Kingsway Solar Farm

EIA Scoping Report

Main Report

December 2024

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LIST OF APPENDICES

Glossary of Terms

Term	Definition
Agricultural Land Classification (ALC)	The system by which agricultural land is graded on a scale of 1 to 5, with Grade 3 subdivided into 3a and 3b.
Air Quality Management Area (AQMA)	A defined area by virtue of Section 82(3) of the Environment Act 1995[1], where it appears that the air quality objectives prescribed under the UK Air Quality Strategy[2] will not be achieved. In these areas, a Local Authority must designate Air Quality Management Areas, within which an Action Plan can be proposed to secure improvements in air quality so that prescribed air quality objectives can be achieved.
After-image	Glint and glare can cause a distraction or lead to an after-image being experienced by an observer. This can present a nuisance and, under some circumstances, a safety hazard.
Azimuth angle	The azimuth angle describes the direction the panels are 'facing'. In the northern hemisphere, the most efficient layout tends to be panels that face approximately south.
Baseline	Environmental conditions at specific periods of time present on, or near, a scheme, against which effects from the scheme are measured or predicted.
Battery Energy Storage System (BESS)	Battery energy storage system and associated infrastructure to allow for the storage, import and export of electricity to NETS.
Best and Most Versatile agricultural land (BMV)	Agricultural land that is defined as Grades 1, 2 and 3a in the Agricultural Land Classification by the revised National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG). This is the land, which is determined to be most flexible, productive, and efficient in response to inputs and which can best deliver future crops for food and non-food uses such as biomass, fibres, and pharmaceuticals. Grades 3b, 4, and 5 are used to classify land that is of moderate quality to very poor quality.
Biodiversity Net Gain (BNG)	Biodiversity Net Gain is an approach to development

[1] Environment Act 1995. Available online: https://www.legislation.gov.uk/ukpga/1995/25/data.pdf

[2] Department for Environment, Food and Rural Affairs (2023) Air Quality Strategy: Framework for Local Authority Delivery. Available online: https://assets.publishing.service.gov.uk/media/64e8963d635870000d1dbf9d/Air_Quality_Strategy_Web.pdf

Term	Definition
	that leaves biodiversity in a better state than before.
Conservation area	An area of notable environmental or historical interest or importance which is protected by law against undesirable changes.
Construction Environmental Management Plan (CEMP)	A plan specific to the Scheme which ensures appropriate environmental management practices are followed during the construction phase.
Cumulative effects	The summation of effects that result from changes caused by the Scheme in conjunction with other reasonably foreseeable human induced effects. Effects can be direct and indirect and are within a specified geography across a certain time frame.
Developable Areas	The land required for the Scheme excluding the Inter Array Connection and Grid Connection.
Development Consent Order (DCO)	A Development Consent Order is a Statutory Instrument made by the Secretary of State pursuant to the Planning Act 2008 (as amended) (PA2008).
Direct impact	Spatially and temporally concurrent impacts on the environment as a result of the Scheme.
Enhancement	Beneficial effects through restoration, reconstruction or creation as a result of the Scheme.
Environmental effect	The consequence of an impact on the environment.
Environmental impact	A physical or measurable change to the environment attributable to the Scheme.
Environmental Impact Assessment (EIA)	A systematic process of assessing a scheme's likely significant environmental effects undertaken in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations).
Environmental Statement (ES)	A formalised statement that includes the information that is reasonably required to assess the environmental effects of the Scheme and which the Applicant can, having regard to current knowledge and methods of assessment, reasonably be required to compile, but that includes at least the information referred to in the EIA Regulations.
Flood Zone 1	Land assessed as having less than 1 in 1000 (0.1%) annual probability of river or sea flooding in any year.
Flood Zone 2	Land assessed as having between 1 in 100 (1%) and 1 in 1000 (0.1%) annual probability of river flooding or

Term	Definition
	between 1 in 200 (0.5%) and 1 in 1000 (0.1%) annual probability of sea flooding in any year.
Flood Zone 3a	Land assessed as having a 1 in 100 (1%) or greater annual probability of river flooding in any year or 1 in 200 (0.5%) or greater annual probability of sea flooding in any given year.
Flood Zone 3b	Flood zone 3b is classified as functional floodplain, and is deemed to be the most at risk land of flooding from rivers or the sea. This zone comprises land where water has to flow or be stored in times of flood.
Glare	A continuous source of bright light typically received by static receptors or from large reflective surfaces
Glint	A momentary flash of bright light typically received by moving receptors or from moving reflectors
Grid Connection	The connection between the Site and the National Electricity Transmission System (NETS), situated within the Grid Connection Corridor exclusive of any other cabling associated with the Site.
Grid Connection Corridor	Land required for the connection between on-site substations and connection to NETS.
Habitats Regulations Assessment (HRA)	A Habitats Regulations Assessment refers to the stages of assessment carried out by the competent authority in accordance with Habitats Regulations and the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) (Habitats Regulations) to determine if a project may affect the protected features of a European site before deciding whether to undertake, permit or authorise it.
Impact	A physical or measurable change to the environment attributable to the Scheme.
Indirect effects	Effects that result indirectly from the Scheme as a consequence of the direct effects, often occurring away from the Site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or time from the source of the effects.
Inter Array Connection	Cabling required to connect on-site substation(s), solar PV modules and solar PV supporting infrastructure.
Inter Array Connection Corridor	Land option required for cabling or overhead lines between land parcels of the Developable Areas.

Term	Definition
Inverters	Device used to convert power between direct current (DC) electricity to alternating current (AC).
Listed Building	A building which is considered to be of special architectural or historic interest and listed in accordance with the Planning (Listed Buildings and Conservation Areas) Act 1990.
Main river	Main rivers are usually larger rivers and streams, designated as such, and shown on the "Main River Map". The Environment Agency carries out maintenance, improvement or construction work on main rivers to manage flood risk.
Magnitude	A combination of the scale, extent and duration of an effect.
Mitigation measures	Actions proposed to avoid, prevent, reduce and where possible offset significant adverse environmental effects arising from the whole or specific elements of a scheme.
National Electricity Transmission System (NETS)	High voltage electricity transmission network across England and Wales comprising pylons, overhead lines, cables and substations that supply low voltage local distribution networks.
National Planning Policy Framework (NPPF)	The framework for the Government's planning policies for England and how they are expected to be applied.
National Policy Statement (NPS)	Planning policy for nationally significant infrastructure projects (NSIPs), including renewable electricity generation and electrical transmission infrastructure, detailing how applications will be assessed by the Secretary of State.
Nationally Significant Infrastructure Project (NSIP)	Schemes of a certain classification and scale that are considered of national importance that require development consent by virtue of the Planning Act 2008.
On-site electric compounds	Compounds within the Developable Area comprising on-site substations and control buildings.
On-site substation(s)	The infrastructure within the Developable Area that transforms the voltage of electricity to be switched for transmission.
Order Limits	The maximum extent of land potentially required temporarily and/or permanently for the construction, operation and decommissioning of the Scheme.
Ordinary watercourse	An Ordinary Watercourse is any river, stream, brook, ditch, drain, culvert, pipe or any other passage that water

Term	Definition
	flows through. It is not designated as a Main River (as marked on Environment Agency main river map). Lead local flood authorities, district councils and internal drainage boards carry out flood risk management work on ordinary watercourses.
Out of bank flooding	Where a river bursts its banks and spills out, causing excess water to flow outside its natural confines.
Preliminary Environmental Information Report (PEIR)	The Preliminary Environmental Information Report (PEIR) is the report prepared by the Applicant, containing information (Preliminary Environmental Information) which has been compiled by the Applicant and is reasonably required for the consultation bodies to develop an informed view of the Likely Significant Effects of the Scheme.
Receptor	A component of the natural, created or built environment such as humans, water, air, a building, animal or plant species or habitat that has the potential to be affected by the Scheme.
Scheduled Monument	Nationally important archaeological sites or historic buildings designated by the Secretary of State as a 'Scheduled Monument' and protected under the Ancient Monuments and Archaeological Areas Act 1979.
Scheme	All components within the Site Boundary, including the solar PV Arrays and associated infrastructure, BESS, Grid Connection and Inter Array Connection Corridors.
Scoping	An exercise undertaken to determine the factors to be addressed within the Environmental Statement.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.
Significance (effect)	A measure of the importance or gravity of the environmental effect defined by significance criteria specific to the environmental factor.
Site	The total land area required for the Scheme.
Site Boundary	The boundary encompassing all land required for the Scheme.
Site of Special Scientific Interest (SSSI)	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. SSSIs include habitats, geological features, and landforms.

Term	Definition
Solar PV arrays	A connected collection of multiple solar PV modules that form a larger complete power-generating unit.
Solar PV supporting infrastructure	The components and equipment, including inverters, transformers, and switchgears, that convert the direct current (DC) electricity generated by the solar PV modules into alternating current (AC) and provide control and onward distribution of electricity across the Site.
Sustainable Drainage System (SuDS)	Sustainable management practices designed to control the rate and quality of surface water runoff into receiving waters, for example the use of swales and wetlands as buffers, as opposed to conventional drainage practices.
Switchgears	A collection of electrical disconnect fuses, switches or circuit breakers that can be used to protect, control and isolate electrical equipment and circuits.
Transformers	The electrical component that allows electricity to transmit between circuits.
Water Framework Directive	The Water Framework Directive (WFD) is a European directive which aims to protect and improve the water environment.
WFD waterbody	The WFD divides the water environment into water bodies. These can include lakes, reservoirs, streams, rivers, canals, groundwater, transitional waters (estuaries) and coastal waters. Water bodies managed under the WFD are subject to River Basin Management Plans which have specific objectives in terms of groundwater and surface water.
Wirescape	The arrangement of electrical wires, pylons and other types of overhead lines (e.g. Wood poles) within the landscape.
Zone of Theoretical Visibility (ZTV)	The zone which represents visibility of the Scheme as determined through analysis of intervening natural and manmade terrain feature.

Acronyms

AADT	Annual Average Daily Traffic
AC	Alternating Current
ADMS	Atmospheric Dispersion Modelling System
AIL	Abnormal Indivisible Load
ALC	Agricultural Land Classification
AQMA	Air Quality Management Area
AQO	Air Quality Objective
BESS	Battery Energy Storage System
BGS	British Geological Survey
BMV	Best and Most Versatile [agricultural land]
BNG	Biodiversity Net Gain
BPM	Best Practicable Means
BSI	British Standards Institute
CAA	Civil Aviation Authority
CAST	Combined Aerodrome Safeguarding Team
CCC	Cambridgeshire County Council
CCTV	Closed-Circuit Television
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CIfA	Chartered Institute for Archaeologists
CIRIA	Construction Industry Research and Information Association
CRTN	Calculation for Road Traffic Noise
CTMP	Construction Traffic Management Plan
DC	Direct Current
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DEMP	Decommissioning Environmental Management Plan
DfT	Department for Transport
DMRB	Design Manual for Road and Bridges
DRD	Downing Renewable Developments
EA	Environment Agency
EcIA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EMF	Electric and Magnetic Field
EPUK	Environmental Protection UK

ES	Environmental Statement
ExA	Examining Authority
FRA	Flood Risk Assessment
GHG	Greenhouse Gas
GLVIA	Guidelines for Landscape and Visual Impact Assessment
HDD	Horizontal Directional Drilling
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HRA	Habitat Regulations Assessment
HV	High Voltage
HVAC	Heating Ventilation and Air Conditioning
IAQM	Institute of Air Quality Management
IEMA	Institute of Environmental Management and Assessment
INNS	Invasive Non-Native Species
LAQM	Local Air Quality Management
LBAP	Local Biodiversity Action Plan
LCA	Life Cycle Assessment
LEMP	Landscape and Ecological Management Plan
LHA	Local Highway Authority
LiDAR	Light Detection and Ranging
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
LPA	Local Planning Authority
LWS	Local Wildlife Site
LVIA	Landscape and Visual Impact Assessment
MAGIC	Multi-Agency Geographic Information for the Countryside
NCA	National Character Area
NETS	National Electricity Transmission System
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
NPPG	National Planning Practice Guidance
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NRMM	Non-Road Mobile Machinery
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
OEMP	Operational Environmental Management Plan
OS	Ordnance Survey

PA	Planning Act
PAS	Publicly Available Specification
PEA	Preliminary Ecological Appraisal
PEIR	Preliminary Environmental Information Report
PH	Priority Habitat
PIA	Personal Injury Accident
PoC	Point of Connection
PPV	Peak Particle Velocity
PRF	Potential Roost Features
PRoW	Public Right of Way
PV	Photovoltaic
RFFP	Reasonably Foreseeable Future Project
RIS	Rail Industry Standard
RVAA	Residential Visual Amenity Assessment
SAC	Special Area of Conservation
SFRA	Strategic Flood Risk Assessment
SMP	Soil Management Plan
SoCC	Statement of Community Consultation
SoS	Secretary of State
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
SuWMP	Surface Water Management Plan
SWMP	Site Waste Management Plan
TA	Transport Assessment
UKCP	UK Climate Projection
WFD	Water Framework Directive
ZOI	Zone of Influence
ZTV	Zone of Theoretical Visibility

1 INTRODUCTION

1.1 Background

1.1.1 Kingsway Solar Farm Ltd (hereafter referred to as the 'Applicant') has commissioned RSK Environment Limited (hereafter, 'RSK') to prepare an Environmental Impact Assessment (EIA) Scoping Report to accompany a request for a Scoping Opinion from the Planning Inspectorate (prepared on behalf of the Secretary of State for Energy Security and Net Zero) for the proposed Kingsway Solar Farm project, located east of Cambridge and the A11, around the villages West Wratting and Weston Colville, and in proximity to Balsham, Cambridgeshire (hereafter referred to as the 'Scheme').

1.1.2 The Scheme comprises the construction, operation (including maintenance) and decommissioning of a solar photovoltaic (PV) electricity generating facility with an export capacity exceeding 50 megawatts (MW) and associated infrastructure including a co-located battery storage. The Scheme will also require a new Overhead Line (OHL) grid connection, approximately 14 km in length, to National Grid's planned Burwell South substation to the north.

1.1.3 The Scheme addresses the policy drive to generate low carbon energy. The Overarching National Policy Statement (NPS) for Energy (EN-1)[3] emphasises that both solar energy and grid connection infrastructure are classified as Critical National Priorities, underscoring their vital role in achieving the UK's net zero targets.

1.1.4 The Scheme is classified as two Nationally Significant Infrastructure Projects ('NSIP'), under Part 3 of the Planning Act 2008 (hereafter referred to as the 'PA 2008')[4] comprising construction of a generating station with capacity of more than 50 MW (s15) and a new electric line exceeding 2 km (s16). The Scheme will require a Development Consent Order ('DCO'). The Scheme also falls within the definition of 'EIA development' as defined within the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter

[3] Department for Energy Security & Net Zero (2024) Overarching National Policy Statement for Energy (EN-1). Available online: https://assets.publishing.service.gov.uk/media/65bbfbdc709fe1000f637052/overarching-nps-for-energy-en1.pdf

[4] Planning Act 2008. Available online: https://www.legislation.gov.uk/ukpga/2008/29/contents

referred to as the 'EIA Regulations')[5], meaning that before a DCO is granted for the Scheme, an EIA must be undertaken.

1.1.5 There is an agreement with National Grid that the Scheme will connect to, and export generated electricity to the new Burwell South substation (being progressed as a separate project by National Grid). The exact location is to be confirmed by National Grid, however is expected to be in proximity to the existing substation, located to the south of Burwell. There is an agreement to export up to 500 MW from the Scheme.

1.1.6 For the purposes of this EIA Scoping Report, the 'Site' is shown in **Figure 1.1**. This comprises the following:

- Developable Areas (including associated infrastructure) consists of three separate areas:
  - Developable Area A – West: located close to Worsted Lodge, east of the A11;
  - Developable Area B – Central: located between the A11 to the north west and Balsham to the south east; and
  - Developable Area C – East: located between Willingham Green, Weston Colville and West Wratting.
- Inter Array Connection Corridors:
  - Inter Array Connection Corridor 1 – this is the area of potential routeing required to connect Developable Area A – West and Developable Area B – Central and
  - Inter Array Connection Corridor 2 – this is the area of potential routeing required to connect two land parcels within Developable Area C - East.
- Grid Connection Corridors consist of two potential areas within which the grid connection could be routed.
  - Grid Connection Corridor A follows the existing OHL (Pelham to Burwell 400 kV line) routing to the Burwell substation, which could allow for a parallel line to be installed; and
  - Grid Connection Corridor B is located further to the east and provides an alternative corridor within which an alignment could be selected.

1.1.7 The Site Boundary for the Scheme and each of the components is outlined within **Figure 1.1**. The Site Boundary is currently in draft form only and includes optionality for the Inter Array Connection Corridors and Grid Connection

[5] The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available online: https://www.legislation.gov.uk/uksi/2017/572/contents/made

Corridors. As the Scheme design is developed, the DCO Order Limits[6] will be refined to include all Scheme components, the preferred alignment within the Grid Connection Corridor and any other temporary and ancillary works as required (e.g. road/junction upgrades).

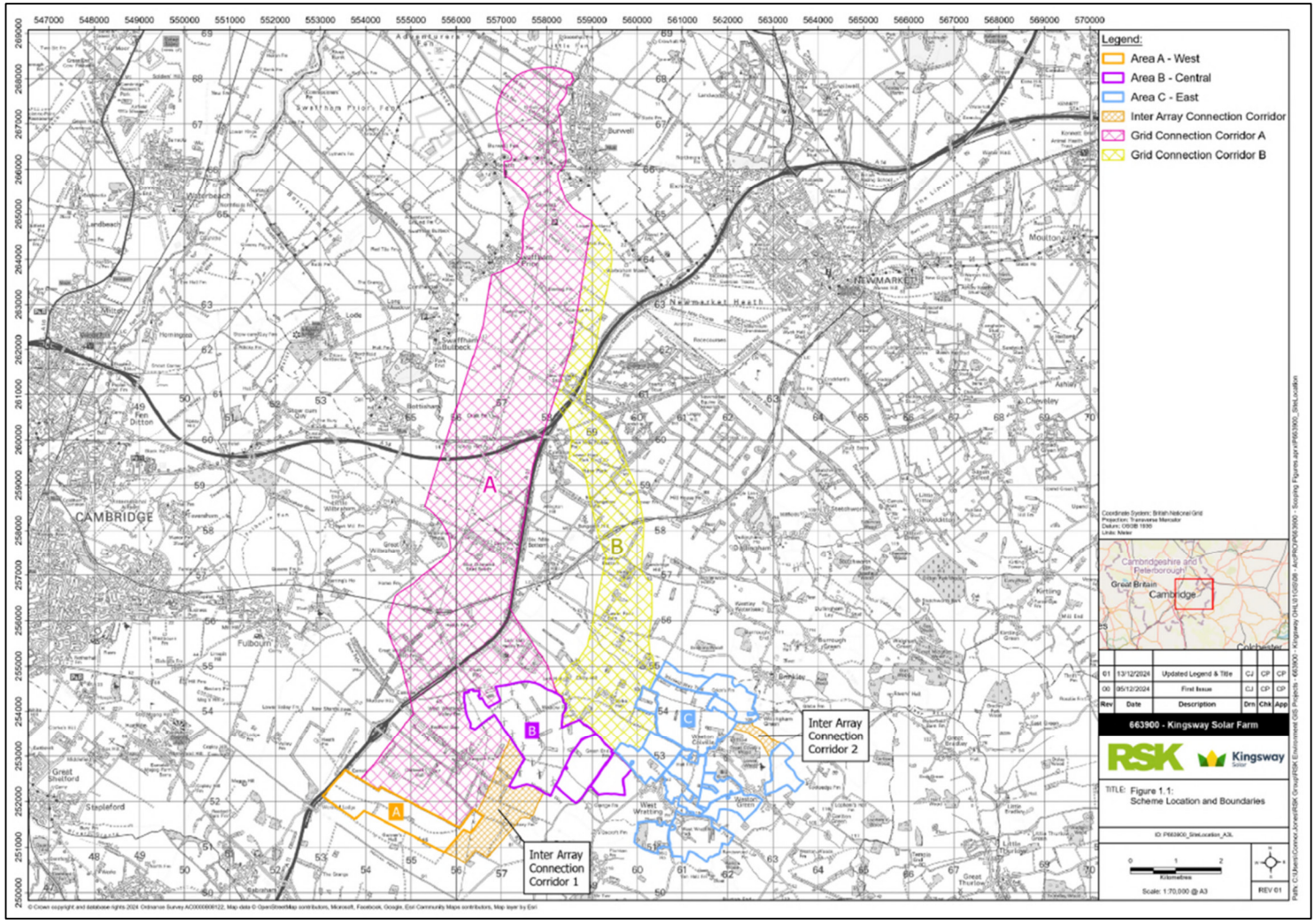
1.1.8 At this stage, four connection corridors have been identified; two for the Inter Array Connections (one between Developable Area A – West and Developable Area B – Central, and one between separate land parcels within Developable Area C – East) and two options for the grid connection (Grid Connection Corridor A and B), denoted by cross hatching outline in **Figure 1.1**.

1.1.9 Both the Inter Array Connection Corridors and Grid Connection Corridors will be subject to further routeing studies, options appraisals, and consultation as the Scheme design progresses to determine the preferred alignment for both. This assessment will be presented in the Environmental Statement (ES) and reflected in the DCO application.

1.1.10 This EIA Scoping Report forms part of a formal request to the Planning Inspectorate for a Scoping Opinion under Regulation 10(1) of the EIA Regulations.

[6] The maximum extent of land potentially required temporarily and/or permanently for the construction, operation and decommissioning of the Scheme.

Figure 1-1: Scheme location and boundaries



1.2 Definition of an EIA

1.2.1 The term EIA describes a procedure that must be followed for certain types of project before it can be given 'consent'. The procedure is a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects. This helps to ensure that the importance of the predicted effects and the scope for avoiding, preventing, reducing or, if possible, offsetting them are properly understood by the public and the authority granting consent (the 'determining authority') before it makes its decision.

1.3 Requirement for EIA

1.3.1 The EIA Regulations set out the types of development which must be subject to an EIA (referred to as a 'Schedule 1 development'), as well as those developments which must only be subject to EIA if considered "*likely to have significant effects on the environment by virtue of factors such as its nature, size or location*" (referred to as a 'Schedule 2 development').

1.3.2 The Scheme does not fall under any of the types of development set out in Schedule 1 of the EIA Regulations 2017. However, the Scheme is of a type and scale described in paragraph 3 of Schedule 2 of the EIA Regulations 2017, as follows:

"Energy industry

a) industrial installations for the production of electricity, steam and hot water (projects not included in Schedule 1 to these Regulations);

b) industrial installations for carrying gas, steam and hot water; transmission of electrical energy by overhead cables (projects not included in Schedule 1 to these Regulations)"

1.3.3 The Scheme may also fall under paragraph 3(b), as it may constitute 'industrial installations for carrying gas, steam, and hot water; transmission of electrical energy by overhead cables'. Flexibility is to be given to the grid connection infrastructure associated with the 'Grid Connection Corridors' and 'Inter Array Connection Corridors', as this could comprise a combination of overhead lines and buried cables. Overhead lines are considered an NSIP under Sections 14(1)(b) and 16 of the PA 2008[7] if thresholds set out in s16 are met (voltage 132 kV or greater and longer than 2 km). The nature of these corridors will be confirmed as the Scheme progresses and will be consulted upon at statutory consultation, and confirmed in the application.

[7] Planning Act 2008. Available online: https://www.legislation.gov.uk/ukpga/2008/29/data.pdf

1.3.4 Due to the Scheme's nature, size or location, it has the potential to have significant effects on the environment. The Applicant has therefore concluded that the Scheme does require an EIA, and therefore this EIA Scoping Report is accompanied by a notification, under Regulation 8(1)(b) of the EIA Regulations, that the Applicant will prepare and submit and ES as part of the DCO application without requesting a Screening Opinion.

1.4 Requirement for a DCO

1.4.1 The Scheme is defined as an NSIP under sections 14(1)(a) and 15(1) and (2) of the PA 2008, being an onshore generating station in England exceeding 50 MW, as discussed in **paragraph 1.3.2**. The OHL could be considered an NSIP under Sections 14(1)(b) and (16) of the PA Act 2008, as discussed in **paragraph 1.3.3.**

1.4.2 Regulation 8(1) of the EIA Regulations requires the Applicant to undertake one of the following steps before carrying out statutory consultation under Section 42 of the Planning Act 2008:

a) *"ask the Secretary of State to adopt a screening opinion in respect of the development to which the application relates; or*

b) *notify the Secretary of State in writing that the person proposes to provide an environmental statement in respect of that development."*

1.4.3 Following the completion of the surveys, assessments, and consultation processes outlined in this EIA Scoping Report, an application for a DCO will be made to the Secretary of State for determination in accordance with the Planning Act 2008. The DCO application will be accompanied by an Environmental Statement (ES), in accordance with Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 ('APFP Regulations')[8]. The ES will set out the methods and findings of a comprehensive EIA undertaken in line with the EIA Regulations.

1.4.4 Under the Localism Act 2011, the Secretary of State will appoint an Examining Authority (ExA) from the Planning Inspectorate. The ExA will review the DCO application for the Scheme and provide a recommendation to the Secretary of State, who will make the ultimate decision as to whether the DCO should be granted consent .

1.4.5 In accordance with Section 104(2) of the PA 2008, the Secretary of State is required to consider any relevant National Policy Statement (NPS), amongst other matters, when deciding whether to grant a DCO. Under the PA 2008

[8] Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. Available online: https://www.legislation.gov.uk/uksi/2009/2264/made

regime, NPSs provide the policy framework from which the Secretary of State examines and makes its decision in relation to DCO applications.

1.4.6 This EIA Scoping Report describes the national and local planning policies relevant to the assessment of the Scheme. The purpose of an EIA Scoping Report is not to assess the Scheme against planning policy. This will be undertaken and set out in a Planning Statement submitted as part of the DCO application. The consideration of national and local planning policy at the Scoping stage allows for the recognition of policy which could have a direct influence on both the sensitivity of receptors, and the required EIA methodology. A summary of the relevant national and local planning policy is provided for each technical chapter.

1.5 National Policy Statements for Energy

1.5.1 Six NPSs have been designated in relation to energy infrastructure. The following energy related NPSs are relevant to the Scheme:

- Overarching National Policy Statement for Energy (EN-1);
- National Policy Statement for Renewable Energy Infrastructure (EN-3); and
- National Policy Statement for Electricity Networks Infrastructure (EN-5).

1.5.2 In January 2024, five of the Energy NPSs (EN-1 to EN-5) were revised, including the introduction of specific policies relating to solar development, battery storage and network connections. Comprising the Government's updated objectives for the development of energy NSIPs, these NPSs set out the critical need for national scale solar development and associated electrical network infrastructure, as well as providing detailed planning and policy guidance.

1.6 National Planning Policy

1.6.1 Whilst the NPSs will provide the policy framework within which the Secretary of State will make the decision, other material considerations will be taken into account, include other national and local planning policy.

1.6.2 The Secretary of State will also consider other important and relevant matters including the National Planning Policy Framework (NPPF), which sets out the Government's economic, environmental and social planning policies for England. The policies contained within the NPPF articulate the Government's vision of sustainable development, and were recently updated in December 2024.

1.6.3 The NPPF should be read alongside the National Planning Practice Guidance (NPPG), which aims to make planning guidance more accessible and ensure that the guidance is kept up to date.

1.7 Regional and Local Planning Policy

1.7.1 The Scheme is located within the administrative areas for East Cambridgeshire District Council and South Cambridgeshire District Council, and within Cambridgeshire County Council.

1.7.2 The Local Development Plans for the land in which the Scheme is proposed to be located include, but are not limited to the following:

- East Cambridgeshire District Council Local Plan. Adopted in April 2015 and amended in 2023[9];
- East Cambridgeshire District Council Climate Change Supplementary Planning Document (SPD). Effective February 2021[10];
- East Cambridgeshire District Council Contaminated Land SPD. Updated January 2015[11];
- East Cambridgeshire District Council Burwell High Town Conservation Area SPD[12];
- West Wickham Neighbourhood Plan 2021-2031, made August 2022[13];
- South Cambridgeshire Local Plan, adopted in September 2018 and prepared in close collaboration with Cambridge City Council and Cambridgeshire County Council[14];
- South Cambridgeshire District Council Contaminated Land Register. Updated July 2015[15];

[9] Available at: https://eastcambs.gov.uk/planning-and-building-control/planning-policy-and-guidance/adopted-local-plan/local-plan

[10] Available at: https://eastcambs.gov.uk/sites/default/files/2024-10/Climate%20Change%20SPD%20-%20Adoption%20versionAC.pdf

[11] ECDC Contaminated Land SPD.

[12] Available at: https://eastcambs.gov.uk/planning-and-building-control/built-heritage/conservation-area-maps/burwell-high-town-conversation

[13] Available at: https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/west-wickham-neighbourhood-plan

[14] Available at: https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/the-adopted-development-plan/south-cambridgeshire-local-plan-2018

[15] Available at: https://www.scambs.gov.uk/media/18427/scdc-contaminated-land-register.pdf

- Greater Cambridge Integrated Water Management Study Level 1 Strategic Flood Risk Assessment. Effective July 2021[16].
- Cambridgeshire and Peterborough Minerals and Waste Local Plan, adopted July 2021[17];
- Cambridgeshire Flood and Water SPD, adopted in November 2019[18]; and
- Cambridgeshire and Peterborough Minerals and Waste Site Specific Proposals Development Plan (2012)[17].

1.8 Purpose of the Environmental Impact Assessment Scoping Report

1.8.1 Regulation 10(1) of the EIA Regulations sets out that "*A person who proposes to make an application for an order granting development consent may ask the Secretary of State to state in writing their opinion as to the scope, and level of detail, of the information to be provided in the environmental statement*".

1.8.2 In accordance with Regulation 10(1) of the EIA Regulations and the Planning Inspectorate's Advice Note Seven[19], this EIA Scoping Report has been prepared with the purpose of ensuring that the subsequent EIA is focused on the key impacts likely to give rise to significant environmental effects, and to obtain agreement on the EIA approach and scope.

1.8.3 As well as identifying matters to be considered in the EIA, this EIA Scoping Report also identifies those matters that are not considered necessary to assess further and are proposed to be scoped out. This approach is in line with the general aim to undertake proportionate EIA, as advocated by industry best practice.

[16] Available at: https://greatercambridgeplanning.org/emerging-plans-and-guidance/strategic-flood-risk-assessment/

[17] Available at: https://www.cambridgeshire.gov.uk/business/planning-and-development/planning-policy/adopted-minerals-and-waste-plan

[18] Available at: https://www.cambridge.gov.uk/cambridgeshire-flood-and-water-spd

[19] Planning Inspectorate (June 2020) Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environment Information and Environmental Statements (Version 7). Available online: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/

1.8.4 In September 2024, the Planning Inspectorate published their 'Technical Advice Page for Scoping Solar Development'[20]. This advice uses an evidence based approach and relates to certain aspects and matters that can be scoped out of an EIA. This ensures that the ES focusses on 'main' or likely significant effects. It includes a 'Solar Scoping Table' with examples of the environmental aspects that can typically be controlled through standard mitigation such that significant adverse effects resulting from a development are considered to be unlikely. It outlines the type of information that would be required to support the request to scope environmental factors out of an EIA. Where relevant, this technical advice has been used to support the justification for scoping out environmental factors within **Chapter 5** of this EIA Scoping Report.

1.8.5 Whilst this EIA Scoping Report seeks to establish the overall framework for the EIA in relation to the environmental factors and associated effects, the exact scope of the EIA will be influenced by the Scoping Opinion received, the on-going design evolution of the Scheme, and through on-going baseline data collection (e.g., field surveys etc.). In this regard, a list of 'scoping questions' is presented within **Chapter 6** of this EIA Scoping Report, the aim of which is to assist the determining authority and its consultees in forming the Scoping Opinion.

1.8.6 The Planning Inspectorate, on behalf of the Secretary of State, will undertake consultation on the EIA Scoping Report with "the consultation bodies", in accordance with Regulation 10(6) of the EIA Regulations. Statutory bodies subject to this consultation include the Environment Agency, Historic England, Natural England and Local Planning Authorities[21]. Feedback from these consultees, and others, will be taken into consideration when developing the Scoping Opinion.

1.8.7 **Table 1-1** sets out what information the EIA Regulations (Regulation 10(3)) state that a request for a Scoping Opinion must include and where this information can be found in this EIA Scoping Report.

1.8.8 **Table 1-2** sets out what information the Planning Inspectorate's Advice Note Seven recommends that a request for a Scoping Opinion should include and where this information can be found in this EIA Scoping Report.

[20] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-technical-advice-page-for-scoping-solar-development

[21] Statutory Consultees are listed in Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009. Available online: https://www.legislation.gov.uk/uksi/2009/2264/schedule/1/made

Table 1-1: Information required by the EIA Regulations to accompany a request for a Scoping Opinion

Information Required	Location within this Report
A plan sufficient to identify the land	**Figure 1.1**
A description of the Scheme, including its location and technical capacity	**Chapter 2**
An explanation of the likely significant effects of the Scheme on the environment	**Chapter 6**
Such other information or representations as the person making the request may wish to provide or make	**Chapters 2 to 7**

Table 1-2: Information required by the Planning Inspectorate's Advice Note Seven to accompany a request for a Scoping Opinion

Information Suggested	Location within this EIA Scoping Report
The Scheme	
An explanation of the approach to addressing uncertainty where it remains in relation to elements of the Scheme e.g. design parameters	**Chapters 2 and 3**
Referenced plans presented at an appropriate scale to convey clearly the information and all known features associated with the Scheme	**Figure 1.1 and Appendix A**
EIA Approach and Topic Areas	
An outline of the reasonable alternatives considered and the reasons for selecting the preferred option	**Chapter 3**
A summary table depicting each of the aspects and matters that are requested to be scoped out allowing for quick identification of issues	**Chapters 5**

Information Suggested	Location within this EIA Scoping Report
A detailed description of the aspects and matters proposed to be scoped out of further assessment with justification provided	**Chapters 5**
Results of desktop and baseline studies where available and where relevant to the decision to scope in or out aspects or matters	**Chapters 5 and 6, and supporting Appendices**
Aspects and matters to be scoped in, the report should include details of the methods to be used to assess impacts and to determine significance of effect e.g. criteria for determining sensitivity and magnitude	**Chapter 4, Chapter 6 and Appendix C**
Any avoidance or mitigation measures proposed, how they may be secured and the anticipated residual effects	**Chapters 4, 5 and 6**
Information Sources and Guidance	
References to any guidance and best practice to be relied upon	**Chapters 4, 5, 6 and 7**
Evidence of agreements reached with consultation bodies (for example the statutory nature conservation bodies or local authorities)	**Chapter 6**
An outline of the structure of the proposed Environmental Statement	**Appendix B**

1.8.9 In accordance with Regulation 14(3)(a) of the EIA Regulations, the ES will be based on the Scoping Opinion adopted.

1.8.10 The outputs of the EIA will comprise:

- A Preliminary Environmental Information Report (PEIR), produced to inform the statutory consultation process, in accordance with the Planning Act 2008. The PEIR will present the understanding of the potential likely significant environmental effects at the time of the consultation and its purpose will be to provide information that enables interested parties, including members of the public, local authorities and

statutory bodies, to understand those effects so that they can provide meaningful feedback; and

- The PEIR will be followed by the ES, which will be submitted as part of the DCO application. The ES will report on a detailed assessment of the likely significant environmental effects resulting from the Scheme, to include taking account of the proposed mitigation measures.

1.8.11 A Statement of Competence will be prepared as an appendix to the ES, in accordance with Regulation 14(4) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. The Statement of Competence will be prepared by RSK as the EIA coordinator for the Scheme, and will outline the relevant professional experience, capabilities and competency of the individuals responsible for preparing the ES.

1.8.12 RSK is a registrant to the Institute of Environmental Management and Assessment (IEMA) EIA Quality Mark, a voluntary scheme through which EIA activity is independently reviewed. All registrants to the scheme are required to adhere to the IEMA EIA Quality Mark seven key commitments.

1.9 EIA Scoping Report structure

1.9.1 This EIA Scoping Report is structured as follows:

- Chapter 1: Introduces the Scheme, the requirement for EIA and the scoping process;
- Chapter 2: Describes the Scheme and its components, and provides an overview of the construction, operation and decommissioning phases;
- Chapter 3: Outlines the alternatives considered to the Scheme;
- Chapter 4: Outlines the proposed approach and assessment methodology for the EIA;
- Chapter 5: Presents the environmental factors to be scoped out of the EIA;

- Chapter 6: Presents the environmental factors to be scoped into the EIA;
- Chapter 7: Provides an overview of the approach to the Cumulative Effects Assessment.

1.9.2 The EIA Scoping Report is supported by the following appendices:

- Appendix A: Environmental and planning features mapping
- Appendix B: Proposed structure of the Environmental Statement
- Appendix C: EIA significance criteria
- Appendix D: Water figures
- Appendix E: Glint and glare receptor scoping study
- Appendix F: Preliminary Ecological Appraisal (Developable Areas)
- Appendix G: Biodiversity figure
- Appendix H: Landscape and visual amenity figures
- Appendix I: Cultural heritage figures
- Appendix J: Initial gazeteer of heritage assets within 2 km of the Developable Areas and Inter Array Connection Corridors
- Appendix K: Department for Transport traffic data count points
- Appendix L: Public Rights of Way (PRoW) within study area

2 DESCRIPTION OF THE SCHEME

2.1 Introduction

2.1.1 This chapter provides a description of the Scheme and the Site for the purposes of identifying and reporting the potential environmental impact and likely significant environmental effects in this EIA Scoping Report. In addition, this chapter explains the need for flexibility in the design process and how this will be addressed in the EIA.

2.1.2 The description of the Scheme represents the current understanding of the design parameters. However, as part of an ongoing design process, the detail provided in this chapter will be further refined for the PEIR. Following statutory consultation, further alteration to the description of the Scheme will be included in the ES which will confirm details of the exact Scheme for which a DCO is sought.

2.1.3 The construction and decommissioning methods to be utilised will be determined by the appointed contractor(s). However, all works will be required to be undertaken within the parameters assessed for the Scheme. With this in mind, the EIA will represent a 'worst case', ensuring a robust assessment of the likely significant environmental effects.

2.2 Need for the Scheme

2.2.1 Low carbon solar generation is an essential part of the energy transition needed to enable decarbonisation. Both the solar and grid connection elements of the Scheme are classified as Critical National Priorities (CNP) and would provide new energy generating and distribution infrastructure in line with national policy targets for decarbonisation, including meeting Net Zero targets, safeguarding energy supply and ensuring affordability.

2.2.2 The Overarching NPS for Energy (EN-1)[22] emphasises that both solar energy and grid connection infrastructure are classified as CNP, underscoring their vital role in achieving the UK's net zero targets. EN-1 identifies "*a secure, reliable, affordable, net zero consistent system in 2050"* as being *"composed predominantly of wind and solar*". It further stresses the urgent need to develop low carbon energy infrastructure, including grid connections to fully

[22] Department for Energy Security and Net Zero (2024) Overarching National Policy Statement for Energy (EN-1). Available online: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1

decarbonise the UK's power system by 2035 to underpin its 2050 net zero ambitions.

2.2.3 The policy highlights that "*The Secretary of State should assess all applications for development consent for the types of infrastructure covered by this NPS on the basis that the government has demonstrated that there is a need for those types of infrastructure which is urgent, as described for each of them in this Part.* This urgency applies equally to grid connection infrastructure, which is essential to support the deployment of renewable energy projects. EN-1 also specifies *"that substantial weight should be given to this need when considering applications for development consent under the Planning Act 2008,"* Importantly, individual projects are not required to demonstrate their specific contribution to the overarching need identified in this policy, ensuring a streamlined approach to the approval of essential energy infrastructure.

2.2.4 The policy also recognizes that grid infrastructure projects benefit all users by increasing system robustness and resilience, ensuring the reliable operation of the electricity network. For example, the NPS explains that while existing networks must adapt and evolve, new transmission lines (132kV or above) will be necessary to support decarbonization efforts and meet growing demand (3.3.67).

2.2.5 The policy support for solar is further solidified within the NPS for renewable energy infrastructure (EN-3)[23], which provides specifically that "*The government has committed to sustained growth in solar capacity to ensure that we are on a pathway that allows us to meet net zero emissions by 2050. As such, solar is a key part of the government's strategy for low-cost decarbonisation of the energy sector.*" Whilst the Energy Security Strategy produced by the Government in April 2022, announced the intent to increase solar capacity in the UK from 14 gigawatts (GW) to 70GW by 2035[24].

2.3 Site location

2.3.1 The Site comprises three Developable Areas , Inter Array Connection Corridors and Grid Connection Corridors (as described in **paragraph 1.1.6**) located within the administrative boundaries of South Cambridgeshire District Council and East Cambridgeshire District Council.

[23] Department for Energy Security and Net Zero (2024) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available online: https://www.gov.uk/government/publications/national-policystatement-for-renewable-energy-infrastructure-en-3

[24] Available at: https://www.gov.uk/government/publications/powering-up-britain/powering-up-britain-energy-security-plan

Developable Areas

2.3.2 The three Developable Areas (for PV and associated infrastructure) total 1,520 hectares (ha) and are identified as follows:

- Area A - West: c. 207 ha – land to the east of the A11, north east of Worsted Lodge;
- Area B - Central: c. 492 ha – land to the east of the A11 and west of Balsham, between Six Mile Bottom road to the north and Balsham Road/Cambridge Road to the south; and
- Area C – East: c. 821 ha – land to the north, east and south of West Wratting, south of Weston Green, and west of Weston Colville and Willingham Green.

Inter Array Connection Corridors

2.3.3 Two areas are required to connect the different Developable Areas, or separate land parcels within a Developable Area. These are as follows:

- Connection 1: between Developable Area A – West and Developable Area B - Central, extends approximately between Dungate Farm to the west and Rectory Farm to the east, measuring c. 205.7 ha; and
- Connection 2: between two separate land parcels within Developable Area C – East. The area being considered extends within fields to the south of Brook Lane, north east of Weston Colville, measuring c. 24.6 ha.

2.3.4 As the design progresses, a single alignment will be defined within each of the corridors.

Grid Connection Corridors

2.3.5 As detailed in Section 1.3.3 The Grid Connection Corridor could form an NSIP in its own right under Part 3 of the Planning Act 2008. Two corridors are currently being considered for the grid connection, which will extend from either of the Developable Areas to the new Burwell South substation located to the north. The proposed connection is a 400kV OHL and two routing options are proposed:

- Grid Connection Corridor A measures c. 3,082.4 ha and allows for a connection point in either Developable Area, and follows the existing OHL route to Burwell substation; and
- Grid Connection Corridor B measures c. 1,116.3 ha and only allows for a connection at the northern parcel of the Developable Areas. As the design progresses, a preferred alignment for the grid connection will be defined, using one of the Grid Connection Corridors.

2.3.6 The expected area of land potentially required for the construction, operation, maintenance and decommissioning of the Scheme, which includes land required for permanent and temporary purposes, is shown in **Figure 1.1**. It is important to note that this will be subject to change as the design and EIA progress; however, **Figure 1.1** shows the envisaged current maximum extent of both temporary and permanent land required for the Scheme.

2.4 Site context

2.4.1 The environmental and planning features of the Site are provided in **Figure 2.1**, with further detailed figures provided in **Appendix A Environmental and planning features**.

2.4.2 The Developable Areas predominantly comprise arable fields divided by hedgerows and interspersed with smaller areas of woodland, grassland and scrub. The villages of Little Abington, Hildersham, Balsham lie to the south and south east and the A11 runs parallel to the west of the Site. West Wratting, Weston Colville, Weston Green and Willingham Green are located centrally to land parcels within Developable Area C – East, with Brinkley to the north.

2.4.3 Developable Area A – West is located northeast of Worsted Lodge and the A11, south of the Balsham/Cambridge Road. The parcel is bounded to the north by a length of deciduous broadleaved woodland, with arable fields divided by native hedgerows. On the northern boundary is a Scheduled Monument (*Bowl barrow 1080m north east of Worsted Lodge Farm, part of a dispersed round barrow cemetery in Charterhouse Plantation*), and within 150 m is another Scheduled Monument (*Four bowl barrows 920m and 950m south east of Heath Farm, part of a dispersed round barrow cemetery in Charterhouse Plantation*). To the south, within 300 m is the Roman Road Site of Special Scientific Interest (SSSI) and *Worsted Street (Via Devana) near Cambridge Scheduled Monument*. To the west, there is a tower for the existing OHL and a small portion of the Site falls within Flood Zones 2 and 3.

2.4.4 Developable Area B – Central is located close to Lark Hall, southeast of the A11 and south of Six Mile Bottom Road. To the southwest is Fleam Dyke, a SSSI and Scheduled Monument. Wadlow Wind Farm is located centrally within the Site, with arable fields divided by hedgerow, ditches and small areas of woodland. Three long distance footpaths intersect, or extend along the boundary of, the Site: E2 long distance footpath, Harcamlow Way and Icknield Way footpath. A small portion of the Site, to the very west and along the un-named watercourse between Lark Hall Corner and Grange Farm, falls within Flood Zones 2 and 3.

