgrades of PV panels or BESS components will also be phased. These measures are outlined in the **oOTMP [APP/7.8]** submitted with this DCO Application. The **oOTMP [APP/7.8]** forms the basis of the detailed OTMP which is secured through a requirement of the DCO.

Decommissioning Phase

11.3.8 The following embedded mitigation measures have been incorporated into the Scheme design for the decommissioning phase:

- Activities that may give rise to audible noise at the surrounding properties and heavy goods vehicle deliveries to the Site would be limited to the hours 07:00 to 18:00 Monday to Friday and Saturday 08:00 to 13:30 unless otherwise approved in advance by BC (except in case of an emergency)
- The embedded mitigation contained in the DS will include the commitment to liaise directly with local residents and the wider community (e.g., notifying them when particular noisy activities will occur and their duration)
- The Site contractors shall be required to employ the BPM of reducing noise emissions from plant, machinery, and construction activities; and
- The National Grid Substation and Grid Infrastructure such as the Overhead Lines will remain in situ upon decommissioning and will not be decommissioned under the DS.

11.3.9 The above embedded measures and additional measures will be applied during the decommissioning phase and have been included in the **oDS [APP/7.10]** which is submitted as part of this DCO Application.

11.4 Assessment of Likely Significant Effects

Construction Phase – Noise

Residential Receptors

11.4.1 Almost all receptors are at large distances to the respective components and Site boundary such that they are not expected to be exposed to sound levels above medium magnitude effect from construction activities, with two exceptions

- Noise from road upgrading work of the A47-to-A1065 slip roads at 'The Splashes' receptors (cluster of residential properties). Due to the very short-duration of works, and given that with prior notice residents are generally tolerant of road work noise, effects are considered **not significant**; and
- Noise from PV panel piling works occurring approximately 85m from Keepers Cottage, during piling at the closest point which represents a medium magnitude of impact. Although the work undertaken at the closest point would last for a period of less than one month and then move away, therefore potentially reducing the magnitude of impact, due to the impulsive nature of the piling and the layout of the PV Site, it is considered on balance that this would represent a **significant** effect.

11.4.2 Specific construction activities associated with cable laying works (e.g. HDD or other trenchless techniques) could be required outside of the assumed daytime construction hours (i.e. evenings, Sundays, Bank Holidays or at night), as the drilling work may need to continue through the night in order for a continuous operation to be completed. If HDD works did continue over the night-time period, in the absence of additional mitigation, the adverse effect at Keepers Cottage would be considered **significant,** in EIA terms. The effects experienced by all other residential receptors under these circumstances would be considered **not significant**.

PRoW

11.4.3 Noise effects on PRoW receptors are expected to be **not significant**.

Construction Phase – Vibration

Residential Receptors

11.4.4 Without additional mitigation, the effect on 'The Splashes' (cluster of residential properties) from the construction of the Access Tracks/upgrading of roads would be **significant,** in EIA terms.

11.4.5 Effects resulting from percussive piling and ground compaction associated with construction of the Solar PV site, as well as from HDD works, are expected to be **not significant**.

PRoW

11.4.6 Vibration effects on PRoW receptors are expected to be **not significant**.

Construction Traffic Effects

11.4.7 Effects resulting from construction traffic are expected to be **not significant**.

Operational Phase – Noise

Residential Receptors

11.4.8 Operational noise from mechanical and electrical equipment within the Scheme would result in an effect at Keepers Cottage that is considered **significant,** in EIA terms.

11.4.9 At all other residential receptors, effects from operational noise are considered **not significant**.

PRoW

11.4.10 Noise effects on PRoW are expected to be **not significant**.

Operational Traffic

11.4.11 Effects from operational traffic are expected to be **not significant**.

Decommissioning Phase

Residential Receptors

11.4.12 Without additional mitigation, the decommissioning phase impact on Keepers Cottage would constitute a **significant** effect, in EIA terms.

11.4.13 For all other residential receptors, effects are expected to be **not significant**.

PRoW

11.4.14 Noise effects on PRoW are expected to be **not significant**.

Decommissioning Traffic

11.4.15 Effects from decommissioning traffic are expected to be **not significant**.

11.5 Additional Mitigation

Additional Construction Phase Mitigation

11.5.1 The following additional mitigation measures have been incorporated into the Scheme design for the construction phase:

- Trenchless works that are likely to result in significant noise effects at nearby residential receptors will be restricted to daytime working hours on weekdays, and they will be completed in the shortest practical timescale. Local residents shall be notified in advance of any night-time construction activities likely to generate significant noise levels
- Further mitigation measures, as detailed in the **oCEMP [APP/7.6]**, will be considered and employed as necessary with regard to residential properties located within 300m of trenchless work areas that could experience significant night-time noise levels
- Where percussive piling is undertaken for the foundations of the PV Arrays within 400m of sensitive receptors, this should be restricted to no more than two periods of four hours each with at least one hour of no piling between these four-hour periods and restricted to the hours of 07:00 to 18:00 Monday to Friday and 08:00 to 13:30 on Saturdays. In addition, piling works within 130m of Keepers Cottage will be further controlled through use of quieter piling techniques, and, if possible, use of localised screening or a combination of these measures; and
- Prior notice to the residents on the time and duration of the construction vibratory works on the Highway slip roads should be provided.

11.5.2 The above additional mitigation measures are proposed for inclusion within the **oCEMP [APP/7.6]** and will be refined once areas of construction activity are finalised. These measures will then be fully implemented through the detailed CEMP which is secured by a requirement of the DCO.

Additional Operational Phase Mitigation

11.5.3 Additional mitigation for the operation phase involves finalising the design of the Scheme, plant selection, and/or the use of additional screening/enclosures in order to limit noise levels at residential receptors such as Keepers Cottage.

11.5.4 This noise limit will be secured through a requirement of the DCO. The design and management of plant noise, as well as monitoring measures, is outlined in the **oOEMP [APP/7.8]** and would be secured in the detailed OEMP.

Additional Decommissioning Phase Mitigation Measures

11.5.5 As the decommissioning phase will result in similar effects to the construction phase, similar additional mitigation measures to those outlined for construction activities can be employed for the decommissioning phase where relevant. These measures have been detailed in the **oDS [APP/7.10]**, which will serve as the framework for the detailed DS which is secured by a requirement of the DCO.

11.6 Residual Effects

11.6.1 Following implementation of the additional mitigation measures proposed above, residual effects on all receptors are expected to be **not significant,** in EIA terms.