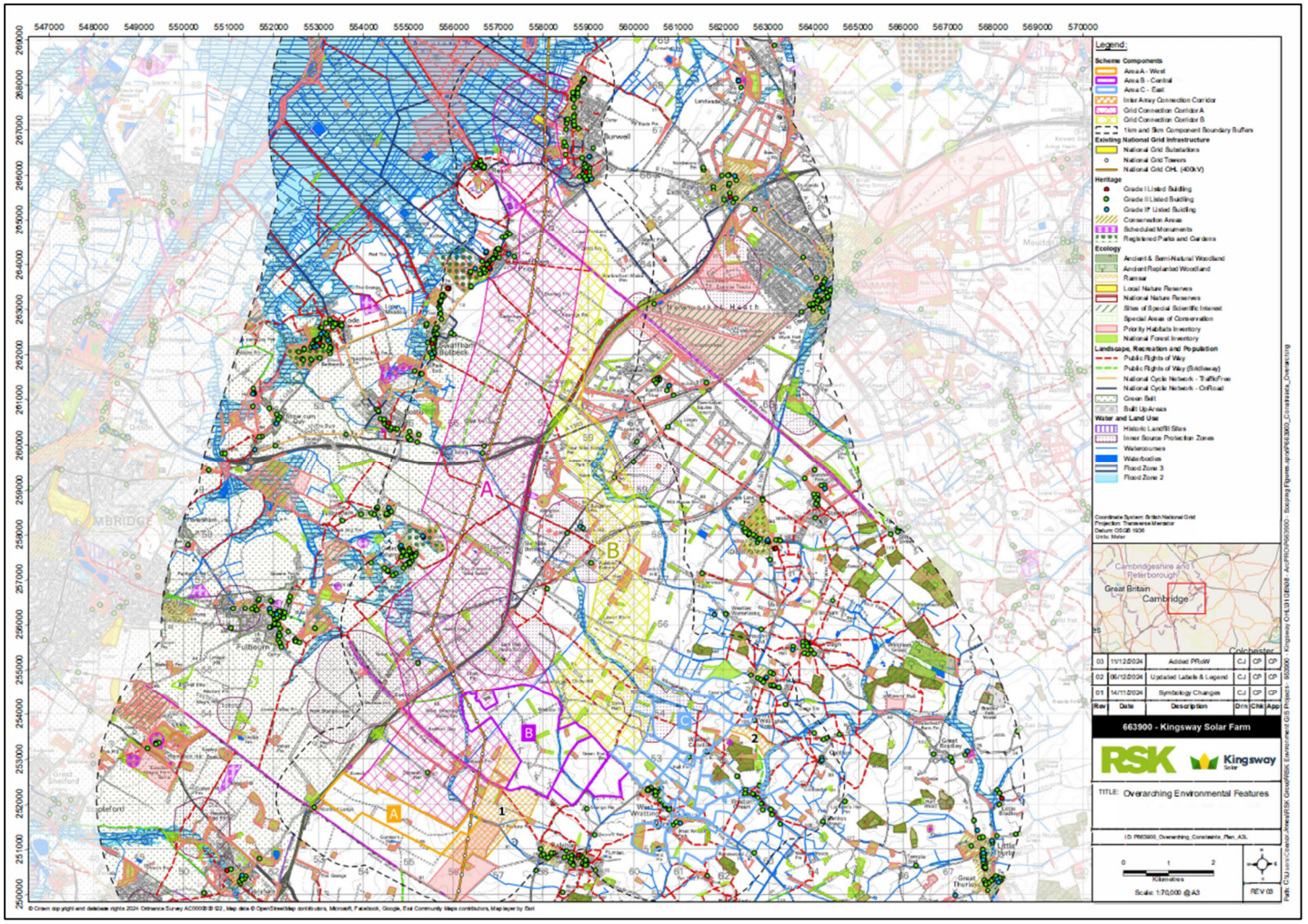
2.4.5 Developable Area C – East is located around the villages of West Wratting, Weston Colville and Willingham Green. Three parcels of ancient and semi-natural woodland are located in proximity to the Developable Area with other

scattered areas of woodland located between the arable fields. The Scheduled Monument *Moat House moated site* is within 125 m (close to West Colville), and the E2 European Long Distance Walking Route passes through the Site. The River Stour extends through Weston Green, and therefore a small part of the area falls within Flood Zones 2 and 3.

2.4.6 The Inter Array Connection Corridors are very similar to the Developable Areas, comprising arable fields, divided by smaller areas of woodland and hedgerows.

2.4.7 The Grid Connection Corridors are predominantly arable fields. Several major road and rail links cross the corridors including the A14, A11 (both part of the Strategic Road Network – SRN), A1303, A1304, and Greater Anglia Cambridge to Newmarket rail line. To the north, Grid Connection Corridor B extends directly to the west of Newmarket racecourse and Newmarket Heath Airfield. Both corridors require the crossing of Devil's Dyke SSSI and Devil's Ditch, and the Reach to Woodditton Scheduled Monument. To the south of Burwell, the arable fields are separated by small ditches and watercourses rather than hedgerows, with the existing Burwell substation located within Flood Zone 3.

Figure 2-1: Environmental and planning features



Biodiversity

2.4.8 There are four statutory designated Habitats sites within 10 km of the Site Boundary, in close proximity to the Grid Connection Corridors:

- Devils Dyke Special Area of Conservation (SAC) (0.95 km south east);
- Fenland SAC (2.08 km north west);
- Wicken Fen Ramsar (2.08 km north west); and
- Chippenham Fen Ramsar (5.08 km north east).

2.4.9 There are three statutory nationally designated sites within the Site Boundary:

- Fleam Dyke SSSI (within Inter Array Connection Corridor 1 and Grid Connection Corridor A);
- Devil's Dyke SSSI (within both Grid Connection Corridors); and
- Newmarket Heath SSSI (within Grid Connection Corridor B).

2.4.10 There are a further five SSSIs, and one National Nature Reserve (NNR) within 2 km of the Site Boundary:

- Roman Road SSSI (0.27 km south of Developable Area A - West);
- Balsham Wood SSSI (1.4 km south west of Developable Area C - East);
- Fulbourn Fen SSSI (1.1 km west of Grid Connection Corridor A);
- Great Wilbraham Common SSSI (1.4 km west of Grid Connection A); and
- Wicken Fen SSSI and NNR (1.9 km north west of Grid Connection Corridor A).

2.4.11 There are no Local Nature Reserves (LNR) within 2 km of the Site Boundary.

2.4.12 There are five non-statutory designated sites within the Site Boundary:

- Old Cambridge Road Verges County Wildlife Site (CWS) (within Developable Area B - Central);
- West Wratting Valley Farm CWS (within Grid Connection Corridor A);
- Health Road/Street Way Green Lanes (within Grid Connection Corridor A);
- Swaffham Bulbeck Protect Road Verge (within Grid Connection Corridor A); and
- Burwell Disused Railway CWS (within Grid Connection Corridor A).

2.4.13 There is no ancient woodland within the Site. The closest area is Hill Croft, which is directly adjacent to Developable Area C – East (close to Weston Colville) which is categorised as ancient and semi-natural woodland. Two other areas of ancient and semi-natural woodland are located near Weston Colville,

in proximity to Developable Area C – East; Great Coven's Wood and Lower Wood.

2.4.14 Throughout the Site are areas of deciduous woodland Priority Habitat (PH). Fleam Dyke SSSI, Devil's Dyke SSSI and Newmarket Heath SSSI all support lowland calcareous grassland PH. There is a small area of lowland fen PH and coastal and floodplain grazing marsh PH in proximity to Burwell substation, with Grid Connection Corridor A.

Landscape

2.4.15 The Site is not covered by any statutory landscape designations, nor are there any within 2 km of the Site. The nearest National Landscape (formerly Areas of Outstanding Natural Beauty (AONB)) to the Site is Dedham Vale, is >30km to the south east.

2.4.16 There are two Registered Parks and Gardens within 2 km of the Site:

- Wilbraham Temple (directly west of Grid Connection Corridor A); and
- Swaffham Prior House (>250m west of Grid Connection Corridor A).

2.4.17 The Site is located in the National Character Area (NCA) 87 East Anglian Chalk.

Geology

2.4.18 There are no recorded geological conservation review sites, regionally important geological and geomorphological sites (RIGS) or Local Geology Sites within 250 m of the Site.

2.4.19 Bedrock geology across the Developable Area and Inter Array Connection Corridors comprises the New Pit and Lewes Nodular Chalk Formations, with the Holywell Nodular Chalk formation present in the north-western parts of these areas. The Grid Connection Corridors comprise the above, with the Zig-Zag and West Melbury Marly Chalk Formations present towards the northern extent at Burwell.

2.4.20 Superficial deposits are largely absent from the Site, with some localised variations.

2.4.21 Agricultural Land Classification (ALC) mapping shows the Site to include areas of Grade 1, 2 and 3a soils, and therefore areas of Best and Most Versatile (BMV) agricultural land (Grades 1, 2 and 3a). **Section 6.4** provides further details of the Site-specific surveys undertaken on the Developable Areas A – West and B - Central to date to accurately classify the soils. This includes defining areas of subgrade 3a: Good Quality Agricultural Land and Subgrade 3b: Moderate Quality Agricultural Land. Survey work for Developable Area C

– East and where necessary the Inter Array Connection Corridors and Grid Connection Corridors, will be undertaken in 2025.

2.4.22 The bedrock deposits underlying the Site form a principal aquifer, with superficial geological units (where present) defined as secondary A aquifers or secondary aquifers (undifferentiated). Sections of the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors are situated within a Zone I Source Protection Zone (SPZ) with respect to groundwater abstraction sources.

Cultural heritage

2.4.23 There are a number of Scheduled Monuments within the Site Boundary. Fleam Dyke Scheduled Monument extends through Grid Connection Corridor A and the Inter Array Connection Corridors, whilst forming part of the boundary of the Developable Area B - Central. Devil's Ditch, Reach to Woodditton Scheduled Monuments extends through both Grid Connection Corridors, south east of Reach. The following bowl barrow Scheduled Monuments are also within the Site:

- Bowl barrow 1.1 km north east of Worsted Lodge Farm, part of a dispersed round barrow cemetery in Charterhouse Plantation – on northern boundary of Developable Area A - West;
- Three bowl barrows 640 m north west of Hare Park Stud – on the eastern boundary of Grid Connection Corridor A; and
- Long barrow 410 m south east of Partridge Hall Farm – in Grid Connection Corridor B.

2.4.24 There are no Listed Buildings within the Developable Areas, Inter Array Connection Corridors or Grid Connection Corridor B. Within Grid Connection Corridor A there are four Listed Buildings:

- Barn at Dotterell Hall Farm (Grade II).
- Hall Farmhouse (Grade II).
- Barn at Spring Hall Farm (Grade II).
- Milestone, 5 metres east of Spring Hall Farm (Grade II).

2.4.25 As discussed in **paragraph 2.4.16** there are two Registered Parks and Gardens within 2 km of the Site: Wilbraham Temple and Swaffham Prior House.

2.4.26 There are no Conservation Areas within the Site, however the following are within 2 km:

- Balsham West End Conservation Area – 540 m south east of the Inter Array Connection Corridor 1.
- Balsham Village Conservation Area – 950 m south east of Developable Area C -East.

- West Wratting Conservation Area – directly adjacent to Developable Area C - East.
- Brinkley Conservation Area – 340 m north east of Developable Area C – East.
- Burrough Green Conservation Area – 1.2km north east of Developable Area C – East.
- Fulbourn Conservation Area – 1.87 km west of Grid Connection Corridor A.
- Great Wilbraham Conservation Area – 380 m west of Grid Connection Corridor A.
- Little Wilbraham Conservation Area – 630 m west of Grid Connection Corridor A.
- Bottisham Conservation Area – 680 m west of Grid Connection Corridor A.
- Swaffham Bulbeck Conservation Area – 820 m west of Grid Connection Corridor A.
- Swaffham Prior Conservation Area – 340 m west of Grid Connection Corridor A.
- Reach Conservation Area – 280 m west of Grid Connection Corridor A.
- Burwell High Town Conservation Area – 100 m east of the northern end of the Grid Connection Corridors.
- Burwell North Street Conservation Area – 50 m east of the northern end of the Grid Connection Corridors.

2.4.27 There are no World Heritage Sites or Registered Battlefields within 2 km of the Site.

Water resources

2.4.28 There are three watercourses within or in close proximity to the Site which are shown as Main Rivers on Environment Agency mapping. The watercourses are all tributaries of the River Cam to the west, and form part of the drainage ditch network to the west of Burwell; Lode Reach, Burwell Reach and Catch Water Drain.

2.4.29 The other closest Main Rivers are the River Granta, located 2.5 km to the south of the Developable Area A - West, and the River Stour located >5 km to the east of the Developable Area B - Central and Grid Connection Corridor B.

2.4.30 Some small parts of the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors fall within Flood Zones 2 and 3 based on the Environment Agency's flood map for planning. Flood Zone 3 indicates an area that has a high probability of flooding, defined as a 1% or greater annual

probability of river or sea flooding. Flood Zone 2 is defined as having between a 0.1% and 1% annual probability of river or sea flooding.

Access and recreation

2.4.31 There are a total of 174 Public Rights of Way (PRoW) either in or within 500 m of the Scheme. The highest number of PRoW are located in and around Developable Area C – East and Grid Connection Corridor A. Full details of the PRoW are provided in **Section 6.8 Population** and **Appendix L Public Rights of Way (PRoW)** and shown in **Figure 2.1** and **Appendix A Environmental and planning features**.

2.4.32 Of these, three are sections of long distance footpaths that intersect the Site as follows:

- E2 European long distance path – the E2 is 5,720 km and passes through Great Britain, Netherlands, Belgium, Luxembourg, Switzerland and France[25]. The section between Balsham and Willingham Green extends through Developable Area B – Central, Developable Area C – East and Grid Connection Corridor B. Between Balsham and Cambridge the pathway extends along Roman Road SSSI, 280 m south of Developable Area A – West. Sections of the path are suitable for walking, cycling and riding.
- Icknield Way Path[26] – long distance pathway between Tring and Thetford (177 km). The section between Balsham and Willingham Green follows a similar routing to the E2 path, extending through Developable Area B – Central, Developable Area C - East and Grid Connection Corridor B. Sections of the path are suitable for walking, cycling and riding.
- Harcamlow Way – long distance pathway extending through Cambridgeshire, Essex and Hertfordshire. The section between Balsham and Fulbourn extends along the southern boundary of Developable Area B - Central, and within the Inter Array Connection Corridor 1 and Grid Connection Corridor A.

2.4.33 To the north, National Cycle Network Route 51 intersects the Grid Connection Corridors. The route extends from Reach to Burwell, along the minor road network (Reach Road and Weirs Drove), and then further east to Exning along Heath Road. National Cycle Network Route 11 also intersects the Grid Connection Corridors, extending from Route 11 west along Hightown Drove and Newnham Drove.

[25] https://www.era-ewv-ferp.org/e-paths/e2/

[26] Icknield Way Path: A walking route from Buckinghamshire to Norfolk. Accessed at https://icknieldwaypath.co.uk/

Existing infrastructure

2.4.34 Publicly available mapping of utilities within the Site has identified the presence of several assets in the area, including high pressure gas mains, telecoms cables and electrical cables. In addition, water utilities are present. The locations of existing utilities will be considered in the ongoing design development.

2.5 The Rochdale Envelope and assessing uncertainty

2.5.1 In order to define the Scheme, determine where detail is to be included in the DCO application and where it may be deferred until after consent is granted, the Applicant will identify the level of flexibility required (e.g., in relation to the location of the solar PV modules or construction methods).

2.5.2 Promoters of renewable energy projects generally need to maximise flexibility in their consents where it is valued to do so, given the long lead in times to consent and subsequent engagement of engineering, procurement, and construction contractors. It is typical for large infrastructure projects to retain the ability to finalise the design of a scheme post-consent within set limits of deviation and/or parameters.

2.5.3 In order to maintain flexibility in the design, it is the Applicant's intention to use the 'Rochdale Envelope' approach within parameter ranges, as outlined in the Planning Inspectorate's Advice Note Nine[27]. The Advice Note provides specific guidance to applicants on the degree of flexibility that could be considered appropriate under the Planning Act 2008 regime. The Advice Note acknowledges that there may be aspects of the design that are not yet fixed, and therefore, it may be necessary for the EIA to assess realistic worst case scenarios to ensure that all foreseeable significant environmental effects of the Scheme will be assessed.

2.5.4 The Rochdale Envelope is an acknowledged way of dealing with an application for EIA development, where details of a project have not been fully resolved by the time the application is submitted. The term is used to describe those elements of a scheme that have not yet been finalised but can be accommodated within certain limits and parameters allowing the likely significant effects of a project to be presented in the ES as a realistic worst case. It also provides the opportunity to assess aspects of a development where the detailed design is to be developed by the Applicant and approved

[27] Planning Inspectorate Advice Note Nine: Rochdale Envelope (July 2018, Version 3). Available online: https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope

by the determining authority under a DCO Requirement, subsequent to the DCO being made.

2.5.5 Furthermore, such flexibility may be useful where a change in the design or capacity of the Scheme is anticipated, but not yet certain. For example, a particular element of the design that may be subject to ongoing technological advancements which cannot necessarily be foreseen at the time of application. Flexibility in the DCO enables the Applicant an ability, where appropriate, to consider and adopt such future technological advancements. This is of particular importance to maintaining flexibility due to the rapid pace of change in renewable energy technologies.

2.5.6 It is therefore necessary for the EIA to assess an 'envelope' within which the works would take place. To remain in accordance with the EIA Regulations, it will be essential that the parameters are defined to ensure that likely significant effects are identified, rather than unrealistically amplified effects, which could be deemed unlikely. These parameters will be considered in detail by the technical authors in the ES to ensure the realistic worst case effects of the Scheme are assessed for each potential receptor.

2.5.7 Further detail on the draft design approach that is being used to inform the EIA is presented in **Section 2.6**. Design parameters will be further developed for statutory consultation and presented in the PEIR. Parameters and limits of deviation will be presented in the ES, draft DCO and works plans.

2.6 Design vision

2.6.1 A design vision has been developed for the Scheme to guide and inform the design process and assist where possible with the mitigation and reduction of potential environmental effects and, where appropriate, wider ranging enhancements or improvements for local stakeholders.

2.6.2 The design process will also take account of the Planning Inspectorates Advice on Good Design, and a Design Approach Document (DAD), or similar, which will be submitted with the DCO application to describe how the design has evolved[28].

2.6.3 Opportunities to mitigate, reduce impacts or provide enhancements will be regularly reviewed throughout the design process, using the following three key themes as guiding principles: sustainability, people, and environment.

[28] Planning Inspectorate (October 2024) Nationally Significant Infrastructure Projects: Advice on Good Design. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-good-design

2.6.4 The Scheme will be designed to support the transition to Net Zero and assist the UK in achieving Net Zero targets by 2050. The Scheme will be designed with flexibility to take advantage of new sustainable and efficient technologies that emerge throughout the development process. Comprehensive lifecycle analysis will be conducted to evaluate the whole-life emissions and environmental impact of the Scheme for its entire lifespan (40 years). The Applicant will, where possible, look to mitigate and reduce emissions through the Scheme by making design changes to improve performance.

2.6.5 Meaningful engagement will be carried out with communities and stakeholders. The Applicant will, where possible, work with local communities to understand how best to protect and enhance their environment and the local area. The Applicant will also explore opportunities to improve community access through new permissive paths and add value to people living locally and maximise the benefits of the Scheme to the local community.

2.6.6 The Applicant will look to protect and enhance the landscape, and the Scheme will be designed sensitively with consideration to complementing the local character. The Applicant will utilise topic-based environmental studies to inform the design and suitable mitigation measures. Where possible, existing habitats including woodlands and hedgerows will be maintained, and a biodiversity net gain beyond 10% will be provided.

2.7 Scheme components: solar and BESS

Overview of solar and battery storage infrastructure

2.7.1 The Scheme could include the following key components in the Developable Areas:

- Solar PV infrastructure, including:
  - Solar PV modules; and
  - Module mounting structures.
- Battery Energy Storage System (BESS);
- Solar PV and BESS Supporting Infrastructure, including:
  - Inverters;
  - Transformers; and
  - Switchgears.
- On-site electrical compounds comprising of substation(s) and control buildings;
- On-site cabling;
- Connections (either cabled or overhead lines) between solar array land parcels;
- A spare parts storage building;

- Welfare and/or operations building;
- Associated infrastructure including access tracks, parking, security measures, gates and fencing, lighting, drainage infrastructure, and storage containers;
- Environmental mitigation, landscape and biodiversity enhancement measures; and
- Temporary development during the construction phase including construction compounds, parking and temporary access roadways.

2.7.2 Works to understand the highway effects of the Scheme are ongoing and there may be a need for additional minor highway widening or adjustments in limited parts of the public highway in the vicinity of the Site to facilitate access during construction. These would be identified, if required, for inclusion in the PEIR or ES.

2.7.3 **Table 2-1** below provides the anticipated parameters of the components listed in **paragraph 2.7.1**, which will be confirmed as the design progresses.

Table 2-1: Anticipated parameters

Scheme Element	Anticipated Parameters (approximate)
Solar modules – Fixed	Length: 2.5 m Width: 1.5 m wide Maximum height 3.5 m
BESS	Length: 12.5 m Width: 3 m Height: 3 m
On-site substation(s)	Length: 100 m Width: 80 m Height: 18 m
Site fencing	Substation – Height: 2.8 m (palisade) BESS - Height: 2.4 m (weld mesh) Other operational areas – Height: 1.8 m (mesh)
CCTV poles	Height: 5 m
Access gates	Height: 2 m Width: 5 m
Internal roads	Width: 3.5 m-5 m
On-site cabling – 33 kV working width and depth (buried)	Width: up to 1.5 m Depth: up to 1.5 m

Scheme Element	Anticipated Parameters (approximate)
Inter Array connection/ Grid connection alignment working width and depth (underground/buried)	Construction Working Width: 50 m Trench dimensions: Width: 2 m Depth: 1.5 m Trenches could be up to 3 m deep and 3 m wide.
Inter Array connection/ Grid connection alignment working width and height (overhead)	Width: 50 m Height: 50 m (steel lattice pylons)

Solar PV infrastructure

Solar PV modules

2.7.4 Solar PV modules convert sunlight into direct current (DC) electricity. Individual panels are typically up to 3.5 m high, 2.5 m in length and 1.5 m wide and weigh approximately 35 kg. Panels are typically formed from a series of PV cells behind two millimetres of toughened frontal glass housed in a frame built from aluminium. It is anticipated the Scheme will utilise 144-cell PV modules, however, with solar technologies evolving quickly, other options may be available at the time of procurement and construction.

2.7.5 Based on current technology, the generating capacity of each of the Scheme's PV panels is estimated to be in the region of 600 W to 800 W. Each module would be fixed into a mounting structure in groups known as 'strings'. Various factors will help to inform the number and arrangement of modules in each string and it is likely some flexibility will be required to accommodate future potential developments in solar technology.

2.7.6 In this configuration, it is anticipated that panels would be tilted at an angle of in the range of 15 to 20 degrees and orientated at 180 degrees, facing south, though this is subject to further appraisal. As the Scheme design develops, the panel orientation will be determined based upon economic, environmental, and technical factors. A realistic worst-case scenario will be assessed and presented in the ES.

2.7.7 The approximate minimum height (assuming level ground topology) of the solar PV modules would be 2.9 m and maximum would 3.5 m (subject to flood modelling).

Module mounting structures

2.7.8 Each row of solar PV modules will be mounted on a rack known as a frame, supported by galvanised steel poles typically driven between 1 m and 1.5 m into the ground. It is anticipated that the Scheme will adopt a predominately south facing fixed module mounting configuration. If necessary (for example, in areas where minimal ground interference is sought due to buried archaeological assets), an alternative option is for the solar PV modules and associated frame to be mounted on concrete ballast so that no ground penetration is required.

2.7.9 Based on the design development to date, spacing between mounting rows is expected to be between 3 m and 5 m to allow for adequate distance to minimise inter-row shading and enable access for routine maintenance.

2.7.10 Solar PV modules are likely to be mounted on structures with a clearance above ground level of between a minimum of 0.5 m and a maximum upper height of 1.0 m. These clearance distances are indicative and subject to further refinement through the consideration of factors including Site topography and flood data.

Solar PV supporting infrastructure

Inverters

2.7.11 Inverters are required to convert the DC electricity generated by the solar PV modules into alternating current (AC) to allow for compliant electricity export to National Electricity Transmission System (NETS). Subject to ongoing design development, it is anticipated that central inverters will be used, located at regular intervals across the Developable Area, mounted on hard standing bases. There is estimated to be approximately 140 inverters required across the Developable Area, each approximately 3 m wide, 2.5 m tall, with a depth of 1.7 m.

Transformers

2.7.12 Transformers are required to step-up or step-down voltage of the electricity generated across the Site before it reaches on-site substation(s). These would be located at various points throughout the Site with specific voltages being confirmed through detailed design. Transformers to the specification required for the Site are typically 6 m long, 2.5 m wide and 3 m high. As the Scheme design develops, the likely configuration of equipment will be determined based upon environmental and technical factors.

Switchgears

2.7.13 Switchgear equipment is required to control, protect and isolate various pieces of electrical equipment on the Site. Switchgear ensures the safe and efficient distribution of electrical power by enabling the interruption of fault currents, the disconnection of circuits for maintenance, and the protection of equipment from overloads and short circuits. Switchgear infrastructure is typically housed in buildings, however, the configuration of equipment is subject to further refinement as the design of the Scheme progresses.

Battery Energy Storage System (BESS)

2.7.14 The Scheme will include a co-located BESS. The BESS is designed to assist with energy management and efficiency helping to balance supply and demand, as well as to support grid stability. Energy generated by the solar PV during times of low consumer demand can be stored by the BESS and exported during times of peak consumer demand. It is also intended that the BESS will be able to participate in available ancillary service markets to support with overall grid stability.

2.7.15 One primary component of the BESS is the battery cells which are typically housed within shipping container type units, accompanied with necessary infrastructure (transformers and inverters) to interconnect with the wider Site. Each BESS unit is assumed to have storage capacity between approximately 3 MWh and 7 MWh. As storage technology advances this per-unit capacity may increase. As such, the specific number of units required will be determined as part of the detailed design process. Each individual BESS unit is assumed to occupy approximately the same footprint as a typical shipping container, approximately 12.5 m long, with a width of 3 m and a height of 3 m. Security fencing around the BESS area(s) is assumed to be weld-mesh fencing of up to 2.4 m in height.

2.7.16 A detailed design process will be undertaken for the BESS exploring several configurations; maintaining flexibility to account for the readily developing technology that could be available at the time of procurement and construction.

2.7.17 The BESS infrastructure will likely be situated within the vicinity of the on-site substation infrastructure to reduce cabling and losses. This will be confirmed through detailed design. Depending on the final on-site substation configuration, the BESS may be split and dispersed across multiple on-site substation areas.

2.7.18 Dependent on specific BESS technologies selected through the detailed design process, there may be a requirement for a Heating, Ventilation and Air Conditioning (HVAC) system, to ensure that the batteries operate safely and

efficiently. This could be an external HVAC system to the battery units, situated adjacent or atop the container, or alternatively housed internally within the container. Specific implementation is subject to evolving technology and refinement to the design of the Scheme as it progresses.

2.7.19 An outline Battery Safety Management Plan (oBSMP) will be prepared to support the DCO Application. This will set out the parameters for the management of fire risk associated with the BESS. The outline Drainage Strategy (see **paragraph 2.7.37**) will need to consider the management of fire water.

2.7.20 Switchgear will be required to help control protect and isolate the BESS ensuring efficient operation and safety. The switchgear will assist with protection against overloads and faults within the BESS helping maintain stability.

2.7.21 As the design develops, the configuration of equipment will be determined based upon environmental and technical factors. A reasonable worst-case scenario will be assessed and presented in the ES.

On-site substation(s)

2.7.22 On-site substation infrastructure will be required which will consist of electrical equipment such as but not limited to transformers, switchgear, control and metering equipment required to facilitate the export of electricity from the Site to National Electricity Transmission System (NETS).

2.7.23 Some of the equipment associated with on-site substation infrastructure such as transformers, switchgear and control and metering devices may be housed within buildings with approximate dimensions of up to 18 m in height, 100 m in length and 80 m in width. The necessary transformer infrastructure would be installed at the on-site substation(s) each with an individual footprint of up to 14.5 m in width, 21.5 m in length and 11 m in height.

2.7.24 Several possible configurations are being explored for the on-site substation infrastructure. The intention of this design work is to minimise electrical losses prior to export to the NETS. The options being explored as to the number and configuration of on-site substation(s) to be installed for the Scheme include:

- A single main 400 kV/33kV on-site substation;
- Two 400 kV/33kV on-site substations;
- Three 400 kV/33kV on-site substations; and
- Three on-site substations consisting of two 132 kV/33kV substations and one 400/132 kV substation.

2.7.25 Substation configurations which would require more than one on-site substation would look to have on-site substations dispersed across multiple locations within the Developable Area and serve to minimise electrical losses when transporting electricity across the different Developable Areas.

2.7.26 At both 400 kV and 132 kV, it is anticipated that the required footprint for each individual on-site substation would be approximately 9,000 m^2. Further refinement is required through the iterative design process to confirm the parameters and location of on-site substation(s) as the design of the Scheme progresses.

On-site cabling

2.7.27 Low voltage on-site electrical cabling is required to connect the solar PV modules and BESS to inverters (typically via 1.5/1.8 kV cables), and the inverters to the transformers on-site (typically via 0.6/1 kV cables). The dimension of the trenches will vary depending on the number of ducts they contain but are typically up to 1.5 m in width and up to 1.5 m in depth.

2.7.28 Cabling from the PV modules to the inverters will be above ground secured to mounting structures, with a small section placed underground where it leaves the modules and connects to the inverters and travels between rows to create a string.

2.7.29 Connections (either overhead lines and/or underground cables) will be required to connect the Developable Areas and land parcels outlined within **Figure 1.1**. The voltage of this cabling will be confirmed following finalisation of the on-site substation(s) configuration and through more detailed design.

2.7.30 Data cables will also be installed within the Developable Areas and Inter Array Connection Corridors, typically alongside electrical cables to allow for the monitoring during operation, such as the collection of solar PV module data from pyranometers.

Fencing and security

2.7.31 Mesh fencing will enclose the operational areas of the Site, approximately 1.8 m in height. The BESS areas will be enclosed by weld mesh fencing up to approximately 2.4 m in height. On-site substation infrastructure, such as that featured at the on-site substation(s), will be enclosed with palisade fencing, up to approximately 2.8 m in height. Pole mounted internal facing closed circuit television (CCTV) cameras will be deployed regularly along the perimeter(s) of the Developable Area with views along the fence line and of the internal Developable Area. Additional CCTV cameras will be deployed at key locations internally. These are expected to be approximately 5 m in height. The specific

equipment and locations will be determined as part of the detailed design process.

2.7.32 Non-continuous sensor triggered infrared lighting will be required and located around critical electrical infrastructure, and access points, for security purposes. It is not anticipated that areas be permanently lit, but this will be confirmed as the Scheme design progresses.

Developable Area access and access tracks

2.7.33 It is anticipated that construction access will be via the four junctions along the A11, and then onto the local road network; Six Mile Bottom Road, London Road, Balsham Road and an unnamed farm access via Worsted Lodge. These routes are shown in **Figure 2.2**. The exact access locations and access routings have yet to be confirmed following further design refinement and ongoing consultation. There is potential that highways improvement works may be required to facilitate access to the Developable Areas, further assessment will determine any requirements which will be outlined within the ES and Transport Assessment (TA).

2.7.34 Access tracks will be constructed across the Developable Areas, typically 3.5 to 5 m wide, with some localised areas being wider to accommodate the turning radii of larger vehicles. These will facilitate maintenance access to key areas of infrastructure such as central solar inverters, BESS and on-site substation(s).

2.7.35 Details regarding operational phase transport arrangements will be further refined as the Scheme's design progresses in consultation with relevant authorities. Details will be set out in the ES.

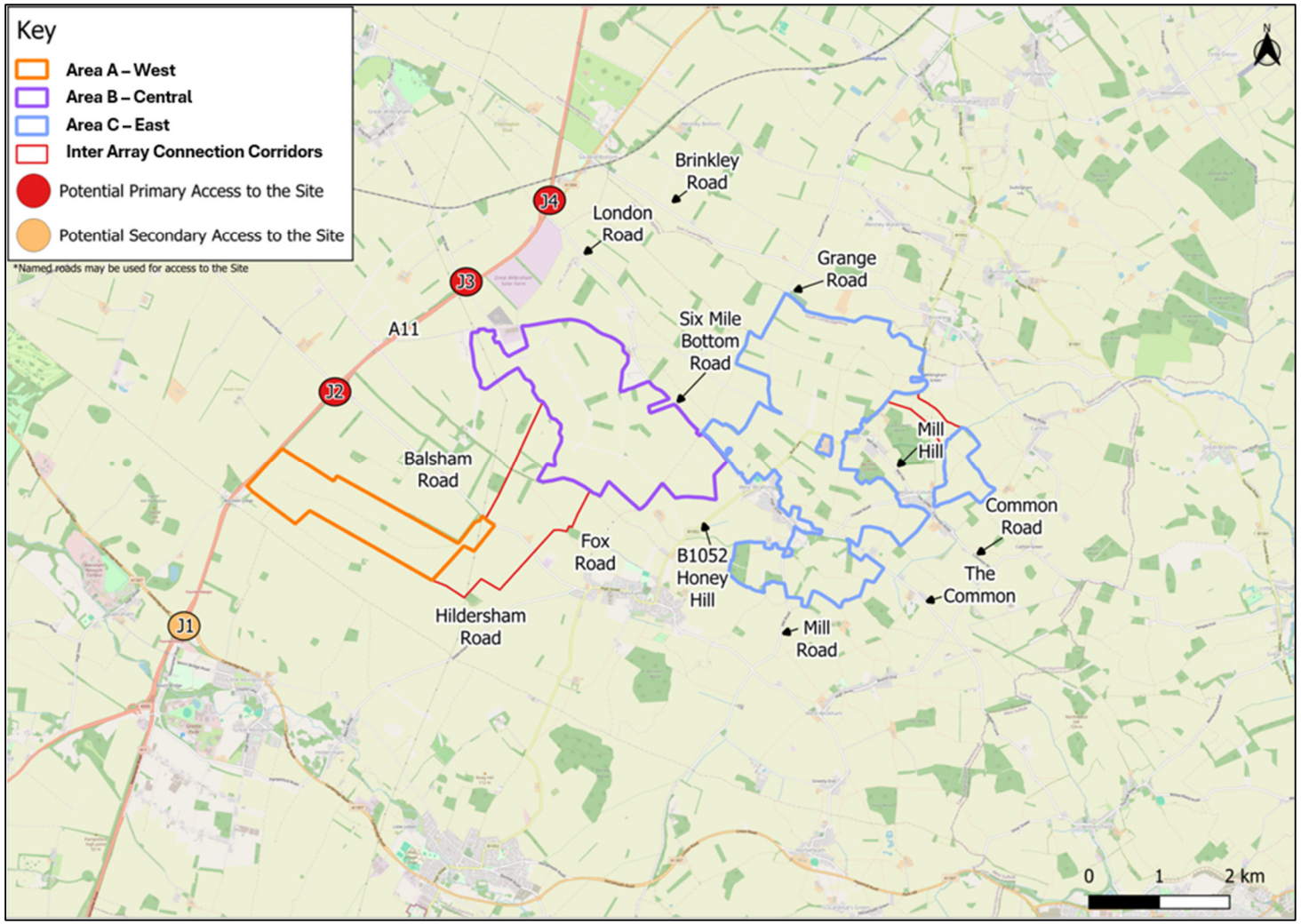
Surface water drainage

2.7.36 While solar PV developments are not typically associated with significant flood impacts, including risk in relation to surface water drainage, some ancillary elements of the Scheme, such as the substation and transformers and electrical connections across the Inter Array Connection Corridors, will be assessed in respect of flood sensitivity as they may lead to surface water run-off and flood effects.

2.7.37 An outline Drainage Strategy will be developed in alignment with the impact assessment to establish how surface water from the Scheme will be managed in relation to flood risk. The outline Drainage Strategy will also need to consider fire water containment around the BESS to prevent contaminants entering surface watercourses or the ground.

2.7.38 The Scheme drainage design will consider the results of the hydrological assessment and associated Flood Risk Assessment which will be submitted as part of the DCO application. The Drainage Strategy will be agreed prior to construction and adhered to throughout the operational phase, managing any changes to existing drainage arrangements across the Scheme.

Figure 2-2: Potential construction site access routes and points



Landscaping, biodiversity mitigation and enhancement

2.7.39 Where possible, existing hedgerows, woodland, ditches, ponds and field margins will be retained within the layout of the solar arrays, with the exception of small breaks and/or crossings required for new access tracks, security fencing and on-site cabling and connections. Any breaks or crossing will be designed to use existing agricultural gateways/tracks between the fields and the width of any new breaks will be kept to a minimum. Similarly, new cable routing will aim to utilise existing agricultural tracks and minimise breaks in habitats.

2.7.40 During an initial design workshop, minimum anticipated offsets/buffers were identified to afford protection to the retained features. These offsets are provided in **Table 2-2**. Additional embedded mitigation, as identified at this stage of the design process, is detailed in **Section 4.8**.

Table 2-2: Minimum anticipated offsets to landscape and ecological features

Landscape / Ecological feature & Designation	Minimum anticipated offset to solar infrastructure
Site of Special Scientific Interest	20 m[29]
Local Wildlife Site	20 m[29]
Scheduled Monument	50 m
Listed Building	10 m
Public Rights of Way	10 m
Waterbodies (ponds and rivers/ditches)	10 m
Ancient Woodland and woodland	15 m[29]
Trees	10 m (or root protection zone)
Hedgerows	5 m
Badger setts	30 m exclusion zone

2.7.41 In keeping with the existing landscape character, landscaping may introduce advanced planting including the restoration of hedgerows as well as the additional planting of small, isolated blocks of woodland. Landscape

[29] Increasing to 50 m where air quality issues arise.

enhancements would increase biodiversity across the Scheme and contribute to Biodiversity Net Gain (BNG).

2.7.42 The Scheme will include biodiversity enhancements which will focus on increasing the diversity of habitats from the current baseline. Following further refinement throughout the iterative design process landscape and biodiversity enhancement measures are to be defined.

2.8 Scheme components: electricity export connection

2.8.1 The electricity generated by the Scheme is currently contracted to export to National Grid's new sub-station, Burwell South. The exact location for the Burwell South sub-station is still to be confirmed by National Grid.

2.8.2 The voltage for the Grid Connection will be up to 400 kV with the connection point at a new Burwell South substation approximately 14 km north of the Developable Areas (assumed maximum distance to existing Burwell site).

2.8.3 The preferred method for installation is overhead lines, however flexibility is required in the project parameters to provide for the potential use of underground cabling, where appropriate or required. Ongoing Grid Connection Corridor feasibility studies and options appraisal will assist in determining the alignment and construction technique. The optioneering will consider all relevant environmental legislation, policy and best practice, including the Holford Rules[30] and the relevant NPSs for Energy. The Holford Rules provide guidelines for the alignment of new high voltage overhead transmission lines and guiding principles to apply to route selection.

2.8.4 Currently two Grid Connection Corridors have been identified. Grid Connection Corridor A is based on the assumption that the new Burwell South substation will be located along the alignment of the existing OHL, and within an assumed 1 km radius to minimise additional length of cabling. Grid Connection Corridor B allows consideration of a new alignment away from existing infrastructure. An initial Red-Amber-Green rating of environmental constraints has been completed to identify the corridors within which a new connection could be provided, with an assumed 75 m offset from the existing OHL. The corridors are shown in **Figure 1.1**.

2.8.5 If the Grid Connection were to be an overhead line, this would likely be via steel lattice pylons, potentially up to approximately 50 m in height, although this is subject to refinement as the Scheme design is progressed. If the Grid

[30] The Holford Rules [undated]. Available online: https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf

Connection were to be underground, this would likely be installed via trenching with the potential for Horizontal Directional Drilling (HDD) required at sensitive receptors (e.g. watercourses). Underground trenching for 400 kV cables will be approximately 2 m wide and approximately 1.5 m deep.

2.8.6 Further consultation with National Grid will be undertaken to determine the location of the Burwell South substation and allow for a defined set of alignments to be appraised. The outcomes of the appraisal will choose a preferred alignment which will minimise potential environmental and social impacts as far as practicable, as well as being technical feasible.

2.8.7 A defined alignment and an understanding of the installation method (including confirmation as to whether cabling will be overhead, underground or a combination of the two) will be assessed and presented in the ES. Details of the grid connection optioneering process will be provided within the ES.

2.9 Construction phase

Construction activities

2.9.1 The types of construction activities that may be required include (not necessarily in order):

- Preparation of the Site:
  - Import construction materials, plant and equipment to the Site;
  - Establishment of the construction compound(s);
  - Upgrading of existing site tracks/access roads and construction of new tracks;
  - Upgrade or construction of crossing points (bridges/culverts) over drainage ditches and watercourses; and
  - Marking out the location of the infrastructure.
- Developable Area construction:
  - Import of components to the Site;
- Erection of module mounting structures through piling or concrete ballasting;
  - Mounting of modules;
  - Installation of electric cabling;
  - Installation of transformer cabins;
  - Installation of battery storage units; and
  - Construction of on-site substation compound(s).
- Grid connection and cable connection installation (overhead and/or underground cabling):
  - Establishment of mobilisation areas and running tracks;

- Temporary construction compounds and roadways (including those located on or near alignments, which are yet to be determined);
- Stripping of topsoil in sections;
- Trenching in sections;
- Appropriate storage and capping of soil;
- Appropriate construction drainage with pumping where necessary;
- Sectionalised approach of duct installation;
- Excavation and installation of jointing pits;
- Link box installation;
- Cable pulling;
- Implementation of crossing methodologies for watercourses, infrastructure (including roads and rails), and sensitive habitats (e.g. horizontal direction drilling (HDD), cable bridging, etc.);
- Clearance of vegetation and installation of fencing. Temporary stone pad would be required next to pylon locations for cranes and piling;
- Import of components to the Site;
- Temporary haul routes for construction vehicles;
- Excavation of soil at pylon bases. Piling subject to the ground conditions; and
- Erection of pylons.

- Testing and commissioning of the Scheme infrastructure; and
- Site reinstatement and habitat creation.

2.9.2 The ES will outline the proposed construction activities in greater detail, including an indicative programme for the detailed phasing of the works.

Construction programme

2.9.3 Subject to development consent being granted, the earliest construction would likely commence is late 2027 to supply energy to the grid, in a staged agreement from 2032 and in full, from 2034. It is estimated that construction will be undertaken over a period of approximately 24 – 36 months. Construction details are to be further refined and will be outlined within the ES.

2.9.4 Core working hours on-site are anticipated to be between 7 am and 7 pm Monday to Friday, and 7 am to 1 pm on Saturday. Construction staff will travel to the Site pre-07:00 and depart the Site post-19:00 (for weekdays).

Construction traffic and site access

2.9.5 Based on the preliminary construction material and equipment requirements, it is anticipated that there could be and average of approximately 80-100 HGV movements per day. This number is indicative, excludes construction staff transportation and ancillary construction traffic, and is subject to refinement. Any potential phasing of the construction programme, or construction at multiple locations at a time, will influence this number. A reasonable worst-case scenario will be presented and assessed in the ES.

2.9.6 Construction access to the Site is yet to be finalised, with an overview provided in **paragraph 2.7.33** and **Figure 2.2**. It is expected that construction accesses will be taken from existing field accesses where possible, to minimise the amount of potential vegetation removal required. Formation of some new accesses may be required, and the impacts of these will be assessed in the ES.

2.9.7 For the Grid Connection, temporary construction compounds and laydown areas will be required at strategic locations along the alignment, with associated access points from the existing road network. Access routes for the Grid Connection have yet to be defined.

2.9.8 Final construction accesses will be confirmed as the Scheme design progresses and in consultation with the relevant stakeholders and authorities, including landowners and Cambridgeshire County Council as the Local Highway Authority.

2.9.9 It is anticipated that the existing local roads would be utilised to access the Site, subject to the suitability of these roads to carry HGVs. Many of the roads around the Site are currently accessible by farm machinery and agriculture-related HGVs. The need for road upgrades, widening and new road construction, for example for abnormal loads or to ensure visibility splays at site access/egress points, will be determined as the Scheme design develops, and assessed as appropriate in the ES. There will be a requirement for deliveries of abnormal loads required for the Scheme. The route and timing of these deliveries will be carefully scheduled to minimise disruption to the local community.

2.9.10 An outline Construction Traffic Management Plan (oCTMP) will be developed and submitted in support of the DCO application. The detailed CTMP(s) will be secured by Requirement of the DCO.

Environmental management during construction phase

Outline Construction Environment Management Plan

2.9.11 An outline Construction Environmental Management Plan (oCEMP) will be submitted as part of the DCO application which will describe the framework of mitigation measures identified in the ES to be followed and to be carried forward to a detailed CEMP prior to the construction of the Scheme. The aim of the oCEMP is to reduce nuisance impacts from:

- Use of land for temporary laydown areas, accommodation etc.;
- Construction traffic (including parking and access requirements) and changes to access and temporary road or footpath closure (if required);
- Noise and vibration;
- Construction lighting;
- Utilities diversion;
- Dust generation;
- Handling of soil resources;
- Run off and drainage; and
- Waste generation.

2.9.12 The detailed CEMP would be produced by the appointed principal contractor and agreed with the Local Planning Authorities following granting of the DCO and prior to the start of construction (secured by a DCO requirement). This would identify the procedures to be adhered to and managed by the principal contractor throughout construction, and would be informed by the oCEMP.

2.9.13 Contracts with companies involved in the construction works would incorporate environmental control, health and safety regulations, and current guidance and ensure that construction activities are appropriately controlled and that all appointed construction contractors involved in the construction of the Scheme are committed to agreed best practice and meet all relevant environmental legislation including:

- Control of Pollution Act 1974;
- Environment Act 2021;
- Hazardous Waste Regulations 2005 (as amended); and
- Waste (England and Wales) Regulations 2011.