12 Soils and Agriculture

12.1 Introduction

12.1.1 **ES Chapter 11: Soils and Agriculture [APP/6.2]** presents the findings of the EIA with regard to effects resulting from the Scheme in relation to Soils and Agriculture.

12.2 Study Area and Surveys

12.2.1 The following aspects have been considered within the Soils and Agriculture assessment process: an assessment of potential effects upon agricultural land and agricultural land quality, as measured under the system of Agricultural Land Classification (ALC); an assessment of potential effects upon soils; an assessment of the potential effects on local agricultural businesses; an assessment of potential wider effects on food production and the wider rural economy.

12.2.2 The Study Area for most of this assessment is limited to the Order limits, as there would be no impact on land use or soils beyond this extent. Farm information collected has covered wider areas farmed beyond the boundary of the Order limits by the businesses farming the Site to inform the assessment of farm business impacts; however, those areas do not need to be identified on any plans. Wider impacts on food production and for the cumulative assessment includes regional and national considerations.

12.2.3 ALC is the standard method for classifying agricultural land in England and Wales based on the type and level of agricultural production it can potentially support. The best quality agricultural land (Grades 1, 2 and 3a) is known as Best and Most Versatile (BMV) and is given a greater level of protection in planning policy than lower quality, non-BMV land (Grades 3b, 4 and 5).

12.2.4 An **ALC Survey (ES Appendix 11.2 [AP/6.4])** has been carried out by the Applicant. The surveyed area extends to 775.4 hectares; this largely covers the Solar PV Site (as shown on NTS Figure 2.1 Concept Masterplan appended to the NTS). This covers all land within the Order limits with the exception of small parts of Work No. 5 (Grid Connection Infrastructure) which are areas which accommodate the pulling zones for the equipment, or temporary areas for access during construction, and hence no impacts are anticipated on soils.

12.2.5 The ALC survey identified a large range in the ALC types found across the Site, from two modest areas of Grade 1 to areas of Grade 4. The ALC survey results show that, in broad terms, the eastern and western areas of the Site are generally moderate or poor-quality land, and the central part, where the soils are more loamy and hold more water, are generally good or very good quality.

12.3 Mitigation Measures

Embedded Construction Phase Mitigation

12.3.1 The following embedded mitigation measures have been incorporated into the Scheme design for the construction phase:

- Minimising or avoiding vehicle movement over soils (trafficking) when soils are in a plastic, wet state
- Only moving soils when they are dry
- For the small volumes of soils that need to be stored for subsequent restoration, placing them into storage bunds when they are dry, and managing and maintaining the bunds; and
- Minimising trench widths, replacing soils in the reverse order, and preventing any adverse long-term effects on land quality.

12.3.2 As part of the Soils and Agriculture Assessment, an **outline Soil Management Plan (oSMP) [APP/7.13]** has been developed to guide good practice and minimise potential effects of soils and agricultural land quality. This has been submitted with the DCO Application and forms the basis for a detailed SMP which is secured by a requirement of the DCO.

Embedded Operation Phase Mitigation

12.3.3 During the operation phase, embedded mitigation constitutes minimising travel over the land in vehicles when ground conditions are wet. Good practice measures are outlined within the **oSMP [APP/7.13]**.

Embedded Decommissioning Phase Mitigation

12.3.4 During the decommissioning phase, embedded mitigation constitutes following the same principles as those applied to the construction phase.

12.4 Assessment of Likely Significant Effects

Construction Phase – Effects on Agricultural Land Quality

12.4.1 Assessed individually, the adverse effects on agricultural land quality resulting from the temporary construction compounds; Access Tracks; Ground Mounted PV Modules; vehicle trafficking; cabling; Customer Substation, National Grid Substation, and Ancillary Buildings and BESS; and Green Infrastructure are considered to be **not significant,** in EIA terms. However, taken collectively the amount of BMV disturbed amounts to 25.1ha on a worst-case scenario; if the impacts were permanent, this would constitute a **significant effect**.

12.4.2 Under a reasonable worst-case scenario in which the Access Tracks and all of Field 27 are not restored on decommissioning, this would result in the permanent loss of 22.7ha of BMV. This would constitute a **significant effect,** in EIA terms.

12.4.3 The likely scenario is that all but the National Grid Substation will be restored to the original ALC grade on decommissioning, which would reduce the permanent loss to 4.5ha of BMV. This effect is considered **not significant,** in EIA terms.

Construction Phase – Effects on Soils

12.4.4 Effects on soils are expected to be **not significant**.

Construction Phase – Effects on Agricultural Businesses

12.4.5 Effects on agricultural businesses are expected to be **not significant**.

Operational Phase

12.4.6 Effects on agricultural land quality, soils, agricultural businesses, BMV and food production on a regional scale, and the economic and other effects of the use of BMV land during the operational phase are expected to be **not significant**.

Decommissioning Phase

12.4.7 Effects on agricultural land quality, soils, and farm businesses during the decommissioning phase are expected to be **not significant**.

12.5 Additional Mitigation

12.5.1 No further mitigation measures have been incorporated into the Scheme design for the construction phase, operational phase, or decommissioning phase.

12.6 Residual Effects

12.6.1 The temporary loss of BMV during the construction phase could exceed 20ha, and there will also be a permanent loss of 4.5ha for the National Grid Substation. However, it should be noted that the temporary loss of BMV will only be experienced during the operational phase, and this land will be returned to the landowner upon decommissioning. Consequently, these impacts are considered to be of low magnitude and therefore are **not significant**, in EIA terms.

12.6.2 There are no further significant effects anticipated either during the construction phase or during the operational and decommissioning phases.

13 Water Resources

13.1 Introduction

13.1.1 **ES Chapter 12: Water Resources [APP/6.2]** presents the findings of the EIA with regard to effects on Water Resources resulting from the Scheme.

13.2 Study Area and Surveys

13.2.1 A variety of online resources have been consulted in the preparation of this chapter, as well as the results of a topographical survey undertaken in 2024.

13.2.2 The Order limits form the Core Study Area (CSA), and a further 1km Study Area is applied to assess private water supplies (PWS) and public water supplies (PuWS) abstractions. This 1km Study Area has been termed the Water Supplies Study Area (WSSA). Furthermore, baseline data has been used to assess potential effects of the Scheme on hydrological and hydrogeological resources within a 5km Wider Study Area (WSA) of the Site.