Site reinstatement and habitat creation

2.9.14 The management of the landscape and ecological features will be undertaken in accordance with an outline Landscape and Ecological Management Plan (oLEMP) that will be secured by requirement in the DCO.

2.9.15 An oLEMP will be submitted as part of the DCO application. The oLEMP will outline mitigation and enhancement that supports BNG. A detailed LEMP would be produced following granting of the DCO and prior to the start of construction (secured by a DCO requirement) and would be in accordance with the oLEMP.

Soils management

2.9.1 An outline Soil Management Plan (oSMP) will be prepared and submitted as part of the DCO application. The oSMP will follow the principles of best practice to maintain the physical properties of the soil, with the aim of restoring the land to its pre-construction condition at the end of the lifetime of the Scheme.

Public Rights of Way

2.9.2 In accordance with Section 55 Acceptance of Applications Checklist (version October 2024)[31], the DCO application will be supported by a plan identifying any proposed new or altered means of access, stopping up of streets or roads or any diversions, extinguishments or creation of rights of way or public rights of navigation. An outline Public Rights of Way Management Plan (oPRoWMP) will also be submitted as part of the DCO application.

2.9.3 The oPRoWMP will include a schedule of public rights of way within the Site and outline the proposed measures to manage any requirements to temporarily 'stop up' public rights of way within the Site during construction with a suitable diversion in place.

2.10 Operational phase

2.10.1 The design life of the Scheme is expected to be up to 40 years, for both the solar and BESS components, and electricity export connection to National Grid's Burwell South substation.

2.10.2 During the operational phase of the Scheme, on-site activities would be limited and restricted to maintenance activities and grazing. It is anticipated that there would be approximately 10 permanent staff on site. It is assumed that inspections will be carried out and access will use the previously built

[31] Planning Inspectorate (August 2024) Nationally Significant Infrastructure Projects: Advice on the Preparation and Submission of Application Documents – Application Acceptance Checklist (Appendix 3). Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-preparation-and-submission-of-application-documents

construction roads and/or access points. Maintenance activities are likely to include:

- Regular visual inspection of all infrastructure;
- Regular scheduled inspections and testing of equipment;
- Replacement of consumable items (e.g., inverter filters);
- Cleaning of solar PV modules, if required;
- Repair or replacement of solar modules or other components, if damaged;
- Delivery of spare parts, replacement equipment items and consumables;
- Water management (e.g., clearing of drainage ditches); and
- Vegetation management (e.g., cut back of grass, hedges, trees).

2.10.3 The Developable Areas would be surrounded by a 1.8 m high security fence. In addition, the Scheme would be monitored with pole-mounted CCTV cameras along the perimeter fencing.

2.10.4 It is proposed that a separate lighting strategy be produced for the Scheme and submitted with the DCO application.

2.10.5 The operational phase will also include the implementation and monitoring of the oLEMP with the DCO application, and then detailed LEMP, to ensure the objectives of the plan are met.

2.10.6 Operational access to the Site will be determined as the Scheme design progresses and in consultation with the relevant authorities and stakeholders, including landowners and Cambridgeshire County Council as the Local Highway Authority.

Operational environmental management

2.10.7 An outline Operational Environmental Management Plan (oOEMP) will be submitted as part of the DCO application, which will set out the principles and key measures that will be employed during the operation of the Scheme to control and minimise impacts on the environment.

Battery safety

2.10.8 As detailed in **paragraph 2.7.19**, an oBSMP will be prepared and submitted as part of the DCO application. The oBSMP will detail the regulatory guidance reviewed to ensure that all safety concerns around the BESS element are addressed in so far as is reasonably practicable.

2.11 Decommissioning

2.11.1 As previously outlined, the design life of the Scheme is expected to be 40 years. The Applicant will develop, construct, and operate the Scheme for the entirety of its lifecycle. It is expected that decommissioning will take approximately two years.

2.11.2 Upon decommissioning, the above-ground physical infrastructure will be dismantled and removed. It has been assumed that any below ground infrastructure will be left in situ following decommissioning, subject to best industry practice, obligations to landowners and the relevant statutory requirements. Any underground cable sections would also be removed rather than being left in situ (unless designations or environmental sensitivities determine otherwise).

2.11.3 An outline Decommissioning Environmental Management Plan (oDEMP) will be submitted as part of the DCO application and will outline general principles to be adhered to prior to decommissioning occurring. However, as the Scheme's operational life is 40 years, it is not possible to completely identify the management routes and facilities.

2.11.4 All infrastructure removed from the Site will be recycled or disposed of in accordance with good practice and taking lessons learnt from similar Schemes. The Scheme will apply the waste hierarchy and where possible look to prevent, reuse, or recycle waste. Up to 99% of materials in a solar PV module are recyclable, with organisations around the UK specialising in solar panel recycling in line with the Waste Electrical and Electrical Equipment Regulations 2021. Any waste created through the decommissioning phase will be required to be removed from the Site and disposed of in line with relevant legislation.

2.11.5 It is to be noted that there can be a high degree of uncertainty regarding decommissioning as engineering approaches and technologies evolve over the operational lifespan of the Scheme.

2.11.6 A detailed DEMP will be prepared at the time of decommissioning, in advance of the commencement of decommissioning works and would include timescales and methods for transportation of materials. This would be secured through a Requirement of the DCO and will be prepared substantially in accordance with oDEMP.

3 REASONABLE ALTERNATIVES CONSIDERED

3.1 Introduction

3.1.1 Regulation 14(2)(d) of the EIA Regulations states that an ES should include:

"a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment."

3.1.2 Section 9.3 of the Planning Inspectorate's Advice Note Seven[32] states that a good ES is one that *"explains the reasonable alternatives considered and the reasons for the chosen option taking into account the effects of the Proposed Development on the environment"*. The ES will include a description of the reasonable alternatives that have been considered, including a clear narrative on the main reasons for selecting the chosen option, including an explanation of how environmental effects have been taken into account. The reasonable alternatives assessment will focus on: the site selection process, design layouts/opportunities within the Site, the sizing and scale of infrastructure, and alternative technologies.

3.1.3 Alternative technologies will only be considered from the perspective of alternative solar technologies. The ES will not consider alternative forms of renewable energy, for example wind, on the basis that the Applicant is a solar developer and therefore did not consider alternative technologies. The recent Sizewell C judgement (2023)[33] reinforced the case that the Applicant does not need to compare different generating technologies such as solar vs. wind vs. nuclear. This is covered in paragraph 131 of High Court Judgement where the judge said promoters need only consider alternatives within the relevant technology type and it would be an absurdity to suggest otherwise.

[32] Planning Inspectorate (June 2020) Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environment Information and Environmental Statements (Version 7). Available online: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/

[33] R. (on the application of Together against Sizewell C Ltd) v Secretary of State for Energy Security and Net Zero [2023] EWHC 1526 (Admin), https://www.judiciary.uk/wp-content/uploads/2023/06/R-Together-Against-Sizewell-C-v-SS-BEIS-judgment-220623-2.pdf

3.1.4 A 'no development' alternative would not deliver the additional electricity generation capacity associated with the Scheme and therefore will not be considered further.

3.1.5 The consideration of alternatives and design evolution will continue to be undertaken with the aim of avoiding and/or reducing significant adverse environmental effects, maintaining operational efficiency and cost-effective design solutions, and with consideration of other relevant matters such as available land and planning policy. This will be aided by the implementation of project design principles which will continue to help guide the design of the Scheme.

3.2 Approach to assessing alternatives

3.2.1 There is no standard methodology for the site selection of solar farms. The site selection methodology has therefore been informed by relevant planning policy. In particular, the site selection has been informed by adopted and emerging NPS for energy infrastructure, alongside other relevant national and local policy, including the following:

- NPS EN-1, published November 2023, enforced from January 2024[34];
- NPS EN-3, published November 2023[35], enforced from January 2024;
- National Policy Statement for Electricity Networks Infrastructure (EN-5), published November 2023[36], enforced from January 2024;
- National Planning Policy Framework, published in December 2024[37];

[34] Department for Energy Security & Net Zero (2023) Overarching National Policy Statement for Energy (EN-1). Available online: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1

[35] Department for Energy Security & Net Zero (2023) National Policy Statement for Renewable Energy Infrastructure (EN-3). Available online: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3

[36] Department for Energy Security & Net Zero (2023) National Policy Statement for Electricity Networks Infrastructure (EN-5). Available online: https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5

[37] National Planning Policy Framework 2024. Available online: https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf

- Draft National Planning Policy Framework published for consultation from, 30 July – 24 September 2024[38]; and
- Local planning policies for the relevant county and district councils.

3.2.2 The following fundamental attributes were applied to an initial search to determine the most suitable location for the Scheme. These attributes are recognised in National Policy Statement EN-3 as important criteria affecting the site selection of large scale solar developments:

- Existence of sufficient land, offered by willing landowners, to deliver the project and meet the scale of the Scheme's aims;
- Availability and capacity of a suitable Point of Connection to the NETS; and
- Solar irradiation levels to support the Scheme's potential to produce an efficient and economic energy yield.

3.2.3 This initial search identified the appropriateness of the broader area within Cambridgeshire, and the confirmation of the point of connection to the NETS at the planned Burwell South substation with National Grid. From there the Applicant identified a search area in proximity to this point of connection.

3.2.4 This was the starting point that led to careful consideration of site options, based on a range of key factors, including:

- Land characteristics and environmental qualities and constraints for solar development;
- The availability of willing and engaging landowners;
- Access to established strategic transport links (such as the A11); and
- The ability to include areas for environmental enhancement and recreation areas.

3.2.5 The environmental and spatial considerations set out in **Table 3-** were also part of the site selection process and will continue to inform the development of the design.

Table 3-1: Environmental considerations in site selection

Consideration	Discussion
Agricultural Land	Planning policy seeks to minimise impacts on the best and most versatile (BMV) agricultural land (defined as grades 1, 2 and 3a) but it doesn't preclude its use for

[38] National Planning Policy Framework: draft text for consultation, July 2024. Available online: https://www.gov.uk/government/consultations/proposed-reforms-to-the-national-planning-policy-framework-and-other-changes-to-the-planning-system

Consideration	Discussion
Classification and land type	solar development and nor should it be a predominating factor in determining its location. Policy simply establishes a preference for development on land graded 3b, 4 or 5 and to utilise previously developed land, brownfield land, contaminated land or industrial land where possible
Designated international and national ecological and geological sites	The location of ecological and geological sites within the search area was mapped. There are no geological sites, however ecological sites are present in the area of search. Habitats sites (SAC, Special Protection Areas (SPA) and Ramsar sites) were avoided. Two nationally designated sites (SSSI) occur within the Site Boundary (Devil's Dyke SSSI and Fleam Dyke SSSI).
Nationally designated landscape	The presence of any National Landscapes or National Parks were considered and excluded from the area of search.
Scheduled Monuments	There are a number of Scheduled Monuments within the area of search. When considering alternative sites, their proximity to Scheduled Monuments was taken into account, together with the opportunity to mitigate effects.
Proximity to sensitive human receptors	Consideration was given to the proximity of nearby sensitive human receptors which include residential dwellings, populated areas and villages. The Applicant also considered the location of PRoWs in the area and sought to identify a site which would reduce impact on these routes.
Flooding	The search area is generally outside Flood Zones 2 and 3, with only small areas occurring along watercourses, or around the drainage network to the west of Burwell. It is considered potential flooding impacts can be appropriately mitigated through detailed design and as such, areas affected by flooding were not discounted, although areas of lower flood risk were considered at an early stage, in compliance with the sequential test for flood risk.

3.2.6 The above considerations for large scale solar development, alongside the key operational criteria, including topography and aspect, and the opportunity to

access the Site during construction and operation, have all been considered and resulted in the Site being identified.

4 APPROACH TO THE EIA

4.1 Introduction

4.1.1 This chapter sets out the overall approach that will be taken to the EIA for the Scheme. The ES will contain the information specified in Schedule 4 of the EIA Regulations. The approach to the assessment has been informed by current best practice guidance, including the Planning Inspectorate's Advice Note Seven[39] and the recently published Technical Advice Page for Scoping Solar Development[40] and Commitments Register[41].

4.1.2 An overview of the guidance and methodology adopted for each environmental factor assessment is provided in **Chapter 6**.

4.1.3 The environmental factors listed under Regulation 5(2) of the EIA Regulations are presented below.

- Population and human health;
- Biodiversity;
- Land and soil (factors combined for the purposes of reporting);
- Water;
- Air;
- Climate;
- Material assets;
- Cultural heritage; and
- Landscape.

[39] Planning Inspectorate (June 2020) Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environment Information and Environmental Statements (Version 7). Available online: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/

[40] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-technical-advice-page-for-scoping-solar-development

[41] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Commitments Register. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-commitments-register

4.1.4 It should be noted that although not listed as specific environmental 'factors' under Regulation 5(2) of the EIA Regulations, the following are also considered within this EIA Scoping Report:

- Noise and vibration;
- Traffic and transport;
- Glint and glare;
- Heat and radiation;
- Electric, magnetic and electromagnetic fields;
- Major accidents and disasters; and
- Utilities.

4.1.5 The proposed structure of the ES is set out in **Appendix B.**

4.2 Consultation

4.2.1 Consultation alongside the EIA process is critical to the development of a comprehensive and proportionate ES. The views of statutory and non-statutory consultees are important to ensure that the EIA from the outset focuses on specific issues where significant environmental effects are likely, and where further investigation is required.

4.2.2 The consultation, as an ongoing process, enables embedded and additional mitigation measures to be incorporated into the Scheme to limit adverse environmental effects and optimise environmental benefits.

4.2.3 Early and ongoing engagement with consultees will be important to influence the design process of the Scheme by seeking an appropriate level of feedback from consultees, to ensure that comments are considered in the evolving design. The consultation responses, including how the Applicant has had regard to these responses, will be recorded in a Consultation Report which will be submitted as part of the DCO application.

4.2.4 Non-statutory consultation was held between 31 October and 12 December 2024, and comprised:

- In-person events at Balsham Sports Pavilion (15 November), West Wratting Village Hall (16 November) and Great Wilbraham Memorial Hall (25 November); and
- Online webinar (2 December).

4.2.5 The aims of non-statutory consultation are to:

- Outline the broad parameters of the Scheme;
- Gather feedback on the early design; and

- Understand key community and stakeholder concerns, insights and proposed design enhancements.

4.2.6 Statutory consultation is expected to be held in Summer 2025. The aims of statutory consultation are to:

- Set out current proposals, demonstrating how the Stage 1 non-statutory and other early consultation feedback has been accounted for and considered within the Scheme design;
- Take formal feedback to ensure that regard is had to the views of local community and identify opportunities for further design enhancements; and
- Identify opportunities for further design refinements, if any.

4.2.7 As part of the EIA process, consultation will be undertaken with a range of statutory and non-statutory consultees. It is anticipated at this stage that the statutory consultees will include (but will not be limited to):

- Cambridgeshire County Council;
- South Cambridgeshire District Council;
- East Cambridgeshire District Council;
- Environment Agency;
- Historic England;
- Natural England;
- National Highways; and
- Beds, Cambs and Northants Wildlife Trust.

4.2.8 The engagement undertaken to date, and the consultation planned, for each of the environmental factor assessments is set out in further detail in **Chapter 6**.

4.3 General difficulties and uncertainties

4.3.1 Factor-specific difficulties and uncertainties are set out in **Chapter 6**. The following key general difficulties and uncertainties apply to a number of environmental factor assessments:

- The detailed design of the Scheme is still emerging, as are the environmental surveys and assessments required to support the planning and EIA process. This EIA Scoping Report is provided based on the information available at the time of writing. Where relevant, the proposed scope will be reviewed and updated to reflect developments in the Scheme design that may occur post-scoping and agreed with relevant statutory consultees. Any changes to the scope of the EIA will be reported as necessary in the PEIR and/or the ES.

- As the location and area of the components that the Scheme comprises are not yet defined or fixed, there is potential for uncertainty regarding the scope of assessment for each factor. However, the description of the Scheme presented in **Chapter 2** details the anticipated parameters of the Scheme components as they are currently known. Whatever location or footprint is decided and applied, the PEIR and ES will assess the 'worst case scenario' to ensure that the maximum level of significant environmental effects is considered.
- Data from third parties relied upon for the baseline against which any effects will be assessed could potentially be out of date or inaccurate. However, any such data will be procured from reputational and industry standard sources. It will be reviewed and used by competent and experienced professional experts. The combination of appropriate data sources being used by competent and experienced experts should ensure that the data is suitable for its purpose and will therefore provide an appropriate evidence base on which the existing environmental baseline will be informed.

4.4 Defining the study area

4.4.1 Study areas have been defined individually for each environmental factor using relevant guidance, taking into account the geographic scope of the potential impacts relevant to that factor and the information required to assess those impacts. The proposed study areas are described within each environmental factor assessment table (**Chapter 6**).

4.5 Establishing baseline conditions

4.5.1 Environmental effects of the Scheme will be described in the PEIR and ES in relation to the extent of changes to the existing baseline environment as a result of the construction, operation and decommissioning of the Scheme.

4.5.2 The baseline environment will comprise the existing environmental characteristics and conditions, based upon desk-top studies and field surveys undertaken and information available at the time of the assessment.

4.5.3 Baseline conditions will be established by:

- Site visits and surveys;
- Desk based studies; and
- Modelling.

4.5.4 The baseline conditions for each environmental factor assessment will be set out within the respective assessment chapters. Currently known baseline

conditions relevant to the individual factor assessments are presented in **Chapter 6**.

4.5.5 As stated above in **Section 4.3**, there is potential that data obtained from third parties is not up to date. The origin of all third-party data used will be clearly identified, alongside any difficulties, uncertainties and assumptions.

4.6 Establishing future baseline conditions

4.6.1 Schedule 4(3) of the EIA Regulations requires consideration of the likely evolution of the current state of the environment (baseline scenario) in the absence of the Scheme, as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge (the 'future baseline'). Whilst there are considerable limitations to the predictions that can be made about natural baseline conditions at a future point in time, reasonable effort will be made to characterise the future baseline in the absence of the Scheme in each topic assessment. In addition, some assessments require projections to account for future change, such as traffic growth within the assessment of likely significant effects associated with the Scheme.

4.7 Assessment scenarios

4.7.1 The assessment scenarios that are being considered for the purposes of the EIA are as follows:

- Existing baseline (without the Scheme) – reported at the time that the baseline data has been collected.
- Future baseline (without the Scheme) – for comparison with the construction phase, operational phase and decommissioning phase.
- Construction of the Scheme – as presented in **Chapter 2**, construction is scheduled to commence in c.2029 and between 24 and 36 months. The environmental factor assessment chapters will assess the relevant 'worst case' construction scenario and where necessary, the relevant period or 'peak' of activity within the construction programme. Consideration will also be given to any phasing required in the construction programme.
- Operation of the Scheme – the environmental factor assessment chapters will assess the relevant 'worst case' scenario where necessary.
- Decommissioning of the Scheme – the Scheme will be operational for 40 years, and therefore decommissioning is estimated to commence in 2070. As the with Construction scenario, the environmental factor assessment will assess the relevant 'worst-case' scenario, 'peak' of activity and/or phasing of the decommissioning as necessary.

4.8 Approach to mitigation

4.8.1 Mitigation can be relied on to reduce any potential significant environmental effects from the Scheme. The sequential steps of the mitigation hierarchy are as follows:

- **Avoid** – take measures to avoid creating impacts from the outset;
- **Reduce** – measures taken to reduce the duration, intensity and extent of the impact if they cannot be avoided;
- **Restore** – measures taken to improve ecosystems following exposure to unavoidable impacts; and
- **Offset** – measures taken to compensate for any residual impacts.

4.8.2 The Institute of Environmental Management and Assessment's (IEMA) 'Environmental Impact Assessment Guide to Shaping Quality Development' (2015)[42] refers to three distinct forms of mitigation:

- **Primary** – an intrinsic part of the project design
- **Secondary** – typically described within the factor chapters of the Environmental Statement, but often are secured through planning conditions and/or management plans.
- **Tertiary** – required regardless of any EIA, as it is imposed, for example, as a result of legislative requirements and/or standard sectoral practices.

4.8.3 For the purposes of this EIA Scoping Report, the PEIR and the ES, embedded 'primary' mitigation measures will form part of the Scheme for which consent is sought. **Table 4.1** describes the currently anticipated embedded (primary) environmental mitigation measures that are considered to be an inherent part of the Scheme, i.e., the project design principles adopted to avoid or prevent adverse environmental effects, based on the design of the Scheme to date. It should be noted that these will likely evolve over the course of the design evolution, up to submission of the DCO application.

4.8.4 As the design of the Scheme is progressed, a Commitments Register will be established in accordance with the Nationally Significant Infrastructure

[42] Environmental Impact Assessment Guide to Shaping Quality Development (2015). Institute of Environmental Management and Assessment (IEMA). Available online: https://www.iaia.org/pdf/wab/IEMA%20Guidance%20Documents%20EIA%20Guide%20to%20Shaping%20Quality%20Development%20V6.pdf

Projects: Commitments Register advice[43]. This will be available at the PEIR, and provided as an appendix to the ES.

4.8.5 These embedded (primary) environmental mitigation measures should not be confused with additional (secondary and tertiary) mitigation measures proposed in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment, which are described under the 'Additional (Secondary and Tertiary) Mitigation Measures' section within each environmental factor assessment section (**Chapter 6**).

Table 4-1: Anticipated embedded (primary) environmental mitigation measures

Environmental Factor to which the Embedded (Primary) Environmental Mitigation Measure Relates	Embedded (Primary) Environmental Mitigation Measure
Biodiversity	Scheme design will incorporate a minimum offset distance of 10 m from any trees and 5 m from any hedgerows.
Biodiversity	Scheme will avoid any development on areas of important or priority habitat.
Biodiversity Water	Scheme design will incorporate a minimum offset distance of 10 m from all watercourses and ditches.
Biodiversity Landscape	Scheme design will incorporate a minimum offset distance of 10 m from all PRoW.
Biodiversity Landscape	Where possible, existing hedgerows, woodland, ditches and field margins will be retained. Any breaks or crossings (associated new tracks, security fencing and/or cable routes) will be designed to use existing agricultural tracks between fields and the width of any breaches will be kept to a minimum.
Cultural heritage	Scheme will be set back 50 m from Scheduled Monuments.

[43] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Commitments Register. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-commitments-register

Environmental Factor to which the Embedded (Primary) Environmental Mitigation Measure Relates	Embedded (Primary) Environmental Mitigation Measure
Air quality	A minimum 250 m offset from the solar PV supporting infrastructure, BESS and substations to residential properties.
Noise and vibration	The on-site substation(s) will not be within 250 m of residential properties or any environmental designation.
Water (flood risk)	Electrical infrastructure (substations, inverters, BESS and switchgear) to be sited in locations at low risk of flooding and/or set at the necessary minimum ground levels determined by the Flood Risk Assessment and in agreement with the relevant prescribed consultees.
Water	For dispersed hardstanding such as containerised infrastructure, runoff is to be directed to ground locally via their gravel beds.
Water	Where hardstanding is concentrated, e.g., substation concrete bases, larger buildings or concentration of containers, a formal drainage strategy will be included, most likely discharging at greenfield rates to the nearby watercourse network.
Utilities	Offsets will be implemented as required by the relevant statutory undertaker.

4.9 Assessment of likely significant environmental effects

4.9.1 The PEIR and ES will report on the likely significant environmental effects for the site preparation, earthworks and construction (hereafter referred to as 'construction'), operational (i.e., once completed and able to be used, and including maintenance) and decommissioning phases of the Scheme.

4.9.2 The method for assessing significance of effects varies between environmental factors but, in principle, will be based on the environmental sensitivity (or value/importance) of a receptor/resource and the magnitude of change from the baseline conditions. The approach to assessing the significance of effects for each individual environmental factor assessment is outlined within **Chapter 6** and **Appendix C EIA Significance Criteria**.

4.9.3 The following criteria will be taken into account when determining significance:

- The receptors/resources (natural and human) which would be affected and the pathways for such effects;
- The geographic importance, sensitivity or value of receptors/resources;
- The duration (short-term, medium-term or long-term); permanence (permanent or temporary) and changes in significance (increase or decrease);
- Reversibility - e.g., whether the change is reversible or irreversible, permanent or temporary; and
- Environmental and health standards (e.g., local air quality standards) being threatened.

4.9.4 Summary of effects tables that summarise the likely significant environmental effects associated with each of the environmental factors will be provided in the ES at the end of each environmental factor assessment chapter. These tables will outline the sensitivity of receptors, the magnitude of impact, embedded and additional mitigation measures, and residual effects. A distinction will be made between direct, indirect, secondary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects. Cumulative effects will be considered as a single coordinated assessment, within its own chapter (see **Chapter 7** for details on the approach to the Cumulative Effects Assessment).

4.10 Opportunities for enhancing the environment

4.10.1 Where possible, the Applicant will seek to identify opportunities for enhancement within the relevant environmental factor assessments. Enhancement is defined as "*a measure that is over and above what is required to mitigate the adverse effects of a project*" (National Planning Policy Framework, 2023)[44]. Therefore, any identified enhancement measures will not be taken into account when determining the significance of effects.

4.10.2 Enhancement measures will be assessed in accordance with steps set out in the National Planning Policy Framework (2024) and the draft National Planning Policy Framework (July 2024)[45].

[44] National Planning Policy Framework 2024. Available online: https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf

[45] National Planning Policy Framework: draft text for consultation, July 2024. Available online: https://www.gov.uk/government/consultations/proposed-reforms-to-the-national-planning-policy-framework-and-other-changes-to-the-planning-system

4.11 Other regimes and assessments

Water Framework Directive (WFD)

4.11.1 A Water Framework Directive (WFD) assessment will be carried out to identify any impacts on the water body status of relevant WFD classified water bodies.

4.11.2 The closest WFD waterbody is named Burwell Lode Water Body which has two tributaries, one located within the northern periphery of Site Boundary (north of Burwell Substation) and one located within the western periphery of the study area (west of Burwell Substation). The second WFD waterbody is named Swaffham – Bulbeck Lode Water Body, which is located at the western periphery of the Grid Connection Corridor boundary.

4.11.3 The assessment will follow the three-stage screening/scoping and detailed assessment approach outlined in the Planning Inspectorate Advice on the Water Framework Directive[46]. The WFD assessment outcomes will be used in undertaking the EIA and will contribute to determining the need for any mitigation measures. WFD classification is used to determine the sensitivity of water resources in the EIA and the predicted impact on WFD status is used to define the magnitude of impact.

Flood Risk Assessment (FRA)

4.11.4 A Flood Risk Assessment will be undertaken to consider the influence of the Scheme on local flooding. Further details are provided in **Section 5.2** Water (including flood risk).

Habitats Regulations Assessment (HRA)

4.11.5 A Habitats Regulations Assessment (HRA) will be undertaken for all protected sites within the national site network, within 10 km of the Scheme (recognising exceptional distance pathways), in accordance with the Habitats Regulations[47]. The national site network includes existing SAC and Special Protection Areas (SPA). The HRA will also consider Ramsar sites, which are an international designation.

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[46] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-the-water-framework-directive

[47] The 2017 Regulations have been amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 to reflect the UK's exit from the EU, although these largely carried forward the provisions and terminology of the 2017 Regulations and do not fundamentally alter their interpretation.

4.11.6 The following Habitats sites have been identified within 10 km of the Site:

- Devils Dyke SAC (0.95 km south east);
- Fenland SAC (2.08 km north west);
- Wicken Fen Ramsar (2.08km north west); and
- Chippenham Fen Ramsar (5.08 km north east).

4.11.7 The potential for the Developable Areas to provide offsite functionally linked habitat for barbastelle bats *Barbastella barbastellus* from the Eversden and Wimpole Woods SAC, c.20 km to the west, is also being considered. This will be reviewed as the bat survey data from the spring-autumn 2024 survey period is analysed.

4.11.8 A draft Stage 1 Screening report will be produced as part of the PEIR, with the final HRA assessment (either a no significant effect report or Information to Inform an Appropriate Assessment) to be submitted as part of the DCO application and referred to within the ES Chapter for Biodiversity.

Biodiversity Net Gain (BNG)

4.11.9 The Environment Act 2021 Act introduced a requirement for all development to achieve a minimum of 10% BNG. However, this requirement does not come into force for NSIPs until November 2025.

4.11.10 Although BNG is not currently a requirement for DCO applicants, measures will be incorporated through the design process to achieve a minimum of 10% BNG.

4.11.11 BNG is not within the scope of the EIA, however, will be included as part of the DCO application and referred to within the ES Chapter for Biodiversity.

5 ENVIRONMENTAL FACTORS PROPOSED TO BE SCOPED OUT OF FURTHER ASSESSMENT

5.1.1 As part of the EIA process and based on the information available to date, there are a number of environmental factors, as listed under Regulation 5(2) of the EIA Regulations 2017, for which it is considered an assessment as part of the EIA is not justified, and therefore will not be considered in the ES.

5.2 Water

5.2.1 This section considers the potential effects associated with the Scheme on flood risk and surface water drainage and provides justification for the proposal to exclude water from the scope of the EIA.

Study area

5.2.2 For the purposes of this assessment, the Site and a 1 km buffer from the Site Boundary have been considered as the study area with regard to identifying key hydrological related receptors that may be impacted on by the construction, operation and/or decommissioning of the Scheme. In the absence of any specific guidance relating to solar developments professional judgement has been used to determine the study area. Professional judgement has been informed by the guidance provided within Design Manual for Roads and Bridges LA 113 (2020)[48], where a 1 km buffer is considered appropriate for cumulative effects of water environment assessments. A 1 km buffer is considered a sufficient distance to enable the deposition of silts in overland flows and dilution of any concentrated pollutants so that waterbodies at a greater distance than the buffer would not be at significant risk of being affected.

Data sources to inform the baseline characterisation

5.2.3 Initial baseline information on the physical and water environment have been collected from the following sources:

- Site Boundary and study area (**Appendix D Water figures, Figure D1**);
- Statutory Main River Map (**Appendix D Water figures, Figure D1**);

[48] Highways England (2020) Design Manual for Roads and Bridges. Sustainability & Environment Appraisal LA 113 Road drainage and the water environment.

- Catchment Data Explorer mapping for the Water environment and Water Framework Directive classifications (**Appendix D Water figures, Figure D1**);
- Internal Drainage Board Mapping (**Appendix D Water figures, Figure D1**);
- Flood Map for Planning (**Appendix D Water figures, Figure D2**);
- Risk of Flooding from Surface Water maps (**Appendix D Water figures, Figure D3**);
- Canal and River Trust asset map;
- Water stressed areas mapping;
- Magic Map (for identification of Drinking Water Protected and Drinking Water Safeguard areas) (**Appendix D Water figures, Figure D4**);
- Online aerial imagery; and
- Ordnance Survey Mapping.

Baseline conditions

5.2.4 The information below outlines the receptors which are relevant to this assessment as they are within the Site and study area (as shown in the figures within **Appendix D Water figures (Figure D1)**), the receptors are categorised below into sub-sections and supported by the relevant figures. The receptor descriptions below are considered as the baseline conditions.

Internal Drainage Board watercourses

5.2.5 The northern extents of the Grid Connection Corridors are within the Swaffam Internal Drainage Board jurisdiction extents, which is part of the Ely Group of Internal Drainage Boards. Ordinary watercourses within the Swaffam Internal Drainage Board jurisdiction extents are managed and maintained by the drainage board. Works which may impact on the watercourses may require consent from the drainage board, or be addressed through provisions within the DCO.

5.2.6 Named watercourses within the Grid Connection Corridor boundary and within the Swaffham Internal Drainage Board jurisdiction extents include Burwell Beck within Burwell Fen. There are watercourses within the drainage board extents at the periphery of the study area at Swaffham Prior.

Environment Agency Main Rivers

5.2.7 There are three Environment Agency Main Rivers identified within the Site boundary and study area, these are all limited to the northern extents of the Grid Connection Corridor to Burwell Substation. There are no Main Rivers within the potential areas designated for Solar PV modules.

5.2.8 The most prominently positioned Main Rivers are: The Weirs, which flows close to southern and eastern boundaries of Burwell Substation and is within the Grid Connection Corridor boundary; and the River Stour which is located to the east of the Site and flows to the southeast.

5.2.9 The remaining two Main Rivers are Burwell Lode located to the northern periphery of the Grid Connection Corridor boundary (north of Burwell Substation) and Reach Lode located at the western periphery of the study area from Burwell Station.

Canal and River Trust watercourses

5.2.10 The Canal and River Trust (CRT) asset map identifies no CRT watercourses within the Site or study area. The closest CRT watercourse is approximately 40 km south from the Site at Bishop Stortford.

Ordinary Watercourses

5.2.11 Given the extents of the Site there are several unnamed and likely unmapped watercourses, which will be neither classified as IDB maintained watercourses or Main Rivers, these are classified as Ordinary Watercourses and will come under the jurisdiction of the Lead Local Flood Authority (LLFA). Ordinary Watercourses can include field drainage ditches, highway ditches and rivers or streams. Works in, adjacent to or over ordinary watercourses may be subject to gaining Ordinary Watercourse Consents, or be addressed through provisions within the DCO.

5.2.12 The 'Risk of Flooding from Surface Water' maps presented in **Appendix D Water figures, Figure D3** provides an indicative mapping of larger Ordinary Watercourse flood routes through the Site. There are several identified, which predominantly align with Ordinary Watercourses located at field boundaries, together with topographic low points, in which surface water flow paths are located.

Water Framework Directive waterbodies

5.2.13 There are a total of six Water Framework Directive (WFD) waterbodies identified within the Site Boundary, these are shown on **Appendix D Water figures, Figure D1**. It is the responsibility of the Environment Agency to ensure the quality of WFD waterbodies are not degraded as a result of development proposals. It is noted that there are no WFD waterbodies within the potential areas designated for Solar PV modules.

5.2.14 The closest WFD waterbody is named Burwell Lode waterbody which has two tributaries, one located within the northern periphery of the Grid Connection Corridors (north of Burwell Substation) and one located within the western

periphery of the study area (west of Burwell Substation). The waterbody is classified with a moderate ecological status. Activities contributing to the reasons for not achieving a good classification are listed as sewage discharge, poor nutrient management, poor livestock management, physical modification and transport drainage.

5.2.15 The second WFD waterbody is named Swaffham – Bulbeck Lode waterbody, which is located at the western periphery of the study area along the Grid Connection Corridor boundary. The waterbody is classified with a moderate ecological status. Activities contributing to the reasons for not achieving a good classification are listed as sewerage discharge, polybrominated diphenyl ethers are listed as a classification element though no activity for this is provided.

5.2.16 The third WFD catchment is the Bottisham Lode - Quy Water waterbody, which is located within the western and central areas of the Site and Study Area. It is proposed that both the west and central Solar PV panels parcels within Developable Area C – East will be located within this WFD catchment area. This catchment is classified as Moderate ecological status. Activities contributing to the reasons for not achieving a good classification are listed as sewerage discharge (Phosphates) and an unknown source (pending investigation) for Perfluorooctane Sulphonates.

5.2.17 The fourth WFD catchment is the Stour (u/s Wixoe), which is located to the southeast of the Site and Study Area. The eastern areas of Developable Area C - East are located within this WFD area. This catchment is classified as Moderate ecological status. Activities contributing to the reasons for not achieving a good classification are listed as sewerage discharge (Phosphates), poor agricultural nutrient management (Phosphates), physical modifications by the local and central government, and invasive non-native species (North American Signal Crayfish).

5.2.18 The fifth WFD waterbody catchment is named Granta waterbody, which is mostly located to the south of the Site and Study Area. Both the southern boundaries of the western and eastern Solar PV parcels within Developable Area C – East intersect this WFD area. This waterbody catchment is classified as Moderate ecological status. Activities contributing to the reasons for not achieving a good classification are listed as sewage discharge (Phosphates, Macrophytes, Phytobenthos and Polybrominated Diphenyl Ethers) and surface water and groundwater abstractions.

5.2.19 The sixth WFD waterbody catchment is named New River and is located to the east of the Site and Study Area. The central areas of the Grid Connection Corridors intersect this WFD area. This catchment is classified as Moderate ecological status. Activities contributing to the reasons for not achieving a

good classification are listed as physical modifications by agriculture, government and recreation.

Flood Map for Planning

5.2.20 The 'Flood Map for Planning' identifies fluvial flood risk for catchments greater than 3 km^2, the risk from flooding is categorised by the Environment Agency into Flood Zone 1, Flood Zone 2 and Flood Zone 3. The 'Flood Map for Planning' has been represented in **Appendix D Water figures, Figure D2** with the spatial extents of the Site and study area. The 'Flood Mapping for Planning' shows limited extents of Flood Zone 2 and Flood Zone 3 within the Site boundary as described below.

5.2.21 There is a short linear extent of Flood Zone 2 and Flood Zone 3 within Developable Area B – Central south of Lark Hall Corner, close to the area of woodland at Vicarage Field. It is unusual that the extents of the flood zones are isolated and have no downstream connectivity to an onwards watercourse. This is considered likely to represent an ephemeral watercourse, that may be limited in extent due to variable underlying ground conditions, causing it to surface and re-surface depending on the permeability of the ground. When compared with the surface water maps presented in **Appendix D Water figures, Figure D3** it is apparent that these watercourses generally flow from southeast to northwest. Despite the apparent anomalies in the flood mapping, it is clear that the flood extents are not extensive in relation to the overall Site and the flood extents are constrained to clear topographically low elevation areas along field boundaries.

5.2.22 There is a flood flow path with Flood Zone 2 and Flood Zone 3 encroaching into Developable Area A – West immediately south of Balsham Road and within Developable Area B – Central south of London Road and west of the Camgrain facility. The mapping shows the flooding is flowing from south to north. The upstream of the flood zone starts close to Developable Area A – West field directly south of Balsham Road, which shows the flooding is associated with a relatively small catchment (approximately 3 km^2). Compared with aerial imagery it is not apparent where the watercourse channel is in relation to the flood zone. As shown on aerial photographic imagery of the Developable Areas, darkened ground conditions relative to the colour of surrounding land in the field north of the fields in Developable Area B – Central directly adjacent to London Road/Camgrain corresponds with the outline of Flood Zone 2 which could suggest the flood zones are associated with an overland flow path as opposed to a formalised channelised flow. The flood zones continue north along the western periphery of the Grid Connection Corridor boundary and within the study area.

5.2.23 At the northern extents of the Grid Connection Corridors at the existing Burwell Substation there is Flood Zone 2 and Flood Zone 3 within the Site

boundary and study area associated with The Weirs watercourse and upstream catchment. The flood zones show out of bank flooding from the watercourse spreads across the land away from the alignment of the watercourse and across the existing Burwell Substation.

5.2.24 There is an area of Flood Zone 3 located within the northwest areas of Developable Area C - East. This flow route intersects the central parcel, north west of Weston Colville. This area of Flood Zone 3 is associated with an Ordinary Watercourse located within the agricultural fields and is discharged into by several other small field drains from the north and west of the land parcel. This area of the DCO is located near the border of the Swaffham – Bulbeck Lode and Stour (u/s Wixoe) catchment boundary. As a result of this there is a small upstream catchment for this Flood Zone and hence the flooding within this area is likely more visibly represented as surface water flooding.

5.2.25 In the isolated land parcel to the north east of Weston Green there is an area of Flood Zone 2 and Flood Zone 3 associated with a tributary of the River Stour. This watercourse flows south to north through the centre this land parcel. The Flood Zone extent is primarily constrained to within the vicinity of the channel as it flows through the Site. There are several field drains/ditches that discharge into this tributary within and in the vicinity of the eastern Site area. This area of the Site is located near the border of the Stour (u/s Wixoe) and Swaffham – Bulbeck Lode catchment boundary. As a result of this there is a small upstream catchment for this Flood Zone and hence the flooding within this area is likely more visibly represented as surface water flooding.

Surface water flood mapping

5.2.26 The surface water maps presented in **Appendix D Water figures, Figure D3** are created from the 'Risk of Flooding from Surface Water' mapping data created by the Environment Agency. The mapping shows limited extents of flooding associated with surface water flow paths within the Site and study area.

5.2.27 The overland flood paths are considered to be typical for the size and nature of the Site and are likely to be indicative of field boundary ditches and topographically low areas.

Surface water protection areas

5.2.28 The majority of the Site or the study area are not located within Drinking Water Protected Areas (Surface Water).

5.2.29 The south eastern extents of the Site and study area are located within a Drinking Water Safeguard Zones (Surface Water). The zone is a catchment area that influences the water quality for their respective Drinking Water

Protected Area (Surface Water). They are identified where the protected area has been assigned as being "at risk" of failing the drinking water protection objectives of the Water Environment (Water Framework Directive) (England & Wales) Regulations 2017[49]. The mapping data identifies that the zone is at risk from pesticides (Metaldehyde, Clopyralid) associated with agricultural activity in the catchment.

Water stress area

5.2.30 In 2021 the Environment Agency looked across the current and future water usage and climate change scenarios, to provide a water stress situation for each water company area. The Site and study area are likely to fall within Anglian Water and Cambridge Water (water companies) extents which are classified as water stress areas.

Future Baseline

5.2.31 Environment Agency guidance for peak rainfall intensities for critical storm events used for the design of drainage indicates there is an anticipated increase in peak rainfall intensities in the future. In turn this can increase river flows causing an increase in flood extents and flood frequency which may be applicable to the flood risk extents within the Site.

5.2.32 There are no expected changes within the Site or study area which would change the characteristics of Water Framework Directive Waterbodies, or change the water quality of surface water runoff.

Justification for scoping out water

5.2.33 The bullet points below outline possible impacts of the Scheme on the identified receptors and the baseline conditions. The impacts have been assessed on the following key assumptions:

- Given the limited extents of Flood Zone 2 and Flood Zone 3 within the Site any water sensitive critical components can feasibly be located outside the flood zones including transformers, invertors, switchgears, BESS and substations.
- Limited extents of Solar PV modules, access and cabling may be within Flood Zone 2 or Flood Zone 3. However, given Solar PV modules will be mounted on structures with an estimated 0.5 m to 1.0 m clearance between the ground and Solar PV modules then the flood risk is considered to be low.

[49] The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. Available online: https://www.legislation.gov.uk/uksi/2017/407/contents

- A Flood Risk Assessment will be undertaken to ensure that flood risk has been considered and any identified flood risk is suitably mitigated against. This will be submitted as part of the DCO application.
- Alongside the embedded mitigation (**Table 4.1**), an outline Surface Water Management Plan (oSuWMP) will be prepared to ensure no increase in water quantity leaving the Site compared to the existing scenario, and therefore no increase in flood risk as a result of the Scheme. The surface water drainage strategy will ensure no degradation of surface water quality leaving the Site. An outline surface water drainage appraisal and strategy would account for the predicted increases in rainfall intensity for critical storm events. The climate change allowances would be included into the attenuation calculations for the areas of positive drainage. This will be submitted as part of the DCO application and secured by a Requirement of the DCO.
- An oCEMP and oDEMP will be provided as part of the DCO application which will ensure the protection of surface water quality and to protect WFD watercourses during construction and decommissioning phases, which would include emergency spill response procedures. The plans will also ensure safe working practices in the flood zones.
- Cleaning of solar panels requires demineralised water, therefore demineralised water would be tankered to the Site as required and there would be no discernible increased demand on local water supplies. The requirements for water resources during the operational phase is not considered significant.
- There would be temporary increases in water resource use during the construction and decommissioning phase where there would be a requirement for plant cleaning, dust suppression and increased numbers of construction personnel on site. Raw water requirements could be met via a mixture of rainwater harvesting, water tanker or bowser from private water suppliers, private supply of water from existing abstraction sources, and public mains supply where feasible. Therefore, the requirements for water resources during the construction and decommissioning phases is not considered significant given the temporary nature and based on professional judgement.
- The Grid Connection Corridor will contain either an overhead pylon or underground cabling installed via trenching. Overhead pylons can span over watercourses, which will prevent any impact on the water environment. If an underground cable is required, then it is assumed the appropriate techniques will be employed to ensure no impacts on watercourses. Should HDD be required then a HDD fluid breakout plan will be provided with the DCO application.

Table 5.1: Water factor receptors scoped out

Receptor/Matter	Phase	Justification
Flood Risk (Flood Map for Planning and Surface Water Flooding)	Construction / Operation / Decommissioning	The Site is predominantly Flood Zone 1. Water sensitive critical components can be placed outside of Flood Zone 2 and Flood Zone 3. Cables are not considered to be flood sensitive, therefore any flooding identified within the Grid Connection Corridor is unlikely to be of any significant consequence. The Flood Risk Assessment will identify flood risk and mitigation measures required for any components within surface water or fluvial flood risk extents. The oCEMP and oDEMP will establish safe working practices in the flood zones. The oSuWMP will ensure no increase in water quantity leaving the Site compared to the existing scenario.
Water Quality (IDB Watercourses, Ordinary Watercourses, Main River, Drinking Water Protection Area (Surface Water))	Construction / Operation / Decommissioning	The oCEMP and oDEMP will establish best practices for the protection of the water environment during the construction and decommissioning phases. A HDD fluid breakout plan will be provided if HDD is required to install the cabling. The outline surface water drainage strategy will ensure the quality of surface water discharged from the Site has been considered during the operational phase.

Receptor/Matter	Phase	Justification
		The potential cessation of agricultural activities in place of a solar farm will reduce the application of pesticide required. This may improve the water quality of surface runoff and therefore of the receiving watercourses.
Water Framework Directive waterbodies	Construction / Operation / Decommissioning	The proposed scheme intersects six WFD waterbody catchments. The interaction between the Scheme and WFD waterbodies will be limited as it is identified that the only WFD Waterbody within the Site Boundary is Burwell Lode Waterbody, north of the existing Burwell Substation at the periphery of the Grid Connection Corridor boundary. It is very unlikely the cabling will require any works within close proximity of the WFD waterbody. Matters pertaining to the water quality of any runoff which may drain to Burwell Lode or Swaffam – Burwell Lode will be dealt with as identified in the water quality section for all phases.
Water Resources (Water Stress Area)	Construction / Operation / Decommissioning	Solar farms typically have inherently low potable and raw water usage during the operational phase. There would be a temporary increased demand for water resources during the construction phase however this is not considered significant and there would be no lasting effects.

5.2.34 A Flood Risk Assessment will be prepared and form part of the DCO submission. Based on the justification detailed in **Table 5.1**, potential risks can be mitigated. It is therefore proposed to exclude consideration of impacts to water (construction, operation, decommissioning) from the scope of the EIA.

5.3 Glint and glare

5.3.1 Solar PV modules are specifically designed to absorb light rather than reflect it. Light reflecting from solar PV modules results in the loss of energy output. Solar PV modules are dark in colour due to their anti-reflective coatings and are manufactured with low-iron, ultra-clear glass with specialised coatings and textures to enable maximum absorption. The combination of these factors significantly increases electrical energy production of the solar panels and significantly reduces reflected rays at the same time.

5.3.2 There are no guidelines setting out a particular methodological approach to delivering a glint and glare assessment. The National Policy Statement EN-3 states in Sections 2.10.158 and 2.10.159[50]:

"Solar PV panels are designed to absorb, not reflect, irradiation. However, the Secretary of State should assess the potential impact of glint and glare on nearby homes, motorists, public rights of way, and aviation infrastructure (including aircraft departure and arrival flight paths)".

"Whilst there is some evidence that glint and glare from solar farms can be experienced by pilots and air traffic controllers in certain conditions, there is no evidence that glint and glare from solar farms results in significant impairment on aircraft safety. Therefore, unless a significant impairment can be demonstrated, the Secretary of State is unlikely to give any more than limited weight to claims of aviation interference because of glint and glare from solar farms".

5.3.3 It is therefore proposed to exclude glint and glare from the scope of the EIA (see **Appendix E Glint and glare receptor scoping study**). However, a detailed stand-alone glint and glare assessment will be undertaken and appended to the ES submitted as part of the DCO application, considering ground-based (residential dwellings, PRoW, road, and rail) and airborne (airfields, Air Traffic Control Towers, and approaching aircrafts) receptors. Detailed geometric analysis will be undertaken using a bespoke glint and glare model for all receptors potentially affected by the Scheme. The outputs of the assessment will inform the design development and landscape mitigation plan. This approach is consistent with the recently released (20 September 2024)

[50] Department for Energy Security & Net Zero National Policy Statement for Renewable Energy Infrastructure (EN-3), November 2023. Available online: https://www.gov.uk/government/publications/national-policy-statement-for-renewable-energy-infrastructure-en-3

guidance from the Planning Inspectorate - Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development[51].

5.3.4 Residential receptors identified within 1 km of the Site Boundary will be considered as sensitive receptors, along with any PRoW, significant road junctions within 1 km of the Site Boundary. It is likely that any receptors to the north of the Site will not be materially impacted as the solar panels will be directed towards the southern sky. The following road receptors have been identified:

- A11
- B1052
- B1055
- Balsham Road/Cambridge Road
- The Common
- Common Road/Brinkley Road

5.3.5 Any predicted impacts towards the ground-based infrastructure (roads and dwellings) can likely be solved with standard mitigation measures – the most common being the provision of screening (e.g. hedgerow planting) at the Site Boundary to obstruct views of potentially reflecting panels. Where views of reflecting panels are obstructed, no effects can be experienced. Other solutions such as layout modification can be considered, but are rarely required in practice.

5.3.6 Aviation receptors (such as airports, airfields and air traffic control towers), within 10 km of the Site Boundary will be considered as sensitive receptors. The assessment will consider the path of approach for landing as well as flight paths more distant from the receptor in question. The approach phase (arrival flight paths) will be considered in the estimation of impact as this is deemed to be the most sensitive phase of a flight. Departing aircraft will have the nose pointing upwards and the visibility of objects (i.e., reflective panels) located on the ground will be reduced and therefore this will not be considered. The following aviation receptors in the surrounding area have been identified:

- Cambridge Airport, approximately 8.4 km north west;
- Duxford Aerodrome, approximately 8.6 km south west;
- Little Shelford Airfield: approximately 7.4 km south west;
- Newmarket Heath Airfield: approximately 7.9 km north east;
- Woodditton Airfield: approximately 8.8 km north east; and

[51] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-technical-advice-page-for-scoping-solar-development

- Addenbrooke's Hospital Helipad: approximately 7.3 km west.

5.3.7 Whilst formal guidance within the UK for quantifying glint and glare impacts is sparse, the industry standard is to evaluate effects on aviation receptors based on their intensity (specifically the potential for a temporary after-image) as well as their duration and operational sensitivity. Any "significant" impacts identified through the process of modelling within the assessment will be adequately mitigated such that any impacts cannot be considered "significant". In practice, this means quantifying whether potential effects are possible for approaching pilots and/or air traffic controllers and, if so, demonstrating that any effects are of acceptably low intensity. Where appropriate, evaluation of effects, duration, and the origin of the glare is considered. Technical mitigation options for aviation receptors can involve modifications to the panel configuration including varying the vertical tilt, azimuth angle and panel footprint.

5.3.8 Based on all of the above, it is proposed that glint and glare be scoped out of the ES. A description of any relevant proposed mitigation measures and safety considerations of the Scheme will be included within the Scheme description chapter of the ES.

5.4 Heat and radiation

5.4.1 The requirement to consider heat and radiation in UK EIA practice was introduced via the EIA Regulations 2017. Schedule 4(5)(c) of the EIA Regulations 2017 requires that an Environmental Statement includes: *'A description of the likely significant effects of the development on the environment resulting from, inter alia:*

(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste.'

5.4.2 Due to the scale and nature of the Scheme, it is not anticipated that there will be any significant sources of heat or radiation during either construction, operation or decommissioning. The consideration of heat and radiation emissions has therefore been scoped out of further assessment and has not been considered further in this EIA Scoping Report.

5.5 Electric, magnetic and electromagnetic fields

5.5.1 Electric fields are produced by voltage, which is the pressure behind the flow of electricity and which depends on the operating voltage of the equipment. Magnetic fields are produced by current, which is a measure of the flow of electricity and depends on the electrical current.

5.5.2 Electrical fields can be blocked by fences, shrubs and buildings and the intensity of the electric and magnetic fields decreases from the source.

5.5.3 The Scheme design will be compliant with the guidelines and policies relating to electromagnetic fields stated in National Policy Statement EN-5 (paragraphs 2.9.44-2.9.58 and 2.10.11), including the International Commission on Non-Ionizing Radiation Protection guidelines (1998) [52] and Control of Electromagnetic Fields at Work Regulations 2016[53].

5.5.4 The Planning Inspectorate's Technical Advice Page for Scoping Solar Development states that a separate chapter for Electro-Magnetic Fields (EMF) is not required. However, it does state: '*Where proposed cables are over 132kV, an EMF assessment should be provided in an appendix to the Environmental Statement. This should include the location, routing and voltages of any cables over 132kV and a risk assessment to any human and ecological sensitive receptors within the ZoI*'[54].

5.5.5 It is therefore proposed to exclude electric, magnetic and electromagnetic fields from the scope of the EIA, with an electromagnetic fields (EMF) report prepared where necessary to demonstrate compliance. The EMF report would also include the location, routing and voltages of any cables over 132 kV and include a risk assessment to any human and ecological sensitive receptors within the zone of influence.

5.5.6 The EMF report would be separate to the EIA process, but form part of the DCO submission.

[52] ICNIRP (1998), 'International Commission on Non-Ionizing Radiation Protection Guidelines: For limiting exposure to time-varying electric, magnetic and electromagnetic field (up to 300GHz)', Health Physics 74 (4): 494-522. Available online: https://www.icnirp.org/cms/upload/publications/ICNIRPemfgd l.pdf

[53] The Control of Electromagnetic Fields at Work Regulations 2016. Available online: https://www.legislation.gov.uk/uksi/2016/588/contents/made

[54] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-technical-advice-page-for-scoping-solar-development

5.6 Major accidents and disasters

5.6.1 Guidance on the consideration of major accidents and disasters is provided by 'Major Accidents and Disasters in EIA: An IEMA Primer' (IEMA, 2020)[55]. This focuses on the consideration of low likelihood/high consequence events which would result in serious harm or damage to environmental receptors, and which could encompass risks exacerbated by climate change. This includes accidents or disasters originating from a proposed development as well as external events (man-made or natural).

5.6.2 In considering the potential for significant effects from the vulnerability of the Scheme to risks of accidents and disasters, it is important to note that the UK already has a structured framework of risk management legislation in place. Vulnerability to major accidents and/or disasters for infrastructure and other built environment developments is covered by a wide range of other safety and non-safety-related legislation, as detailed below:

- Health and Safety at Work Act 1974;
- Construction (Design and Management) Regulations 2015;
- The Construction (Health, Safety and Welfare) Regulations 1996; and
- Electricity Safety, Quality and Continuity Regulations 2002.

5.6.3 The risk of major accidents and disasters will be considered throughout the design process of the Scheme. This will include siting the potentially hazardous equipment, such as the BESS and grid infrastructure, at a suitable distance from sensitive receptors.

5.6.4 The construction, operation and decommissioning phases of the Scheme have the potential for limited interactions which may give rise to major accidents and/or disasters. **Table 5.2** presents a list of possible major accidents and disasters that will require consideration.

Table 5-2: Possible major accidents and disasters

Major accident and/or disaster	Potential receptor	Comments
Flooding	Properties Local residents	The majority of the Site is within Flood Zone 1, and therefore considered to be low risk. The Site is not considered to be at significant risk of river flooding or surface water flooding if potentially

[55] IEMA (2020) Major Accidents and Disasters in EIA: A Primer. Available online: https://www.iema.net/resources/blog/2020/09/23/iema-major-accidents-and-disasters-in-eia-primer

Major accident and/or disaster	Potential receptor	Comments
		vulnerable infrastructure is sufficiently raised. The vulnerability of the Scheme to flooding and its potential to exacerbate flooding will be covered in the stand-alone Flood Risk Assessment to be submitted as part of the DCO application.
Fire	Properties Local residents Local habitats and species	There is a potential fire risk associated with the BESS. This will be managed by a cooling system, which will form part of the BESS and which is designed to regulate temperatures to safe conditions to minimise the risk of fire. The BESS and associated grid infrastructure will be sited a suitable distance from sensitive receptors in accordance with BESS standards (UL9540). Battery Safety Commitments and an outline Battery Safety Management Plan will be produced and submitted as part of the DCO application to account for the potential safety risks and the relevant mitigation and management procedures.
Aircraft disasters	Pilots	The potential for glint and glare to affect aircraft will be considered within the glint and glare assessment, which will form a technical appendix to the ES (refer to **Section 5.3** above).
Plant disease	Habitats and species	New planting may be susceptible to biosecurity issues, such as increased prevalence of pests and disease, due to source of provenance and climate change. The planting design and oLEMP will take account of and document procedures to manage biosecurity risks.

5.6.5 Those major accidents and disasters that are not considered within the scope of the existing technical assessment will continue to be reviewed and addressed as part of the design process. The construction, operation and decommissioning of the Scheme are not considered to have a risk of major accidents or disasters that could affect existing or future receptors, which are not considered through existing design mitigation and regulatory regimes.

5.6.6 The mitigation in place is generally sufficient to manage vulnerabilities to major accidents and/or disasters without the need for additional mitigation in most circumstances. It is not expected that inclusion of major accidents and disasters in the EIA scope would add any greater level of safety performance to the already established process. By implementing recognised and approved safety legislation and regulation, no significant effects in relation to major accidents and disasters are anticipated during the construction, operation and decommissioning phases.

5.6.7 It is therefore proposed to exclude major accidents and disasters from the scope of the EIA.

5.7 Material assets (and waste)

5.7.1 Material assets can be defined as "*substances used in each lifecycle stage of a development, with particular focus on the construction, operation and maintenance, and decommissioning or 'end of first life' (deconstruction, demounting, demolition and disposal) phases*" (IEMA, 2020)[56]. Material assets can include 'material' (i.e. physical resources that are used across the lifecycle of a development) and 'excavated arisings' (i.e. soil, rock, or similar resource generated by excavations).

5.7.2 Waste is defined as "*any substance or object which the holder discards or intends or is required to discard*". The Waste Framework Directive (European Parliament and the Council, 2008)[57] definition includes any substance or object that is discarded for disposal or that has not been subject to acceptable recovery (including reuse and recycling).

[56] IEMA (2020), 'IEMA guide to Materials and Waste in Environmental Impact Assessment'. Available online: https://www.iema.net/resources/reading-room/2020/03/30/materials-and-waste-in-environmental-impact-assessment

[57] European Parliament and the Council (2008), 'Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with Environment Agency relevance)'. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32008L0098

5.7.3 The main impacts (changes) and effects (consequences) of materials consumption and waste disposal are presented in **Table 5-3**.

Table 5-3: Material assets[58]

Matter	Direct impacts	Adverse effect	Applicable development phase
Materials	Consumption of resources	Depletion of resources, resulting in the temporary or permanent degradation of the natural environment.	Construction, operation and decommissioning
Waste	Generation and disposal of waste	Reduction in landfill capacity. Unsustainable use or loss of resources to landfill resulting in the temporary or permanent degradation of the natural environment.	Construction, operation and decommissioning

5.7.4 The indirect impacts associated with materials consumption and waste disposal (e.g. release of greenhouse gas emissions, water consumption, amenity impacts, ecological impacts, etc) will be assessed elsewhere within the EIA. Similarly, the indirect impacts of any off-site waste management facilities and material production facilities are expected to be assessed (and where necessary, mitigated) under the planning and permitting regime for those sites and thus do not form part of an EIA for a development that uses such facilities for material supply or waste management.

5.7.5 A description of the potential streams and volumes of construction materials and waste disposal will be described within the 'Description of the Scheme' chapter of the ES. In addition to this, the oCEMP will set out how construction materials and waste will be managed on-site, and opportunities to recycle waste will be explored. Where possible, development-specific commitments for sustainable resource management will be presented within the ES. As part of the detailed CEMP, prepared by the Contractor following the granting of the DCO, there would be a requirement to develop and implement a Site Waste Management Plan and Materials Management Plan in advance of the construction works. An oOEMP and oDEMP will be submitted as part of the

[58] IEMA (2020), 'IEMA guide to Materials and Waste in Environmental Impact Assessment'. Available online: https://www.iema.net/resources/reading-room/2020/03/30/materials-and-waste-in-environmental-impact-assessment

DCO application, which will set out how waste from replacing components during the operational phase, and decommissioning waste will be managed and detail opportunities for re-use and recycling.

5.7.6 It is also not intended to remove significant quantities of excavated arisings from the Site during construction (there are currently no demolition works proposed, for example). There may, however, be a need to remove some soils from the Site for treatment or disposal, if found to be contaminated, and it is not practical to treat this on-site. However, where possible, soil arising from underground cables, steel poles supporting solar PV modules and other supporting infrastructure will be balanced through a cut and fill exercise to retain materials on site.

5.7.7 For the operational phase, the potential streams and volumes of construction materials and waste disposal will be described within the 'Description of the Scheme' chapter of the ES. There will be relatively little waste produced during the operation phase and the requirement for material assets will be limited to maintenance and replacement parts, as required. Where necessary, this will be addressed in the oOEMP.

5.7.8 During decommissioning, the removal of any material assets and waste will be recycled or disposed of in accordance with good practice and market conditions at that time. If items can be recycled, this will be the first-choice option.

5.7.9 It is therefore proposed to exclude material assets and waste from the scope of the EIA.

5.8 Human health

5.8.1 In accordance with the Planning Inspectorate's Technical Advice for Scoping Solar Development[59] and IEMA's Guide to Effective Scoping of Human Health in Environmental Impact Assessment[60], it is proposed that consideration of the potential effects to human health due to changes to health determinants such as access to open space and nature, active travel, community safety and access to work and training as a result of the Scheme will be covered through the

[59] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-technical-advice-page-for-scoping-solar-development

[60] Institute of Environmental Management and Assessment (IEMA) (2022) Guide to: Effective Scoping of Human Health in Environmental Impact Assessment. Available at: https://www.iema.net/media/s35fughe/iema-eia-guide-to-effective-scoping-of-human-health-nov-2022.pdf

findings of other assessments undertaken as part of the EIA process, as follows:

- Air quality (in accordance with the Planning Inspectorate's Technical Advice Page for Scoping Solar Development, the human health effects from vehicle emissions and dust are considered in **Section 6.5**;
- Landscape and visual amenity (refer to **Section 6.2**);
- Noise and vibration (in accordance with the Planning Inspectorate's Technical Advice Page for Scoping Solar Development, the human health effects from noise and vibration are considered in **Section 6.6**);
- Traffic and transport (refer to **Section 6.7**); and
- Population (refer to **Section 6.8**).

5.8.2 Each of these chapters within the EIA Scoping Report and subsequent PEIR and ES will consider the potential effects to human health within their own assessments. As described in **Section 5.3**, a detailed stand-alone glint and glare assessment will be undertaken and appended to the ES. This will consider the potential human health effects from glint and glare, and where necessary these will also be considered within the relevant environmental factor assessment chapters.

5.8.3 There is potential for the additional construction/operational workers to impact healthcare facilities in the vicinity of the Scheme. Although the number of construction staff is to be confirmed, it is estimated that 95%[61] will travel to the Site from their homes, where their own GPs are based. The number of operational staff is also yet to be confirmed however it is anticipated that the roles will be filled by staff living within a commutable distance of the Scheme and therefore already registered to a GP practice. It is therefore anticipated that the impacts on health providers during construction and operation of the Scheme will not be significant.

5.8.4 As any potential human health impacts would be captured by the aforementioned assessments and there are not expected to be any significant human health impacts outside of these assessments, it is proposed that human health is not subject to a stand-alone assessment and therefore a separate ES chapter is excluded from the scope of the EIA. Measures will also be incorporated into the various management plans (e.g. oCEMP, oPRoWMP, battery safety management plan) that address human health.

[61] Construction Industry Training Board (2023). Workforce Mobility and Skills in the UK Construction Sector 2022. Available at: https://www.citb.co.uk/media/uwhbtrkj/2272_bmg_workforce_mobility_and_skills__uk_wide_report_v1.pdf

5.9 Utilities

5.9.1 The Scheme has the potential to affect existing utilities infrastructure located within the Site Boundary. Given the nature of the Scheme, potential impacts on existing utilities assets would be limited to the construction phase. To identify any existing infrastructure constraints, a utilities search covering the area within the Site Boundary will be undertaken.

5.9.2 This utilities search could identify assets such as water pipelines (supply and wastewater), telecoms cables, electrical cables, gas mains and drainage within the Site Boundary that would require careful consideration as the design of the Scheme evolves.

5.9.3 Further consultation will be carried out with the relevant utility companies to confirm the information drawn from the utilities search is accurate and up to date. In addition, consideration and advice will be sought regarding separation distances and methods of construction in close proximity to any utility identified to avoid any risk of impact during construction of the Scheme. This information would be used to inform the layout of the Scheme and reported within the PEIR and/or ES as embedded (primary) mitigation.

5.9.4 The oCEMP would include any additional mitigation measures to protect against interference with below ground utilities during construction. The Applicant would also expect to agree protective provisions with relevant statutory undertakers in order to ensure the DCO includes appropriate protections and restrictions on the Applicant's exercise of its powers for the protection of utilities.

5.9.5 Taking the above into account, it is not proposed to prepare a separate utilities chapter as part of either the PEIR or ES.

5.10 Transboundary effects

5.10.1 Regulation 32 of the EIA Regulations requires the consideration of any likely significant effects on the environment of another European Economic Association (EEA) State. The consideration of transboundary effects is also detailed within the Planning Inspectorate's Advice Note Seven[62]. The

[62] Planning Inspectorate (June 2020) Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environment Information and Environmental Statements (Version 7). Available online: https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/

consideration of transboundary effects is also detailed within the Planning Inspectorate's Advice Note Seven (2020)[63].

5.10.2 Due to the nature and location of the Scheme, it is not anticipated that the Scheme will lead to potential for any likely significant effects on the environment of another EEA State. Therefore, a transboundary screening matrix has not been included within this EIA Scoping Report.

[63] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Transboundary Impacts and Process. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-transboundary-impacts-and-process

6 ENVIRONMENTAL FACTORS PROPOSED TO BE SCOPED INTO FURTHER ASSESSMENT

6.1 Biodiversity

6.1.1 Consultation

Consultation for the Scheme will be undertaken with Natural England (NE), Cambridgeshire County Council, South Cambridgeshire District Council and East Cambridgeshire District Council as well as Beds, Cambs and Northants Wildlife Trust to provide them with sufficient information to agree the assessment methodology and biodiversity assets of sufficient importance to be considered in the EIA.

If required, consultees will also be approached to agree a suitable licensing and mitigation strategy for protected species and/or important habitats during the construction, operation and decommissioning phases.

Additional consultees will be contacted if and when required.

6.1.2 Study area

The survey/assessment study area includes the Developable Areas (A, B and C), Inter Array Connection Corridors (1 and 2), Grid Connection Corridors (A and B) and appropriate buffer zones, which varies per receptor as discussed below.

Background data searches will differ per site / habitat types as follows:

- Statutory and non-statutory designated sites and protected species records will focus on the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors.
- A 1 km search buffer has been used for non- statutory designated sites.
- A 2 km buffer has been used for statutory designated sites, protected and notable species records, extended to 10 km for Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites.
- A 20 km search for bat SACs has been undertaken to identify any potential for functionally linked land (as per best practice).
- Therefore, the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors and 2 km surrounding them are considered to be the primary Zone of Influence (ZoI) but extended to 10 km when considering effects on internationally designated sites (Habitats sites), with 20 km for internationally designated sites primarily designated for bats.

- Priority habitats will focus on the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors within the Site Boundary.
- A 2 km buffer for European Protected Species (EPS) licences on the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridor.

The general survey study area for Preliminary Ecological Appraisal (PEA) is the Developable Areas (A, B and C), Inter Array Connection Corridors and Grid Connection Corridors within the Site Boundary. No buffers have currently been applied. Specific survey study areas will be as follows:

- For hedgerows and invasive species will comprise all the proposed works areas within the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors, including those where ancillary works will occur, as only direct impacts to these habitats/species need to be considered.
- If the design of the Scheme determines that any high-quality habitat suitable for invertebrates will be directly impacted then invertebrate surveys will be carried out within those areas identified. These areas will be identified through the background data search and PEA.
- If the design of the Scheme determines that any sections of watercourse will be directly impacted, e.g. culverted to allow for cable installation, then fish, water vole (*Arvicola amphibius*) and otter (*Lutra lutra*) surveys will be carried out in, and adjacent to, the works area, for up to 100 m upstream and downstream, where accessible. Adjacent waterbodies would be included to account for any effects that may extend beyond the Site Boundary. A survey area of 100 m upstream and downstream has been proposed as this distance would account for any local water vole populations that are likely to commute further along the watercourse, into the Site Boundary (Dean et al., 2016[64]).
- For great crested newts (GCN; *Triturus cristatus*) the survey area includes Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors plus a 250 m buffer (for waterbodies). A 250 m buffer has been proposed as this distance would account for any GCN populations within the surrounding area that are likely to commute to suitable breeding waterbodies within the Site Boundary.
- For considering reptile suitability the survey area will be the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors.
- For breeding bird surveys is the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors, due to the need to assess the overall significance of the breeding bird assemblage present and inform potential enhancement measures.

[64] Dean, M., Strachan, R., Gow, D and Andrews, R. (2016), *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series*) (London: The Mammal Society).

- For wintering bird surveys is the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors, due to the need to assess the overall significance of the wintering bird assemblage present and inform potential enhancement measures. An additional buffer may be applied to the Grid Connection Corridors for wintering bird surveys, to compare findings in a local context. This is only considered for wintering bird surveys on the Grid Connection Corridors due to the need to assess impacts of Overhead Lines. Due to the current expected width of the Grid Connection Corridor options we do not consider it necessary to extend surveys outside of these areas, unless specific receptors are identified.
- For bat activity surveys the survey area will include the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors.
- For Preliminary Roost Assessments (PRA) for bats the survey area is all buildings to be directly or indirectly impacted by works.
- For Ground Level Tree Assessment (GLTA) for bats the survey area is all trees within the Developable Areas, and all trees to be directly or indirectly impacted by works in the Inter Array Connection Corridors and Grid Connection Corridors. The difference is because the Corridors are wider than the Zone of Influence of the works.
- For badger (*Meles meles*) the survey area will comprise the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors.

Where a specific buffer has not been included above in the survey text then the survey area will be generally within the Site Boundary, unless a specific receptor is identified to justify extending beyond the Site Boundary during surveys.

6.1.3 Data sources to inform the EIA baseline characterisation

The proposed assessment scope has been based on:

- A background data search from Cambridgeshire and Peterborough Environmental Records Centre which included a search for designated sites and protected species records within 2 km of the Developable Areas, Inter Array and Grid Connection Corridors, 10 km for SPAs, SACs and Ramsar sites (including candidate sites) and 20 km for bat SACs. Protected species records within the last ten years were considered, unless specified differently. A search for species records within the last 20 years were considered for birds and plants due to a scarcity of records within the last 10 years.
- A search on MAGIC[65] (Multi—Agency Geographic Information for the Countryside) which included a search for priority habitats and European Protected Species licences.

[65] MAGIC gov.uk. - interactive mapping tool run by Natural England [Accessed October 2024]

- Ecology surveys undertaken on Developable Areas A - West and Developable Area B - Central in 2023/2024 (see **Section 6.1.4** below for more details).

At the time of scoping only Developable Areas A - West and Developable Area – B Central have been subject to a PEA survey and habitat assessment for protected species, alongside breeding and wintering bird surveys. Developable Area C – East, Grid Connection Corridors and Inter Array Connection Corridors have yet to be surveyed due to access restrictions and seasonality constraints, and the requirement for a preferred alignment. These will be subject to survey in 2025.

6.1.4 Surveys to inform the EIA baseline characterisation

Surveys to inform the baseline were started on Developable Areas A – West and B – Central in 2023/2024. No surveys have yet been undertaken in Developable Area C - East, Grid Connection Corridors or Inter Array Connection Corridors to date[66]. Further surveys within the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors are proposed for 2024/2025.

The following surveys of the Developable Area A – West and Developable Area B – Central have been undertaken in 2023/2024:

- A PEA survey[67] was carried out in February 2024. Habitats assessed using UK Habitat (UKHab) classification[68] (see **Appendix F PEA [Confidential]**).
- Botanical survey for arable weeds, carried out in July 2024.
- A reptile habitat suitability survey undertaken during the PEA survey in February 2024.
- Ornithology surveys (wintering and breeding season) undertaken between November 2023 and July 2024.
- Bat activity surveys (automated/static monitoring), undertaken between April 2024 and October 2024. This involved deployment of static bat detectors in various habitat types across the Developable Areas.
- Bat activity surveys (night-time bat walkover), undertaken between May and September 2024.
- A GLTA undertaken in February 2024.
- Badger survey, undertaken during the PEA survey in February 2024.

The following surveys are due to be undertaken in 2024/2025:

- For Developable Area A – West and Developable Area B – Central:

[66] Due to land access restrictions and/or land being available to access outside optimal survey periods.

[67] Note, the PEA also included a central land parcel which is now no longer part of the Scheme.

[68] UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at https://www.ukhab.org)

  - GCN environmental DNA (eDNA) surveys of ponds and ditches within 250 m of the Developable Areas (A and B) between April and June 2025; and,
  - Otter and water vole surveys of ditches in May and August 2025.
- For Developable Area C – East:
  - PEA survey, including habitat suitability assessment for protected species. Habitats will be assessed using UKHab classification.
  - Additional protected species surveys as identified by the PEA likely to be similar to those listed above for Developable Areas A and B.
- For the Inter Array Connection Corridors and Grid Connection Corridors:
  - PEA survey, including habitat suitability assessment for protected species. Habitats will be assessed using UKHab classification.
  - Targeted priority grassland and hedgerow surveys should these be impacted by the works.
  - Targeted botanical surveys.
  - Fish surveys, should watercourses be directly impacted by the works.
  - GCN eDNA survey of ponds and ditches on Site and within 250 m of the Site Boundary.
  - Breeding and wintering bird surveys.
  - Bat activity surveys (automated/static monitoring).
  - Bat roost surveys (if required) – appropriate surveys to determine roosting status of trees or buildings which are to be directly or indirectly impacted by the construction of the Scheme.
  - Otter and water vole surveys, should watercourses be directly impacted by the works.
  - Badger survey.
  - Targeted invertebrate surveys if habitats with high potential to contain notable invertebrates or important populations are likely to be impacted (e.g. species rich grasslands). It is currently envisaged this will not occur.

As the preferred alignments have yet to be defined, within the Inter Array and Grid Connection Corridors, a PEA has not yet been completed, which will inform the suite of protected species surveys to be undertaken. This will be reviewed as the design progresses to allow a more targeted approach, although will be cognisant of the optimal survey periods for the relevant protected species to ensure sufficient data is obtained for the PEIR and/or ES.

6.1.5 Baseline conditions

The existing ecological baseline is based on both desk and field-based studies undertaken to date (see **Sections 6.1.3** and **6.1.4** above).

The Developable Areas A - West and B - Central predominantly consists of agricultural fields (mostly arable with some grassland) interspersed with hedgerows, lines of trees, ditches, small woodland blocks and farm access tracks. The hedgerows within the Developable Areas A - West and B - Central range between gappy and failing hedges to healthy mixed examples in good condition, with and without trees, banks and ditches. The lines of trees within the Developable Areas A - West and B - Central range from planted saplings to mature specimens.

The fields are predominately bordered by a mix of hedgerows and ditches with the occasional line of trees or woodland present.

A more detailed description of the Site and Scheme is provided in the **Chapter 2 Description of the Scheme**.

The following habitat types, in UKHab classification (relevant habitat codes in brackets), were recorded as present on and adjacent to the Developable Areas A - West and B - Central during the PEA survey undertaken in February 2024:

- Urban (u1/u1b/u1b5/u1c)
- Cropland (c1/c1a8/c1b/c1c)
- Grassland (g3c/g4)
- Other neutral grassland (g3c)
- Woodland (w1g/w1h5/w1h6/w2c)
- Lines of trees (no code in UK Hab 2.0/w1g6 in UK Hab 1.0)
- Hedgerows (h2a)
- Heathland and scrub (h3h)
- Rivers and lakes (r1f)
- Ditches (r1e)

At the time of scoping, a UKHab survey has not yet been undertaken for Developable Area C – East, the Inter Array Connection Corridors or Grid Connection Corridors. A review of aerial imagery of Developable Area C – East and the Inter Array Connection Corridors shows the areas comprising arable fields, small areas of grassland, small blocks of woodland and hedgerows. A collection of farm buildings are also present within the Inter Array Connection Corridors.

A review of aerial imagery of the Grid Connection Corridors shows the area comprising arable fields, areas of grassland, small blocks of woodland, ponds and hedgerows/ line of trees. There are several residential properties, farm buildings and two solar farms within the Grid Connection Corridors.

Internationally and nationally designated sites

There is one internationally designated site within 10 km of Developable Area C – East and Developable Area B – Central and four sites within 10 km of the Grid Connection Corridors (see **Appendix G Biodiversity figure**). There is one internationally designated

site for bats within 20 km of Developable Area A and Grid Connection Corridor A. There are no internationally designated sites within 10 km of the Inter Array Connection Corridors.

There are three nationally designated sites within 2 km of the Developable Areas, eight sites within 2 km of the Grid Connection Corridors and three within 2 km of the Inter Array Connection Corridors.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
Internationally designated sites					
Devil's Dyke SAC[69]	6.4 km northeast of Developable Area C – East	9.3 km northeast	6.4 km northeast	905 m east from the northern portion of Corridor B	Devil's Dyke SAC is designated for: Annex I habitats that are a primary reason for selection of this site Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)
Wicken Fen Ramsar[70]	Over 10 km north from all three Developable Areas and both Inter-Array Connection Corridors			1.9 km north from the northern portion of Corridor A	Wicken Fen Ramsar is designated for: Ramsar criterion 1 One of the most outstanding and representative remnants of the East Anglian peat fens. The area is one of the few which has not been drained. Traditional management has created a mosaic of habitats from open water to sedge and litter

[69] Joint Nature Conservation Committee (1998) Devil's Dyke SAC (UK0030037) (updated 2015) Available at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030037.pdf. Accessed online: October 2024

[70] Joint Nature Conservation Committee (1995) Wicken Fen Ramsar (UK11077) Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11077.pdf. Accessed online: October 2024

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
					fields. Ramsar criterion 2 The site supports one endangered species of Red Data Book plant, the Fen Violet (*Viola persicifolia*), which survives at only two other sites in Britain. It also contains eight nationally scarce plants and 121 Red Data Book invertebrates. The GB Red Book considers the vascular plant (*Senecio paludosus*) as critically endangered, while *Myriophyllum verticillatum* and *Peucedanum palustre* are considered vulnerable.
Fenland SAC[71]	Over 10 km north from all three Developable Areas and both Inter-Inter Array Connection Corridors			1.9 km north from the northern portion of Corridor A	Fenland SAC is designated for: Annex I habitats that are a primary reason for selection of this site Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). Calcareous fens with *Cladium mariscus* and

[71] Joint Nature Conservation Committee (1995) Fenland SAC (UK0014782) (updated 2015) Available online at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0014782.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
					species of the *Caricion davallianae* * Priority feature Annex II species present as a qualifying feature, but not a primary reason for site selection Spined loach (*Cobitis taenia*) GCN
Chippenham Fen Ramsar[72]	Over 10 km northeast from all three Developable Areas and both Inter-Array Connection Corridors			5 km northeast from the northern portion of Corridor A	Chippenham Fen Ramsar is designated for: Ramsar criterion 1 A spring-fed calcareous basin mire with a long history of management, which is partly reflected in the diversity of present-day vegetation. Ramsar criterion 2 The invertebrate fauna is very rich, partly due to its transitional position between Fenland and Breckland. The species list is very long, including many rare and scarce invertebrates characteristic of ancient

[72] Joint Nature Conservation Committee (1992) Chippenham Fen Ramsar (UK11014) [Online] Available at: https://jncc.gov.uk/jncc-assets/RIS/UK11014.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
					fenland sites in Britain. Ramsar criterion 3 The site supports diverse vegetation types, rare and scarce plants. The site is the stronghold of Cambridge Milk-parsley (*Selinum carvifolia*).
Eversden and Wimpole Woods SAC[73]	17km west of Developable Area A – West Over 20km from Developable Area B – Central and Developable Area C - East, Grid Connection Corridor B and both Inter-Array Area Connection Corridors			17km west of Grid Connection Corridor A	Eversden and Wimpole Woods SAC is designated for: Annex II species that are a primary reason for selection of this site Western barbastelle
Nationally designated sites					
Fleam Dyke SSSI[74]	Adjacent to the south border of Developable Area B –	Within the corridor	5.4km southwest	Within southern portion of	The Fleam Dyke holds chalk scrub and species-rich chalk grassland communities which are of a very limited distribution in south, central and eastern England and

[73] Joint Nature Conservation Committee (2004) Eversden and Wimpole SAC (UK0030331) (updated 2015) [Online] Available at: https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0030331.pdf. Accessed: October 2024.

[74] Natural England (1984) Fleam Dyke SSSI (1001069) [Online] Available at: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001069.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
	Central			Corridor A	especially rare in Cambridgeshire. The site is a linear earthwork which dates back to at least the seventh Century and extends across the open chalklands from the Fens to the formerly heavily wooded Boulder Clay. Of prime importance is the species-rich chalk grassland which, once extensive in the area and maintained by grazing, is now restricted to the steep banks of this ancient earthwork and is now maintained by cutting. The grassland community is characterised by the presence of such species as Upright Brome, Meadow Oat-grass (*Helictotrichon pratense*) and Crested Hair-grass (*Koeleria cristata*). Associated herbs include Dropwort (*Filipendula vulgaris*) and Purple Milk-vetch (*Astragalus danicus*). Areas of the Dyke are covered by calcareous scrub which has developed over formerly open grassland. Hawthorn (*Crataegus monogyna*) forms dense thickets but many other shrub species are present. Of particular

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
					note is the presence of Juniper (*Juniperus communis*), a species which is rare in the region and for which Fleam Dyke is the only Cambridgeshire site.
Roman Road SSSI[75]	272 m south of Developable Area A – West	720 m west	7.5km southwest	1 km south from the southern portion of Corridor A	The Roman Road supports species-rich calcareous grassland communities of a type which was once widespread on the chalk areas of lowland England and which is now scarce due to changes away from the traditional sheep grazing economy of these areas to arable. Thick hedgerows and small copses along this 'green lane' enhance the value of the grassland for invertebrates. The grassland communities range from short swards characterised by the presence of grasses such as Sheep's-fescue (*Festuca ovina*) and Quaking-grass (*Briza media*), together with a rich variety of herbs, to tall grassland dominated by False-Oat Grass (*Arrhenatherum elatius*) with Upright Brome.

[75] Natural England (1984) Roman Road SSSI (1002220) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002220.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
					The many herbs recorded include characteristic species such as Salad Burnet (*Poterium sanguisorba*), Dropwort and Wild Carrot (*Daucus carota*), together with Harebell (*Campanula rotundifolia*), Purple Milk-vetch and Greater Knapweed (*Centaurea scabiosa*). The hedgerows are dominated by Hawthorn and Blackthorn (*Prunus spinosa*) but include a good variety of additional shrubs.
Park Wood (SSSI)[76]	1.3 km east of Developable Area C – East	Over 2 km northeast	1.2km north	1.3 km east from the southern portion of Corridor B	A wet ash-maple woodland of ancient origin. It is a particularly good example of a variant of the 'typical' form, containing a population of Oxlip (*Primula elatior*). Woodlands of this type are restricted in distribution and are a nationally scarce habitat.
Balsham	1.6 km south west of Developable	1.9 km southeast	4.9 km south west	Over 2 km south east from the southern	Balsham Wood holds woodland community types of ancient origin and of a type geographically restricted to lowland England. The woodland represents one of the few

[76] Natural England (1984) Park Wood SSSI (1002147) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002147.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
Wood SSSI[77]	Area C – East			portion of Corridor A	remaining areas of ancient ash-maple woodland on the chalky Boulder Clay and contains a rich assemblage of plants including a population of Oxlip, a species which is restricted to a few sites in eastern England. The woodland is dominated by coppice of Ash (*Fraxinus excelsior*) and Field Maple (*Acer campestre*) with Hazel (*Corylus avellana*). Mature Oak (*Quercus robur*) standards are present in parts of the wood. Of particular note is the presence of coppiced Hornbeam (*Carpinus betulus*) which occurs here at the edge of its geographic range in Britain. A good variety of shrubs are present, including Dogwood (*Cornus sanguinea*) and Wild Privet (*Ligustrum vulgare*). The ground flora is typically rich and of the Dog's Mercury (*Mercurialis perennis*) Bluebell (*Hyacinthoidies non-scripta*) type together with such species

[77] Natural England (1984) Balsham Wood SSSI (1000028) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000028.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
					as Herb-Paris (*Paris quadrifolia*), Early-purple Orchid (*Orchis mascula*) and, of special note, Woodruff (*Galium odoratum*), Orpine (*Sedum telephinum*) and Wood Sanicle (*Sanicula europaea*). This is one of very few Cambridgeshire woods where Primrose (*Primula vulgaris*) occurs on the same site as Oxlip. Where open grassy rides occur additional habitat variety is provided and herbs such as Bugle (*Ajuga reptans*) and Wood-sedge (*Carex sylvatica*) occur.
Carlton Wood (SSSI)[78]	1.6 km east of Developable Area C – East	Over 2 km east	2.1km east	Over 2 km south east from the southern portion of Corridor B	An ancient and semi-natural woodland which holds one of the finest of the few Hornbeam stands in the county. In addition, both the Hornbeam and Ash-Maple stands are of a nationally uncommon variant containing Oxlip.
Devil's Dyke	Over 2 km north east from all three			Crosses	Holds one of the best and most extensive

[78] Natural England (1986) Carlton Wood SSSI (1003285) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003285.pdf. Accessed: October 2024.

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
SSSI[79]	Developable Areas and both Inter-Array Connection Corridors			through both Corridors	areas of species-rich chalk grassland in the county, and a similarly extensive area of chalk scrub grading into woodland to the east. A number of nationally rare plants are present.
Newmarket Heath SSSI[80]	Over 2 km north from all three Developable Areas and both Inter Array Connection Corridors			Within Corridor B	This is by far the largest area of unimproved chalk grassland remaining in Cambridgeshire. It contains the sole Cambridgeshire example of chalk heath, and has a high diversity of flowering plants, including several nationally uncommon species.
Wicken Fen SSSI[81] and National Nature	Over 2 km north from all three Developable Areas and both Inter Array Area Connection Corridors			1.9 km north from the northern portion of the	Part of Wicken Fen Ramsar and Fenland SAC. The site supports a range of characteristic fenland communities and is notable for its

[79] Natural England (1984) Devil's Dyke SSSI (1000404) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000404.pdf. Accessed: October 2024

[80] Natural England (1993) Newmarket Heath SSSI (1006650) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1006650.pdf. Accessed: October 2024

[81] Natural England (1983) Wicken Fen SSSI (1003251) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003251.pdf. Accessed: October 2024

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
Reserve (NNR)				Corridor A	diverse fauna and flora, in particular the invertebrate fauna and the relic fen flora.
Great Wilbraham Common SSSI[82]	Over 2 km north west from all three Developable Areas and both Inter Array Connection Corridors			1.4 km north west from the southern portion of Corridor A	Great Wilbraham Common supports neutral grassland communities of the calcareous loam grassland type. The sward is characterised by the presence of grasses as Creeping Bent (*Agrostis stolonifera*) and Red Fescue (*Festuca rubra*). Other characteristic species include Quaking-grass (*Briza media*), Glaucous Sedge (*Carex flacca*), Lady's Bedstraw (*Galium verum*) and Salad Burnet. A number of locally uncommon species are also present. They include Purple Milk-vetch, Felwort (*Gentianella amarella*), Meadow Saxifrage (*Saxifraga granulate*), Green-winged Orchid (*Orchis morio*) and Sulphur Clover (*Trifolium ochroleucon*).
Fulbourn Fen	Over 2 km north west from all three			1.1 km west	This site supports species-rich neutral

[82] Natural England (1983) Great Wilbraham Common SSSI (1002271) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002271.pdf. Accessed: October 2024

Designated Site	Distance and location from:				Feature interest/description
	Developable Areas (closest listed)	Inter Array Connection Corridor 1	Inter Array Connection Corridor 2	Grid Connection Corridors	
SSSI[83]	Developable Areas and both Inter Array Connection Corridors			from the southern portion of Corridor A	grassland on calcareous loam and peat, with remnants of 'fen' woodland. These habitats are now rare in lowland England where only small fragments are known to persist. Yorkshire-fog (*Holcus lanatus*) and Red Fescue are particularly common within the grasslands with herbs such as Cowslip (*Primula veris*), Salad Burnet and Purging Flax (*Linum catharticum*). The wetter areas support tall fen vegetation including species such as Marsh-orchids (*Dactylorhiza* spp), Fen Bedstraw (*Galium uliginosum*), Meadowsweet (*Filipendula ulmaria*) and Common Fleabane (*Pulicaria dysenterica*).

[83] Natural England (1986) Fulbourn Fen SSSI (1001093) Available online: https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1001093.pdf. Accessed: October 2024

Non-statutory designated sites

There are 11 non-statutory designed sites within 1 km of the Developable Areas and 18 sites within 1 km of the Grid Connection Corridors. There are no non-statutory designated sites within 1 km of the Inter Array Connection Corridors.

Site name[84]	Distance and location from				Feature interest/description
	Developable Areas	Inter Array Connection 1	Inter Array Connection 2	Grid Connection Corridors	
Carlton Lane County Wildlife Site (CWS)	Within the northeastern boundary of Developable Area C – East	Over 1 km northeast	100m east within Developable Area C	Over 1 km southeast of the southern portion of Corridor B	Supports populations of a Nationally Scarce vascular plant species Oxlip, and a vascular plant species which is rare in the county (*Adoxa moschatellina*). Also supports hedges at least 500m in length with five or more woody species.
Hills Crofts (CWS)	Adjacent to the northeast boundary of Developable Area C – East	Over 1 km east	Over 1 km south west	Over 1 km west of the southern portion of Corridor B	Supports a population of a Nationally Scarce vascular plant species Oxlip.
Whitings Grove (CWS)	Adjacent to the southeastern boundary of Developable Area C – East	Over 1 km east	870 m south east	1 km south east of the southern portion of corridor B	

[84] Cambridgeshire and Peterborough Environmental Records Centre (2024) County Wildlife Site information – multiple citations.