13.2.3 The Environment Agency's Flood Map for Planning shows that the built aspects of the Scheme are entirely within Flood Zone 1, which has a very low risk of flooding. Only a small section of the mitigation area (approximately 1.1ha) for Skylark is located in Flood Zones 2 and 3 (medium risk and high risk, respectively).

13.2.4 There are no natural watercourses within the Site. Agricultural ditches on-Site have presented as persistently dry. There are understood to be several marl pits (clay removed for agricultural fertiliser) throughout the Site, none of which are active and are generally filled with standing water.

13.2.5 The EA Surface Water Flood Map shows that the modelled surface water flooding extent for the 1% AEP event is largely absent across the entire Site with the exception of a small area in the north which is confined to a topographical depression and an area in proximity to Fincham Drove.

13.3 Mitigation Measures

Construction Phase

13.3.1 Embedded mitigation measures that have been incorporated into the Scheme's design for the construction phase include:

- 10m watercourse edge buffers for all infrastructure works (i.e. Solar PV Site and Ancillary Infrastructure, Associated Development, and construction compounds) with the exception of watercourse crossings for cables and Access Tracks
- 10m buffer of IDB maintained watercourses and marl pits

- Appropriate buffer of redundant MOD pipeline
- The Scheme will utilise existing access roads and agricultural tracks already in place where practicable, and this will help to minimise ground disturbance and requirements for further watercourse crossings; and
- Watercourse crossings will take one of several forms depending on the nature of works, habitat sensitivity, and other environmental and technical design considerations. Trenchless crossings (HDD) will be the default option for watercourse crossings as this is the least invasive and most sensitive method, although this may not be suitable or necessary in some locations.

13.3.2 The **oCEMP [APP/7.6]** describes water management measures to control surface water runoff and drain hardstanding and other structures during the construction, operation and decommissioning of the Scheme. A Pollution Prevention Plan (PPP) will also form part of the CEMP.

Operational Phase

13.3.3 The following embedded mitigation measures have been incorporated into the Scheme design for the operational phase:

- The BESS, Customer Substation, and National Grid Substation will be served by a SuDS network; and
- Access Tracks will be served by trackside drainage ditches and will include check dams at regular intervals.

13.3.4 **ES Appendix 12.2: Flood Risk Assessment (FRA) [APP/6.4]** commits the Scheme to having dedicated contaminated water tanks with automated penstocks to prevent fire suppressant reaching the infiltration components of the SuDS network, in the rare event of a fire within Work No.s. 2, 3 or 4.

Decommissioning Phase

13.3.5 An **oDS [APP/7.10]** has been prepared and the DCO includes a requirement for a DS to be prepared in advance of the commencement of decommissioning works. The DS will ensure that decommissioning is undertaken safely and with regard to the environmental legislation at the time of decommissioning, including relevant waste legislation.

13.4 Assessment of Likely Significant Effects

13.4.1 Effects incurred during the construction phase, operational phase, and decommissioning phase on all receptors are expected to be **not significant**.

13.5 Additional Mitigation

13.5.1 As no significant effects have been identified above for receptors during any phase of the Scheme once embedded mitigation is taken into account, no additional mitigation measures for the Scheme are required.

13.6 Residual Effects

13.6.1 As there are no additional mitigation measures required, the effects will remain unchanged from those in Section 12.4 – i.e. there are no likely significant effects.

14 Climate Change

14.1 Introduction

14.1.1 **ES Chapter 13: Climate Change [APP/6.2]** presents the findings of the EIA with regard to effects on Climate Change resulting from the Scheme.

14.2 Baseline Conditions and Methodology

14.2.1 The climate change assessment considers three components: lifecycle greenhouse gas (GHG) impact assessment, in-combination climate change impact (ICCI) assessment and a climate change resilience (CCR) assessment.

GHG Assessment

14.2.2 The baseline comprises existing carbon stock and sources of GHG emissions within the Site from the existing activities on-Site. The baseline GHG emissions are dependent on the soil and vegetation types present and the fuel used for the operation of any plant and machinery on the Site. Taking a conservative approach, the baseline activities on site will be assumed to be generating zero emissions of CO2e. For the lifecycle GHG impact assessment, the baseline is a 'business as usual' scenario whereby the Scheme is not implemented.

14.2.3 The Scheme is expected to provide a substantial source of renewable electricity for the country. Compared to the emissions generated from the current grid as a UK average, the Scheme is anticipated to result in the generation of fewer GHG emissions. Consideration was given to the wider impacts of the Scheme including in the context of the carbon budget targets developed for the UK, and the Scheme's overall contribution to climate change.

ICCI Assessment

14.2.4 The scope of the ICCI assessment methodology, developed in line with best practice guidance, identifies how receptors in the surrounding environment are affected by the Scheme in combination with future climate change conditions. Climate change impacts relevant to the Scheme have been assessed through the other relevant topics of the ES, namely **ES Chapter 12: Water Resources [APP/6.2]**, **ES Chapter 7: Ecology and Biodiversity [APP/6.2]**, **ES Chapter 9: Transport and Access [APP/6.2]**, and **ES Chapter 11: Soils and Agriculture [APP/6.2]**.

CCR Assessment

14.2.5 The CCR Assessment provides a description of how the Scheme will be affected by climate change impacts, taking into consideration the embedded mitigation measures that have been designed into the Scheme so that it will be more resilient to the impacts identified during the review of the UK Climate Projections 2018 (UKCP18) data.

14.2.6 It is anticipated that the future baseline will be different from the current present-day baseline, due to changes in climate. For this assessment, UKCP18 probabilistic projections have been provided for 30-year periods from 2020-2099 and obtained for various climate variables which include annual and seasonal changes in climatic conditions over the land area of the Scheme.

14.2.7 The impact of climate change will be determined over the course of the Scheme's construction, operational and decommissioning phases, which is estimated to be 64 years for the purpose of the EIA.

14.3 Mitigation Measures

Construction Phase – GHG Impact

14.3.1 Embedded mitigation measures that have been incorporated into the Scheme's design for the construction phase include:

- Measures to reduce waste, including designing the Scheme in such a way as to minimise the creation of waste
- Measures to reduce vehicle emissions, including encouraging the use of lower carbon modes of transport, switching vehicles and plant off when not in use, and implementing a shuttle bus; and
- General good practice measures, including adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution (including GHGs), conducting regular planned maintenance and retaining existing vegetation as far as practicable.