Site name[84]	Distance and location from				Feature interest/description
	Developable Areas	Inter Array Connection 1	Inter Array Connection 2	Grid Connection Corridors	
Old Cambridge Road Verges (CWS)	Adjacent to north boundary of Developable Area B – Central	Over 1 km north	Over 1 km west	Adjacent to south boundary of the southern portion of corridor A	Cambridgeshire County Council and the Wildlife Trust co-ordinate efforts to identify and protect verges of special wildlife value in the County. A few of these verges have been selected as CWS, while the rest have been selected as Protected Road Verges (PRVs).
Great Covens Wood and Lower Wood (CWS)	90 m central to Developable Area C – East	Over 1 km northeast	110 m south	1 km south of the southern portion of corridor B.	Woodlands listed in the ancient woodland inventory of Cambridgeshire which retains more than 25% semi-natural cover. Also supports populations of a Nationally Scarce plant species Oxlip. Great Covens Wood and Lower Woods also supports a locally rare plant species (*Adoxa moschatellina*).
Rands Wood (CWS)	150 m south east of Developable Area C – East	Over 1 km east	Over 1 km south	Over 1 km southwest of the southern portion of corridor B	
Brinkley Hall Veteran Trees (CWS)	530 m north of Developable Area C – East	Over 1 km northeast	Over 1 km north	250 m east of the southern portion of corridor B	Five or more veteran trees in association with other semi-natural habitat.
Worsted	556 m south west	Over 1 km	Over 1 km	Over 1 km	Botanically rich roadside verge.

Site name[84]	Distance and location from				Feature interest/description
	Developable Areas	Inter Array Connection 1	Inter Array Connection 2	Grid Connection Corridors	
Lodge Road Side Verge (RSV) CWS	of Developable Area A – West	north	south east	southwest from the southern portion of corridor A	
Ladies Grove and Hay Wood (CWS)	660 m north of Developable Area C – East	Over 1 km northeast	Over 1 km northeast	80 m east of the southern portion of corridor B	Woodlands listed in the Cambridgeshire Inventory of Ancient Woodlands which retains more than 25% semi-natural cover. Additionally it qualifies because it supports a population of a Nationally Scarce vascular plant species Oxlip.
Brinkley Wood (CWS)	580 m north of Developable Area C – East	Over 1 km northeast	Over 1 km north	Within the southern portion of corridor B	
West Wratting Valley Farm RSV CWS	596 m west of Developable Area B – Central	Over 1 km north west	Over 1 km west	Within the southern portion of corridor A	Supports frequent numbers of at least three strong neutral grassland indicator species.
Beacon Course Green Lane CWS	Over 1 km north from all three Developable Areas and both Inter Array Connection Corridors.			145 m east from the mid portion of corridor B	Supports at least 0.05 ha of NVC CG3 Upright Brome calcareous grassland and locally frequent numbers of at least 16 calcareous grassland indicator species of which at least six are strong. Also supports more than 50 grassland species.

Site name[84]	Distance and location from				Feature interest/description
	Developable Areas	Inter Array Connection 1	Inter Array Connection 2	Grid Connection Corridors	
Bottisham Park CWS				815 m west from the mid portion of the corridor A	The site qualifies for parkland as it contains five or more veteran trees in association with other semi-natural habitat, for neutral grassland, and for plant species which are rare in the county *Ophrys insectifera*, *Dipsacus pilosus*.
Burwell Brick Pit CWS				500 m north from the northern portion of the corridor A	Site qualifies as a habitat mosaic, as it is a site over 10 ha in size with areas of open water, swamp, and semi-improved grassland.
Burwell Disused Railway CWS				Within the northern portion of corridor A	Contains at least 0.05 ha of NVC CG3 grassland and frequent numbers of at least six strong calcareous grassland indicator species. Also supports populations of a Nationally Rare plant (*Silene otites*) and two nationally declining butterfly species.
Fleam Dyke Pumping Station CWS	Over 1 km north west from all three Developable Areas and both Inter Array Connection Corridors.			670 m west from the southern portion of corridor A	Supports frequent numbers of at least sixteen calcareous grassland indicator species, of which at least six are strong indicators.
Heath Road/	Over 1 km north from all three Developable Areas and both Inter Array Connection			Within the southern	Supports frequent numbers of at least eight neutral grassland indicator species and a

Site name[84]	Distance and location from				Feature interest/description
	Developable Areas	Inter Array Connection 1	Inter Array Connection 2	Grid Connection Corridors	
Steet Way Green Lanes CWS	Corridors.			portion of corridor A	population of a Nationally Scarce vascular plant species (*Medicago sativa* ssp. *falcata*).
Pauline's Swamp CWS				90 m east from the northern portion of corridor A	Contains at least 0.25 ha of the NVC Meadowsweet - Wild Angelica mire community (M27) and at least 0.05 ha of the NVC Blunt-flowered rush - Marsh Thistle fen meadow community (M22). It also has a pond with beds of stoneworts.
Spring Close CWS				95 m east from the northern portion of corridor A	The site qualifies because it supports frequent numbers of at least 8 neutral grassland indicator species
St George's Churchyard CWS				1 km west and east from the southern portion of the corridors A and B	Supports frequent numbers of at least eight neutral grassland indicator species
Swaffham Prior Meadow				540 m west from the northern	Supports at least 0.25 ha of a good example of the NVC Meadowsweet - Wild Angelica mire community (M27). In addition, it supports

Site name[84]	Distance and location from				Feature interest/description
	Developable Areas	Inter Array Connection 1	Inter Array Connection 2	Grid Connection Corridors	
CWS				portion of corridor A	frequent numbers of at least 3 strong neutral grassland indicator species.
Swaffham Bulbeck Protected Road Verge				Within the northern portion of corridor A	Neutral/calcareous grassland, presence of a local red data book species.
Lophams Wood (CWS)	Over 1 km from all three Developable Areas, Grid Connection Corridors and both Inter Array Connection Corridors			Over 1 km southeast from the southern portion of corridor B	Woodlands listed in the Cambridgeshire inventory of ancient woodland which retains more than 25% semi-natural cover. Also supports a population of Nationally Scarce vascular plant species.
Leys Wood (CWS)					

Other notable habitats

There are a number of parcels of ancient semi-natural woodland within 1 km of Developable Area C – East, and its associated Inter Array Connection Corridor 2, the closest being at Hill Croft, Great Covens Wood and Lower Wood. Other parcels include Brinkley Wood which is located 560 m north of Developable Area C – East and 956 m east of the Grid Connection Corridor B, and Rand's Wood 140m south east of Developable Area C – East.

Other priority habitats which are within or adjacent to the Grid Connection Corridors/ Inter Array Connection Corridors according to MAGIC maps include areas of:

- Deciduous woodland (throughout both connection corridors);
- Floodplain grazing marsh (Grid Connection Corridors only - located near Burwell); and
- Lowland calcareous grassland (associated with Devil's Dyke and Newmarket Heath SSSIs within the Grid Connection Corridors).

Protected and notable species

The below section discusses background data searches for all areas within the Scheme. At the time of writing this report (December 2024), no surveys have been completed on the Grid Connection Corridors, Developable Area C- East, or either of the Inter Array Connection Corridors. A PEA survey and appropriate further surveys are due to be completed in 2025.

Plants

The background data search returned a range of protected and notable plant species within 2 km of the Developable Areas and Inter Array Connection Corridors; 17 species are present within the Developable Areas these include: Pyramidal Orchid (*Anacamptis pyramidalis*), Quaking-grass (*Briza media*), Hound's-tongue (*Cynoglossum officinale*), Dwarf Spurge (*Euphorbia exigua*), Common Cudweed (*Filago vulgaris*), Fine-leaved Fumitory (*Fumaria parviflora*), Field Scabious (*Knautia arvensis*), Crested Hair-grass (*Koeleria macrantha*), Cat-mint (*Nepeta cataria*), Hoary Plantain (*Plantago media*), Small Scabious (*Scabiosa columbaria*), Night-flowering Catchfly (*Silene noctiflora*), Nettle-leaved Bellflower (*Campanula trachelium*), Oxlip, Sainfoin (*Onobrychis viciifolia*), Water Avens (*Geum rivale*) and Wild Strawberry (*Fragaria vesca*). Five of these species are listed as Vulnerable and two are listed as Near Threatened on Great Britain Red List, respectively. Four species are listed as Near Threatened on England's Red List and six are listed as 'Cambridgeshire and Peterborough Additional Species of Interest'. Deptford Pink (*Dianthus armeria*), listed on Schedule 8 of the Wildlife and Countryside Act, 1981 as amended[85], is located approximately 100 m north-west of the Developable Area B – Central.

The background data search returned records of 34 botanical species within the Grid Connection Corridors within the last 10 years; of these, one is listed on Schedule 8 of the Wildlife and Countryside Act (Deptford pink). Four are listed on Section 41 of

the Natural Environment and Rural Communities (NERC) Act 2006[86], seven of these species are listed as Vulnerable and two are listed as Near Threatened on Great Britain Red List, respectively. Six species are listed as Near Threatened on England's Red List, three listed as Nationally Scarce and 11 are listed as 'Cambridgeshire and Peterborough Additional Species of Interest'.

Historical records (from the last 20 years) show significant survey effort within the area, totalling an additional 75 botanical species recorded within this time. The majority of records are associated with Devil's Dyke, Newmarket Heath and Fleam Dyke SSSIs. However, there are records present within areas away from the designated sites.

No protected or notable plant species were recorded within Developable Areas A - West or B - Central during the PEA.

Arable weed surveys were undertaken within Developable Areas A - West and B - Central which resulted in three landholdings with high Important Arable Plant Areas (IAPA) scores, making them of national importance for arable plant assemblages. The arable weed survey also noted the following notable species: Stinking Chamomile (*Anthemis cotula*), Dwarf Spurge, Common Cudweed, Catmint, Night-flowering Catchfly, Wild Pansy (*Viola tricolor*), Corncockle and Fine-leaved Fumitory.

Invasive non-native plants

No records of non-native invasive species were present within 2 km of the Developable Areas or Inter Array Connection Corridors. The background data search returned 18 records of ten species listed under Schedule 9 of the Wildlife and Countryside Act (WACA) 1981 (as amended)[87], within 2 km of the Grid Connection Corridors, of these three species were recorded within the Grid Connection Corridors: Few-flowered Garlic (*Allium paradoxum*), Nuttall's Waterweed (*Elodea nuttallii*) and Giant Hogweed (*Heracleum mantegazzianum*).

No invasive non-native species on Schedule 9 were identified on Developable Areas A - West and B - Central during the PEA or botanical surveys completed in 2024.

Cherry-laurel (*Prunus laurocerasus*) was recorded within woodland on the Developable Area B – Central, this is invasive non-native but is not listed on Schedule 9.

Invertebrates

The background data search returned a range of protected and notable invertebrates within 2 km of Developable Areas A - West and B - Central and Inter Array

[85] HMSO (1981 et seq.), 'Wildlife and Countryside Act, as amended'. 1981. Available online: http://www.legislation.gov.uk/ukpga/1981/69/.

[86] Natural Environment and Rural Communities Act (2006). Available online: https://www.legislation.gov.uk/ukpga/2006/16/contents.

[87] Wildlife and Countryside Act 1981. Available online: https://www.legislation.gov.uk/ukpga/1981/69/contents

Connection Corridors; the closest of which are associated with Fleam Dyke SSSI. Chalkhill blue (*Polyommatus coridon*) is the closest record, located 1 km north of Developable Area A – West. The background data search returned records of 23 invertebrate species within 2 km of the Grid Connection Corridors, the majority of records are associated with Devils Dyke and Newmarket Heath SSSIs. The background data search returned no records of invertebrates within 2 km of Developable Area C – East (within the last ten years).

Habitats present within Developable Areas A - West and B - Central were considered likely to support a range of common invertebrate species, typical of hedgerows, scrub, woodlands, and species-poor neutral grasslands. It is therefore not considered that further invertebrate surveys will be required within Developable Areas A - West and B - Central.

A review of aerial imagery within Developable Area C – East and the corridors (cable and grid) shows predominantly presumed arable fields with areas of grassland and hedgerows, similar to that within Developable Areas A - West and B - Central. Due to the similarity of habitats between the surveyed Developable Areas (A and B) and Developable Area C - East, it is therefore considered that no further invertebrate surveys will be required within Developable Area C - East.

However, the presence of Devils Dyke and Newmarket Heath SSSIs within the Grid Connection Corridors, and Fleam Dyke SSSI within both corridors (Inter Array Connection Corridor and Grid Connection Corridor A), designated for calcareous grasslands, are anticipated to offer high value habitat for invertebrates.

Fish

The background data search for the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors returned no records of fish. It is possible that the area is under-recorded and that fish are present within 2 km of the Scheme areas.

Watercourses within Developable Areas A - West and B - Central comprised 25 field drainage ditches. No aquatic species were recorded within the ditches, and 16 ditches were dry at the time of the PEA survey (February 2024). The ditches within Developable Areas A - West and B - Central are likely only wet after a period of heavy rain, considering the survey was undertaken during winter and the ditches were dry suggests that they are dry most of the time. Therefore, the ditches within those Developable Areas are considered to be unsuitable for fish species.

Watercourses (potential ditches) identified from a review of aerial imagery appear to be present within Developable Area C – East in addition, the River Stour is adjacent to one of the land parcels within Developable Area C – East. The river and ditches may be suitable to support fish populations. Watercourses (drainage ditches) identified from a review of aerial imagery appear to be present within the Inter Array Connection Corridors and in particular the north of the Grid Connection Corridors, these ditches may be suitable to support fish populations. There is a possibility that ditches within the Grid Connection Corridor, particularly in the northern portion, are

functionally linked to Fenland SAC and that spined loach are present within these ditches.

Amphibians

GCN

The background data search returned records of GCN within Developable Area C – East, and records within 2 km of the Inter Array Connection Corridors. The background data search returned records of GCN within 700 m of the Grid Connection Corridors (northern extent – Burwell). A search for EPS licences highlighted one EPS licence located 1.1 km south of Developable Area C – East.

The Developable Areas are mostly arable with occasional parcels of improved or other neutral grassland, woodland and hedgerows, which is considered suitable terrestrial habitat for GCN.

A series of ditches are present throughout Developable Areas A - West and B - Central, some held water at the time of the PEA, but had no suitable aquatic vegetation for GCN. One pond was identified within 250 m of Developable Areas A and B. At the time of writing, the pond within 250 m of Developable Areas A - West and B - Central has not been subject to Habitat Suitability Index (HSI) assessment or eDNA survey, this is programmed for 2025.

A review of aerial imagery highlighted watercourses (potential ponds and ditches) present within Developable Area C and within 250 m which may be suitable for breeding GCN. There appears to be ditch networks present which may also be suitable for breeding GCN; further survey would be required to confirm this. The river Stour is located adjacent to a land parcel within Developable Area C - East, large rivers are considered to be a barrier to GCN movement, however waterbodies are located either side of the river so it is possible GCN could be present throughout Developable Area C - East. Terrestrial habitat within Developable Area C - East is similar to that of Developable Areas A and B which is considered suitable terrestrial habitat.

A review of aerial imagery highlighted watercourses (potential ponds, drainage ditch systems and streams) present within the Grid Connection Corridors some of which (ponds and ditches) may be suitable breeding habitat for GCN. Watercourses with flow and considered to be unsuitable for breeding GCN. One watercourse is present which appears to be a flowing stream, although further survey would be required to confirm this. There appear to be no waterbodies within the Inter Array Connection Corridors. Terrestrial habitat within the Inter Array Connection Corridors and Grid Connection Corridors appears to be suitable for GCN, based on aerial imagery.

Common amphibians

The background data search returned a record of common toad (*Bufo bufo*), 900 m west of the Developable Area A – West, and common frog (*Rana temporaria*) 1.6 km east of the Inter Array Connection Corridors. The background data search returned records of common toad and common frog within the Grid Connection Corridors (near Swaffham Prior and Westley Waterless).

The watercourses and terrestrial habitat within Developable Areas A - West and B - Central are suitable to support these species. It is currently unknown if the watercourse within Developable Area C – East, Inter Array Connection Corridors and Grid Connection Corridors are suitable to support breeding amphibians.

Reptiles

The background data search returned records of common lizard (*Zootoca vivipara*) within Fleam Dyke SSSI which is adjacent to Developable Area B – Central and within the Inter Array Connection Corridors. The background data search returned records of grass snake (*Natrix helvetica*) and common lizard within the Grid Connection Corridors (near Burwell). No records of reptiles were identified within 2 km of Developable Area C – East.

Most of Developable Areas A - West and B - Central is unsuitable for reptiles, comprising large areas of arable land. The Developable Areas A - West and B - Central do contain fragmented areas of rough grassland and some log piles that would provide suitable basking, resting and hibernating opportunities for reptiles. The woodlands on site could also provide suitable hibernating opportunities.

A review of aerial imagery within Developable Area C – East and the two corridors (Grid Connection Corridors and Inter Array Connection Corridors) shows predominantly presumed arable fields with areas of grassland and hedgerows, similar to that within Developable Areas A - West and B - Central, and therefore reptiles will likely be present in suitable areas.

Birds

The background data search returned records of 47 bird species within 2 km of Developable Areas A - West and B - Central and Inter Array Connection Corridors within the last 20 years. Fourteen species listed on Annex I of the Birds Directive[88], 11 are listed on Schedule 1 of the Wildlife and Countryside Act 1981[85], 21 species listed as species of principal importance on Section 41 of the NERC Act[86] and one species on the Birds of Conservation Concern (BoCC) Red list[89]. The background data search returned records of 33 bird species within 2 km of Developable Area C – East within the last 20 years. Nine species listed on Annex I of the Birds Directive[88], six species are listed on Schedule 1 of the Wildlife and Countryside Act 1981[86], 16

[88] Council of the European Communities. (2009) Directive 2009/147/EC of the European Parliament and of the Council of 20 November 2009 on the conservation of wild birds (codified version). Official Journal of the European Communities, 20 (2009), 7-25.

[89] Stanbury, A.J., Eaton, M.A., Aebischer, N.J., Balmer, D., Brown, A.F., Douse, A., Lindley, P., McCulloch, N., Noble, D.G. & Win, I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. British Birds 114: 723-747.

species listed as species of principal importance on Section 41 of the NERC Act[86], and one species on the Birds of Conservation Concern (BoCC) Red list[89]).

The background data search returned records of 127 bird species within 2 km of the Grid Connection Corridors from within the last 20 years. Twenty-eight species listed on Annex I of the Birds Directive[88], 24 are listed on Schedule 1 of the Wildlife and Countryside Act 1981[87], 24 species listed as species of principal importance on Section 41 of the NERC Act[86], 12 species on the BoCC Red list[89], 35 species on the BoCC Amber list[89] and four species on Schedule 9 of the Wildlife and Countryside Act 1981[87]. The majority of records are associated with Burwell and Fulborn located at the north and south of the Grid Connection Corridors.

A total of 64 bird species were recorded within or adjacent to Developable Areas A - West and B - Central during the 2023/2024 field surveys (combination of wintering and breeding surveys), of these 35 were specially protected and/or notable.

A total of 53 species were recorded breeding or potentially breeding within or adjacent to Developable Areas A - West and B - Central during the July 2024 breeding bird surveys. Of these, 26 protected or notable species were recorded breeding (or suspected breeding) within or adjacent to the Developable Areas A - West and B - Central. The most abundant of these species were skylark (*Alauda arvensis*) with up to 114 territories. The breeding bird assemblage within or adjacent to Developable Areas A - West and B - Central comprised two Annex 1 species, two Schedule 1 species, 11 Section 41 species, two red list species and nine amber list species. The following species are considered to be of county importance: corn bunting (*Emberiza calandra*), grey partridge (*Perdix perdix*), peregrine (*Falco peregrinus*), skylark and turtle dove (*Streptopelia turtur*). Linnet (*Linaria cannabina*), and yellowhammer (*Emberiza citrinella*) are considered to be up to district level importance. No species were present in numbers of international or national levels of importance. Five species were identified to have populations of county level importance (corn bunting, linnet, red kite (*Milvus milvus*), skylark and yellowhammer) whilst three species were identified to have populations of district level importance (barn owl (*Tyto alba*), kestrel (*Falco tinnunculus*) and short-eared owl (*Asio flammeus*)).

The wintering bird assemblage within and adjacent to Developable Areas A - West and B - Central was considered to be relatively diverse with 63 species recorded, and considered to be up to county level of importance. The wintering raptor assemblage is of particular note. Ten raptor species including three owls, two harrier species and high numbers of common raptor species were recorded. Therefore, the wintering raptor assemblage is considered to be of county level importance.

A review of aerial imagery within Developable Area C – East and the corridors (cable and grid) shows habitat similar to that within Developable Areas A - West and B - Central. Wetland habitats are present within the north of the Grid Connection Corridors which would be suitable for breeding and wintering birds. Similar findings to the Developable Areas A - West and B - Central are expected within Developable Area C – East and both corridors (inter array and grid).

Bats

The background data search returned records of eight bat species and two bat groups within 2 km of the Developable Areas and Inter Array Connection Corridors, these included: Western barbastelle, serotine (*Eptesicus serotinus*), Daubenton's bat (*Myotis daubentonii*), Natterer's bat (*Myotis nattereri*), noctule, common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), Myotis species (*Myotis* sp.) and *Nyctalus* species. A search for EPS licences highlighted three EPS licences within 2 km of the Developable Areas and the Inter Array Connection Corridors, one 860m north of Developable Area A – West (western barbastelle, common pipistrelle, Natterer's bat, serotine and soprano pipistrelle), one 1.2 km east of the Inter Array Connection Corridors (including brown long-eared and common pipistrelle) and one 1.2 km north of Developable Area C – East (including brown long-eared, common and soprano pipistrelle).

The background data search returned records of eight bat species and two bat groups within 2 km of the Grid Connection Corridors; these included: western barbastelle, Natterer's bat, serotine, Leisler's bat, noctule, common pipistrelle, soprano pipistrelle, brown long-eared bat, Myotis species and pipistrelle species. A search for EPS licences highlighted one EPS licence within the southern portion of Grid Connection Corridor A which included western barbastelle, common pipistrelle, Natterer's bat, serotine and soprano pipistrelle. A further three licences were identified, one approximately 100 m east of Grid Connection Corridor A near Burwell (including western barbastelle and Natterer's bat), the second within Great Wilbraham approximately 600 m west of Grid Connection Corridor A (including brown long-eared, common and soprano pipistrelle and Natterer's bat) and the third located approximately 200 m east of Grid Connection Corridor B (including brown long-eared, common and soprano pipistrelle).

Eversden and Wimpole Woods SAC is located 17km west of Developable Area A – West and the southern portion of Grid Connection Corridor A, the site is designated for Western barbastelle.

Habitat present within Developable Areas A - West and B - Central are considered suitable for commuting and foraging bats (arable fields, woodland and linear features such as hedgerows and farm tracks). The linear features provide good connectivity out of Developable Areas A - West and B - Central into the wider landscape.

GLTA surveys have been completed on Developable Areas A - West and B - Central and the results are currently being compiled. The static monitoring of Developable Areas A - West and B - Central completed to date is in the process of being analysed, it has highlighted the following species using the site: common and soprano pipistrelle, myotis species, serotine, Leisler's bat, noctule, brown long-eared bat and western barbastelle.

A review of aerial imagery within Developable Area C – East and the corridors (Grid Connection and Inter Array) shows predominantly presumed arable fields with areas of grassland and hedgerows, similar to that found within Developable Areas A and B, which would provide suitable commuting and foraging habitat. In addition, there is a

presumed drainage network and wetland habitat within the north of the Grid Connection Corridors (near Burwell). This habitat is likely to support a more diverse invertebrate assemblage which would offer higher value foraging habitat for bats.

Hazel dormouse

The background data search returned no records of hazel dormice (*Muscardinus avellanarius*) within 2 km of the Developable Areas, Inter Array Connection Corridors or Grid Connection Corridors. In addition to this a search for EPS licences returned no records of hazel dormouse mitigation licences within 2 km of the Developable Areas, Inter Array Connection Corridors or Grid Connection Corridors.

The People's Trust of Endangered Species 2018 distribution map shows hazel dormice as 'absent' within Cambridgeshire[90].

Therefore, hazel dormice are considered to be absent from the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors, and are therefore **scoped out** and will not be considered further in the assessment.

Water vole

The background data search returned records of water vole within 2 km of the Developable Areas A - West and B - Central, and Inter Array Connection Corridors. The background data search returned records of water vole within the Grid Connection Corridors (near Burwell).

Of the 25 ditches identified within Developable Areas A - West and B - Central, only nine of them were considered potentially suitable to support water vole. Mammal holes were identified along some watercourses however no presence/absence surveys have been completed to date; this is programmed for the 2025 survey season.

A review of aerial imagery within Developable Area C – East and the corridors (Grid Connection and Inter Array) shows predominantly presumed arable fields with areas of grassland and hedgerows, similar to that within Developable Areas A - West and B - Central. There appears to be a drainage network and wetland habitat within the north of the Grid Connection Corridors (near Burwell) which are likely suitable for water vole as the desk study search showed records within the same area.

Otter

The background data search returned records of otter within 2 km of the Developable Areas and Inter Array Connection Corridors. The background data search returned one record of otter located approximately 700 m west of the Grid Connection Corridors (near Reach).

[90] People's Trust for Endangered Species. Current hazel dormouse distribution map. [Online] Available from: https://ptes.org/campaigns/dormice/about-hazel-dormice/hazel-dormice-range-and-distribution-in-the-uk/current-distribution-updated-aug-2018-of-hazel-dormice-hazel-dormice-range-ptes/

The ditches within Developable Areas A - West and B - Central may provide commuting opportunities for otter between other watercourses, the nearest watercourse system is approximately 1 km north-east of the Developable Areas A - West and B - Central. Suitable terrestrial habitat is present within Developable Areas A - West and B - Central, however these habitats are quite far from any large rivers and no obvious signs of resting places for otter were identified during the PEA. No targeted presence/absence surveys have been completed to date; this is programmed for the 2025 survey season.

A review of aerial imagery within Developable Area C – East and the two corridors (Grid Connection and Inter Array Connection) shows terrestrial habitats, similar to that within Developable Areas A - West and B - Central. There appears to be a drainage network and wetland habitat within the north of the Grid Connection Corridors (near Burwell) which has the potential to provide habitat for otters.

Badgers

The background data search returned records of badger within 2 km of Developable Areas A - West and B - Central and the Inter Array Connection Corridors. The background data search returned a number of records for badger within the Grid Connection Corridors (the majority near Burwell and one near Newmarket Heath). No records were identified within 2 km of Developable Area C – East.

The habitats within Developable Areas A - West and B - Central include long linear features which badgers typically use for moving around the landscape and as territory boundaries. The woodland within these Developable Areas offer suitable habitat for foraging and sett creation. A number of badger setts were identified within Developable Areas A - West and B - Central, ranging from single entrance outliers to multiple entrance setts.

A review of aerial imagery within Developable Area C – East and the corridors (Inter Array Connection and Grid Connection) shows predominantly presumed arable fields with areas of grassland and hedgerows, similar to that within Developable Area A - West and B - Central. These habitats have potential to support badgers.

Other notable species

The background data search returned records of brown hare (*Lepus europaeus*), western European hedgehog (*Erinaceus europaeus*), polecat (*Mustela putorius*), brown hare (*Lepus europaeus*) and harvest mouse (*Micromys minutus*) within 2 km of the Developable Areas and Inter Array Connection Corridors. The background data search returned a number of records for western European hedgehog, brown hare, harvest mouse and polecat within the Grid Connection Corridors (the majority near Burwell and Six Mile Bottom).

Brown hare favour a mosaic of arable fields, grassland and woodland edges. The PEA recorded brown hare within Developable Areas A - West and B - Central, with a maximum count of 30 within an arable field in the south-west of Developable Area A – West. The woodland, hedgerow and grassland areas provide suitable habitat for hedgehog. Arable fields, arable field margins, grassland areas and hedgerows are

suitable habitats for harvest mouse. There is a lack of connectivity within Developable Areas A - West and B - Central between suitable habitats for harvest mouse.

A review of aerial imagery within Developable Area C – East and the corridors (Grid Connection and Inter Array Connection) shows predominantly presumed arable fields with areas of grassland and hedgerows, similar to that within Developable Areas A - West and B - Central. It is assumed similar potential for notable species will be present.

6.1.6 Additional (secondary and tertiary) mitigation

Construction

- Production and implementation of an oLEMP that will offset significant impacts on legally protected species whilst also delivering a significant gain in biodiversity;
- A BNG plan will be produced identifying how the Scheme can achieve BNG requirements. Which may include appropriate vegetation enhancement under solar arrays, with creation of new hedgerows. As well as appropriately seeded field margins;
- Production and implementation of an oCEMP to include measures to safeguard ecological receptors during construction (including INNS if required);
- Pre-construction surveys for badger, otter and water vole where required;
- Survey of any trees with potential to support roosting bats/ breeding barn owl if they require felling;
- Precautionary method of working where required for protected species (these will be authored in method statements and where required licence applications for protected species; and
- Ensuring any fencing is permeable to mammal species such as badger, brown hare and hedgehog. Allowing the movement of deer across the wider landscape will also be considered, with details to be outlined in the oLEMP.

Operation

- Continued adherence to, and implementation of, the LEMP and OEMP (detailed versions to be produced based on the oLEMP and oEMP).
- The final BNG plan will identify delivery of BNG to be delivered through the operational phase.

Decommissioning

- The impacts from decommissioning (removal of solar panels and associated infrastructure) will be similar to construction impacts. The oDEMP will reference decommissioning impacts and include measures to safeguard ecological receptors during decommissioning.

- Pre-decommissioning surveys for badger, otter, water vole and other species relevant at the time.

The above mitigation would be relevant and required for the Developable Areas, Inter Array Connection Corridors and the Grid Connection Corridors. However, targeted additional mitigation cannot be discussed for these areas as it is currently unknown what ecological receptors are present and what may be impacted.

6.1.7 Description of likely significant effects

Developable Areas (A, B and C) and Inter Array Connection Corridors

Developable Area C – East has not yet been surveyed. A review of aerial imagery shows that Developable Area C – East is likely to be similar to Developable Areas A - West and B - Central. Therefore, although a full appraisal of potential impacts of Developable Area C – East cannot be undertaken; an assessment based off aerial review and survey results from Developable Areas A – West and B – Central has been completed. The Inter Array Connection Corridors have not yet been surveyed so potential impacts cannot be fully assessed at this stage. A full assessment of potential impacts will be undertaken once habitat surveys and any further protected species surveys have been completed.

Statutory and non-statutory designated sites

Construction of the Inter Array Connection Corridor 1 between Developable Area A – West and Developable Area B - Central could impact calcareous grassland within Fleam Dyke SSSI. Avoidance of the designated site will be recommended, where possible, so that significant effects would not occur. However, potential impacts on the land yet to be surveyed (Inter Array Connection Corridor) are currently unknown.

Old Cambridge Road CWS is adjacent to the north of Developable Area B – Central and should be avoided during all phases, where possible. Avoidance of the designated site with an appropriate buffer zone will be recommended so that significant effects would not occur. Measures to avoid and/or protect Old Cambridge Road CWS would be included in the oCEMP and oOEMP.

Habitat loss/degradation

Although construction of the Developable Areas would result in modification of habitat during the construction phase and the installation of solar modules could cause habitat degradation of grassland during the operational phase, i.e. by creating dominance of shade tolerant species, mitigation will be proposed to avoid/ compensate any significant effects. However, the habitat value and potential impacts on the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) is to be confirmed following planned surveys in 2025. A full assessment of potential impacts of the Inter Array Connection Corridors will be undertaken once the preferred alignment has been identified within the Inter Array Connection Corridors, and necessary surveys have been completed on both the Inter Array Connection Corridors and Developable Area C – East.

Arable weeds

Construction of the Developable Areas element of the Scheme would result in modification of habitat during the construction and operational phases. Taking the land out of arable production i.e. by installing solar modules could lead to the loss of arable weeds through a reduction in species diversity, abundance and distribution during the construction and operational phases. As mentioned in **Section 6.1.5**, Developable Areas A - West and B - Central have arable plant assemblages which meet criteria for national importance. Therefore, a change in land management which led to a decline of arable weeds could be a significant effect of the proposed works. Mitigation will be proposed to avoid/ compensate any significant effects. The habitat value and potential impacts on the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) is currently unknown. However, as Developable Areas A - West and B - Central are of national importance for arable weeds, it is possible arable weeds are present within both unsurveyed areas.

Invasive species

No invasive non-native species (INNS) listed on Schedule 9 have been recorded in Developable Areas A - West and B - Central to date. The BDS identified no records of INNS within Developable Area C – East or the Inter Array Connection Corridors. The potential impacts on the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) is currently unknown. If INNS are identified on the Site, mitigation will be proposed to avoid/ compensate any significant effects.

Invertebrates

Fleam Dyke SSSI, present within the Inter Array Connection Corridor 1, is designated for calcareous grassland which is likely to offer high quality habitat for invertebrates. The construction of the Inter Array Connection Corridor may cause a loss of habitat for invertebrate species. Avoidance of the designated site will be recommended, where possible, so that significant effects would not occur.

Fish

There is potential that waterbodies / watercourses suitable for fish are present within the Inter Array Connection Corridors and Developable Area C – East. Construction activities could cause direct or indirect impacts on fish species. This could be through new access tracks crossing watercourses, culverts for cables, or a frac out during horizontal directional drilling (HDD), which can cause damage to waterway habitats where it occurs.

As described in **Section 6.1.5**, the ditches within Developable Areas A - West and B - Central were considered unsuitable to support fish.

Great crested newt

A review of aerial imagery shows a number of waterbodies within and within 250 m of Developable Area C – East which may be suitable for breeding GCN; in addition, the desk study identified records of GCN within Developable Area C – East. Construction of the Scheme could affect suitable great crested newts habitat.

Mitigation will be proposed to avoid/compensate any suitable breeding or terrestrial habitat and any significant effects.

Ground-nesting birds

Construction of the Developable Areas would result in the modification of habitat during the construction and decommissioning phase. The breeding bird assemblage within Developable Areas A - West and B - Central is of county level importance and includes a high number of ground-nesting bird territories. Open fields, with good long-range visibility, are important for ground nesting birds some of which will be lost under the footprint of the Scheme components. In the absence of mitigation there could be a significant long-term impact.

The habitat value and potential impacts on the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) is currently unknown but is likely to be similar to that within Developable Areas A - West and B - Central.

Wintering birds

Construction of the Scheme would result in the modification of habitat during the construction and decommissioning phase. The wintering bird assemblage within Developable Areas A - West and B - Central is considered to be of county level importance. The presence of ten raptor species during winter is also considered to be of county level importance. In the absence of mitigation there could be a significant long-term impact.

The habitat value and potential impacts on the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) is currently unknown but is likely to be similar to that within Developable Areas A - West and B - Central.

Turtle dove

Hedgerows and scrub within Developable Areas A - West and B - Central are considered suitable for turtle dove. A probable breeding pair of turtle dove on Site accounts for 0.5% of the county population and considering the conservation status and population trends for this species, it is considered to be of county level importance. Therefore, turtle dove will be treated as its own receptor. It is unlikely that construction of the Scheme components within Developable Areas will cause a significant loss of breeding habitat due to hedgerows being avoided by the installation of the solar panels; but it is possible that indirect impacts (such as noise) will affect this species. Mitigation will be proposed to mitigate any potential significant effects identified.

The habitat value of the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) for turtle dove and potential for impacts on this species are currently unknown, but is likely to be similar to that within the Developable Areas A - West and B - Central.

Bats (foraging and commuting)

Much of Developable Areas A - West and B - Central, being large open arable and grassland fields with hedgerows and ditches, is suitable for foraging and commuting

bats. Construction of the Scheme components within Developable Areas A - West and B - Central would avoid the removal of hedgerows but would result in the modification of habitat during the construction and operational phase. Recent published evidence indicates that for some foraging bat species solar panels have a displacement effect[91,92,93]. Barbastelle have been identified foraging and commuting within Developable Areas A - West and B - Central which may be one of the species potentially affected by solar panels. There could be a significant long-term impact if roosts are lost, habitat fragmentation or significant reduction in foraging resource occurs. Mitigation will be proposed to mitigate any potential significant effects identified.

The requirement for lighting during the operational phase is dependent on the progression of the design. Measures to minimise lighting disturbance to foraging and commuting bats would be included in the oOEMP.

The habitat value and potential impacts on the land yet to be surveyed (Developable Area C – East and Inter Array Connection Corridors) is currently unknown but is likely to be similar to that within the Developable Areas A - West and B - Central.

Reptiles, badger, otter, water vole and other notable species

The Developable Areas and Inter Connection Corridors potentially offer suitable habitat for these species. Further surveys will be undertaken to inform potential effects, although suitable avoidance and mitigation will be proposed to avoid/ compensate any significant effects.

Grid Connection Corridors

The Grid Connection Corridors have not yet been surveyed so potential impacts cannot be fully assessed. A full assessment of potential impacts of the grid connection will be undertaken once the preferred alignment has been identified within a Grid Connection Corridor, and habitat surveys have been completed. The below assessment generally focuses on construction impacts, unless otherwise stated. For most receptors operational impacts are not envisaged, but this will be reviewed upon confirmation of preferred alignment and construction technique.

Statutory and non-statutory designated sites

Construction of the grid connection within a Grid Connection Corridor would not cause direct impact to Fenland SAC and Wicken Fen Ramsar, SSSI and NNR as these sites are all over 1 km from the Grid Connection Corridors. However, the Grid Connection Corridors are hydrologically linked to Fenland and Wicken Fen wetland habitats through a ditch network, therefore, construction may have an indirect effect

[91] Tinsley, E.,*et al* (2023) Renewable energies and biodiversity: Impact of ground-mounted solar photovoltaic sites on bat activity. Journal of Applied Ecology.

[92] Szabadi, K.L. *et al* (2023) The use of solar farms by bats in mosaic landscapes: Implications for conservation. Global Ecology and Conservation

[93] Barre, K. *et al* (2023) Insectivorous bats alter their flight and feeding behaviour at ground-mounted solar farms. Journal of Applied Ecology.

on these sites. Mitigation will be proposed to avoid/ compensate any significant effects.

Construction of the grid connection within a Grid Connection Corridor could have impacts on the calcareous grassland within Devils Dyke SAC/ SSSI, Newmarket Heath SSSI and Fleam Dyke SSSI. Avoidance of the designated sites, or use of appropriate construction techniques where sites have to be crossed, will be recommended so that significant effects would not occur.

Construction of the grid connection within a Grid Connection Corridor could cause damage to Old Cambridge Road Verges CWS, West Wratting Valley Farm RSV CWS, Burwell Disused Railway CWS, Swaffham Bulbeck (Protected Road Verge) and Heath Road/ Steet Way Green Lanes CWS. Avoidance of the designated sites during the identification of a preferred alignment will be recommended, where possible, to avoid significant effects.

Habitat loss/degradation

Works within the Grid Connection Corridor would result in temporary / permanent loss or damage of habitat during the construction / decommissioning phases, with access tracks, compounds and pylon locations having a direct impact. During operation maintenance around the new infrastructure (wayleaves) can cause long-term modification of habitats. Appropriate mitigation will be proposed to avoid/ compensate any significant effects.

Arable weeds

Arable fields appear to be present within the Grid Connection Corridors, therefore, it is likely that arable weeds are present within this area. Construction of the Grid Connection Corridor could affect arable weeds. Loss in arable land due to construction of pylons and access tracks and/or undergrounding of cables could directly impact arable weed species if present. However, if there is no change in land management within the remaining land, the proposed works are unlikely to cause a significant effect on arable weeds. Should arable weeds be identified within impacted areas then mitigation will be proposed to avoid/ compensate any significant effects.

Invasive species

The background data search confirmed the presence of invasive species within the Grid Connection Corridors. The construction of the Scheme could result in the spread of invasive species throughout the Scheme. Mitigation will be proposed to avoid/ compensate any significant effects.

Invertebrates

Fleam Dyke, Devils Dyke and Newmarket Heath SSSI, designated for calcareous grassland, are present within the Grid Connection Corridors. Calcareous grassland offers high quality habitat for invertebrates. Other areas of high-quality habitat may also be present. The construction of the grid connection within the Grid Connection Corridor could cause a loss of habitat for invertebrate species. Avoidance of key habitats will be recommended, and the amount of vegetation removed will be

minimised. Mitigation would be proposed to avoid/compensate any significant effects.

Fish

There is potential that waterbodies / watercourses suitable for fish are present within the Grid Connection Corridors. Construction activities could cause direct or indirect impacts on fish species. This could be through new access tracks crossing watercourses, culverts for cables, or a frac out during horizontal directional drilling (HDD), which can cause damage to waterway habitats where it occurs.

Great crested newt

The Grid Connection Corridors potentially offer suitable terrestrial and breeding habitat for great crested newts. Construction of the grid connection within the Grid Connection Corridor could affect suitable great crested newts habitat. Mitigation will be proposed to avoid key areas of suitable breeding or terrestrial habitat so that significant effects would not occur.

Great crested newt are a qualifying feature of Fenland SAC which is within 2 km of the northern portion of the Grid Connection Corridors; indirect effects from construction on the wetland habitats and drainage network could impact great crested newts. Mitigation will be proposed so that significant effects would not occur.

Bats (roosting, foraging and commuting)

Habitats within the Grid Connection Corridor such as woodlands, grasslands, hedgerows offer suitable foraging and commuting habitat for bats. Any land take as part of construction of the Grid Connection Corridor would be minimal due to the small footprint of pylons. Avoiding the severing or removal of hedgerows would be recommended but where this is not possible then mitigation to provide continuity of flight paths will be recommended. The same impacts are envisaged for Decommissioning.

Recent research[94] on bats and high-voltage power lines found that under humid conditions light-tolerant (e.g. pipistrelles and light-sensitive (e.g. Western barbastelle) bats were attracted to power lines for feeding on insect prey attracted to 'corona light'. However, it also found that high-flying and open-space foragers like noctule, and Leisler's bats, may avoid power lines owing to the physical structure (pylons and cables) of the power lines. These are two open-space forager species that forage at height and OHL may potentially represent obstacles for foraging/commuting.

Additionally, other recent research[95] looking at hedgerow connections and bat feeding found that there was no significant association between likelihood of bat

[94] Froidevaux, J.S.P, *et al* (2023) Acoustic activity of bats at power lines correlates with relative humidity: a potential role for corona discharges. Proceedings of the Royal Society of London B: Biological Sciences

[95] EirGrid (2015) Evidence Based Environmental Studies Study 3: Bats Literature review and evidence based field study on the effects of high voltage transmission lines on bats in Ireland

occurrence and distance from power lines of any voltage, concluding that 'power lines do not have a deterrent effect on the more common resident Irish bats while in flight'.

Specific mitigation will be proposed so that significant effects would not occur, once the level of impacts are fully understood.

Reptiles, nesting birds, wintering birds, turtle dove, peregrine, barn owl, badger, otter, water vole and other notable species

The Grid Connection Corridors potentially offer suitable habitat for these species. Further surveys will be undertaken to inform potential effects, although suitable avoidance and mitigation will be proposed to avoid/ compensate any significant effects.

6.1.8 Receptors/matters to be scoped into further assessment

The Developable Areas A - West and B - Central and Inter Array Connection Corridor 1 have already been surveyed to an extent while Developable Area C – East, the Grid Connection Corridors A and B and Inter Array Connection Corridor 2 have not been subject to survey, these have been presented as separate tables below. Whilst the Inter Array Connection Corridors and Developable Area C – East have not been subject to ecological baseline surveys, their close proximity to Developable Areas A - West and B - Central means that they are known to contain similar habitats and be subject to similar constraints.

The Grid Connection Corridor has no baseline survey data, except for desk study, at the current time. The proposed installation method (overhead line and/or sections of underground cable) is uncertain and the connection will also span a number of designated sites. The below assessment is the working assumption, taking a precautionary approach, at the time of scoping.

As the survey works progress, and alignments and installation methods refined, the scoping of receptors in or out of the PEIR and/or ES will be revisited.

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area A – West and B – Central		
Receptor/Matter	**Phase**	**Justification**
Fleam Dyke SSSI	Construction and decommissioning	Due to the Fleam Dyke SSSI being located adjacent to the south boundary of Developable Areas A and B, indirect impacts on Fleam Dyke SSSI are possible. As the design proposals are to be confirmed as the project develops, this receptor is scoped in on a precautionary basis. However, it is envisaged that suitable avoidance measures such as the use of buffer zones will be put into place to minimise impacts and avoid significant impacts.
Old Cambridge Road Verges CWS	Construction and decommissioning	Old Cambridge Road Verges CWS is adjacent to the northern boundary of the Developable Area B. There is a potential for direct and indirect impacts on the CWS, as it is along a proposed access route. Significant impacts will seek to be avoided through the implementation of protection where possible. However, as the design proposals are to be confirmed as the project develops, this receptor is scoped in on a precautionary basis.
Arable weeds	Construction, operation and decommissioning	Developable Area A and the majority of Developable Area B returned a species assemblage rated of national value for arable weeds. Construction, operation and decommissioning will alter the arable farming practices which are important for the maintenance of this habitat. Impacts will be dealt with through mitigation / compensation.
Great Crested Newt	Construction and decommissioning	At the time of writing, no HSI or eDNA survey on waterbodies on or within 250 m of Developable Areas A and B has taken place; this is programmed for the 2025 survey season. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area A – West and B – Central		
Receptor/Matter	**Phase**	**Justification**
		be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Ground nesting birds	Construction and decommissioning	Surveys undertaken in 2024 on Developable Areas A and B considered the breeding bird assemblage present to be of County level importance. Breeding populations of corn bunting, grey partridge and skylark recorded within Developable Areas A and B are considered to be up to county level importance. The construction of panels will reduce suitable nesting habitat. Construction and decommissioning could disturb nesting birds Appropriate timings of construction and decommissioning, buffers, habitat compensation and appropriate management to provide alternative breeding and foraging resources are anticipated to remove significant impacts.
Turtle dove	Construction and decommissioning	A probable breeding pair of turtle dove were recorded within Developable Area A during the 2024 breeding bird surveys which considered the pair to be of County level importance. Developable Areas A and B have suitable nesting habitat for turtle dove (hedgerows, woodland, scrub). Construction within the Developable Area is unlikely to cause loss of breeding habitat, but could have indirect impacts upon this species (disturbance during nesting). Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Wintering birds	Construction and decommissioning	Surveys undertaken in 2023/2024 on Developable Areas A and B considered the wintering bird assemblage present within the Developable Areas to be of County

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area A – West and B – Central		
Receptor/Matter	**Phase**	**Justification**
		level importance; the wintering raptor assemblage recorded is potentially of county level importance. Construction and decommissioning could disturb wintering birds from foraging, and construction of solar PV modules may reduce suitable foraging habitat. Appropriate timings of construction and decommissioning, habitat compensation and appropriate management to provide foraging resources are anticipated to remove significant impacts.
Bats – foraging and commuting	Construction, operation and decommissioning	Surveys undertaken in 2024 on Developable Areas A and B determined that bats are using the Developable Areas for foraging and commuting, with species present including common and soprano pipistrelle, myotis species, serotine, Leisler's bat, noctule, brown long-eared bat and Western barbastelle. Eversden and Wimpole Woods SAC is located 17km west of Developable Area A, the site is designated for Western barbastelle. Western barbastelle have an average core sustenance range of 7km[96] but have been known to range as far as 20km to reach productive foraging grounds. Habitats present between the SAC and the Scheme appear to be similar to those within Developable Areas A and B, with the addition of larger woodland blocks, river corridors and wetland areas. With suitable foraging habitat closer to the SAC, it is unlikely Western barbastelle associated with the SAC are foraging within Developable Areas A and B. Construction and decommissioning would modify habitats, and construction of solar arrays may cause displacement of some species. Operation of BESS may require security lighting which could impact foraging and commuting routes around the site.

[96] Natural England (2024) Definition of Favourable Conservation Status for barbastelle bat.

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area A – West and B – Central		
Receptor/Matter	**Phase**	**Justification**
		Surveys will inform the design to reduce impacts on key habitats, and mitigation is anticipated to provide continuity of commuting routes and enhanced foraging resources.

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Fleam Dyke SSSI	Construction and decommissioning	Due to the Fleam Dyke SSSI being located within Inter Array Connection Corridor 1, direct impacts on Fleam Dyke SSSI are possible as the alignment and methods of installing the Connection Corridor are currently unknown. As the design proposals are to be confirmed as the project develops, this receptor is scoped in on a precautionary basis. However, it is envisaged that suitable avoidance measures such as the use of buffer zones will be put into place to minimise impacts and avoid significant impacts.
Ancient semi-natural woodland	Construction and decommissioning	Developable Area C has not been surveyed, but ancient woodland habitat is mapped within direct proximity of the Scheme. Although suitable buffers will be recommended around all woodlands during the design, and any impacts would be expected to be temporary, given the direct proximity of Hills Croft in particular, the receptor is scoped in.
Arable weeds	Construction, operation and decommissioning	Developable Area C has not been surveyed but the habitats are similar to those within Developable Areas A and B; it is therefore likely that an assemblage of arable weeds is also present within Developable Area C, Inter Array Connection Corridors 1 and 2. These areas will need to be surveyed to assess the suitability and importance for arable weeds to understand any potential impacts from the Scheme. Construction, operation and decommissioning may alter the arable farming practices which are important for the maintenance of this habitat, particularly within Developable Area C where Developable Areas will be placed. Impacts will be dealt with through mitigation / compensation.
Invertebrates	Construction, and decommissioning	The majority of the habitats within the Inter Array Connection Corridors are expected to support assemblage of common and widespread species, as high quality

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		habitats are not evident from aerial imagery. Fleam Dyke SSSI, designated for calcareous grassland which is considered to be high quality habitat for invertebrates, is present within Inter Array Connection Corridor 1. Suitable avoidance measures such as the use of buffer zones (minimum 25 m) will be put into place to minimise impacts and significant impacts are unlikely. If subject to impacts, this area may need to be surveyed to assess the suitability and importance for invertebrates. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Fish	Construction and decommissioning	The Developable Area C – East and Inter Array Connection Corridors 1 and 2 have not been surveyed and therefore habitats suitable for fish have not been assessed. These habitats will need to be surveyed to assess their conservation importance. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Great Crested Newt	Construction and decommissioning	Developable Area C and the Inter Array Connection Corridors have not been surveyed but based on review of aerial imagery, terrestrial habitats appear to be similar to those present within Developable Area A and B. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Ground nesting birds	Construction and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed but the habitats are similar to those within Developable Area A and B. This area will need to be surveyed to assess the suitability and importance for breeding birds to understand any potential impacts from the Scheme. Construction and decommissioning could disturb nesting birds, and construction of panels will reduce suitable nesting habitat. Appropriate timings of construction and decommissioning, buffers, habitat compensation and appropriate management to provide alternative breeding and foraging resources are anticipated to remove significant impacts.
Turtle dove	Construction and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed but have suitable nesting habitat for turtle dove (hedgerows, woodland, scrub). Construction within the Developable Area is unlikely to cause loss of breeding habitat, but could have indirect impacts upon this species (disturbance during nesting). Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation/ compensation.
Wintering birds	Construction and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed but the habitats are similar to those within Developable Areas A and B. This area will need to be surveyed to assess the suitability and importance for wintering birds to understand any potential impacts from the Scheme. Construction and decommissioning could disturb wintering birds from foraging, and construction of panels may reduce suitable foraging habitat.

6.1.8 Receptors/matters to be scoped into further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		Appropriate timings of construction and decommissioning, habitat compensation and appropriate management to provide foraging resources are anticipated to remove significant impacts.
Bats – foraging and commuting	Construction, operation and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed but contains similar habitats and is anticipated to support similar species to those identified within Developable Areas A and B (common and soprano pipistrelle, myotis species, serotine, Leisler's bat, noctule, brown long-eared bat and Western barbastelle). Construction and decommissioning would modify habitats, and construction of solar arrays may cause displacement of some species. Operation of BESS may require security lighting which could impact foraging and commuting routes around the site. Surveys will inform the design to reduce impacts on key habitats, and mitigation is anticipated to provide continuity of commuting routes and enhanced foraging resources.

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
Fenland SAC Wicken Fen Ramsar/SSSI/NNR	Construction and decommissioning	Fenland SAC/ Wicken fen Ramsar/SSSI/NNR is within 2 km of the Grid Connection Corridors, and due to the distance from the Grid Connection Corridor, no significant direct impacts are anticipated. It is currently unknown if Fenland SAC/Wicken fen and the Grid Connection Corridors are hydrologically linked. The design will seek to minimise indirect impacts such as implementing buffers on watercourses where possible and pollution control measures. A Habitat Regulations Assessment (HRA)[97] will be completed for the SAC, encompassing the functionally linked Ramsar, SSSI and NNR. Impacts on these receptors will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Devils Dyke SAC/SSSI	Construction and decommissioning	Devils Dyke SAC is within 1 km of the Grid Connection Corridor whilst the SSSI is within the Grid Connection Corridor. Significant impacts on Devils Dyke SAC/SSSI are highly unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. A HRA will be completed for the SAC, encompassing the functionally linked SSSI. Impacts on these receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Fleam Dyke SSSI	Construction and decommissioning	Fleam Dyke and Newmarket Heath SSSIs are within the Grid Connection Corridor. Significant impacts on Fleam Dyke and Newmarket Heath SSSIs are highly unlikely

[97] Tyldesley, D., and Chapman, C. (2013) The Habitats Regulations Assessment Handbook, (January) (2021) edition UK: DTA Publications Limited. Available at: https://www.dtapublications.co.uk/.

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
Newmarket Heath SSSI		and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. Impacts on these receptors will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Non-statutory designated sites (Old Cambridge Road Verges CWS, West Wratting Valley Farm RSV CWS, Burwell Disused Railway CWS, Swaffham Bulbeck (Protected Road Verge), Heath Road/ Steet Way Green Lanes CWS and Brinkley Wood CWS	Construction and decommissioning	Old Cambridge Road Verges CWS is adjacent to the southern boundary of Grid Connection Corridors. West Wratting Valley Farm, Heath Road/ Steet Way Green Lanes and Brinkley Wood CWS are within the southern portion of the Grid Connection Corridors. Burwell Disused Railway CWS and Swaffham Bulbeck (Protected Road Verge) are within the northern portion of the Grid Connection Corridors. Direct and indirect effects on local statutory designated areas for nature conservation purposes as a result of construction phase of the Scheme, where the design is unable to avoid potential connectivity with these sites. It is anticipated that the design will seek to retain and protect, through buffers, all non-statutory designated sites. However, as the preferred alignment within a Grid Connection Corridor, design and construction techniques are not available at this Scoping stage, the receptors are scoped on a precautionary basis.
Priority habitats – woodland,	Construction and decommissioning	These habitats are present/ may be present within the Grid Connection Corridors. This area has not been surveyed and therefore, these habitat types have not been

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
hedgerows, rivers and streams, grasslands (calcareous and coastal floodplain grazing marsh)		assessed. These habitats will need to be surveyed to assess their conservation importance, if located within the preferred alignment. Significant impacts on these habitats are considered unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. It is expected these receptors may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Arable weeds	Construction and decommissioning	The Grid Connection Corridors have not been surveyed for arable weeds but the habitats are similar to those within Developable Area A and B and a number of notable arable weed species have been identified within the background data search. It is therefore possible that an assemblage of arable weeds is also present within the Grid Connection Corridor. This area will need to be surveyed to assess their suitability and importance for arable weeds to understand any potential impacts from the Scheme. Due to small overall footprint of this element, it is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Fish	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for fish have not been assessed. These habitats will need to be surveyed to assess their conservation importance.

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
		It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Invertebrates	Construction, and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for invertebrates have not been assessed. Three SSSIs are present within the Grid Connection Corridors (Fleam Dyke, Devils Dyke and Newmarket Heath), which are designated for calcareous grassland which is considered to be high-quality habitat for invertebrate species and may support notable species. Significant impacts on these habitats are highly unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Great crested newt	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for great crested newts have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Fenland SAC is within 2 km of the Grid Connection Corridor and great crested newt are a qualifying feature of the SAC. If suitable habitats, including ponds, are within the Grid Connection Corridors then it is possible great crested newts are present within the Grid Connection Corridors.

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
		Significant impacts on great crested newts are highly unlikely and the design will seek to avoid direct impacts, including use of buffers around confirmed breeding ponds where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts e.g. terrestrial habitat degradation.
Ground nesting birds	Construction, operation and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for ground nesting have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Appropriate timings of construction and decommissioning, buffers, habitat compensation to provide alternative breeding and foraging resources are anticipated to remove significant impacts. The footprint of preferred alignment within a Grid Connection Corridor is anticipated to be relatively small (subject to construction techniques). Wetland habitat within the Grid Connection Corridors could be used by wetland bird species. Collision with overhead lines is a possible impact for the operational phase.
Non-ground nesting birds	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for non-ground nesting birds have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Significant impacts on non-ground nesting birds are highly unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and scheme design progresses. Impacts on this receptor will

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
		be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Wintering birds	Construction, operation and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for wintering birds have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Wetland habitat within the Grid Connection Corridors could be used by large wetland bird species. Collision with overhead lines is a possible impact during the winter season during the operational phase. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts.
Barn owl, peregrine and other raptors	Operation	The Grid Connection Corridors contain suitable habitat for several raptor species. The installation of overhead lines could pose a potential impact to raptor species i.e. collision risk during the operational lifetime. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Bats – foraging and commuting	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for foraging and commuting bats have not been assessed. These habitats will need to be surveyed to assess their conservation importance. The majority of habitats present within the Grid Connection Corridor are similar to those within Developable Areas A and B; therefore, it is anticipated that a similar species assemblage to those identified within the Developable Area A and B is present.

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
		Surveys will inform the design to reduce impacts on key habitats, and mitigation is anticipated to include use of buffers and provide continuity of commuting routes. Impacts on foraging resources is anticipated to be low given habitats present and the small footprint required for pylons. Impacts of overhead lines on bats not considered to be significant as discussed in **Section 6.1.4**.
Bats – roosting	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for roosting bats have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Significant impacts on roosting bats is highly unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Badger	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for badger have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Significant impacts on badger is highly unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts.

6.1.8 Receptors/matters to be scoped into further assessment: Grid Connection Corridors		
Receptor/Matter	**Phase**	**Justification**
		It is expected this receptor may be scoped out at a later date, prior to the ES, as survey data is collected and scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.
Water vole and otter	Construction and decommissioning	The Grid Connection Corridors have not been surveyed and therefore habitats suitable for water vole or otter have not been assessed. Significant impacts on water vole and otter is highly unlikely and the design will seek to avoid direct impacts, including use of buffers where possible. Indirect effects as a result of the construction phase of the Scheme may apply where the design is unable to avoid potential impacts. It is expected these receptors may be scoped out at a later date, prior to the ES, as survey data is collected and Scheme design progresses. Impacts on this receptor will be avoided where possible, and where not possible residual impacts dealt with through mitigation / compensation.

6.1.9 Receptors/matters to be scoped out of further assessment

As surveys have not yet been completed on Developable Area C – East, Inter Array Connection Corridors 1 and 2, and the Grid Connection Corridors, these have been presented as separate tables below. While Developable Areas A and B, which have been surveyed, are in their own table. Whilst the Inter Array Connection Corridors and Developable Area C – East have not been subject to ecological baseline surveys, their close proximity to Developable Areas A - West and B - Central means that they are known to contain similar habitats and be subject to similar constraints to Developable Areas A and B.

The Grid Connection Corridor has no baseline survey data, except for desk study, at the current time. The proposed installation method (overhead line or underground cable) is uncertain and the connection will also span a number of designated sites. The below assessment is the working assumption, taking a precautionary approach, at the time of scoping.

As the design of the Scheme progresses, the scoping of receptors in or out of the PEIR and/or ES will be revisited.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
Habitats sites (Fenland SAC, Wicken Fen Ramsar, Devils Dyke, Chippenham Fen Ramsar, Eversden and Wimpole SAC)	Construction, operation and decommissioning	Fenland, Devils Dyke and Eversden and Wimpole SAC's, Wicken Fen and Chippenham Fen Ramsar sites are over 10 km from Developable Areas A and B, whilst the three SSSIs are over 2 km from the Site. Eversden and Wimpole Woods SAC is located 17km west of Developable Area A, the site is designated for Western barbastelle. Western barbastelle have an average core sustenance range of 7km but have been known to range as far as 20km to reach productive foraging grounds[98]. Habitats present between the SAC and Developable Areas are likely to be similar to those within Developable Areas A and B with the addition of larger areas of woodland, river corridors and wetland areas. With suitable foraging habitat closer to the SAC, it is unlikely Western barbastelle associated with the SAC are foraging within Developable Areas A and B. These sites are avoided by the current Scheme design and therefore will not be directly impacted or indirectly effected by the construction/ decommissioning of Developable Areas A and B. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Nationally designated sites (Wicken Fen SSSI&NNR, Devil's Dyke SSSI, Fulbourn Fen SSSI,	Construction, operation and decommissioning	All seven SSSIs are over 2 km from Developable Area A and B. These sites are avoided by the current Scheme design and therefore will not be directly impacted or indirectly effected by the construction/ decommissioning of the Developable Areas A and B.

[98] Natural England (2024) Definition of Favourable Conservation Status for barbastelle bat.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
Great Wilbraham Common SSSI, Newmarket Heath SSSI, Park Wood SSSI, Carlton Wood SSSI		The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Fleam Dyke SSSI	Operation	Fleam Dyke SSSI is adjacent to the south border of Developable Area B boundary. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Roman Road SSSI	Construction, operation and decommissioning	Roman Road SSSI is approximately 270 m from Developable Area A. The SSSI is designated for calcareous grassland. The SSSI does not appear to be hydrologically linked to Developable Areas A or B. Standard pollution prevention measures will be implemented to prevent any potential indirect effects on the SSSI. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Balsham Wood SSSI	Construction, operation and decommissioning	Balsham Wood SSSI is over 1 km from Developable Areas A and B boundaries. No direct impacts or indirect effects anticipated. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
Old Cambridge Road Verges CWS	Operation	Old Cambridge Road Verges CWS is adjacent to the northern boundary of Developable Area B. The operational life of the Scheme is not anticipated to involve any direct/indirect impacts to the designated sites, as the CWS is along an existing track which will have similar levels of use during operation.
Other Non-statutory designated sites[99]	Construction, operation and decommissioning	All sites are over 500 m from the Developable Areas A and B. These sites are avoided by the current Scheme design and therefore will not be directly impacted or indirectly impacted or effected by the construction/ decommissioning of the Scheme or Inter Array Connection Corridor. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Ancient semi-natural woodland	Construction, operation and decommissioning	No ancient woodland is present within 1 km of Developable Area A and B, therefore no direct or indirect impacts are anticipated during construction, operation or decommissioning.

[99] Worsted Lodge Road Side Verge CWS, West Wratting Valley Farm RSV CWS, Beacon Course Green Lane CWS, Bottisham Park CWS, Heath Road/ Steet Way Green Lanes CWS, Pauline's Swamp CWS, St George's Churchyard CWS, Burwell Brick Pit CWS, Burwell Disused Railway CWS, Fleam Dyke Pumping Station CWS, Spring Close CWS, Swaffham Prior Meadow CWS, Swaffham Bulbeck (PRV)), Carlton Lane CWS, Hills Crofts CWS, Whitings Grove CWS, Great Covens Wood and Lower Wood CWS, Rands Wood CWS, Brinkley Hall Veteran Trees(CWS, Ladies Grove and Hay Wood CWS, Brinkley Wood CWS, Lophams Wood CWS and Leys Wood CWS.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
Woodlands, rivers and streams	Construction, operation and decommissioning	Woodlands are to be avoided within Developable Areas A and B. Rivers and streams are also absent. The Scheme currently avoids impacts on woodlands within Developable Areas A and B and suitable buffers will be recommended around all woodlands during the design. Woodlands within the Inter Array Connection Corridor have not been surveyed. However, as the area is adjacent to Developable Areas A and B with similar habitat types, and substantial existing access route ways within the area, it is unlikely that there will be any significant impacts on woodlands. As mentioned above, suitable buffers will be recommended for all woodlands. Should any impacts effect woodlands these are expected to be temporary. There are not expected to be any significant effects during operation due to the nature of the works, with any habitats retained during construction being subject to no greater impacts during operation.
Hedgerows	Construction, operation and decommissioning	Hedgerows within Developable Areas A and B are gappy and fragmented, in addition to this there are already substantial access ways within both Developable Areas which could be used during all phases to access the site. Therefore, significant impacts on hedgerows within the Developable Areas is unlikely. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. The operational life of Developable Areas A and B will not involve any direct/indirect impacts to hedgerows other than routine maintenance, which would be undertaken at appropriate times and in accordance with the oLEMP.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
Calcareous grassland	Construction, operation and decommissioning	A small section of Fleam Dyke SSSI (designated for calcareous grassland) is adjacent to Developable Area B. It will be recommended that the Scheme avoids this designated site and calcareous grassland. Therefore, it is unlikely that there will be any significant impacts on calcareous grassland.
Other habitats	Construction, operation and decommissioning	Arable fields within both Developable Areas will be subject to arable reversion where deemed appropriate and in accordance with the oLEMP. Some level of arable farming practices will remain to retain an assemblage of arable weeds. Ditches within Developable Areas A and B will be avoided by the Scheme and a suitable buffer (a minimum of 10m) will be implemented. This will be appropriately mitigated should it not be possible to retain ditches in localised cases. Therefore, it is unlikely that there will be any significant impacts on ditches. The operational life of the Developable Areas will not involve any direct/indirect impacts to ditches, other than routine maintenance, which would be undertaken at appropriate times and in accordance with the oLEMP.
Invasive species	Construction, operation and decommissioning	The background data search and PEA returned no records of invasive species within Developable Areas A and B. Other than routine maintenance activities that may be required during the operation life of the Scheme, significant activities are not anticipated during operation. Therefore should invasive species be present then significant impact is unlikely.
Invertebrates (other habitats)	Construction, operation and decommissioning	High-value habitats within Developable Areas A and B that are considered to be suitable for invertebrates (hedgerows and woodlands) are to be retained as part of the design. Therefore, construction of the Scheme is unlikely to have any significant impacts on invertebrates.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
		The operational life of the Scheme will not involve any direct/indirect impacts to high-value habitats.
GCN	Operation	Compensation habitat that is created for other species will remain present for the duration of the operational phase. This habitat in addition to habitats outside of the solar panel footprint will provide suitable foraging/ commuting/ hibernating habitat for GCN. Therefore, there are not expected to be any significant effects during operation.
Fish	Construction, operation and decommissioning	Drainage ditches within Developable Areas A and B are considered to be unsuitable for fish species. In addition to this, no ditches are anticipated to be lost or impacted by the Scheme due to substantial existing access routes within the Site; 10m buffers will also be recommended around all watercourses/ ditches. Therefore, the Scheme will not have any significant effects on fish species. There are not expected to be any significant effects during operation. As it is expected that construction will aim to factor in minimal year on year drainage run off into nearby water ways.
Reptiles	Construction, operation and decommissioning	Developable Areas A and B being mostly arable fields, is largely unsuitable for reptiles. The Inter Array Connection Corridor has not been surveyed but habitats appear to be similar to those present within both Developable Areas. The background data search identified records of reptiles adjacent to the Developable Area B. Construction would take place within the least suitable habitat types (arable fields) therefore, reptiles are unlikely to be present in large numbers within the active construction area. Substantial access ways within the Developable Areas are already present so any suitable habitat loss should be minimal.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
		The design will seek to implement the use of buffers where possible to prevent effects on suitable reptile habitat. A precautionary working method statement would be implemented which would detail mitigation measures to be utilised on site such an the presence of an Ecological Clerk of Works during the construction phase to capture any reptiles found within the works area and relocation to suitable reptile habitat that would be created or enhanced within the local area. This method is not considered to affect the favourable conservation status of the local population and would avoid the killing and injury of any reptiles present. The same approach would be used during decommissioning. There are not expected to be any significant impacts on reptiles during operation, as other than routine maintenance, details of which will be listed within the oLEMP, no additional impacts are anticipated on suitable habitats where they may be.
Non-ground nesting birds	Construction, operation and decommissioning	Hedgerows and trees within Developable Areas A and B provide suitable nesting habitat for non-ground nesting birds. No trees are anticipated to be lost or impacted within either Developable Area, and any hedgerow removal is anticipated to be minor. There are substantial existing access route ways within the Developable Areas so any vegetation clearance should be minimal. Therefore, it is considered that there will be no significant impacts on non-ground nesting birds. The design will seek to implement the use of buffers where possible to prevent any direct/indirect effects on suitable non-ground nesting bird habitat. A precautionary working method statement would be implemented which would detail how to sufficiently safeguard nests during construction/ decommissioning.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
		Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation as once constructed, the maintenance should not impact nesting birds other than routine maintenance of habitats, details of which will be listed within the oLEMP. Therefore, there are not expected to be any significant effects during operation.
Ground nesting birds and wintering birds	Operation	Compensation habitat that is created prior to construction for displacement of birds will remain available during operation. These compensation areas will be managed appropriately, details of which will be listed within the oLEMP. Therefore, there are not expected to be any significant effects during operation.
Peregrine, barn owl and other raptors	Construction, operation and decommissioning	A probable breeding pair of peregrine were recorded within Developable Area B during the 2024 breeding bird surveys. The Developable Areas have suitable nesting habitat for peregrine (pylons and buildings). Barn owl was observed within the Developable Area A in 2024. The Developable Area has suitable nesting habitat for barn owl (trees and buildings). If nesting peregrine are present on buildings or structures adjacent, or nesting barn owl within trees and barns adjacent to works, or any other raptors species they may be disturbed by construction and decommissioning. However, this will be mitigated by buffer zones between the solar panels and boundary features. There is not expected to be a loss of foraging habitat as boundary features will be enhanced and other habitat creation and enhancement works secured through the oLEMP is likely to benefit foraging peregrine. A precautionary working method statement would be implemented which would detail how to sufficiently safeguard nests during construction/ decommissioning.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
		Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation.
Turtle dove	Operation	There are not expected to be any significant effects during operation as woodlands are to be retained with suitable buffers and other mitigation measures such as creation of arable field margins will enhance the area for turtle doves.
Bats – Roosting	Construction, operation and decommissioning	Developable Areas A and B potentially have suitable roosting habitat for bats (boundary trees and barns) adjacent to the works. If bats are roosting in trees or barns adjacent to works, then they may be disturbed by construction and decommissioning. However, this will be mitigated by retention of such features, buffer zones (works buffer from trees and buildings) and measures detailed within the oCEMP. Where necessary appropriate mitigation licences will be applied for. Mitigation / compensation to meet the criteria of any such licences would negate any significant effects. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation.
Hazel dormouse	Construction, operation and decommissioning	The background data search returned no records of dormice (*Muscardinus avellanarius*) within 2 km of the Developable Areas. The People's Trust of Endangered Species 2018 distribution map shows dormice as 'absent' within Cambridgeshire[100] Therefore, hazel dormice are considered to be absent from the area.

[100] Available online: https://ptes.org/house-a-dormouse/dormice-in-decline/current-dormouse-distribution-map/

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
Badger	Construction, operation and decommissioning	Several badger setts were identified within Developable Areas A and B (the majority within woodlands or field boundaries). The design will seek to avoid all known setts and measures such as suitable exclusion zones will be implemented. Where this is not possible, a badger licence for disturbance/ closure will be applied for via Natural England. If a main sett requires closure, then this would be completed under a Natural England licence and a replacement sett would be provided where required. This would prevent a reduction in population and is not considered to affect the favourable conservation status of the species. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation. Measures would be incorporated into fencing design so badgers could still access and forage within the Developable Areas, so significant reduction in foraging habitat is not expected.
Otter and water vole	Construction, operation and decommissioning	Developable Areas A and B have nine ditches that were considered to be potentially suitable for water vole, however, no presence/ absence surveys have been completed to date. The ditches within both Developable Areas may provide commuting opportunities for otter between other watercourses. No watercourses are anticipated to be lost or impacted by the Scheme due to substantial existing access routes within the Developable Area; 10m buffers will also be recommended around all watercourses/ ditches. Therefore, the Scheme will not have any significant effects on otter or water vole. Should designs change or necessitate significant impacts, this will be scoped in for further assessment.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Areas A – West and B - Central		
Receptor/Matter	**Phase**	**Justification**
		There are not expected to be any significant effects during operation.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Habitats sites (Fenland SAC, Wicken Fen Ramsar, Devils Dyke, Chippenham Fen Ramsar, Eversden and Wimpole SAC)	Construction, operation and decommissioning	Fenland, Devils Dyke and Eversden and Wimpole SAC's, Wicken Fen and Chippenham Fen Ramsar sites are over 10 km from the Developable Area and Inter Array Connection Corridors. These sites are avoided by the current Scheme design and therefore will not be directly impacted or indirectly effected by the construction/ decommissioning of the Developable Area/ Inter Array Connection Corridors. Eversden and Wimpole Woods SAC is located over 20 km west from Developable Area C and Inter Array Connection Corridors, the site is designated for Western barbastelle. Western barbastelle have an average core sustenance range of 7km[101] but have been known to range as far as 20km to reach productive foraging grounds. Habitats present between the SAC and Developable Area C and the Inter Array Connection Corridors are likely to be similar to those within Developable Areas A and B, with the addition of larger woodland, river corridors and wetland areas. With suitable foraging habitat closer to the SAC, it is unlikely Western barbastelle associated with the SAC are foraging within Developable Area C and the Inter Array Connection Corridors. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Nationally designated sites (Balsham Wood SSSI, Carlton Wood SSSI, Park	Construction, operation and decommissioning	Balsham Wood, Park Wood and Carlton Wood SSSIs are over 1 km from Developable Area C - East. No direct impacts or indirect effects anticipated. Roman Road, Newmarket Heath, Fulbourn Fen, Great Wilbraham, Devils Dyke, Wicken Fen and Fleam Dyke SSSI are over 2 km from Developable Area C.

[101] Natural England (2024) Definition of Favourable Conservation Status for barbastelle bat.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Wood SSSI, Roman Road SSSI, Newmarket Heath SSSI, Fulbourn Fen SSSI, Great Wilbraham SSSI, Devils Dyke SSSI, Wicken Fen SSSI and Fleam Dyke SSSI)		All SSSIs are over 1km from Inter Array Connection Corridors 1 and 2 with the exception of Roman Road SSSI which is located 720m west of Inter Array Connection Corridor 1. These sites are avoided by the current Scheme design and therefore will not be directly impacted or indirectly effected by the construction/ decommissioning of the Site or Inter Array Connection Corridor. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Non-statutory designated sites (Carlton Lane CWS, Hills Crofts CWS, Whitings Grove CWS)	Construction, operation and decommissioning	Carlton Lane CWS is within Developable Area C - East. Hills Crofts and Whitings Grove CWS are located adjacent to Developable Area C. Woodlands are to be avoided within the Developable Area. The Scheme currently avoids impacts on woodlands on the Developable Area and buffers in excess of 15 m will be recommended around all woodlands during the design. Carlton Lane CWS is located 100m from Inter Array Connection Corridor 2. The operational life of the Scheme is not anticipated to involve any direct/indirect impacts to the designated sites, as the CWS is along an existing track which will have similar levels of use during operation.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Other Non-statutory designated sites[102]	Construction, operation and decommissioning	All sites are over 90 m from Developable Area C – East and Inter Array Connection Corridors 1 and 2. These sites are avoided by the current Scheme design and therefore will not be directly or indirectly impacted or indirectly effected by the construction/ decommissioning of the Scheme. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Ancient semi-natural woodland	Operation	Ancient woodland is currently avoided by the Developable Area and Inter Array Connection Corridors 1 and 2 and suitable buffers (of at least 15 m) are anticipated as detailed in Table 2-2.
Woodlands, rivers and streams	Construction, operation and decommissioning	Woodlands within Developable Area C and Inter Array Connection Corridors 1 and 2 have not been surveyed. However, as the area is adjacent to Developable Areas A and B with similar habitat types, and substantial access route ways within the area it is unlikely that there will be any significant impacts on woodlands. The Scheme currently avoids impacts on woodlands on the Developable Area and suitable buffers will be

[102] Old Cambridge Road Verges CWS, Great Covens Wood and Lower Wood CWS, Rands Wood CWS, Brinkley Hall Veteran Trees CWS, Ladies Grove and Hay Wood CWS, Brinkley Wood CWS, West Wratting Valley Farm RSV CWS, Burwell Disused Railway CWS, Swaffham Bulbeck (Protected Road Verge), Heath Road/ Steet Way Green Lanes CWS, Worsted Lodge Road Side Verge CWS, Beacon Course Green Lane CWS, Bottisham Park CWS, Pauline's Swamp CWS, St George's Churchyard CWS, Burwell Brick Pit CWS, Fleam Dyke Pumping Station CWS, Spring Close CWS, Swaffham Prior Meadow CWS, Lophams Wood CWS, Leys Wood CWS)

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		recommended around all woodlands during the design. Should any impacts effect woodlands these are expected to be temporary. The River Stour flows adjacent to Developable Area C. The Scheme currently avoids impacts on streams adjacent to the Developable Area and buffers in excess of 10 m will be recommended around all streams during the design. There are not expected to be any significant effects during operation due to the nature of the works, with any habitats retained during construction being subject to no greater impacts during operation.
Hedgerows	Construction, operation and decommissioning	Hedgerows within Developable Area C and Inter Array Connection Corridors 1 and 2 have not been surveyed. However, as the area is adjacent to Developable Areas A and B with similar habitat types, and substantial access route ways within the area it is unlikely that there will be any significant impacts on hedgerows. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. The operational life of the Scheme in these locations will not involve any direct/indirect impacts to hedgerows other than routine maintenance, which would be undertaken at appropriate times and in accordance with the oLEMP.
Calcareous grassland	Construction, operation and decommissioning	Unlike Developable Areas A and B, there are no designated sites with calcareous grassland present within or adjacent to Developable Area C or the Inter Array Connection Corridors. The Developable Area and Inter Array Connection Corridors appear to comprise arable and woodland habitat with no grassland priority habitats present (shown via desk study). Therefore, calcareous grassland will not be impacted during construction, operation or decommissioning.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Other habitats	Construction, operation and decommissioning	Arable fields within the Developable Area and Inter Array Connection Corridors will be subject to arable reversion where deemed appropriate and in accordance with the oLEMP. Some level of arable farming practices will remain to retain an assemblage of arable weeds. It is unlikely that there will be any significant impacts on arable fields. Ditches within the Developable Area and Inter Array Connection Corridors have not been surveyed. However, any ditches within these areas will be avoided by the Scheme and a suitable buffer (10m) will be implemented. Therefore, it is unlikely that there will be any significant impacts on ditches. The operational life of the Developable Area and Inter Array Connection Corridors will not involve any direct/indirect impacts to ditches, other than routine maintenance, which would be undertaken at appropriate times and in accordance with the oLEMP.
Invasive species	Construction, operation and decommissioning	The background data search returned no records of invasive species within Developable Area C or Inter Array Connection Corridors. If present, standard protocols during all phases will need to be adhered to and where possible, treatment of invasive species should take place to ensure there are no significant impacts. Other than routine maintenance activities that may be required during the operation life of the Scheme, significant activities are not anticipated during operation.
Invertebrates (other habitats)	Construction, operation and decommissioning	High-value habitats within the Developable Area that are considered to be suitable for invertebrates (hedgerows and woodlands) are to be retained as part of the design. Avoidance of high-value habitats, within the Inter Array Connection Corridors, that are considered to be suitable for invertebrates (hedgerows and woodlands) will be recommended to avoid significant impacts on invertebrate species Therefore, construction of the Scheme is unlikely to have any significant impacts on invertebrates.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		The operational life of the Scheme will not involve any direct/indirect impacts to high-value habitats.
Fish	Operation	There are not expected to be any significant effects during operation on fish, as no impacts are envisaged on watercourses during this stage. It is expected that construction will aim to factor in minimal year on year drainage run off into nearby water ways.
Reptiles	Construction, operation and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed but habitats appear to be similar to those present within Developable Areas A and B (which is considered be largely unsuitable for reptile species). The background data search identified records of reptiles within Inter Array Connection Corridor 1 and no records of reptiles within 2km of Developable Area C, however, this does not mean they are absent from the area. Construction would take place within the least suitable habitat types (arable fields) therefore, reptiles are unlikely to be present in large numbers within the active construction area. Substantial access ways within the Developable Area are already present so any suitable habitat loss should be minimal. The design will seek to implement the use of buffers where possible to prevent any indirect effecting suitable reptile habitat. A precautionary working method statement would be implemented which would detail mitigation measures to be utilised on site such as the presence of an Ecological Clerk of Works during the construction phase to capture any reptiles found within the works area and relocation to suitable reptile habitat that would be created or enhanced within the local area.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		This method is not considered to affect the favourable conservation status of the local population and would avoid the killing and injury of any reptiles present. The same approach would be used during decommissioning. There are not expected to be any significant impacts on reptiles during operation, as other than routine maintenance, details of which will be listed within the OLEMP, no additional impacts are anticipated on suitable habitats where they may be.
Non-ground nesting birds	Construction, operation and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed or assessed for their suitability for non-ground nesting birds. Developable Area C and the Inter Array Connection Corridor 1 are directly adjacent to Developable Areas A and B and appears to have similar habitat types. Hedgerows and trees within these areas are likely to provide suitable nesting habitat for non-ground nesting birds. No trees are anticipated to be lost or impacted within the Developable Area, and any hedgerow removal is anticipated to be minor. There are substantial existing access route ways within the Developable Area so any vegetation clearance should be minimal. Therefore, it is considered that there will be no significant impacts on non-ground nesting birds. The design will seek to implement the use of buffers where possible to prevent any direct/indirect effects on suitable non-ground nesting bird habitat. A precautionary working method statement would be implemented which would detail how to sufficiently safeguard nests during construction/ decommissioning. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation as once constructed, the maintenance should not impact nesting birds other than routine

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		maintenance of habitats, details of which will be listed within the oLEMP. Therefore, there are not expected to be any significant effects during operation.
Ground nesting birds and wintering birds	Operation	Compensation habitat that is created prior to construction for displacement of birds will remain available during operation. These compensation areas will be managed appropriately, details of which will be listed within the oLEMP. There are not expected to be any significant effects during operation. However should designs change, or following the Inter Array Connection installation method confirmation necessitate significant impacts, the scope will be reviewed.
Peregrine, barn owl and other raptors	Construction, operation and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed or assessed for their suitability for peregrine or barn owl. However, Developable Area C and Inter Array Connection Corridor 1 are directly adjacent to Developable Areas A and B and appears to have similar habitat types. A probable breeding pair of peregrine were recorded within Developable Area B during the 2024 breeding bird surveys. If nesting peregrine are present on buildings or structures adjacent, or nesting barn owl within trees and barns adjacent to works, they may be disturbed by construction and decommissioning. However, this will be mitigated by buffer zones between the solar panels and boundary features. There is not expected to be a loss of foraging habitat as boundary features will be enhanced and other habitat creation and enhancement works secured through the oLEMP is likely to benefit foraging peregrine. A precautionary working method statement would be implemented which would detail how to sufficiently safeguard nests during construction/ decommissioning.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		There are not expected to be any significant effects during operation. However should designs change, or following the Inter Array Connection installation method confirmation necessitate significant impacts, the scope will be reviewed.
Bats – Roosting	Construction, operation and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed or assessed for its suitability for roosting bats. However, Developable Area C and Inter Array Connection Corridor 1 are directly adjacent to Developable Areas A and B and appears to have similar habitat types and has the potential to support roosting bats. If bats are roosting in trees or barns adjacent to works, then they may be disturbed by construction and decommissioning. However, this will be mitigated by retention of such features, buffer zones (works buffer from trees and buildings) and measures detailed within the oCEMP. Where necessary appropriate mitigation licences will be applied for. Mitigation / compensation to meet the criteria of any such licences would negate any significant effects. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation.
Hazel dormouse	Construction, operation and decommissioning	The background data search returned no records of dormice within 2 km of Developable Area C or Inter Array Connection Corridors. The People's Trust of Endangered Species 2018 distribution map shows dormice as 'absent' within Cambridgeshire[103]. Therefore, hazel dormice are considered to be absent from the area, and suitable to be scoped out for construction, operation and decommissioning.

[103] Available online: https://ptes.org/house-a-dormouse/dormice-in-decline/current-dormouse-distribution-map/

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
Badger	Construction, operation and decommissioning	The design will seek to avoid all known setts and measures such as suitable exclusion zones will be implemented. Where this is not possible, a badger licence for disturbance/ closure will be applied for via Natural England. If a main sett requires closure, then this would be completed under a Natural England licence and a replacement sett would be provided where required. This would prevent a reduction in population and is not considered to affect the favourable conservation status of badger. Should designs change or necessitate significant impacts, this will be scoped in for further assessment. There are not expected to be any significant effects during operation. Measures would be incorporated into fencing design so badgers could still access and forage within the Developable Areas, so significant reduction in foraging habitat is not expected.
Otter and water vole	Construction, operation and decommissioning	Developable Area C and Inter Array Connection Corridors have not been surveyed or assessed for its suitability for otter and water vole. The Developable Area and Inter Array Connection Corridor 1 is directly adjacent to Developable Areas A and B and appears to have similar habitat types. There are substantial access route ways within the Developable Area, 10m buffers will be recommended on any watercourses within the Developable Area, therefore it is unlikely there will be any impacts on any watercourses through creation of access routes. Any crossing of ditches / culvert installation will be impact assessed and located in an area of least impact. Should water vole or otter be present, appropriate licences would be applied for, with mitigation designed to avoid any significant impacts. It is considered that there will be no significant impacts on otter and water vole. Should designs change or necessitate significant impacts, this will be scoped in for further assessment.

6.1.9 Receptors/matters to be scoped out of further assessment: Developable Area C – East, Inter Array Connection Corridors 1 and 2		
Receptor/Matter	**Phase**	**Justification**
		There are not expected to be any significant effects during operation.
Species: great crested newt and turtle dove	Operation	Compensation habitat that is created for other species will remain present for the duration of the operational phase. This habitat in addition to habitats outside of the footprint will provide suitable habitat for these species. Therefore, there are not expected to be any significant effects during operation. Suitable habitat will be subject to management during the operational phase, details of which will be listed within the oLEMP. Therefore, there are not expected to be any significant effects during operation.

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor		
Receptor/Matter	**Phase**	**Justification**
Fenland SAC Wicken fen Ramsar/SSSI/NNR Devils Dyke SAC/SSSI Fleam Dyke SSSI Newmarket Heath SSSI	Operation	The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites, due to distance between the site and Scheme, as once in place maintenance is minimal and less than any impacts at construction phase.
Eversden and Wimpole SAC	Construction, operation and decommissioning	Eversden and Wimpole Woods SAC is located 19 km west of Grid Connection Corridor A, the site is designated for Western barbastelle. Western barbastelle have an average core sustenance range of 7 km but have been known to range as far as 20 km to reach productive foraging grounds[104]. Habitats present between the SAC and Grid Connection Corridors are likely to be similar to those within the Grid Connection Corridors with the addition of larger areas of woodland, river corridors and wetland areas. With suitable foraging habitat closer to the SAC, it is unlikely Western barbastelle associated with the SAC are dependent on habitats within the Grid Connection Corridors. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Chippenham Fen Ramsar	Construction, operation and decommissioning	Chippenham Fen Ramsar site is 5 km from the Grid Connection Corridor.

[104] Natural England (2024) Definition of Favourable Conservation Status for barbastelle bat.

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor		
Receptor/Matter	**Phase**	**Justification**
		Chippenham Fen Ramsar is avoided by the current Scheme design and does not have any hydrological link to the Scheme and therefore, will not be directly impacted by the construction/ decommissioning of the Grid Connection Corridor. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Nationally designated sites (Fulbourn Fen SSSI, Great Wilbraham Common SSSI, Balsham Wood SSSI, Roman Road SSSI, Carlton Wood SSSI, Park Wood SSSI)	Construction, operation and decommissioning	Fulbourn Fen, Great Wilbraham Common, Balsham Wood, Roman Road, Carlton Wood and Park Wood SSSIs are over 1 km from Grid Connection Corridor. These sites are avoided by the current Scheme design and therefore, will not be directly impacted by the construction/ decommissioning of the Grid Connection Corridor. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.
Non-statutory designated sites (Old Cambridge Road Verges CWS, West Wratting Valley Farm RSV CWS, Burwell Disused Railway	Operation	Significant impacts are not anticipated during operation, as once in place maintenance is minimal and less than any impacts at construction phase.

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor		
Receptor/Matter	**Phase**	**Justification**
CWS, Swaffham Bulbeck (Protected Road Verge), Heath Road/ Steet Way Green Lanes CWS and Brinkley Wood CWS.		
Other Non-statutory designated sites (Worsted Lodge Road Side Verge CWS, Beacon Course Green Lane CWS, Bottisham Park CWS, Burwell Brick Pit CWS, Fleam Dyke Pumping Station CWS, Pauline's Swamp CWS, Spring Close(CWS, St George's Churchyard CWS, Swaffham Prior	Construction, operation and decommissioning	All sites are outside of the Grid Connection Corridor ranging from 80 m (Ladies Grove and Hay Wood CWS) to over 1 km (Worsted Lodge Road Side Verge). These sites are avoided by the current Scheme design and therefore, will not be directly impacted by the construction/ decommissioning of the Grid Connection Corridor. The operational life of the Scheme will not involve any direct/indirect impacts to the designated sites.

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor		
Receptor/Matter	**Phase**	**Justification**
Meadow CWS, Carlton Lane CWS, Hills Crofts CWS, Whitings Grove CWS, Great Covens Wood and Lower Wood CWS, Rands Wood CWS, Brinkley Hall Veteran Trees(CWS, Ladies Grove and Hay Wood CWS, Lophams Wood CWS and Leys Wood CWS.		
Ancient semi-natural woodland	Construction, operation and decommissioning	Ancient woodland is 956 m east of Grid Connection Corridor B, therefore no direct or indirect impacts are anticipated during construction, operation or decommissioning.
Priority habitats – woodland, hedgerows, rivers and streams, grasslands	Operation	The operational life of the Grid Connection Corridor will not involve any direct/indirect impacts to these habitats, other than routine maintenance, which would be undertaken at appropriate times and in accordance with the oLEMP.