Construction Phase – Climate Change Resilience

14.3.2 Climate change resilience measures are embedded within the Scheme, particularly in relation to flood risk. These measures include:

- Access will be taken from existing access points, where suitable
- The Scheme has been designed to locate the most electrically sensitive infrastructure outside of Flood Zones 2 and 3; and
- Crossings will be designed with bridges sitting above the design flood level.

14.3.3 The Scheme will adhere to a CEMP that will ensure compliance with the relevant guidance, as set out in the **oCEMP [APP/7.6]**.

Operational Phase

14.3.4 Specifically, the following embedded mitigation measures will be in place during the operational phase:

- Infrastructure within the Scheme (Conversion Units, Customer Substation and National Grid Substation, and BESS) have been sequentially located where possible to an area with a "Low probability of flooding"
- All sensitive and electrical equipment on the PV panel will be elevated by mounting structures (including the PV panel face itself)
- Using equipment's cooling systems where necessary/adapting working practices and equipment used based on current weather conditions; and
- BESS systems would include Heating Ventilation and Cooling (HVAC) systems and these would be contained within the individual equipment containers.

14.3.5 Further best practice measures, including protecting workers and resources from extreme weather conditions through appropriate Personal Protective Equipment (PPE) and working practices, will be secured through the OEMP, as set out in the **oOEMP [APP/7.8]**.

Decommissioning Phase

14.3.6 Similar measures to the construction phase will be developed prior to the decommissioning phase for the use of lower-carbon and more climate change resilient methods, as highlighted in the **oDS [APP/7.10]**.

14.3.7 Decommissioning is expected to occur in 2093. The requirements for decommissioning are subject to change as the environment beyond 2093 is likely to be considerably different to today. The future technological, regulatory, and environmental landscape beyond 2089 is difficult to predict with certainty, so maintaining flexibility in the decommissioning approach is prudent.

14.4 Assessment of Likely Significant Effects

14.4.1 The GHG assessment findings indicate that the Scheme will have a **significant beneficial** effect with regard to total GHG emissions.

14.4.2 The In-Combination Climate Change Impact Assessment concluded that impacts of the Scheme when accounting for climate change are considered to be effectively managed, mitigated, and **not significant**.

14.5 Additional Mitigation

14.5.1 The assessment of the Scheme's design and operational parameters demonstrates that the embedded measures are adequate. Specifically, the Scheme is expected to save GHG emissions compared to the grid in 2025, supporting the UK's transition to net zero emissions. Based on the conclusions of the assessment, no additional mitigation measures are required in terms of Climate Change.

14.6 Residual Effects

14.6.1 As there are no additional mitigation measures required, the effects will remain unchanged– i.e. there are no likely significant adverse effects.

15 Socio-economics

15.1 Introduction

15.1.1 **ES Chapter 14: Socio-economics [APP/6.2]** presents the findings of the EIA with regard to effects on Socio-economics resulting from the Scheme.

15.2 Baseline Conditions and Methodology

15.2.1 Existing baseline Socio-economic conditions have been established through the interpretation of nationally recognised research, data and survey information. The year 2025 or the most recent data period is presented to reflect the current baseline position. Furthermore, where information availability allows, a future baseline has been developed for socio-economic conditions, reflecting anticipated changes in population, employment, and economic context over time.

15.2.2 Study Areas of various sizes have been used as part of the assessment, dependent on the nature of the effect.

15.2.3 Within the Labour Catchment Area (LCA), approximately 9.7% of all employed residents work in the construction industry. This proportion is higher than the national average, but is broadly in line with the regional average. Alternatively, using workplace-based data, there are 36,600 individuals working in the construction industry within the LCA, equivalent to 6.0% of total workers. The stark differential between the resident-based and workplace-based analysis suggests that a significant number of construction workers who reside in the LCA commute out of the area for work. This finding is supported by origin destination data.

15.2.4 The Construction Industry Training Board (CITB) estimates that there will be a 0.8% yearly increase in the number of construction workers in the East of England between 2024 and 2028. Applying this figure to the LCA, it is estimated that the construction workforce will rise to 65,300 by 2028, a 4% increase from 2023. However, past construction employment growth across the LCA suggests that it may not be realistic to assume that it will match the East of England growth rates going forward.

15.2.5 The Scheme has the potential to require a significant workforce during the construction and decommissioning phases. The construction workforce is expected to include workers from outside the LCA. While some may commute, it is reasonable to assume that a portion will require temporary accommodation. Within the LCA, it has been calculated that there is a total of 9,600 available and affordable bed spaces (8,700 excluding campsites). Within Breckland, this figure is 2,500 available and affordable bed spaces (2,100 excluding campsites).

15.3 Mitigation Measures

Construction Phase

15.3.1 The following embedded mitigation measures have been incorporated into the Scheme's design for the construction phase:

- Construction works that create dust will be kept to a minimum within proximity to existing pedestrian routes and residential properties. Dust prevention measures, as detailed within the **oCEMP [APP/7.6]**, will be used to reduce the impact on users of the PRoW
- The existing landscape fabric within and around the boundaries of the Site, namely mature hedgerows and tree cover, will be retained as set out within the oLEMP **[APP/7.11]**
- Measures will be implemented to maximise local benefits from the Scheme with regard to employment and skills. These measures will be coordinated with BC and other local partners, as set out in the outline Employment, Skills and Supply Chain Strategy (oESSCS) **[APP/7.15].**

Operational Phase

15.3.2 The following embedded mitigation measures have been incorporated into the Scheme design for the operational phase:

- New hedgerow and tree planting will be used to mitigate potential views from the existing residential dwellings within proximity of the Site
- Recreational enhancements have been proposed, along with a number of new permissive routes that would link the existing PRoW with the Study Area
- Internal access routes will be provided within the Site to minimise vehicles needing to use the LRN where possible
- Initiatives to sustain long-term skills development and community benefits, such as site tours and educational outreach on solar energy, will be implemented.

15.3.3 Embedded mitigation measures incorporated during the operational phase will be secured within the oOEMP **[APP/7.8]**, with the exception of the initiatives to sustain skill development and community benefits, which will be set out in the oESSCS **[APP/7.15]**.

Decommissioning Phase

15.3.4 Decommissioning works that create dust will be kept to a minimum within proximity to existing pedestrian routes and residential properties, and dust prevention measures will be used to reduce the impact on users of the PRoW. These measures will be secured within the DS and are set out in the **oDS [APP/7.10]**.

15.4 Assessment of Likely Effects

Construction Phase

15.4.1 The effect on jobs, change in demand for temporary worker accommodation, land uses, and changes in commuting patterns is expected to be **not significant**.

15.4.2 The Scheme is considered to have a medium magnitude of impact in relation to education, skills and training for residents and businesses. On a high sensitivity receptor, this leads to a direct, temporary, major beneficial effect that is considered **significant** during the construction phase.

Operational Phase

15.4.3 The effect on land uses and changes in local tourism assets is considered to be **not significant**.

15.4.4 The Scheme is considered to have a low magnitude of impact in relation to education, skills and training for residents, workers and businesses. On a high sensitivity receptor, this leads to a direct, long-term, moderate beneficial effect that is considered **significant** during the operational phase of the Scheme.

Decommissioning Phase

15.4.5 All effects during the decommissioning phase are expected to be **not significant**.

15.5 Additional Mitigation

15.5.1 As no significant adverse effects have been identified above for receptors during any phase of the Scheme, once embedded mitigation is taken into account, no additional mitigation measures are required.

15.6 Residual Effects

15.6.1 As there are no additional mitigation measures required, the effects will remain unchanged from those in Section 14.4 – i.e. there are no likely significant adverse effects.

16 Human Health

16.1 Introduction

16.1.1 **ES Chapter 15: Human Health [APP/6.2]** presents the findings of the EIA with regard to effects on Human Health resulting from the Scheme.

16.2 Study Area and Surveys

16.2.1 The Human Health assessment is based on other technical assessments in the ES, including: **ES Chapter 6: Landscape and Visual [APP/6.2]; ES Chapter 10: Noise [APP/6.2]; ES Chapter 11: Soils and Agriculture [APP/6.2];** and **ES Chapter 14: Socio-economics [APP/6.2]**.

16.2.2 Existing baseline Health conditions have been established through the interpretation of nationally recognised research, data and survey information. The year 2025 or the most recent data period is presented to reflect the current baseline position. A future baseline has not been presented for this assessment due to the inherent uncertainty in forecasting future health outcomes and the lack of sufficiently reliable data to support a meaningful projection. As such, Human Health effects are assessed against the current baseline only.

16.2.3 Study Areas of various sizes have been used as part of the assessment, dependent on the nature of the effect.

16.2.4 Well-being is assessed in line with IEMA (now known as ISEP) guidance, which recognises that health is comprehensive, encompassing physical, mental, and social wellbeing. These outcomes are shaped by a wide range of wider determinants of health, from economic security and employment to housing, environment, and social networks, and it is the interaction of these determinants that should inform the assessment of population and Human Health. In practice, this means considering how each impact of the Scheme may influence well-being as well as physical health.

16.2.5 The life expectancy for Breckland residents is higher than the regional and national averages for both men and women. King's Lynn & West Norfolk residents, meanwhile, have a life expectancy that is above the national average but below the regional average for men and women. Across both assessed local authorities, a higher proportion of residents are classified as overweight or obese than the regional and national averages, and Breckland has a greater proportion of residents reporting that they have 'Poor' levels of happiness than all other comparator geographies.

16.2.6 Breckland and King's Lynn & West Norfolk share similar vulnerable group profiles, having an age profile that is skewed towards older residents, a high proportion of residents who are classified as disabled, and low prevalences of other vulnerable groups.

16.2.7 The unemployment rate in LCA remains below the regional and national averages for all age groups. Unemployment is linked to a range of negative mental health outcomes, including increased rates of anxiety and lower levels of life satisfaction.

16.2.8 Physical activity levels in Breckland are broadly consistent with regional and national averages, suggesting that the general population is not at elevated health risk from inactivity. While provision of open space is below Fields in Trust benchmarks, this is offset by a good network of PRoW which provides accessible opportunities for recreation and activity.

16.3 Embedded Mitigation

Construction Phase

16.3.1 The following embedded mitigation measures have been incorporated into the Scheme's design for the construction phase:

- As detailed within the **oCEMP [APP/7.6]** the implementation of visual screening for more sensitive visual receptors, and the minimisation of construction works that create dust in proximity to existing pedestrian routes and residential properties
- Internal access routes will be provided within the Site to minimise vehicles needing to use the Local Road Network (LRN) where possible, as set out within the **oCTMP [APP/7.7]**; and
- Measures designed to maximise local benefits from the scheme in respect of employment and skills will be implemented, including the creation of apprenticeship and trainee opportunities as well as targeted engagement with local education providers and STEM organisations.

Operational Phase

16.3.2 The following embedded mitigation measures have been incorporated into the Scheme's design for the operational phase:

- As detailed in the **oLEMP [APP/7.11]**, the majority of existing landscape features that contribute to local landscape character and serve to restrict, filter and enclose visibility will be retained. The **oLEMP [APP/7.11]** also details the offset and buffering of the Scheme with new woodland, hedgerow and tree planting, as well as the recreational enhancements proposed – such as the potential for new publicly accessible amenity space within the north-western area of the Site, and the creation of new permissive routes linking to the existing PRoW network; and
- Initiatives to sustain long-term skills development and community benefits will be implemented, including site tours for schools and colleges, educational outreach on solar energy, and summer internship and research programmes.

Decommissioning Phase

16.3.3 The following embedded mitigation measures have been incorporated into the Scheme's design for the decommissioning phase:

- Decommissioning works creating dust will be kept to a minimum within proximity of existing pedestrian routes and residential properties, and dust prevention measures will be undertaken to reduce the impact on users of the PRoW network. This will be presented within the DS which will be secured as a requirement of the DCO and prepared in accordance with the **oDS [APP/7.10]**.

16.4 Assessment of Likely Effects

Construction Phase

16.4.1 With regard to employment, the Scheme is expected to have a direct, temporary, minor **beneficial** effect on the health of the general population; in EIA terms, this is considered **not significant**. However, this same effect on vulnerable groups is considered **significant**.

16.4.2 The provision of temporary training and upskilling opportunities, assessed as a direct, temporary, moderate **beneficial** effect, is considered **significant** for both the general population and vulnerable groups.

16.4.3 Effects relating to physical activity are considered to be **not significant**.

Operational Phase

16.4.4 The provision of education, skills, and training has been assessed as having a direct, temporary, minor **beneficial** effect. For the general population, this is considered **not significant**, but for vulnerable groups this is a **significant** effect.