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor

Receptor/Matter	Phase	Justification
(calcareous and coastal floodplain grazing marsh)		
Other habitats	Construction, operation and decommissioning	Other habitats likely to be present within the Grid Connection Corridor are likely to include widespread habitats such as arable fields, scrub, field drainage ditches and other neutral grassland. Any impacts from the Grid Connection Corridor are likely to be temporary in nature and the design will seek to re-instate disturbed habitat. The operational life of the Grid Connection Corridor will not involve any direct/indirect impacts to these habitats, other than routine maintenance, which would be undertaken at appropriate times and in accordance with the oLEMP.
Arable weeds	Operation	Other than routine maintenance activities that may be required during the operation life of the Scheme, significant activities are not anticipated during operation.
Invasive species	Construction, operation and decommissioning	The background data search returned records of Few-flowered Garlic, Nuttall's Waterweed and Giant Hogweed within Grid Connection Corridors. It is currently unknown if these species are still present or if any other invasive species are present within the Grid Connection Corridors. If present, standard protocols during all phases will need to be adhered to and where possible, treatment of invasive species should take place to ensure there are no significant impacts. Other than routine maintenance activities that may be required during the operation life of the Scheme, significant activities are not anticipated during operation.
Reptiles	Construction, operation and decommissioning	The majority of the Grid Connection Corridor appears to be arable fields, making it highly likely that the majority of impacts from the Grid Connection Corridor will fall within arable fields where reptiles are unlikely to be present. Construction would take

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor		
Receptor/Matter	**Phase**	**Justification**
		place within the least suitable habitat types (arable fields) therefore, reptiles are unlikely to be present in large numbers within the active construction area. The design will seek to implement the use of buffers where possible to prevent any indirect effecting suitable reptile habitat. A precautionary working method statement would be implemented which would detail mitigation measures to be utilised on site such an the presence of an Ecological Clerk of Works during the construction phase to capture any reptiles found within the works area and relocation to suitable reptile habitat that would be created or enhanced within the local area. This method is not considered to affect the favourable conservation status of the local population and would avoid the killing and injury of any reptiles present. The same approach would be used during decommissioning. There are not expected to be any significant impacts on reptiles during operation, as other than routine maintenance, details of which will be listed within the oLEMP, no additional impacts are anticipated on suitable habitats where they may be.
Turtle dove	Construction, operation and decommissioning	The majority of the Grid Connection Corridor appears to be arable fields, making it highly likely that the majority of impacts from the Grid Connection Corridor will fall within arable fields. Retention of suitable nesting habitat for turtle dove will be recommended. Any residual impacts from the Scheme will be mitigated for through appropriate methods during construction and decommissioning. Therefore, there are not expected to be any significant effects during operation.

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor

Receptor/Matter	Phase	Justification
Peregrine, barn owl and other raptors	Construction and decommissioning	The Grid Connection Corridor has not been surveyed and therefore habitats suitable for peregrine and barn owl have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Given the presence of a probable breeding pair of peregrine and barn owl presence within Developable Areas A and B, it is possible additional pairs will be present within the Grid Connection Corridor. If nesting barn owl/peregrine are present in trees, barns or other structures within the construction area, they may be disturbed by construction and decommissioning. However, this will be mitigated by buffer zones between the works areas and boundary features. There is not expected to be loss of foraging habitat as boundary features will be enhanced and other habitat creation and enhancement works secured through the oLEMP is likely to benefit foraging barn owls/ peregrine. A precautionary working method statement would be implemented which would detail how to sufficiently safeguard nests during construction/ decommissioning. Should designs change or necessitate significant impacts, this will be scoped in for further assessment.
Hazel dormouse	Construction, operation and decommissioning	There are no records of dormice within 2 km of the Grid Connection Corridor. The People's Trust of Endangered Species 2018 dormouse distribution map shows Cambridgeshire as a county where dormice are considered to be 'absent'[90].
Groups: fish, invertebrates, bats (roosting, commuting and foraging)	Operation	Watercourses are not expected to be impacted during operation as all access tracks/ cabling works will be completed during construction; therefore there are not expected to be any significant effects on fish during the operational phase. Should any hedgerows require removal as part of access track construction will be compensated for and continuity of foraging routes will be provided and detailed within the oLEMP. Operation of the Grid Connection Corridor will not have any additional

6.1.9 Receptors/matters to be scoped out of further assessment: Grid Connection Corridor		
Receptor/Matter	**Phase**	**Justification**
		impacts on these species than at construction or decommissioning. There are not expected to be any significant effects during operation.
Species: Great crested newt, badger, water vole and otter	Operation	The Grid Connection Corridor has not been surveyed and therefore habitats suitable for GCN, badger, water vole and otter have not been assessed. These habitats will need to be surveyed to assess their conservation importance. Maintenance works may be required as part of operational phase in relation to pylons and access tracks, which may impact GCN and badger. Precautionary working methods statement would be provided within the oLEMP. Watercourses are not expected to be impacted during operation as all access tracks/ cabling works will be completed; therefore there are not expected to be any significant effects on otter and water vole during operation.

6.1.10 Summary of Scoping

The following table provides a high-level summary of those biodiversity receptors which are to be scoped in or out of the assessment (for PEIR and ES), for each of the Scheme components and for each phase (construction, operation and decommissioning).

	Developable Area A – West and B – Central			Developable Area C – East & Inter Array Connection Corridors			Grid Connection Corridors		
Receptor	Const.	Op.	Decom.	Const.	Op.	Decom.	Const.	Op.	Decom.
Designated sites									
Eversden and Wimpole Woods SAC	Out	Out	Out	Out	Out	Out	Out	Out	Out
Fenland SAC	Out	Out	Out	Out	Out	Out	In	Out	In
Wicken Fen SSSI/NNR/Ramsar	Out	Out	Out	Out	Out	Out	In	Out	In
Devils Dyke SAC/SSSI	Out	Out	Out	Out	Out	Out	In	Out	In
Chippenham Fen Ramsar	Out	Out	Out	Out	Out	Out	Out	Out	Out
Roman Road SSSI	Out	Out	Out	Out	Out	Out	Out	Out	Out
Fleam Dyke SSSI	In	Out	In	In	Out	In	In	Out	In
Newmarket Heath SSSI	Out	Out	Out	Out	Out	Out	In	Out	In
Fulbourn Fen SSSI	Out	Out	Out	Out	Out	Out	Out	Out	Out
Great Wilbraham Common SSSI	Out	Out	Out	Out	Out	Out	Out	Out	Out
Balsham Wood SSSI	Out	Out	Out	Out	Out	Out	Out	Out	Out
Park Wood SSSI	Out	Out	Out	Out	Out	Out	Out	Out	Out
Carlton Wood SSSI	Out	Out	Out	Out	Out	Out	Out	Out	Out

	Developable Area A – West and B – Central			Developable Area C – East & Inter Array Connection Corridors			Grid Connection Corridors		
Receptor	Const.	Op.	Decom.	Const.	Op.	Decom.	Const.	Op.	Decom.
Non-statutory designated sites									
Carlton Lane County Wildlife Site (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Hills Crofts (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Whitings Grove (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Old Cambridge Road Verges_CWS	In	Out	In	Out	Out	Out	In	Out	In
Great Covens Wood and Lower Wood (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Rands Wood (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Brinkley Hall Veteran Trees (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Ladies Grove and Hay Wood (CWS)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Brinkley Wood (CWS)	Out	Out	Out	Out	Out	Out	In	Out	In
West Wratting Valley Farm RSV CWS	Out	Out	Out	Out	Out	Out	In	Out	In
Burwell Disused Railway CWS	Out	Out	Out	Out	Out	Out	In	Out	In
Swaffham Bulbeck (Protected Road Verge)	Out	Out	Out	Out	Out	Out	In	Out	In
Heath Road/ Steet Way Green Lanes CWS	Out	Out	Out	Out	Out	Out	In	Out	In

	Developable Area A – West and B – Central			Developable Area C – East & Inter Array Connection Corridors			Grid Connection Corridors		
Receptor	Const.	Op.	Decom.	Const.	Op.	Decom.	Const.	Op.	Decom.
Worsted Lodge Road Side Verge CWS, Beacon Course Green Lane CWS, Bottisham Park CWS, Pauline's Swamp CWS, St George's Churchyard CWS, Burwell Brick Pit CWS, Fleam Dyke Pumping Station CWS, Spring Close CWS, Swaffham Prior Meadow CWS, Lophams Wood CWS, Leys Wood CWS	Out	Out	Out	Out	Out	Out	Out	Out	Out
Habitats									
Ancient semi-natural woodland	Out	Out	Out	In	Out	Out	Out	Out	Out
Woodland (PH)	In	Out	In	Out	Out	Out	Out	Out	Out
Calcareous grassland (PH)	Out	Out	Out	In	Out	In	In	Out	In
Priority habitats – hedgerows, rivers and streams, grasslands (coastal floodplain grazing marsh)	Out	Out	Out	Out	Out	Out	In	Out	In
Other habitats - arable fields and ditches	Out	Out	Out	Out	Out	Out	Out	Out	Out
Groups and species									
Arable weeds	In	In	In	In	In	In	In	Out	In
Invasive non-native species	Out	Out	Out	Out	Out	Out	Out	Out	Out
Inverts (calcareous grassland)	Out	Out	Out	In	Out	In	In	Out	In
Inverts (hedgerows and woodland)	Out	Out	Out	Out	Out	Out	Out	Out	Out
Fish	Out	Out	Out	In	Out	Out	In	Out	In
Great crested newt	In	Out	In	In	Out	In	In	Out	In

	Developable Area A – West and B – Central			Developable Area C – East & Inter Array Connection Corridors			Grid Connection Corridors		
Receptor	Const.	Op.	Decom.	Const.	Op.	Decom.	Const.	Op.	Decom.
Common amphibians	Out	Out	Out	Out	Out	Out	Out	Out	Out
Ground nesting birds	In	Out	In	In	Out	In	In	Out	In
Non-ground nesting birds	Out	Out	Out	Out	Out	Out	In	Out	In
Turtle dove	In	Out	In	In	Out	In	Out	Out	Out
Wintering birds	In	Out	In	In	Out	In	In	In	In
Barn owl, peregrine and other raptors	Out	Out	Out	Out	Out	Out	Out	In	Out
Reptiles	Out	Out	Out	Out	Out	Out	Out	Out	Out
Bats - foraging and commuting	In	In	In	In	In	In	In	Out	In
Bats - roosting	Out	Out	Out	Out	Out	Out	In	Out	In
Hazel dormouse	Out	Out	Out	Out	Out	Out	Out	Out	Out
Water vole	Out	Out	Out	Out	Out	Out	In	Out	In
Otter	Out	Out	Out	Out	Out	Out	In	Out	In
Badger	Out	Out	Out	Out	Out	Out	In	Out	In
Other small mammals (brown hare, hedgehog, harvest mouse, pole cat)	Out	Out	Out	Out	Out	Out	Out	Out	Out

6.1.11 Opportunities for enhancing the environment

Opportunities for ecological enhancement within the Developable Areas A - West and B - Central are diverse due to the number of different habitats present and their generally low biodiversity value, being intensively farmed.

A detailed biodiversity design will be produced and implemented outlining how net gain in biodiversity will be achieved. The biodiversity design will be cognisant of local biodiversity priorities already identified and priorities emerging from the developing Cambridgeshire and Peterborough Local Nature Recovery Strategy.

These measures will focus on compensating for adverse effects on habitats and species from the Scheme (Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors), and to improve the Scheme for species that could feasibly colonise in the future given the surrounding landscape. Therefore, enhancement measures could include some of the following:

- Enhancement of habitat suitable for nesting and wintering birds;
- Creation of wetland areas in low lying areas of the Site, providing increased habitat for biodiversity, run-off capture and improved water quality, flood alleviation in wider catchment and additional foraging and nesting habitat for bird species.
- Creation of flower-rich calcareous grassland and herbal 'ley' habitat or similar underneath and between solar panels to restore soil health and create a nectar source for invertebrates (in particular pollinators) and provide foraging for bat and bird species.
- New hedgerow planting and reinforcing existing hedgerow networks where appropriate.
- Enhancement of field boundaries to provide greater habitat connectivity and increased habitat for invertebrates.
- Winter food for farmland birds – leaving over winter stubbles and or provision of specific seed source within buffer strip margins between panels and boundary features.

As Developable Area C – East, Inter Array Connection Corridors and Grid Connection Corridors have not yet been surveyed, the exact habitats present are unknown. However, the above points could be relevant to all three areas. The below enhancement measures could also be included in relation to the Inter Array Connection Corridors and Grid Connection Corridors:

- Creation and enhancement of floodplain grassland providing nesting and foraging habitat for ground nesting birds, foraging bats and other species.

- Should drainage ditches be present then enhancement of these to encourage water vole presence (if not already present).

Creation of additional ponds through the Grid Connection Corridor to provide links between GCN populations.

6.1.12 Proposed assessment methodology

The Ecological Impact Assessment (EcIA) will follow the Chartered Institute of Ecology and Environmental Management's (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland, referred to here as 'the CIEEM Guidelines'[105].

The significance criteria proposed for the biodiversity assessment is presented in **Appendix C EIA significance criteria**.

6.1.13 Difficulties and uncertainties

To ensure transparency within the EIA process, the following difficulties and uncertainties have been identified:

- Developable Area C – East, Inter Array Connection Corridors and Grid Connection Corridors have not yet been surveyed. As outlined in **Section 6.1.4** above, these areas will be subject to survey in 2024/2025.
- Some species-specific surveys have not yet been completed or undertaken. As stated in **Section 6.1.4** above, these will be completed / undertaken in 2024/2025.

6.1.14 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed study areas?
- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Do you agree that the surveys proposed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?

[105] CIEEM (2018, updated 2024), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3 (Chartered Institute of Ecology and Environmental Management, Winchester

- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of the EIA?
- Do you agree with the proposed factor-specific assessment approach?

6.2 Landscape and visual amenity

6.2.1 Consultation

Consultation in relation to landscape and visual matters commences with production and submission of this EIA Scoping Report. Consultation will be undertaken with South Cambridgeshire District Council and East Cambridgeshire District Council, and where appropriate with Natural England, to agree the finer detail of the LVIA. Agreement will be sought on the selection of viewpoints to represent the key receptors being assessed within the LVIA, including the illustrative techniques to be used for any visualisations of the Scheme (in accordance with LI TGN 06/19[106]).

6.2.2 Study area

Best practice guidance for the assessment of landscape and visual effects (Guidelines for Landscape and Visual Impact Assessment – GLVIA 3, 2013[107]) states:

"Scoping should … identify the area of landscape that needs to be covered in assessing landscape effects. This should be agreed with the competent authority, but it should also be recognised that it may change as the work progresses, for example as a result of fieldwork, or changes to the proposal. The study area should include the site itself and the full extent of the wider landscape around it which the proposed development may influence in a significant manner."

And:

"Scoping should identify the area that needs to be covered in assessing visual effect, the range of people who may be affected by these effects and the related viewpoints in the study area that will need to be examined. The study area should be agreed with the competent authority at the outset and should consider the area from which the proposed development will potentially be visible. The emphasis must be on a reasonable approach which is proportional to the scale and nature of the proposed development."

To assist in the determination of an appropriate and proportionate study area for the LVIA, preliminary Zone of Theoretical Visibility (ZTV) plans have been prepared and are presented in **Appendix H Landscape and visual amenity figures, Figures H1 and H2**. The analysis was carried out using a topographic model and including buildings and trees (with heights derived from LiDAR surface mapping data) as visual barriers in order to provide a more realistic indication of potential visibility for elements of the Scheme, based on the anticipated parameters set out in **Chapter 2: Description of the Scheme**. The ZTV study does not take account of all above ground features, only those included

[106] Landscape Institute (2019) Technical Guidance Note 06/19: Visual Representation of Development Proposals, published by the Landscape Institute.

[107] Landscape Institute and Institute of Environmental Management & Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition.

as woodland and buildings in the OS mapping at the time the ZTV was prepared. These ZTV studies present a more realistic visibility pattern than bare ground studies, but do not take detailed account of felling cycles, tree growth, demolition or construction, for which modelling is not readily available. This approach is also proportionate to the level of design the ZTVs reflect, and their purpose as a guide or aid to the assessment.

The purpose of the ZTVs at this stage is to identify the maximum possible extents of visibility and to help identify potential visual receptors. As is typical for all such ZTVs, the visibility shown on the plans is exaggerated and the actual extent of visibility of any development on the Site would be considerably more constrained than is indicated on these preliminary ZTVs.

The following ZTVs have been produced:

- **Figure H1** ZTV of the maximum height parameters of the solar PV modules at 3.5 m.
- **Figure H2** ZTV of potential substation and switchgear locations at 18 m.

The ZTVs treat the solar PV modules and substation/switchgear as standalone developments but should be read together to understand the full extent of visibility. The ZTV for the 3.5 m solar PV modules (**Appendix H Figure H1**) assumes that the entire extent of the potential Developable Area (Areas A, B and C) could be filled with solar PV modules. The ZTV for the substation and switchgear (**Appendix H Figure H2**) assumes that the full extent of the Developable Area (Areas A, B and C) could have structures up to 18 m anywhere within the Developable Area. In reality, the substation and switchgear would occupy a fraction of the Developable Area modelled and therefore visibility would be considerably less than implied by the ZTV.

Based on analysis of the ZTVs, desk based research and field work undertaken to date (19 December 2023, 11 April 2024 and 19 August 2024) it has been identified that the visibility of the land within the Developable Area boundary varies as a result of undulating landform, scattered woodland, vegetation boundaries and built form across the surrounding landscape. Considering this and past experience of similar projects, it is likely that there would be no more than negligible, distant and filtered glimpses of the solar PV modules and substation/switchgear beyond 3 km of the fields in which they are located. At such distances, the effects would in no circumstances be significant. It is therefore proposed that a 3 km study area offset from the boundaries of the Developable Area is more than adequate and proportionate for the consideration of landscape and visual effects arising as a result of the operation of the Scheme.

With respect to the Inter Array Connection Corridors, the alignment and installation methods are still being optioneered, with infrastructure potentially being above and/or below ground. A ZTV has therefore not been produced for the Inter Array Connections. Once the alignment and installation methods are confirmed, the scope will be reviewed as necessary.

A ZTV has not been produced for the Grid Connection Corridors (A and B) due to the unknown parameters and broad location of the proposed alignment of any overhead lines within the corridor. **Figure H3 (Appendix H)** identifies a 3 km buffer of the Grid

Connection Corridors. The corridor is overlain on a topographical base map, with screening features including principal woodlands and buildings shown for information. Following initial field survey to gain an understanding of the local terrain and landscape features, it has been identified that the visibility of the land within the Grid Connection Corridor varies as a result of undulating landform, scattered woodland, vegetation boundaries and built form across the surrounding landscape. Considering this and past experience of similar projects, it is likely that there would be no more than negligible, distant and filtered glimpses of overhead lines and lattice towers (pylons) beyond 3 km of the fields in which they are located. It is therefore proposed that a 3 km study area offset from the route of the Grid Connection Corridors is more than adequate and proportionate for the consideration of landscape and visual effects arising as a result of the construction and operation of the Scheme. Should any discrete locations within the Grid Connection Corridor be undergrounded, it is likely that the primary landscape and visual effects would be in relation to construction activity, except for any surface level infrastructure and structures associated with the connection. A bespoke and proportionate study area will be defined if this scenario is the case.

6.2.3 Data sources to inform the EIA baseline characterisation

The following data/information sources are to be used to inform the EIA baseline characterisation for landscape and visual matters:

- National Character Area (NCA) Profiles 46: The Fens, 86: South Suffolk and North Essex Clayland and 87: East Anglian Chalk[108].
- Landscape character areas from the Greater Cambridge Landscape Character Assessment (2021)[109], East of England Landscape Typology (2010)[110] and West Suffolk Landscape Character Assessment (2022)[111], plus relevant supporting environmental datasets used in the landscape characterisation studies above.
- Green Infrastructure Strategies and Green Infrastructure networks, notably the Cambridgeshire Green Infrastructure Strategy and emerging Greater Cambridge strategic green infrastructure initiatives.
- Topographic and woodland inventory sites data.
- Data in relation to designated landscape interests.
- Data and citations in relation to heritage designated interests which have a relationship to / bearing on landscape character, such as sites on the Sites and

[108] Available online at: https://nationalcharacterareas.co.uk/

[109] Chris Blandford Associates (2021) Greater Cambridge Shared Partnership – Greater Cambridge Landscape Character Assessment. [Online] Available at: https://consultations.greatercambridgeplanning.org/sites/gcp/files/2021-08/LandscapeCharacterAssessment_GCLP_210831_Part_A.pdf

[110] Available online at: http://www.landscape-east.org.uk/

[111] Available online at: https://www.westsuffolk.gov.uk/planning/landscapes.cfm

Monuments Record (SMR), Registered Parks and Gardens, Listed Buildings (particularly where they and their setting have a designed and/or functional relationship to the landscape) and Conservation Areas.

- Data and citations in relation to ecological designations which have a relationship to/bearing on landscape character, such as Ancient Woodland Inventory data, Ancient Tree Inventory data, National Site Network sites, Sites of Special Scientific Interest, National and Local Nature Reserves, Local Wildlife Sites and Biodiversity Action Plan Priority Habitat Data.

The LVIA will consider relevant policy and guidance contained within:

- South Cambridgeshire Local Plan (2018)[112].
- East Cambridgeshire Local Plan 2015 (as amended 2023)[113].
- Greater Cambridge Sustainable Design and Construction SPD (2020)[114].

6.2.4 Surveys to inform the EIA baseline characterisation

Initial survey work has been undertaken to inform this EIA Scoping Report, on 19 December 2023, 11 April 2024 and 19 August 2024. This included drive and walk over surveys of the proposed Grid Connection Corridors, Inter Array Connection Corridors, Developable Areas and the environs during winter, spring and summer months. These site visits were undertaken by qualified and experienced landscape architects including a Chartered Member of the Landscape Institute (CMLI).

All site visits were undertaken from publicly accessible land, Paths and Rights of Way (PRoWs) and public highways. They were used to confirm the broad landscape and visual baseline and to form a preliminary view as to receptors that would potentially experience significant landscape and visual effects arising from the Scheme.

Further site visits will be undertaken to inform the EIA, post-scoping. These will be carried out at appropriate times of the year, to confirm the full suite of landscape and visual receptors in relation to the Developable Areas, Inter Array Connections and the preferred alignment(s) within the Grid Connection Corridors, and to confirm agreed

[112] South Cambridgeshire District Council (2018) South Cambridgeshire Local Plan. Available online: https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/the-adopted-development-plan/south-cambridgeshire-local-plan-2018

[113] East Cambridgeshire District Council (2023) East Cambridgeshire Local Plan (April 2015, as amended 2023). Available online: https://www.eastcambs.gov.uk/local-development-framework/east-cambridgeshire-local-plan-2015-amended-2023

[114] Greater Cambridge Shared Planning (2020) Greater Cambridge Sustainable Design and Construction Supplementary Planning Document. Available online: https://www.cambridge.gov.uk/greater-cambridge-sustainable-design-and-construction-spd

representative viewpoints in relation to visual receptors. As above, these site visits will be undertaken from publicly accessible land, PRoWs and public highways.

Site visits will also be used to capture surveyed and verifiable photography for photomontages (Landscape Institute Type 4 visualisations) to support the assessment. As far as is practicable , winter and summer photography will be captured to enable a robust consideration of seasonal effect in the assessment and supporting visual materials. However late additions to viewpoints due to design change or stakeholder request may not always be able to have the full set of winter and summer images. In situations where this applies it will be stated as a limitation in the relevant part of the assessment, although the assessment will in any event take account of seasonal effect when making judgements.

Where access to private property is required and can be arranged, visits will also be made to selected residential properties where appropriate, to assess the potential for visual effects on residential amenity, in agreement with the relevant local authority.

6.2.5 Baseline conditions

This section provides a concise overview of the landscape and visual baseline, future baseline and relevant key receptors in relation to the Developable Area (Areas A, B and C), Inter Array Connection Corridors and the Grid Connection Corridors.

Landscape designations

No part of the Site or its surrounding context within the study area falls within a statutorily designated landscape. There are also no local landscape designations within the study area. The locally valued Gog Magog Hills and Wandlebury Country Park are located outside of the study area to the west of the Developable Areas.

Other designations of relevance

Dullingham House Registered Park and Garden is approximately 2.8 km north of Developable Area C - East. Pampisford Hall and Sawston Hall are approximately 3.5 km and 4.5 km south-west of the Developable Area and Wilbraham Temple is approximately 3.5 km north of the Developable Area. There are a number of Registered Parks and Gardens within 3 km of the Grid Connection Corridors. The nearest are Wilbraham Temple, Swaffham Prior House within 1 km and Anglesey Abbey and Dullingham House within 3 km. These are all relatively well self-contained with views out being curtailed by vegetation.

A number of historic landscape features of note fall within the Developable Area and study area, notably the Fleam Dyke Earthwork and route (SMR and SSSI) whose earthworks and tree line form a prominent local landmark, and the route of the Harcamlow Way, as well as a Roman Road (SMR and SSSI) to the south; the highly distinctive alignment of which is marked by a prominent double parallel tree line. The alignment of the Devil's Dyke SMR and SSSI, an Anglo-Saxon earthwork, is a locally highly prominent landform feature between Swaffham Prior and Burwell (along with

adjacent Roman villa site north of Swaffham Prior) in the northern part of the area of search for the Grid Connection Corridors.

Landscape context

The Site sits within the gently undulating, relatively low lying farmland landscape of south Cambridgeshire, a landscape which is characterised by a strong linear, geometric pattern of shelterbelts and hedgerows bounding a network of rectilinear, mostly arable fields.

There is a strongly rectilinear, grid form to the landscape surrounding the Developable Area and extending into the lowland drained fenland landscape further north along the Grid Connection Corridors. This is cut by linear droving routes and lodes (man-made waterways), overlaid on peat soils.

Remnant fens and now predominantly drained fens are notable features of the local landscape. The existing pylon line is a prominent visual feature viewed from the Devil's Dyke and the drained fens, as is the existing substation (located to the west of Burwell), particularly from the linear network of waterways or lodes that cross the northern part of the study area, and of which some are navigable or have PRoW access. The A11 road corridor is a visually and aurally prominent detracting feature in the landscape, immediately west of the Developable Areas.

Notable features in the landscape include scattered minor manors, halls and parklands and the historic Newmarket Racecourse, along with the linked site of Round Course and training ground near Egerton House.

The landscape of the study area is a fairly settled landscape, comprising clustered and linear villages along the main road routes. Many of the historic settlements such as the Swaffhams (Swaffham Prior and Swaffham Bulbeck) and Burwell are inward looking by virtue of local topography and vegetated settlement edges, with few opportunities for intervisibility with the wider landscape. This also has the effect that historic landmarks which are potential recreational receptors, such as Anglesey Abbey (Listed Building and Registered Park and Garden or RPG of historic interest) to the west of Burwell, are screened from view. This is also the case with the notable historic designed parklands at Swaffham Prior House (Listed Building and RPG) and Bottisham (Bottisham Hall and Park).

The landform of the local landscape becomes markedly more undulating in the southern half of the study area, and towards the rising chalk landforms of the Gog Magog Hills to the southwest. Landform variation, together with field boundary hedgerows and Scots Pine shelterbelts ('Deal Rows') of variable condition and density, help foil views to the existing pylon line and potential Grid Connection Corridors at various points in the southern part of the study area.

Landscape character

Relevant National and County/district level character areas and associated landscape elements of note, as they relate to the Developable Areas, Inter Array Connection

Corridors and the Grid Connection Corridors, are identified on **Figure H4 (Appendix H)** and summarised below.

The Site is predominantly within National Character Area (NCA) 87 East Anglian Chalk. The Natural England Profile[115] describes NCA87 East Anglian Chalk as:

"…characterised by the narrow continuation of the chalk ridge that runs south-west-north-east across southern England…a visually simple and uninterrupted landscape of smooth, rolling chalkland hills with large regular fields enclosed by low hawthorn hedges, with few trees, straight roads and expansive views to the north."

Part of Developable Area C – East and the study area to the east is within NCA 86 South Suffolk and North Essex Clayland. The Natural England Profile describes NCA86 South Suffolk and North Essex Clayland as:

"*…an ancient landscape of wooded arable countryside with a distinct sense of enclosure. The overall character is of a gently undulating, chalky boulder clay plateau, the undulations being caused by the numerous small-scale river valleys that dissect the plateau. There is a complex network of old species-rich hedgerows, ancient woods and parklands, meadows with streams and rivers that flow eastwards. Traditional irregular field patterns are still discernable over much of the area, despite field enlargements in the second half of the 20th century*".

The study area to the north of the Grid Connection Corridors is within NCA46 The Fens.

At a district level, the Greater Cambridge Landscape Character Assessment (2021) covers the majority of the Site and study area for the Developable Area and Inter Array Connection Corridors. The Grid Connection Corridors extend into the adjoining authority area of East Cambridgeshire District Council. No published Landscape Character Assessment exists for East Cambridgeshire District Council. Reference has therefore been made to the regional level Landscape Typology of Landscape Character Types (LCT) defined by Landscape East for the former East of England region[116]. Part of Developable Area C – East and the Grid Connection Corridor study area falls within West Suffolk, which is covered by the West Suffolk Landscape Character Assessment (2022)[117].

The majority of the Developable Area (most of Areas A and B, and a small part of Area C), the Inter Array Connection Corridors and southern part of the Grid Connection Corridors are within Local Character Area (LCA) 7A Eastern Chalk Hills, which is

[115] https://nationalcharacterareas.co.uk/East-Anglian-Chalk/

[116] Landscape East, 2010, Regional Landscape Typology for the East of England: http://landscape-east.org.uk/east-england-landscape-typology Accessed 15 August 2024.

[117] Alison Farmer Associates and Shiels Flynn, 2022, Landscape Character Assessment – West Suffolk District: https://www.westsuffolk.gov.uk/planning/landscapes.cfm. Accessed 11 October 2024.

described in the Greater Cambridge Landscape Character Assessment[118] as being a simple agricultural landscape of large, predominantly regular fields bounded by low, gappy hedges. Shelterbelts including coniferous and broadleaf species are very distinctive, as are ornamental roadside trees. Areas of small scale landscapes are visually contained by shelterbelts and landform, with frequent views to wind turbines (Wadlow Windfarm, within Developable Area B - Central). Pockets of equestrian landscapes associated with Newmarket Racecourse, the National Stud and the related stud farms lie to the north, contained within shelterbelts.

A small part of Developable Area B - Central and the central part of Developable Area C – East are within LCA 4D West Wratting Wooded Claylands, which is described in the Greater Cambridge Landscape Character Assessment as being a settled rural landscape with two linear villages including Balsham, set within a large, regular field network with scattered woodlands including ancient woodland at Balsham Wood. The Roman Road bisecting the LCA and which runs close to the south of the Developable Area is a very distinctive feature.

The east part of Developable Area C - East falls within LCA 4E West Wickham Wooded Claylands, as does the Inter Array Connection Corridor 2.This character area is described in the Greater Cambridge Landscape Character Assessment as a landscape of predominantly irregular field pattern indicating medieval field layouts, and significant levels of woodland cover, which generally comprise medium size blocks, including ancient woodland. A settled landscape with small, linear villages and isolated farmsteads. Generally enclosed by strong woodland groups and mature hedgerows, however the landscape also has distinctive open, panoramic views to wooded horizons.

The easternmost parts of the study area for the Developable Area (Developable Area C – East) fall within the Wooded Village Farmlands Landscape Character Type within the East of England Regional Landscape Typology, which is described in the landscape assessment document for that typology as:

'A gently rolling, elevated arable landscape with ancient woodland blocks and small, nuclear villages. Often an open landscape with long distance views, although woodland contains views particularly around settlements.'

Part of the above LCT in the study area for the Developable Area (Developable Area C – East) is also dissected by the Valley Settled Farmlands LCT in the East of England Regional Landscape Typology, and associated with the River Stour. This LCT is described as:

'Settled, often busy landscapes which occur along the sides of the sinuous valley corridors that cut through the East Anglian clay plateau'.

A very small part of the north-easternmost parts of the study area for the Developable Area is intersected by the Chalk Hills and Scarps LCT within the East of England Regional

[118] Chris Blandford Associates, 2021, Greater Cambridge Shared Partnership Greater Cambridge Landscape Character Assessment. https://consultations.greatercambridgeplanning.org/sites/gcp/files/2021-08/LandscapeCharacterAssessment_GCLP_210831_Part_A.pdf

Landscape Typology. This is described below in relation to the landscape baseline for the Grid Connection Corridors, since this LCT interacts far more extensively with that part of the Study Area. A portion of the south-west Grid Connection Corridor A fall within 6B Wilbraham Fen Edge Chalklands. This LCA is described in the Greater Cambridge Landscape Character Assessment as a sparsely wooded, lightly settled farmland landscape of distinctive regular, rectilinear fields and notable linear features including the Fleam Dyke and minor roads. The openness creates panoramic views to the rising chalk hills to the south, providing diversity in an otherwise simple landscape.

A small part of the west of the Grid Connection Corridor A falls within 6C Fulbourn Fen Edge Chalklands, which is described in the Greater Cambridge Landscape Character Assessment as a gently undulating landscape with scattered woodland cover and remnant historic parkland. It is a rural landscape with historic linear settlements and associated small scale field pattern.

The northern part of the Grid Connection Corridors (outside of the Greater Cambridge area) lies across the following landscape types within the East of England Regional Landscape Typology[119] (from south to north):

- Chalk Hills and Scarps – "*Prominent chalk hills, in places forming a distinct edge, elsewhere incised by dry valleys to create a rounded rolling landform. Often well wooded with long distance views, this is a large scale landscape with an ordered pattern of fields and woodlands*" (Southern part of A and most of B).
- Lowland Village Chalklands – "*a low lying, but gently rolling arable landscape, dissected by small streams, with a distinctive pattern of nucleated villages and a patchwork of woodlands and shelterbelts*" (Much of A and small part of B).
- Planned Peat Fen – "*a flat, expansive, low lying and sparsely populated landscape. It is characterised by dark peaty soils and a grid like rectilinear pattern of large arable fields bounded by drainage ditches. Wide views to distant, often dramatic big skies are a notable characteristic*" (Northern extent of A).

The other LCAs and LCT within the proposed study area, and which will be considered in greater detail where appropriate in the ES, are:

- LCA 1E Fulbourn Fen (Greater Cambridge);
- LCA 4E West Wickham Wooded Claylands (Greater Cambridge);
- LCA 6C Fulbourn Fen Edge Chalklands (Greater Cambridge);
- LCA 7B Gog Magog Chalk Hills (Greater Cambridge);
- LCA 7C Linton Chalk Hills (Greater Cambridge);
- LCA 8A Pampisford Lowland Chalkland (Greater Cambridge);

[119] Landscape East, Regional Landscape Typology for the East of England. http://landscape-east.org.uk/east-england-landscape-typology. Accessed 11 October 2024.

- LCA 9D Granta River Valley (Greater Cambridge);
- LCT Lowland Village Farmlands (East of England Regional Landscape Typology); and
- LCA G1 Newmarket and Fordham Chalklands (West Suffolk).

Visual receptors

Visual receptors are *"the different groups of people who may experience views of the development"* (GLVIA 3rd edition, para 6.3[120]). In order to identify those groups who may be significantly affected by the Scheme, an initial review of the ZTVs, baseline studies and preliminary site visits have been undertaken. When preparing the LVIA this work will be expanded upon and considered in more detail.

The different types of groups assessed will encompass local residents, people using key routes such as long distance trails, cycle routes and roads, people within accessible or recreational landscapes, people using PRoW and people visiting key viewpoints.

The relatively flat, gently undulating landscape means that there is the potential for long-distance and open views around the study area. Hedgerows, shelterbelts, scattered small woodlands and parkland trees across the study area can provide substantial screening for low-level development and often combine with gently undulating topography to obscure existing vertical structures.

Settlements

Settlements within the study area are listed below. All distances given are approximate, at the closest point to the boundary of the Developable Areas, Inter Array Connection Corridors or Grid Connection Corridors as applicable:

- The villages of Balsham (790 m east of the Inter Array Connection Corridor 1 and a maximum 990 m south of Developable Area B – Central, and approximately 800 m southwest of Developable Area C - East), West Wratting (380 m east of the Developable Area B – Central and directly adjacent to Developable Area C – East) and Weston Colville (directly adjacent to Developable Area C – East) are located to the east of the proposed Developable Area. The outer edges of Balsham and West Wratting, and much of Weston Colville are within the ZTVs for the Developable Area and substation/switchgear. These villages are also within the study area, to the south-east of the Grid Connection Corridors. Weston Green also falls within the study area of the Developable Area to the east, as do the settlements of Brinkley, Carlton, Willingham Green, Widgham Green, Burrough Green, Great Bradley and, to the south-east, West Wickham, Withersfield and Horseheath.
- The villages of Little Abington (2.1 km south-west of Developable Area A - West and 4.8 km south-west of the Grid Connection Corridors), Great Abington (2.7 km south of Developable Area A – West), Hildersham (2.1 km south-west of the

[120] Landscape Institute and Institute of Environmental Management & Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition.

Developable Area A - West and 4.7 km south of the Grid Connection Corridors) and Babraham (2.1 km south-west of the Developable Area A – West) are located to the south-southwest of the Developable Area and Grid Connection Corridors. The settlements are outside of the ZTVs for the Developable Area and substation/switchgear.

- The villages of Great Wilbraham (260 m west of the Grid Connection Corridor A), Little Wilbraham (580 m west of the Grid Connection Corridor A) and Fulbourn (2.1 km west of the Grid Connection Corridor A) are located in the landscape to the west of the Grid Connection Corridors and north-west of the Developable Area B – Central. They are outside of the 3 km study area for the Developable Area, with the edges closest to the Site within the ZTVs for the solar array and substation/switchgear.
- The villages of Bottisham (970 m west), Swaffham Bulbeck (540 m west), Lode (2.8 km west), Swaffham Prior (80 m west) and Reach (230 m west) are a series of historic small villages in the landscape to the west of the Grid Connection Corridors.
- Wicken (2.3 km north) is a linear village to the north of the Grid Connection Corridors.
- The village of Six Mile Bottom (2.1 km north of the Developable Area B - Central) is generally outside of the ZTVs, with a small area in the south of the settlement within the ZTVs. It is located within 200 m of the Grid Connection Corridors.
- The settlements of Burwell (abuts the Grid Connection Corridors at the nearest edge), Exning (2.2 km north-east), Dullingham (2 km east), Westley Waterless (1.8 km east) and Brinkley (3.1 km south-east) are located in the landscape to the east of the Grid Connection Corridors.

For all of the above settlements, there would be generally limited views of the Scheme due to the gently undulating local topography, scattered vegetation across the landscape, inward looking nature of many of the settlements and, in relation to the Developable Area, the largely low-level nature of the Scheme. There is theoretical potential to see elements of the Scheme from the edges of these settlements, particularly those in proximity to the Grid Connection Corridors. There is also potential through design and mitigation to minimise the potential views of new infrastructure, particularly associated with the Developable Areas.

In addition to the settlements above, there are scattered properties through the 3 km study area, including some in relatively close proximity to the Developable Areas and within the Grid Connection Corridors. As the project progresses, following the design vision developed for the project (see **Section 2.6 Design Vision, Chapter 2: Description of the Scheme**), appropriate set back and mitigation would be incorporated to minimise impacts to these properties.

Key routes

The key transport routes within the study area are:

- Balsham Road, running north-west to southeast between Developable Area A – West and Developable Area B – Central and through the Inter Array Connection Corridors, between Cambridge and Balsham.
- A11, running south-west to north-east along the north-west edge of the Developable Area A – West and Developable Area B - Central, and continuing north through the Grid Connection Corridors, between the M11 and the A14.
- B1052, running south-west to north-east between Balsham and West Wratting to the south-east of the Developable Area A – West and Developable Area B – Central, and south-west of Developable Area C – East, plus running alongside the outermost western edge of the Inter Array Connection Corridor 2.
- Six Mile Bottom Road, running south-east to north-west along the north-east edge of the Developable Area B – Central and directly adjacent to part of Developable Area C – East, between West Wratting and the A1304.
- A1307, running broadly east-west towards Linton, and located in the southernmost part of the study area for the Developable Area, taking in the settlement of Horseheath at the southernmost extents of the study area.
- Little Wilbraham Road, running north-west to south-east through the centre of the Grid Connection Corridors, between Cambridge and Six Mile Bottom.
- A14 and A1303, running west to east through the centre of the Grid Connection Corridors, from Cambridge to Newmarket.
- B1102, running south-west to north-east between Stow cum Quy, Swaffham Bulbeck, Swaffham Prior and through the north of the Grid Connection Corridors.

Recreational routes

Recreational users of PRoW would likely be the most sensitive visual receptors of any change in the landscape associated with the Scheme. Key recreational routes are:

- E2 European Long Distance Route, links through the villages to the east of the Developable Area and follows the route of the Roman Road through the south of the study area.
- Icknield Way Trail, links into the study area from the south, and passes through the villages to the east of Developable Area B – Central and also lies on the edge of part of Developable Area C – East.
- Harcamlow Way, connects along the Fleam Dyke immediately south of Developable Area B – Central and continues around the edge of Fulbourn through the west of the study area.
- National Cycle Route 11 passes through the north-west of the study area between Lode and Wicken (west of Grid Connection Corridor A).
- National Cycle Route 51 passes through the north and north-west of the study area between Newmarket and Cambridge (around the north of Grid Connection Corridor A).

- Devil's Dyke, which includes a public footpath on a 7 km stretch of the scheduled earthwork, to the southeast of Reach (passing through the northern part of Grid Connection Corridors A & B and surrounding study area).

A review of relevant data sources identifies several PRoW within the study area. There are a small number within / along the boundary of the Developable Areas and Inter Array Connection Corridors, which link with the recreational routes identified above and into the nearby villages. There are also several PRoW linking through the Grid Connection Corridors, between local roads and settlements.

Other recreational and/or tourist receptors

Other recreational and/or tourist receptors within the study area include:

- Registered Parks and Gardens, namely Wilbraham Temple, Swaffham Prior House, Anglesey Abbey and Dullingham House;
- Fulbourn Fen Nature Reserve, Wicken Fen National Nature Reserve (1.9 km north-west of the Grid Connection Corridors);
- Visitors to the various studs in the east of the study area, associated with Newmarket Race Course and the National Stud (partially within and extending east of Grid Connection Corridor B); Visitors to Meg's Mount (within 200m west of the Developable Area).

6.2.6 Additional (secondary and tertiary) mitigation

Construction

Consideration will be given to the site selection for compounds and equipment laydown areas to reduce the potential for landscape and visual effects as far as practicable. There is, however, limited potential for additional mitigation of landscape and visual construction effects of the Scheme. The construction mitigation that is practicable for the Scheme will be documented in the oCEMP.

Lighting of any construction compounds will be designed to minimise visual intrusion as far as is reasonably practicable. Existing trees, woodlands and hedgerows would be protected and any losses strictly localised and minimised as far as practicable. Tree, woodland and hedgerow protection would be in accordance with best practice for construction in proximity to trees and their root protection areas (RPAs) and in accordance with relevant British Standards.

Operation

The design vision (see **Section 2.6 Design Vision, Chapter 2: Description of the Scheme**) will inform a high-quality design, as part of an iterative, collaborative process between initial and detailed environmental assessment, site selection and design. Design quality and sensitivity will also be secured through careful site selection for the various components of the Scheme, taking account of the potential landscape and visual effects. Due to the nature of OHL, any OHL within the Grid Connection Corridors (and Inter

Array Connection Corridors where overgrounded) is likely to give rise to effects on landscape and visual receptors that cannot be fully mitigated.

Removal of or disruption to any existing landscape fabric (e.g. trees, hedgerows) will be minimised to that which is necessary for the implementation of the Scheme.

An oLEMP will be developed in accordance with the principles of good design, aligning with the design vision, to integrate the Scheme into the landscape and mitigate visual effects as far as practicable. It will be complementary to any biodiversity and other environmental objectives. The landscape design will seek to deliver landscape enhancements over and above the requirement to simply mitigate adverse effects. The oLEMP will seek to manage and restore existing vegetation and habitats within the Site, as well as implement the planting of extensive areas of new native vegetation and creation of new biodiverse habitats, enhanced habitat connectivity and networks of green and blue infrastructure. It will be developed in consultation with South Cambridgeshire District Council, East Cambridgeshire District Council and Natural England to secure the long-term management of the landscape and biodiversity masterplan for the Scheme.

Decommissioning

This stage of the Scheme will be similar to the construction stage, albeit in reverse whereby the dismantled equipment will need storing within the Site prior to removal. Given the anticipated operational duration (40 years), mitigation landscaping will have reached maturity and short-term landscape and visual effects during decommissioning will be more filtered and/or screened than at the construction stage. No additional mitigation is envisaged during this phase.

The design life of an OHL grid connection is also assumed to be 40 years, and will be fully decommissioned. The activities involved in decommissioning the grid connection would broadly reflect in reverse those used for construction of the grid connection (with the exception of any felling which is likely to have been 'replaced' with re-planted woodland areas outside of areas of construction, and other biodiversity net gain).

It is therefore proposed that a separate decommissioning assessment will not be undertaken and the effects assessed for construction would be assumed to be the same as that for decommissioning as a worst case scenario.

6.2.7 Description of likely significant effects

At this stage, prior to any formal assessment or additional design refinement, it is acknowledged that there is the potential for significant landscape and visual effects to arise during construction, operation and decommissioning of the Scheme.

The LVIA will therefore consider the potential effects upon:

- Landscape fabric;
- Landscape character; and
- Visual receptors including residential, recreational, visitors and users of surrounding transport routes.

The ZTVs presented in **Appendix H Figures H1 and H2** illustrate the theoretical visibility of the Developable Areas and substation/switchgear, out to 5 km. Preliminary site visits (as described in **Section 6.2.4** above) have provided a greater understanding of the surrounding landscape, and it is likely that any significant effects would extend across a much narrower distance from the Site boundary than the ZTV.

Given the ongoing optioneering of the preferred alignment within the Inter Array Connection Corridors and Grid Connection Corridors, ZTVs are not presented. Preliminary site visits have provided an understanding of the landscape and existing visibility of the Site, including existing OHL routes in the vicinity of the Developable Area.

Based on site analysis to date and previous experience of assessing the significance of landscape and visual effects of solar, battery storage and electricity export connection infrastructure in similar landscapes, significant landscape and visual effects arising from the Scheme would be likely to be limited to within a distance of approximately 3 km.