16.4.5 The impact on physical activity is assessed as having a direct, temporary, minor **beneficial** effect. For the general population, this is considered **not significant**, but for vulnerable groups this is considered a **significant** effect.

Decommissioning

16.4.6 The creation of employment opportunities is assessed as having a direct, temporary, minor **beneficial** effect on health. For the general population, this is considered **not significant**, but for vulnerable groups this is considered a **significant** effect.

16.4.7 The provision of education, skills, and training has been assessed as having a direct, temporary, minor beneficial effect. For the general population, this is considered **not significant**, but for vulnerable groups this is a **significant** effect.

16.4.8 Effects relating to physical activity are considered to be **not significant**.

16.5 Additional Mitigation Measures

16.5.1 As no significant adverse effects have been identified above for receptors during any phase of the Scheme once embedded mitigation is taken into account, no additional mitigation measures for the Scheme are required.

16.6 Residual Effects

16.6.1 As there are no additional mitigation measures required, the effects will remain unchanged from those in section 15.4 – i.e there are no likely significant adverse effects.

17 Other Environmental Matters

17.1 Introduction

17.1.1 **ES Chapter 16: Other Environmental Matters [APP/6.2]** presents the findings of the EIA with regard to effects on Other Environmental Matters (OEM) resulting from the Scheme.

17.1.2 The following aspects have been addressed:

- Air Quality
- Arboriculture
- Glint and Glare
- Electromagnetic Fields (EMF)
- Telecommunications, Utilities and Television Receptors; and
- Waste.

17.2 Air Quality

Dust Assessment

17.2.1 A Construction Dust Risk Assessment (appended to the oCEMP [APP/7.6]) has been produced to determine the level of mitigation required to control dust and particulate matter emissions.

17.2.2 Dust emissions associated with construction activities will be controlled through mitigation measures outlined in the **oCEMP [APP/7.6]**. These mitigation measures will serve to address the following issues:

- Communications
- Dust Management Plan
- Site management
- Monitoring
- Preparing and maintaining the Site
- Operating vehicles/machinery and sustainable travel
- Operations
- Waste management; and
- Construction.

17.2.3 With the inclusion of this mitigation, potential dust emissions associated with on-Site activities during the construction phase are expected to be **not significant**.

17.2.4 Mitigation measures implemented for the construction phase will also be used for the decommissioning phase and are outlined in the **oDS [APP/7.10]**. With the inclusion of this mitigation, potential dust emissions associated with on-site activities during the decommissioning phase are anticipated to be **not significant**.

Vehicle Movements

17.2.5 Traffic emissions produced during the construction phase, as well as measures to minimise dust emissions arising from vehicles entering and leaving the Site, will be controlled through mitigation measures specified in the **oCTMP [APP/7.7]**. These mitigation measures will serve to address the following issues:

- Dust release due to vehicle movement; and
- Exhaust and non-exhaust emissions due to vehicle movement.

17.2.6 Given the low number of vehicle movements, as well as the mitigation measures set out in the **oCTMP [APP/7.7]**, emissions associated with construction vehicles during the construction phase are anticipated to be **not significant**.

17.2.7 It is not expected that vehicle movements associated with the decommissioning phase will exceed the vehicle movements calculated for the construction phase. As such, emissions associated with vehicle movements during the decommissioning phase are anticipated to be **not significant**.

Non-Road Mobile Machinery (NRMM)

17.2.8 All NRMM used will adhere to the latest emissions standards; this is included within the **oCEMP [APP/7.6]**. Consequently, significant effects as a result of NRMM are **not** likely.

17.3 Arboriculture

17.3.1 An Arboricultural Impact Assessment (AIA) (**ES Appendix 16.4**: **Arboricultural Impact Assessment [APP/6.4]**), has been undertaken to provide an assessment of the potential impacts upon existing trees, groups of trees, woodlands and hedgerows. The AIA provides a baseline survey of existing trees (undertaken between August and October 2025), an assessment of the potential impacts of the Scheme on the existing trees and indicative mitigation and tree protection measures to be incorporated at the detailed design stage.

17.3.2 Tree surveys recorded a total of 547 individual trees, 157 groups of trees, 24 woodlands and 91 hedgerows were recorded within the Site. Within this total, 39 trees were assessed as veteran.

17.3.3 The AIA (**ES Appendix 16.4**: **Arboricultural Impact Assessment [APP/6.4]**) has considered the potential impacts of the Scheme upon existing trees, tree groups, woodlands and hedgerows. Design and mitigation measures, design principles and commitments for the avoidance or mitigation of impacts have been built into the Scheme. A summary of the embedded design mitigation measures considered in the AIA (**ES Appendix 16.4**: **Arboricultural Impact Assessment [APP/6.4])** are set out in Table 6.1 of the AIA which are secured by the **Design Principles, Parameters and Commitments [APP/5.8], outline Landscape and Ecology Management Plan (oLEMP) [APP/7.11]** and **outline Construction Environmental Management Plan (oCEMP) [APP/7.6**]. These can be summarised as below:

- Buffers to Solar PV Arrays, Access Tracks and fencing:
  - Hedgerows – 8m
  - Hedges with tress – 10m
  - Woodland (non-ancient) – 15m
  - Individual trees and groups of trees – 10m (unless otherwise specified by arboricultural consultant)
  - Non-Statutory Designated sites and Local Wildlife sites – 10m; and
  - Veteran and Ancient trees – 15x width of tree stem diameter.
- Preparation of an Arboriculture Method Statement as part of the detailed CEMP; and
- General mitigation measures relating to tree removal, tree pruning, root loss/damage from excavation or soil compaction within Root Protection Areas (RPAs), dust/sediment impacts to adjacent woodland and damage to canopies/stems from machinery movements

Conclusion

17.3.4 As concluded in **ES Appendix 16.4**: **Arboricultural Impact Assessment [APP/6.4]** there is potential for removal and partial removal of trees/groups of trees, woodland and

hedgerows. Removals are considered to represent as worst-case scenario, with tree removal avoided wherever practicable as set out in the oCEMP **[APP/6.7]**. Part removal of tree groups is minor in nature and relate predominantly to crossings for Access Tracks. The AIA has identified impacts to RPAs arising predominantly from proposed Access Tracks. Design and mitigation measures within the **oCEMP [APP/6.7]** and commitments within the **Design Principles, Parameters and Commitments [APP/5.8]** outline a range of mitigation measures to avoid and mitigation impacts to PRAs, such as buffer zones and ground protection.

17.3.5 As summarised in the AIA (see **ES Appendix 16.4**: **Arboricultural Impact Assessment [APP/6.4]** a detailed Arboricultural Method Statement (AMS) will be prepared at the detailed design stage to further set out tree protection measures in response to design and existing embedded mitigation. Furthermore, from the outset of the Scheme the Applicant has afforded arboriculture considerations into the design process, evidenced during the site selection and assessment process, this is detailed further in the **Planning Statement [APP/5.5].**

17.3.6 Therefore, it is considered that significant effects as a result of the Scheme in respect of arboriculture can be avoided and/or mitigated through embedded design mitigation measures as set out in **ES Appendix 16.4: Arboricultural Impact Assessment [APP/6.4].**

17.4 Glint and Glare

17.4.1 Glint and glare effects on dwelling receptors, road receptors, aviation receptors, and viewpoint receptors have been considered as part of the **Solar Photovoltaic Glint and Glare Study** included as **ES Appendix 16.2 [APP/6.4]**, the findings of which have been incorporated into **ES Chapter 16: Other Environmental Matters [APP/6.2]**.

17.4.2 Advance planting and hedgerow enhancement will be undertaken during winter 2025 along the eastern boundary of the Site in order to fill gaps within the existing screening found between the Site and the A1065. It is anticipated that this planting will be established (i.e. it will reach a height that is at least as tall as the PV panels themselves) in advance of the PV panels being installed.

Construction and Decommissioning Phases

17.4.3 During the construction and decommissioning phases, during which the number of panels will be less than or equal to the number of panels present during the operational phase, it is **not** considered that there is potential for likely significant effects.

Operational Phase

17.4.4 Consultation is ongoing with RAF Marham to understand whether views of the Site are possible from the ATC Tower, and whether the identified solar reflections towards the approach paths are considered operationally accommodatable. In the case of all other aviation receptors, all effects are considered to be **not significant**.

17.4.5 Effects on road receptors, dwelling receptors, and viewpoint receptors are expected to be **not significant**.

17.5 Electromagnetic Fields (EMF)

17.5.1 The EMF Risk Assessment has considered EMF in relation to the following Scheme infrastructure:

- Low and High Voltage underground and overground cables (specifically those that exceed 132kV up to 400kV)
- Customer Substation
- National Grid Substation; and
- BESS.

17.5.2 Design measures for the avoidance of significant effects have been built into the Scheme and, as concluded in the EMF Assessment (See **ES Appendix 16.3: High-Level Electromagnetic Field Assessment [APP/6.4]**) significant effects are **not likely** in respect of EMF.

17.6 Telecommunications, Utilities and Television Receptors

17.6.1 Due to the size, scale, and nature of the Scheme, it is considered that there is limited potential for likely significant effects on above-ground telecommunications, utilities and television receptors during all phases of the Scheme. However, solar farms have the potential to affect existing below-ground utility infrastructure, for example, through 'cable strike' when piling for Ground Mounted PV Modules or excavating the cable trenches.

17.6.2 There are two utility services within the Order limits, namely:

- Anglian Water Foul Main Sewer; and
- National Grid Overhead line
- UKPN/EPN.

17.6.3 Embedded mitigation measures have been incorporated into the Scheme design to identify and manage utilities interactions. These measures ensure that the impact on utilities is minimised, and, where direct interaction is anticipated, utility crossings will be carried out in collaboration with the relevant utility provider. These precautionary measures are written into the **oCEMP [APP/7/6].**

17.6.4 Following the application of the embedded mitigation measures, **no likely significant effects** are expected on telecommunication, utilities or television receptors as a result of the construction, operation, or decommissioning of the Scheme.

17.7 Waste

17.7.1 The land within the Order limits is predominately in agricultural use, being utilised in part for pig farming, chickens and other livestock, and in part for arable crop production across agricultural fields. The existing waste arisings are assumed to be low.

17.7.2 Likely environmental effects have been or will be avoided, minimised, mitigated or reduced through design measures and/or management of the Scheme. Waste management will adhere to the waste hierarchy and will comply with all relevant environmental permits, regulations, and legislation.

Embedded Mitigation – Construction Phase

17.7.3 The following embedded mitigation measures have been incorporated into the Scheme design during the construction phase:

- The predominant use of pre-fabrication has been incorporated into the Scheme design in order to reduce on-Site waste
- Uncontaminated excavated soil and stone is, where feasible, to be reused on Site. Soils from the Scheme will be removed for treatment or disposal if they are found to be contaminated and cannot be treated on Site. Control measures are set out in the **oCEMP [APP/7.6]** and site storage measures are set out in the **oSMP [APP/7.13]**
- Waste streams will be minimised and eliminated wherever possible, and opportunities for reusing material resources will be pursued, as detailed in the **oCEMP [APP/7.6]**
- A Site Waste Management Plan (SWMP) will be prepared before construction begins. This will detail the efficient management, storage, and legal disposal of materials in line with measures set out in the **oCEMP [APP/7.6]**
- A Construction Resources Management Plan (CRMP) will be prepared by the appointed contractor, as set out in the **oCEMP [APP/7.6]**; and
- The location and consolidation of the temporary construction compounds and welfare facilities will minimise the amount of excavation and construction waste required for hardstanding.

Embedded Mitigation – Operational Phase

17.7.4 The following embedded mitigation measures have been incorporated into the Scheme design during the operational phase, and are secured through measures set out within the **oOEMP [APP/7.8]**:

- The waste hierarchy will be adhered to by prioritising waste prevention, followed by the reuse, recycling, and recovery of equipment during the replacement of components. A Waste Management Strategy will be developed as part of the detailed OEMP, to be prepared in accordance **oOEMP [APP/7.8]**

- All waste management will comply with relevant regulations, and waste will be transported by licensed hauliers to authorised waste management sites with the necessary permits for the consigned wastes
- Waste electronics and electrical equipment (WEEE) will be recovered and recycled by an authorised reprocessor in compliance with the WEEE Regulations 2013; and
- Batteries must be separated from WEEE streams so they can be recovered, recycled, or disposed of in accordance with the Waste Batteries and Accumulators Regulations 2009.

Embedded Mitigation – Decommissioning Phase

17.7.5 The following embedded mitigation measures have been incorporated into the Scheme design during the decommissioning phase:

- The decommissioning of the Scheme will adhere to the measures and procedures outlined in the **oDS [APP/7.10]**, upon which the detailed DS will be prepared. A Decommissioning Resource Management Plan (DRMP) will set out how to manage the disposal of waste in accordance with relevant legislative and policy requirements at the time of decommissioning; and
- The recycling and reuse of the Scheme components at the end of their life will be maximised, as set out in the **oDS [APP/7.10].**

Assessment of Likely Effects

17.7.6 With the embedded mitigation measures in place, effects on waste during the construction operational, and decommissioning phases are considered to be **not significant**.

17.7.7 As no significant effects have been identified, no additional mitigation measures for the Scheme are required and consequently the residual effects will remain unchanged.

18 Cumulative Effects

18.1 Introduction

18.1.1 The Cumulative Effects Assessment (CEA) has been undertaken in accordance with PINS Advice on Cumulative Effects Assessment (September 2024) and considers two types of cumulative effects:

- In-combination effects – the inter-relationship between individual development effects, for example, noise, dust and visual on one particular receptor; and
- Cumulative effects – multiple existing and/or approved developments generating additive effects which together have an increased effect on the same receptors.

In-combination Effects

18.1.2 A summary of potential likely in-combination effects is provided within **ES Chapter 17: In-Combination Effects [APP/6.2]** to provide a summary of effect interactions between topics assessed in the technical aspect ES chapters, setting out the inter-relationship arising as a result of direct effects from other environmental topics.

18.1.3 In summary, the significant in-combination effects identified within the ES are:

- Construction and decommissioning phase noise, vibration, and visual impact on Residential Properties and Public Rights of Way represented by Visual Receptor Groups 1, 2 and 3 selectively, as well as The Peddars Way and Norfolk Coastal Path, and Rebellion Way Cycle Route
- Decommissioning phase visual and heritage impact on heritage assets of Castle Acre Castle and Castle Acre Priory
- Operational phase noise and visual impact in the short term on Residential Properties represented by Visual Receptor Groups 1 and 3, and Public Rights of Way represented by Visual Receptor Groups 1 and 2
- Operational phase noise and visual impact in the medium term on Residential Properties represented by Visual Receptor Groups 1 and 3, and Public Rights of Way represented by Visual Receptor Groups 1 and 2; and
- Operational visual impact, cultural heritage, and socio-economic impacts in the short, medium and long term on Castle Acre Priory and Castle Acre Castle.

18.1.4 The in-combination effects listed above are deemed to be significant because the visual effects on Residential Receptors and Public Rights of Way, as well as the effects on Castle Acre Castle and Castle Acre Priory, are considered significant in isolation. Mitigation for visual effects involves planting throughout the Site which is embedded into the Scheme and secured in the design, meaning additional mitigation is not available. Similarly, no additional mitigation is available to reduce the effect on Castle Acre Priory and Castle Acre Castle. Consequently, there are residual in-combination significant effects.

Cumulative Effects

18.1.5 Each topic chapter within the ES has set out how the particular topic area has considered and assessed the cumulative effects arising as a result of other existing or proposed development that is set out in the long and short lists for the EIA.

18.1.6 The Cumulative Effects Assessment has adopted a four-staged approach. Stage 1 establishes a long list of other existing and/or approved development for the environmental assessment. The long list and short lists are finalised with input from Statutory Consultation. This ensures all developments with potential significant cumulative effects, when considered with the Scheme, are included in the environmental assessments.

18.1.7 At Stage 2, a short list is established from the long list of other existing and/or approved development. Developments unlikely to cause significant cumulative effects will be excluded after review by environmental specialists.

18.1.8 Stage 3 looks to gather and review information on the final shortlisted developments, including their design, location, and programme of construction, operation, and decommissioning, as well as any environmental assessments that set out baseline data, and effects arising from other existing and / or approved development.

18.1.9 Stage 4 involves a proportionate assessment of the cumulative effects of the Scheme with the other existing and / or proposed developments identified in Stage 1 to 3.

18.1.10 The ES then reports the assessment results, focusing on significant cumulative effects and the need for mitigation. These effects are detailed in individual technical chapters, with full details of Stages 1 to 4 and the final development list outlined in as part of the ES.

18.1.11 In summary, the significant cumulative effects identified within the ES are:

- The Scheme, taken cumulatively with the adjacent High Grove Solar scheme, would give rise to a significant impact on landscape character during the construction, operational, and decommissioning phases. Additionally, there is expected to be a short-term temporary cumulative visual effect on one Visual Receptor Group; however, the magnitude of cumulative visual effects is expected to lessen in the operational phase as mitigation planting matures.
- Cumulative noise impacts from the Scheme and High Grove Solar are deemed significant at one receptor, known as ‘The Off Barn’. However, whilst this significant effect is theoretically possible, it is based on worst-case assumptions and it is considered unlikely that noise levels from both schemes would add up in this way in practice. Through the implementation of additional mitigation measures, it is considered likely that noise levels can be controlled to such a level that the effect is deemed not significant in EIA terms.
- A worst-case assessment considers that permanent loss of agricultural land caused by the Scheme, High Grove Solar, East Pye Solar, and Norfolk Boreas Offshore Windfarm onshore would be significant. However, this would only occur in the event that the permanent loss of agricultural land exceeds that which is expected.
- Significant beneficial socio-economic effects, particularly with regard to delivery of employment and skills initiatives, are expected as a result of the Scheme and East Pye Solar when taken cumulatively.
- Considered cumulatively with 18 different schemes, the Scheme is expected to generate significant beneficial effects on the health of vulnerable groups through the creation of employment opportunities (construction phase only). These schemes will also give rise to significant beneficial effects on the health of vulnerable groups (both construction and operational phases) and the general population (construction phase only) through the provision of education, skills, training and supply chain.

- During the operational phase, the enhanced Public Right of Way network and improved long-term access to walking routes is expected to have positive health impacts; this effect is expected to be significant and beneficial for vulnerable groups.

19 Summary and Conclusions

19.1.1 The ES explains the findings of the environmental assessments that have been undertaken for the Scheme.

19.1.2 A number of embedded and additional mitigation measures have been identified to mitigate and control environmental effects during the construction, operational and decommissioning phases of the Scheme. These will be secured through appropriate requirements and other controls within the DCO for the Scheme.

THE DROVES
SOLAR FARM