Sources of effects during the construction of the Scheme (please refer also to Chapter 2 Description of Scheme, Section 2.9 Construction phase):

- Introduction of construction activity and vehicular/personnel movements along the preferred alignment and on local roads;
- Establishment of construction compounds;
- Stripping of topsoil and movement of earth from trenching and temporary storage of material;
- Construction work associated with track upgrades and construction of temporary haul routes and running tracks;
- Installation of electric cabling, transformer cabins, battery storage units;
- Removal of vegetation and installation of fencing;
- Cable pulling;
- Construction of solar modules, excavation and piling as required at pylon bases, and erection of pylons; and
- Introduction of various structures including tall vertical structures (pylons).

Sources of effects during the operation of the Scheme (please refer also to Chapter 2 Description of Scheme, Section 2.10 Operational phase):

- Presence of solar PV modules, battery storage units, switchgear, Inter Array Connection Corridor (potential for overhead lines and/or underground sections) and associated structures including transformers, security fence and CCTV cameras etc;
- New OHL with associated pylons; and
- Long-term presence of open wayleaves through woodland and tree belts.

Due to the nature of OHL within the Grid Connection Corridor, the Scheme is likely to give rise to effects on landscape and visual receptors that cannot be fully mitigated. In these circumstances operational phase effects will be assessed in Year 1 only. Installation techniques for the Inter Array Connections and Grid Connection are still being investigated (overhead line versus underground configurations) and there may be scope for short sections of underground cable to avoid significant landscape/visual impacts, where appropriate and considering other likely significant effects or operational requirements of underground cabling.

6.2.8 Receptors/matters to be scoped into further assessment

Receptor/Matter	Phase	Justification
Landscape receptors		
LCA 4D West Wratting Wooded Claylands (Greater Cambridge LCA[121])	Construction, operation and decommissioning	The Developable Area B – Central and Developable Area C – East is partly within this LCA and is likely to directly affect the landscape characteristics of the LCA.
LCA 4E West Wickham Wooded Claylands (Greater Cambridge LCA)	Construction, operation and decommissioning	The Developable Area C - East is partly within this LCA and is likely to directly affect the landscape characteristics of the LCA. The Inter Array Connection Corridor between parcels within Developable Area C – East also falls within this LCA.
LCA 6B Wilbraham Fen Edge Chalklands (Greater Cambridge LCA)	Construction, operation and decommissioning	A small part of the Developable Area A - West and part of the south-west portion of Grid Connection Corridor A is within the LCA. The Scheme is likely to directly affect the landscape characteristics of the LCA.

[121] Greater Cambridge Shared Partnership and Chris Blandford Associates, 2021, Greater Cambridge Landscape Character Assessment: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://consultations.greatercambridgeplanning.org/sites/gcp/files/2021-08/LandscapeCharacterAssessment_GCLP_210831_Part_A.pdf Accessed 15 August 2024.

6.2.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
LCA 6C Fulbourn Fen Edge Chalklands (Greater Cambridge LCA)	Construction, operation and decommissioning	A small part of the west of Grid Connection Corridor A is within this LCA. The Scheme is likely to directly affect the landscape characteristics of the LCA.
LCA 7A Eastern Chalk Hills (Greater Cambridge LCA)	Construction, operation and decommissioning	The Developable Area A – West, Developable Area B – Central and a small part of Developable Area C - East and Inter Array Connection Corridor are predominantly within this LCA and the southern part of the Grid Connection Corridors are within it. The Scheme is likely to directly affect the landscape characteristics of the LCA.
Lowland Village Chalklands LCT (Regional Typology for the East of England[122])	Construction, operation and decommissioning	Grid Connection Corridors (A and small part of B) pass through this LCT and are likely to directly affect the landscape characteristics of the LCT.
Planned Peat Fen LCT (Regional Typology for the East of England)	Construction, operation and decommissioning	The Grid Connection Corridor (A) passes through this LCT and is likely to directly affect the landscape characteristics of the LCT.
Chalk Hills and Scarps LCT (Regional Typology for the East of England)	Construction, operation and decommissioning	The Grid Connection Corridors (A&B) pass through this LCT and are likely to directly affect the landscape characteristics of the LCT.
Wooded Village Farmlands LCT	Construction, operation and decommissioning	A very small peripheral part of the Developable Area C - East falls on the edge of this LCT. The Scheme is

[122] Landscape East, 2010, Regional Landscape Typology for the East of England: http://landscape-east.org.uk/east-england-landscape-typology Accessed 15 August 2024.

6.2.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
(Regional Typology for the East of England)		likely to directly affect the landscape characteristics of the LCT, albeit only in a very localised sense.
Designations of relevance to landscape		
Fleam Dyke SMR and SSSI	Construction, operation and decommissioning	The Developable Area B - Central is likely to affect the landscape setting and experience of the monument.
Roman Road SMR/SSSI	Construction, operation and decommissioning	The Developable Area A - West is likely to affect the landscape setting and experience of the monument.
Devils' Dyke SMR/SSSI	Construction, operation and decommissioning	The Grid Connection Corridors and ancillary structures are likely to affect the landscape setting and experience of the monument, particularly in construction and decommissioning phases (and, depending on the configuration employed, whether over or underground, possibly also in the operational phase).
Visual receptors		
Settlements – visual receptors		
Balsham, Brinkley, Carlton, West Wratting, Weston Colville, Weston Green and Willingham Green, potentially also Widgham Green, West Wickham and Horseheath	Construction, operation and decommissioning	Potential views from receptors in and around these settlements; for local residents and visitors to the area. Views of solar arrays may be possible and there is considered to be the potential for visual impacts from taller on-site substation/switchgear infrastructure from some of these settlements, although views from Widgham Green and Horseheath are unlikely..

6.2.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		However, these receptors could potentially be scoped out of further assessment depending on the final design of the Scheme.
Great Wilbraham, Little Wilbraham and Fulbourn	Construction, operation and decommissioning	Potential views from receptors in and around these settlements; for local residents and visitors to the area. Views of solar PVs are unlikely, but there is considered to be potential for visual impacts from taller on-site substation/switchgear infrastructure and the grid connection infrastructure (OHL). However, these receptors could potentially be scoped out of further assessment depending on the final location and design of the Scheme.
Bottisham, Swaffham Bulbeck, Lode, Swaffham Prior and Reach.	Construction, operation and decommissioning	Potential views from receptors in and around these settlements; for local residents and visitors to the area. Views of the Scheme within the Developable Areas are unlikely, but there are potential visual impacts from the Grid Connection infrastructure (OHL). However, these receptors could potentially be scoped out of further assessment depending on the final location and design of the Scheme.
Six Mile Bottom	Construction, operation and decommissioning	Potential views from receptors in and around these settlements; for local residents and visitors to the area. Views of the Scheme within the Developable Area B – Central and Developable Area C – East are unlikely, but there are potential visual impacts from the Grid Connection infrastructure (OHL).

6.2.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		However, these receptors could potentially be scoped out of further assessment depending on the final location and design of the Scheme.
Burwell, Exning and Westley Waterless	Construction, operation and decommissioning	Potential views from receptors in and around these settlements; for local residents and visitors to the area. Views of the Scheme within the Developable Area are unlikely, but there are potential visual impacts from the Grid Connection infrastructure (OHL). However, these receptors could potentially be scoped out of further assessment depending on the final location and design of the Scheme.
Individual residential properties	Construction, operation and decommissioning	A Residential Visual Amenity Assessment (RVAA) will be undertaken to identify properties within 150 m radius (see **Section 6.2.11** below) from the Scheme, for which an RVAA may be necessary. The RVAA would be an appendix to the ES.
Key routes – Visual receptors		
Users of Balsham Road and Little Wilbraham Road	Construction, operation and decommissioning	These routes run northwest-southeast through parts of the Scheme, between Cambridge and outlying settlements. There is potential visibility of different elements of the Scheme as users pass through/by the Scheme for up to 6 km.
B1052	Construction, operation and decommissioning	The B1052 runs southwest to northeast between Balsham and West Wratting, with parts of it in

6.2.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		proximity to the Developable Area B – Central and Developable Area C – East. There is potential visibility of different elements of the Scheme as users move along this route.
Six Mile Bottom Road	Construction, operation and decommissioning	This route runs northwest from West Wratting, along the northeast boundary of the Developable Area B – Central and adjacent to part of Developable Area C - East and continues through the south of the Grid Connection Corridor to join the A1304. There is potential visibility of different elements of the Scheme as users travel along the route.
A1307	Construction, operation and decommissioning	This route runs broadly east-west towards Linton, and is located in the southernmost part of the Study Area for the Developable Area A – West, taking in the settlement of Horseheath at the southernmost extents of the study area There is potential visibility of different elements of the Scheme as users travel along the route.
B1102	Construction, operation and decommissioning	This route passes between a number of settlements west/northwest/north/northeast of the Grid Connection Corridor. There is potential visibility of different elements of the Scheme as users travel along this route.
Recreational routes – Visual receptors		
Users of key recreational routes:	Construction, operation and decommissioning	Key recreational routes within the 3 km study area, from which the Scheme would be noticeable.

6.2.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
E2 European Long distance Route Icknield Way Trail Harcamlow Way Stour Valley Path NCN Route 11 NCN Route 51		
Users of PRoW through and within 3 km of the Site	Construction, operation and decommissioning	Potential for large scale changes in view from the PRoW.
Other recreational and/or tourist – Visual receptors		
Wicken Fen National Nature Reserve	Construction, operation and decommissioning	This is a renowned destination with people visiting to experience the locally important landscape and wildlife. There is potential for large scale changes to the views experienced by these receptors, associated with the Grid Connection alignment (OHL).
Various studs to the east of the Grid Connection Corridor	Construction, operation and decommissioning	Potential for large scale changes in views for visitors and users of the studs.
Other		
Cumulative landscape and visual effects (CLVIA)	Construction, operation and decommissioning	Potential for significant CLVIA effects with other consented and proposed projects of a similar type and scale within the study area, to be agreed with consultees. The existing OHL structure is considered within the baseline and does not form part of any CLVIA.

6.2.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Landscape receptors		
NCA 86 – South Suffolk and North Essex Clayland	Construction, operation and decommissioning	This NCA is within the study area but is not crossed by the Grid Connection Corridor. Developable Area C – East falls within a small part of the NCA. Any impacts from the Scheme would not be significant. The focus of the assessment will be on the relevant finer grain county/local authority landscape character areas.
NCA 87 – East Anglian Chalk	Construction, operation and decommissioning	The NCA covers the majority of the Site and study area. However, considering the scale of the NCA in comparison to the scale of the Scheme, impacts from the Scheme would not be significant. The focus of the assessment will be on the relevant finer grain county/local authority landscape character areas.
NCA 46 – The Fens	Construction, operation and decommissioning	This NCA is within the study area and covers a small portion of the north of the Grid Connection Corridors. Any impacts from the Scheme would be indirect and would not be significant. The focus of the assessment will be on the relevant finer grain county/local authority landscape character areas.
LCA 1E Fulbourn Fen (Greater Cambridge LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 1 km northwest of Grid Connection Corridor A) but is not within the

6.2.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
		Site. Any impacts from the Scheme would be indirect and would not be significant.
LCA 7B Gog Magog Chalk Hills (Greater Cambridge LCA)	Construction, operation and decommissioning	This LCA is within the study area (abuts the west corner of Developable Area A) but is not within the Site and is separated from the Developable Area by the A11. Any impacts from the Scheme would be indirect and would not be significant.
LCA 7C Linton Chalk Hills (Greater Cambridge LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 790 m south of Developable Area A) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
LCA 8A Pampisford Lowland Chalkland (Greater Cambridge LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 1.3km southwest of Developable Area A) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
LCA 9D Granta River Valley (Greater Cambridge)	Construction, operation and decommissioning	This LCA is within the study area (c. 2.5km south of Developable Area A) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
LCT Lowland Village Farmlands (East of England Typology)	Construction, operation and decommissioning	This LCT is within the study area (c. 1.9 km north of Grid Connection Corridor A) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.

6.2.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
LCA G1 Newmarket and Fordham Chalklands (West Suffolk LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 875 m southeast of Grid Connection Corridor B) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
LCA A1 Upper Stour Valley (West Suffolk LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 2.6 km east of Developable Area C) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
LCA B1 Haverhill Farmlands (West Suffolk LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 2.4 km southeast of Developable Area C) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
LCA B2 Sowley Green Plateau Farmlands (West Suffolk LCA)	Construction, operation and decommissioning	This LCA is within the study area (c. 1.8 km southeast of Developable Area C) but is not within the Site. Any impacts from the Scheme would be indirect and would not be significant.
Character areas outside of the study area	Construction, operation and decommissioning	Landscape character areas outside the study area would be scoped out of the EIA because any impacts from the Scheme would be indirect and would not be significant.
Designations of relevance to landscape		
National Landscape Designations	Construction, operation and decommissioning	There are none within the study area.

6.2.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Visual receptors		
Settlements – visual receptors		
Little Abington, Great Abington, Hildersham and Babraham	Construction, operation and decommissioning	Considering the distance from the Site (over 2 km south/southeast of Developable Area A), inward looking nature of the settlement and intervening vegetation, there may be occasional glimpsed views of taller elements of the Scheme, but there would not be significant effects on these receptors.
Wicken	Construction, operation and decommissioning	Considering the existing energy infrastructure in this context, along with the distance from the Site (c.2.3 km north of Grid Connection Corridor A) and intervening vegetation, there may be occasional glimpsed views of the Scheme, although there would not be significant effects on these receptors.
Key routes – Visual receptors		
A11	Construction, operation and decommissioning	Considering the transient nature of the views, the general purpose of users on this route, landform and substantial existing vegetation, whilst there may be occasional glimpsed views of the Scheme, there would not be significant effects on these receptors.
A14 and A1303	Construction, operation and decommissioning	Considering the transient nature of the views, the general purpose of users on this route, existing energy infrastructure, landform and intervening vegetation, whilst there

6.2.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
		may be occasional glimpsed views of the Scheme, there would not be significant effects on these receptors.
Other recreational and/or tourist sites – Visual receptors		
Gog Magog Hills and Wandlebury Country Park	Construction, operation and decommissioning	This is an important local historical landscape and destination. It is outside of the study area. Due to distance, intervening vegetation and direction of the promoted viewpoint (orientated away from the Site) impacts from the Scheme would not be significant.
Visitors to Registered Parks and Gardens, including Wilbraham Temple, Swaffham Prior House, Anglesey Abbey and Dullingham House.	Construction, operation and decommissioning	Although these sites are within the study area, they are predominantly enclosed by vegetation within the designed landscape and particularly within mature and robust boundary planting. Views associated with these sites are generally inward looking, with very limited opportunity for views out towards the Scheme. Impacts from the Scheme would not be significant.
Fulbourn Fen Nature Reserve	Construction, operation and decommissioning	This is a well treed destination that is outside of the ZTVs. Due to distance from the Scheme and the intervening vegetation views of elements of the Scheme would be limited and there would not be significant effects on these receptors.
Visitors to Meg's Mount	Construction, operation and decommissioning	This is a well treed destination that is outside of the ZTVs. Although it is close to the Scheme, the intervening vegetation would enclose views and

6.2.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
		elements of the Scheme would be limited. There would not be significant effects on these receptors.
Other		
Visual receptors outside 3 km study area	Construction, operation and decommissioning	Due to the distance from the Scheme and, usually, intervening landform, vegetation and built form there would not be any significant effects on the visual amenity of receptors over 3 km from the Scheme.
Lighting impacts on landscape character and visual amenity	Construction, operation and decommissioning	In general, it is anticipated that the Scheme would not be lit. Infrared security lighting would be required around key electrical infrastructure, which would be sensor triggered and therefore not continuous. There may be need for occasional and temporary construction lighting and some low level task lighting during operation. Lighting impacts on landscape character and visual amenity would not be greater than negligible adverse.
6.2.10 Opportunities for enhancing the environment		
A comprehensive landscape and environmental masterplan and mitigation strategy for the Scheme will be developed and this will seek to deliver significant landscape, as well as biodiversity enhancement and green infrastructure connectivity.		

6.2.11 Proposed assessment methodology

The LVIA will be undertaken in accordance with published best practice, namely the '*Guidelines for Landscape and Visual Impact Assessment (Third Edition)*', Landscape Institute and IEMA 2013 (GLVIA3)[123] and associated technical guidance notes published by the Landscape Institute, as detailed below.

"Landscape and Visual Impact Assessment is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right and people's views and visual amenity." (GLVIA3, paragraph 1.1).

In addition to GLVIA3, other associated technical guidance notes of relevance to the assessment published by the Landscape Institute include:

- Technical Guidance Note LI TGN-2024-01: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition (2024)[124];
- Technical Guidance Note 06/19: Visual Representation of Development Proposals (2019)[125];
- Technical Guidance Note 02/21: Assessing landscape value outside national designations (2021)[126];
- Technical Guidance Note 02/19: Residential Visual Amenity Assessment (2019)[127]; and
- Technical Guidance Note 04/20: Infrastructure (2020)[128].

Wherever possible, identified effects will be quantified, but the nature of landscape and visual assessment requires interpretation using professional judgement. To provide a level of consistency to the assessment, the prediction of magnitude and assessment of significance of the residual landscape and visual effects will be based on pre-defined criteria.

[123] Landscape Institute and Institute of Environmental Management & Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition.

[124] Landscape Institute (2024) Technical Guidance Note LI TGN-2024-01 Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition.

[125] Landscape Institute (2019) Technical Guidance Note 06/19: Visual Representation of Development Proposals.

[126] Landscape Institute (201) Technical Guidance Note 02/21: Assessing landscape value outside national designations.

[127] Landscape Institute (2019) Technical Guidance Note 02/19: Residential Visual Amenity Assessment.

[128] Landscape Institute (202) Technical Guidance Note 04/20: Infrastructure.

GLVIA3 states that *"professional judgement is a very important part of the LVIA"* (paragraph 2.23) and that *"in all cases there is a need for the judgements that are made to be reasonable and based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others"* (paragraph 2.24). It continues at paragraph 3.32 to state that *"there are no hard and fast rules about what effects should be deemed 'significant' but LVIAs should always distinguish clearly between what are considered to be the significant and non-significant effects."*

The LVIA will define the existing landscape and visual baseline environment, assess its sensitivity to change, describe the key landscape and visual related aspects of the Scheme, describe the nature of the anticipated changes and assess the effects arising during construction, operation and decommissioning.

Although linked, landscape and visual effects are considered separately. Landscape effects derive from changes in the landscape fabric, which may result in changes to the character, whereas visual effects are the effect of these changes as experienced by people (visual receptors).

The specific significance criteria to be used in the LVIA are set out in **Appendix C**.

All above ground primary and secondary elements of the Scheme will be considered in the LVIA as visible features which either individually or collectively have the potential to give rise to significant landscape and visual effects.

A selection of viewpoints, to be agreed with South Cambridgeshire and East Cambridgeshire District Councils, will be used in the LVIA to consider effects on different receptor groups, at various distances from the Site and to illustrate any particularly sensitive views identified through scoping.

Annotated photographs will be provided for each of the assessment viewpoints used in the LVIA. The annotated photographs will accord with guidance for 'Type 1' visualisations as defined in Landscape Institute Technical Guidance Note 06/19 (TGN 06/19)[129].

Photomontages will be presented for key viewpoints (locations to be determined through further consultation) in the LVIA (with wirelines/photowires to be produced for the PEIR Report). The photomontages will be produced using the same base photographs as the annotated photographs and accord with guidance for 'Type 3' or 'Type 4' visualisations as defined in TGN 06/19.

Mitigation measures will be developed as appropriate and taken into consideration in the assessment of effects. Operational phase effects will be assessed in Year 1 and Year 10 (Year 1 only for the grid connection, assuming OHL).

The LVIA will conclude by summarising which if any effects are assessed as 'significant'.

[129] Landscape Institute (2019) Technical Guidance Note 06/19: Visual Representation of Development Proposals.

As set out within LI Technical Guidance Note 02//19 'Residential Visual Amenity Assessment'[130]:

"Changes in views and visual amenity are considered in the planning process. In respect of private views and visual amenity, it is widely known that no one has 'a right to a view."

And:

"It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook/visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before."

The LVIA will present, as an appendix to the main assessment, a RVAA of visual effects on residential properties for any property where there is a possibility that the visual effects may approach the threshold described above.

Cumulative landscape and visual effects will be assessed as appropriate. Other projects to be considered in the cumulative LVIA will be identified through stakeholder consultation (see **Chapter 7 Cumulative Effects**).

6.2.12 Difficulties and uncertainties

Key difficulties and uncertainties with regard to the LVIA at this stage are identified as follows:

- Limitations of the programme to DCO submission with regard to a complete set of winter and summer photographs and photomontages and particularly with regard to the ability to accommodate late stakeholder requests for images in this regard. Where this occurs, it will be clearly noted as a limitation/qualification within the assessment.

6.2.13 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed LVIA study areas?
- Do you agree that the data sources listed to inform the LVIA are appropriate?
- Do you agree that the surveys proposed to inform the LVIA are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the LVIA?
- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?

[130] Landscape Institute (2019) Technical Guidance Note 02/19: Residential Visual Amenity Assessment.

- Do you agree with the landscape and visual receptors that are proposed to be scoped in and out of further assessment?
- Do you agree with the proposed factor-specific assessment approach?
- Are there any specific viewpoints that you would like us to consider and/or illustrate as a photomontage?
- Are there any other developments which you consider it will be necessary for us to address in a cumulative landscape and visual impact assessment?

6.3 Cultural heritage

6.3.1 Consultation

The Cambridgeshire Historic Environment Record (HER) has been consulted in the preparation of this EIA Scoping Report to gather data on known non-designated heritage assets.

Historic England will be consulted regarding potential impacts on designated heritage assets as a result of direct impacts and changes in their setting; this consultation will be continued throughout the EIA.

The Written Scheme of Investigation (WSI) for the geophysical surveys was approved by Cambridgeshire Historic Environment Team (CHET) in March 2024. CHET will continue to be engaged as survey work is progressed for the remaining Scheme components and assessment.

Further consultation with Cambridgeshire County Council, South Cambridgeshire District Council and East Cambridgeshire District Council will be carried out to confirm the scope of and timing of any intrusive evaluation following completion of the geophysical survey, and the South Cambridgeshire Council's Conservation Officer will be consulted regarding potential impacts on Conservation Areas and Grade II Listed Buildings as these lie outside of the remit of Historic England.

6.3.2 Study area

A 2 km study area from the Site Boundary will be used for heritage assets. The ZTVs for the Scheme (see **Section 6.2** and **Appendix H Landscape and visual amenity figures**) will also be used to inform the study area in respect of setting impacts on all designated heritage assets up to 2 km, while designated heritage assets particularly sensitive to changes in their setting in the opinion of the assessor will be filtered up to 3 km.

6.3.3 Data sources to inform the EIA baseline characterisation

The following sources of information have been used to inform this EIA Scoping Report:

- South Cambridgeshire Local Plan (adopted September 2018), Policy NH/14: Heritage Values[131];
- East Cambridgeshire Local Plan April 2015 (as amended 2023), Policies ENV 12: List Buildings, ENV 14: Sites of archaeological interest, ENV 15: Historic parks

[131] South Cambridgeshire Local Plan (adopted September 2018).

and gardens, and ENV 16: Enabling development associated with heritage assets will be consulted once the Grid Connection Corridor alignment is confirmed[132];

- Information on designated heritage assets from the National Heritage List for England (NHLE), downloaded on 16 August 2024;
- Data on heritage assets and previous archaeological investigations from the Cambridgeshire HER, obtained as a digital data extract on 16 August 2024;
- Historical Ordnance Survey (OS) mapping; and
- LiDAR data obtained from the Environment Agency.

The following additional sources will be used to inform the assessment:

- Aerial photographs held by Historic England Archives, Cambridgeshire HER, and Cambridge University Collection of Aerial Photography;
- Maps and other relevant primary and secondary sources held in Cambridgeshire Archives; and
- Portable Antiquities Scheme (PAS) data.

6.3.4 Surveys to inform the EIA baseline characterisation

The following additional surveys are proposed to inform the EIA:

- Full desk-based assessment including walkover and 'aerial investigation and mapping' of LiDAR data and aerial photographs. This will include an assessment of potential impacts on the setting of heritage assets in the Site and surrounding area, following the methodology in Historic England Good Practice Note 3: The Setting of Heritage Assets.
- Geophysical survey (underway for Developable Areas A and B at time of writing).

The need for, scope, and timing of any intrusive evaluation will be discussed with the statutory consultees with the intention to seek agreement following completion of the desk-based assessments and geophysical survey.

6.3.5 Baseline conditions – Developable Areas and Inter Array Connection Corridors

Appendix I Cultural heritage figures provides supporting figures to the text within this section, identifying the designated and non-designated heritage assets, whilst an initial gazetteer of all heritage assets within 2 km of the Developable Areas and Inter Array Connection Corridors is provided in **Appendix J Initial gazeteer**.

Within Developable Area and Inter Array Connection Corridors

There are 83 heritage assets recorded within the Developable Areas and Inter Array Connection Corridors. These comprise two Scheduled Monuments and four Listed

[132] East Cambridgeshire Local Plan April 2015 (as amended 2023).

Buildings recorded on the National Heritage List for England (NHLE) and 77 non-designated heritage within the Cambridgeshire HER (see **Figure I2**, **Appendix I**).

The Scheduled Monument Fleam Dyke (NHLE 1006931 & HER 7889), which dates to the Early Medieval period, runs on a northwest to southeast orientation through the Inter Array Connection Corridor, and a small section of the Developable Area B - Central, while the remaining Scheduled Monuments relate to a Bronze Age *Bowl barrow 1080 m north east of Worsted Lodge Farm* that is part of a dispersed round barrow cemetery in Charterhouse Plantation on the northern boundary of Developable Area A - West (NHLE 1019989). A further four non-designated barrows/ring ditches are recorded by the Cambridgeshire HER, as well as ten cropmarks that are suggestive of further barrows/ring ditches. This indicates that the Developable Areas and Inter Array Connection Corridors were previously part of a Prehistoric funerary landscape.

Four Listed Buildings are located within the southern section of Developable Area C-East. All are associated with Grade II* West Wratting Park House (NHLE 1127902 & HER MCB18515) and its Grade II Stables, Garden Walls and Lordship Cottage and House (the latter being a single entry), while two non-designated heritage assets representing earthworks and surrounding park are also recorded (HER MCB21093, & MCB18516). In the grounds of West Wratting Hall (HER MCB18513, MCB18514), a possible Roman-British farmstead and deserted medieval settlement has also been identified (HER 10187 & 9152).

Further evidence for settlement activity has been identified within the Developable Areas and Inter Array Connection Corridors, with 14 non-designated cropmarks representing possible enclosures that are currently of an unknown date but could range in date from the Prehistoric to Medieval period (see **Figure I4**, **Appendix I**). Two former sites of windmill have been recorded in Developable Area C – East that illustrate the presence of small-scale Medieval industrial activity near Weston Colville.

Historic mapping records the location of a number of former field boundaries, while within the Developable Areas and Inter Array Connection Corridors the extant 'Parsonage Farm' and former sites of 'Bullen's Farm' and 'Little Green) are annotated. Two gravel pits and a copse of trees is marked as 'The Tower', which have not previously been recorded in the Cambridgeshire HER.

Within 2 km study area

There are 568 heritage assets recorded within 2 km of the Developable Areas and Inter Array Connection Corridors. These include 150 designated heritage assets (six Scheduled Monuments, 137 Listed Buildings and seven Conservation Areas) and 418 non-designated heritage assets (see **Figure I7**, **Appendix I**).

The six Scheduled Monuments relate to three Medieval moated sites (1019174, 1019184 & 1020059), Worstead Street (Via Devana) near Cambridge (NHLE 1003263 & HER 7970), a Roman Road that runs c. 280 m to the southwest of Developable Area A – West and Inter Array Connection Corridors, Mutlow Hill tumulus c. 320 m to north of Developable Area A - West and Inter Array Connection Corridors (NHLE 1006932 & HER 6320), which is a Bronze Age barrow, as well as *Four bowl barrows 920 m and 950 m east of Heath Farm form part of a dispersed round barrow cemetery in Charterhouse*

Plantation and are represented as a single designated heritage (NHLE 1017326), but grouped in two areas c. 135 m north of Developable Area A- West. These are two of 37 further heritage assets that relate to recorded Prehistoric ring ditches/barrows or cropmarks suggestive of similar activity within the 2 km study area and represent 6.5% of all the heritage assets recorded within the 2 km study area. This further illustrates that the Developable Areas and Inter Array Connection Corridors and surrounding landscape previously formed part of a wider Prehistoric funerary landscape, while a non-designated long barrow and enclosure has also been recorded c. 1.9 km to the southwest (HER 9282).

Thirty-nine heritage assets relate to Romano-British activity; these largely represent findspots or enclosures, but of note is a possible Romano-British shrine recorded c. 40 m northeast of Mutlow Hill tumulus, c. 320 m north of Developable Area A - West and Inter Array Connection Corridor (HER 06320b) and potential Roman villa c. 480 m southeast of Developable Area C - East.

Settlement activity has also been identified from the Medieval period with two manors documented. The nearest is located c. 300 m southeast of the Site at West Wratting (HER 8145), while ten moated sites have also been identified in the 2 km study area as well as a house platform earthworks at Balsham (HER 10837), c. 1 km southeast of the Developable Area and Inter Array Connection Corridor. Seven of the Listed Buildings have their origins in the Medieval period comprising the Grade I listed Church of Holy Trinity, c. 1 km southeast of the Developable Area and Inter Array Connection Corridors, as well as six Grade II* Churches that are recorded in the 2 km study area. The closest of these are the Parish Church of St Mary at Brinkley c. 560 m northeast of Developable Area C - East, the Church of St Peter at Carlton c. 750 m northeast of Developable Area C - East and the Church of St Andrew, c. 850 m east of the Developable Area and Inter Array Connection Corridors. Mutlow appears to have still played a role within the Medieval period and is recorded as a moot, which was a meeting place for the local administration (HER 06320c). This demonstrates that this location was utilised from at least the Bronze Age to the Medieval period.

The majority of the heritage assets recorded within the 2 km study area date to the Post Medieval period, with 269 dating to this time representing nearly 47% of all the assets recorded within the 2 km study area. These largely relate to residential properties located within West Wratting Conservation Area (15782), which Developable Area C – East surrounds to the north, and Balsham West End and Balsham Village Conservation Areas (15708 & 15707), c. 540 m and 1.10 km to the south of the Developable Areas and Inter Array Connection Corridors.

Heritage assets from this time that lie outside of these areas are predominantly related to extraction activity or are agricultural in character, with the Grade II Worsted Lodge Farmhouse c. 300 m south of the Developable Area A - West (NHLE 1127128), as well as Grange Farmhouse (NHLE 1165034) and Linton End House (NHLE 1318222) representing outlier Listed Buildings c. 300 m and c. 440 m east of Developable Area B - Central respectively.

Sixteen non-designated heritage assets date to the Modern period that relate to World War II features such as an airfield, temporary camp, pillbox, bomb decoy sites and a rifle range.

There are 99 non-designated heritage assets which are of unknown date. Yet from their descriptions they appear to predominantly relate to features that date between the Late Prehistoric to Medieval periods.

6.3.6 Baseline conditions - Grid Connection Corridors

Appendix I provides supporting figures to the text within this section, identifying the designated and non-designated heritage assets**.** Given the size of the Grid Connection Corridors, the initial gazeteer of all heritage assets within 2 km is not provided as the number of entries exceeds 1,000 items. This will be included as the Scheme design progresses and a preferred alignment(s) is identified.

Within Grid Connection Corridors

There are 239 heritage assets recorded within the Grid Connection Corridors. The NHLE records seven designated heritage assets - five Listed Buildings and two Scheduled Monuments.

The five Grade II Listed Buildings comprise two milestones (NHLE 1126318 & 1127083), a barn at Dotterell Farm as well as Spring Hall Farm (NHLE 1127153 & 1127082), and Hall Farmhouse (NHLE 1317771) (see **Figures I2** and **I3**).

The Scheduled Monument Devil's Ditch/Dyke (NHLE 1003262 & HER 7801), a large vallum defensive ditch, extends through the northern section of the Grid Connection Corridors study area on a northwest to southeast orientation and dates to the Early Medieval period. Three bowl barrows 640 m north west of Hare Park Stud, which represent a single Scheduled Monument, are recorded where the two sections of the Grid Connection Corridors converge in the north (NHLE 1016819 & HER 6746).

A further 51 non-designated barrows/ring ditches are recorded by Cambridgeshire HER meaning that 21% of all heritage asset relate to Bronze Age barrows/ring ditches. The remaining heritage assets identified largely relate to Prehistoric to Romano-British activity represented as possible settlements, recorded findspot artefacts or cropmarks suggestive of further activity.

Early Medieval funerary activity and Medieval agricultural activity are also well attested, and the majority of Post Medieval heritage assets recorded are similarly agricultural, representing farms and farmsteads. In addition, Newmarket Races runs north northeast to south southwest and bisects the eastern section at its northern junction (HER MCB32265), while the course of the Cambridge, Newmarket & Bury Branch Railway runs east-west, bisecting the southern section and converging with the former Chesterford-Newmarket Railway line that headed south. The former Barnwell Junction to Mildenhall Railway line runs southwest-northeast through the north of the Grid Connection Corridors.

Historic mapping records a number of former field boundaries which have not previously been recorded in the Cambridgeshire HER within the Grid Connection Corridors study area.

Within 2 km study area

There are 1,175 heritage assets recorded within 2 km of the Grid Connection Corridors study area.

- Eleven are Scheduled Monuments dating from the Neolithic to Medieval periods (see **Figure 2.1** and **Appendix A Environmental and Planning Features**).
- There are 252 Listed Buildings recorded within 2 km that comprise five Grade I listed Churches and an Abbey that have their origins in the Medieval period, 14 Grade II* listed buildings representing further churches, large houses and mills that are Post Medieval in date, as well as 233 Grade II listed buildings that are largely located around settlements and eight conservations areas.
- There are also two Grade II Registered Parks and Gardens within the 2 km study area comprising Swaffham Prior House (NHLE 1000396 & HER 06444A), c. 190 m west of the Grid Connection Corridors study area, and Wilbraham Temple (NHLE 1000397 & HER 12285), c. 37m west of the Grid Connection Corridors.

Out of the 11 Scheduled Monuments recorded, seven date to between the Prehistoric and Romano-British periods, with three representing a long barrow (NHLE1020842 & HER 10282), c. 325m east of the Grid Connection Corridors, a causewayed enclosure (NHLE 1009103 & HER 6468), c. 1.70 km west of the Grid Connection Corridors, and a henge, c. 1.30 km west of the Grid Connection Corridors, which are all identified to date to the Neolithic period (NHLE 1011716 & HER 9292). Two further Scheduled Monuments date to the Prehistoric period and represent a group of five bowl barrows at Hare Park Stud (NHLE 1016818) and a group of four near Allington Hill Farm (NHLE 1016820) that date to the Bronze Age. This further exemplifies that the Grid Connection Corridors and the surrounding landscape formed part of a Prehistoric funerary landscape with 66 non-designated heritage assets, out of 267 that date between the Prehistoric and Romano-British period, which are also suggestive of similar funerary activity. Two Iron Age to Romano-British settlements are also recorded, both adjacent to the Grid Connection Corridors study area. The remaining four Scheduled Monuments are all Medieval in date relating to earthworks at the Abbey (NHLE 1472391, HER 11931 & 06559a), a deserted medieval village in Bottisham Park (NHLE 1006900 & HER 1124), a moated site at Swaffham Bulbeck (NHLE 1012622), and Burwell Castle (NHLE 1015596 & HER 1775), c. 167m east of the Grid Corridor Connections study area.

There are 200 non-designated heritage assets that date from the Early Medieval to Medieval periods that predominantly relate to findspots of coins and agricultural features, however moated sites, inhumations, buildings and the site of Shuckburgh Castle (HER 7391), c. 1.20 km to the east of the Grid Connection Corridors study area, are also attested.

There are 539 heritage assets that date to the Post Medieval period. These include 254 of the previously mentioned listed buildings, two registered parks and gardens and eight

conservations areas. The remaining 285 non-designated heritage assets comprise residential properties within the surrounding Conservation Areas and settlements.

There are 39 non-designated heritage assets that date to the Modern period, largely relating to public air raid shelters and buildings associated with RAF Bottisham, while 109 non-designated heritage assets are of an unknown date but appear to largely date between the Prehistoric and Medieval periods based on their descriptions.

6.3.7 Additional (secondary and tertiary) mitigation

Archaeological remains

Where archaeological remains within the Site Boundary do not require preservation in situ and cannot be avoided through primary mitigation (i.e. through changes to the Scheme layout, design and/or construction methods), it is anticipated that additional mitigation to off-set potential adverse impacts will take the form of a programme of archaeological investigation and recording secured by a DCO requirement. Such a programme may include pre-commencement phases of archaeological excavation and/or archaeological 'watching brief' during construction. The need for and scope of such mitigation will be agreed with the CHET archaeological advisor and Historic England where necessary. The scope and methodology of the mitigation will be set out in a WSI.

No additional mitigation during the operational and decommissioning phase is currently proposed, as it is anticipated that any potential impacts would have been mitigated prior to or during the construction phase.

Setting

Where impacts on the setting of heritage assets within the study area cannot be avoided through primary mitigation (i.e. through changes to the Scheme layout), it is anticipated that additional mitigation to offset any potential operational phase adverse impacts will be required. This would most likely involve planting and landscaping.

6.3.8 Description of likely significant effects

The proposed layout of the Scheme is still to be confirmed following survey work (including geophysical surveys) and the results of consultation, therefore the archaeological potential of the Site have not yet been reported. As such, there remains some uncertainty regarding both the likely direct physical impacts on heritage assets within the Site as a result of construction activities, and the extent of visual change within the setting of heritage assets in the wider study area. This has therefore resulted in assets being scoped into further assessment (see **Section 6.3.9** below) which may, following detailed design, be scoped out of further assessment as effects will have been avoided. Similarly, there are assets proposed to be scoped out of further assessment (see **Section 6.3.10** below) which may, following changes to design of the Scheme, be

scoped back into further assessment should the asset then be affected, although unlikely.

The list of receptors outlined in **Section 6.3.9** below is therefore a "long list" of the heritage assets which will be considered in the assessment; however, not all are likely to experience significant effects.

Assets that have been scoped out of further assessment at this stage (see **Section 6.3.10** below) are those where their particular characteristics and the contribution made by their setting to their significance are anticipated to be unaffected by the Scheme regardless of its final layout.

6.3.9 Receptors/matters to be scoped into further assessment

Receptor/Matter	Phase	Justification
Four Scheduled Monuments within the Site Boundary (Fleam Dyke, Bronze Age *Bowl barrow 1080 m north east of Worsted Lodge Farm*, Devil's Ditch/Dyke and *Three bowl barrows 640 m north west of Hare Park Stud*)	Construction, operation and decommissioning	Construction activity has the potential to directly impact on these assets and the operation of the Scheme may impact on the contribution that setting makes to their significance, with potential for significant effects to occur.
17 Scheduled Monuments within 2 km study area	Operation	Depending on the layout of the Scheme, these assets may experience visual change in their setting during operation which could result in significant adverse effects.
Nine Listed Buildings within the Site Boundary[133]	Construction, operation and decommissioning	Construction activity has the potential to directly impact on these assets and the operation of the Scheme may impact on the contribution that setting makes to their

[133] Developable Area: Grade II* West Wratting Park House and its Grade II Stables, Garden Walls and Lordship Cottage and House (the latter being a single entry), and

6.3.9 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		significance, with potential for significant effects to occur.
Listed Buildings, Two Registered Park and Gardens, and 15 Conservation Areas within the 2 km study area	Operation	Depending on the layout of the Scheme, these assets may experience visual change in their setting during operation which could result in significant adverse effects.
Non-designated Heritage Assets within the Site Boundary	Construction, operation and decommissioning	Construction activity has the potential to directly impact on these assets and the operation of the Scheme may impact on the contribution that setting makes to their significance, with potential for significant effects to occur.
Non-designated barrows/ring ditches within the 2 km study area	Operation	Depending on the layout of the Scheme, these assets may experience visual change in their setting during operation which could result in significant adverse effects, as part of their cultural significance is based in the wider landscape and possible association with designated heritage assets.
Currently unknown heritage assets within the Site study area	Construction, operation and decommissioning	There remains uncertainty about the extent and significance of heritage assets within the Site and therefore the potential for significant effects is unknown.
6.3.10 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
17 Scheduled Monuments, Listed Buildings,	Construction and decommissioning	Construction and decommissioning phase effects resulting from changes in the setting of heritage assets will be temporary and

Grid Connection Corridors: the five Grade II Listed Buildings comprise two milestones, a barn at Dotterell Farm, Spring Hall Farm, and Hall Farmhouse.

6.3.10 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Two Registered Park and Gardens, and 15 Conservation Areas within the 2 km study area		reversible, with any decommissioning effects mitigated during the operation phase. . Construction activity related noise and dust will be controlled through the oCEMP and is unlikely to be significant. No assets have been identified that would be particularly sensitive to the temporary construction noise. Therefore, it is not considered necessary to repeat the setting assessment for the construction phase. Decommissioning activities will be controlled through the Decommissioning Management Plan and are unlikely to result in significant effects.
Non-designated barrows/ring ditches within the 2 km study area	Construction and decommissioning	Construction and decommissioning phase effects resulting from changes in the setting of heritage assets will be temporary and reversible, with any decommissioning effects mitigated during the operation phase. Construction activity related noise and dust will be controlled through the oCEMP and is unlikely to be significant. No assets have been identified that would be particularly sensitive to the temporary construction noise. Therefore, it is not considered necessary to repeat the setting assessment for the construction phase. Decommissioning activity will be controlled through the oDEMP and are unlikely to be significant
Non-designated heritage outside the Site, apart from those that have been proposed to be scoped in (see **Section 6.3.9**)	Construction, operation and decommissioning	Construction and decommissioning phase effects resulting from changes in the setting of heritage assets will be temporary and no worse than any setting effects during the operational phase. Construction activity will not directly impact these heritage assets as they are not located within the Site. Construction related noise and dust will be controlled through the oCEMP and is unlikely

6.3.10 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
		to be significant. No assets have been identified that would be particularly sensitive to the temporary construction noise. Therefore, it is not considered necessary to repeat the setting assessment for the construction phase. No non-designated heritage assets have been identified, beyond those that operation is proposed to be scoped in, which would be particularly sensitive to changes to their setting due to operation as the wider landscape and association with designated heritage assets does not contribute to their cultural significance. Decommissioning activity will be controlled through the oDEMP and are unlikely to result in significant effects.
Findspots recorded by Cambridgeshire HER within the Site	Construction, operation and decommissioning	As findspots, these have been removed from the Site and the heritage significance of their former locations will not be harmed by the Scheme.

6.3.11 Opportunities for enhancing the environment
Should residual effects remain during operation, potential enhancement opportunities may include measures to enhance the significance of heritage assets not affected by the Scheme, which would provide additional beneficial effects to be counted in the planning balance. This could include the enhancing of interpretation of designation heritage in the 2 km study area, such as Mutlow hill tumulus (NHLE 1006932 & HER 6320) or assist in removing heritage assets from the Historic England Heritage at Risk Register such as Henge 220m ESE of Herring's House (NHLE 1011716).

6.3.12 Proposed assessment methodology
The Scheme would result in a change to the existing baseline, and change might be considered as impacts according to the degree of change in relation to heritage significance. In accordance with EIA Regulations, the assessment would identify

potential impacts and effects as direct or indirect, adverse or beneficial, and short-term, long-term or permanent.

Direct impacts are those which physically alter an asset and therefore its heritage significance. Impacts upon setting are those which affect the heritage significance of an asset by causing visual or other sensory change within its setting. The assessment of effects resulting from change within the setting of heritage assets will follow the four-stage process set out in Historic England's Good Practice Advice Note 3: The Setting of Heritage Assets[134].

The assessment of effects will follow the significance criteria in **Appendix C**.

The residual effect is a product of the importance of the heritage asset and the magnitude of impact following mitigation. The importance of a heritage asset reflects any statutory or non-statutory designation or in the case of undesignated assets the professional judgement of the assessor with reference to regional research frameworks.

Conclusions of the assessed magnitude of impacts is a product of the consideration of the elements of an asset and its setting that contribute to its cultural significance and the degree to which the Scheme would change these contributing elements. The assessment will therefore reflect the varying degrees of sensitivity of different assets to change brought about by different types of development.

6.3.13 Difficulties and uncertainties

To ensure transparency within the EIA process, the following difficulties and uncertainties have been identified:

- The Grid Connection Corridor is currently being optioneered before further design.
- Existing records for the historic environment do not record all heritage assets. This will be addressed through the desk-based assessment and aerial investigation and mapping survey to identify previously unrecorded assets and assess the potential for below-ground archaeological remains. The geophysical survey will also further investigate the potential for below ground archaeological remains.

6.3.14 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed study area?
- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?

[134] Historic England (2017) Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (Second Edition) Historic England: Swindon. Available online: https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/

- Do you agree that the surveys proposed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?
- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of further assessment?
- Do you agree with the proposed factor-specific assessment approach

6.4 Land, soils and groundwater

6.4.1 Consultation

The Environment Agency, South Cambridgeshire District Council and East Cambridgeshire District Council will be consulted as part of the land, soil and groundwater assessment. Consultation with Natural England on the approach and methodology for the Agricultural Land Classification (ALC) was undertaken prior to these surveys commencing, and engagement will continue as the assessment work and mitigation measures are developed.

6.4.2 Study area

For the purposes of the land and soil assessment (excluding groundwater), the Site Boundary plus a 250 m buffer have been considered with regard to identifying land and soil related receptors that could be impacted by the construction, operation, and decommissioning of the Scheme. The size of the study area is appropriate to identify features that may impact on the Scheme.

With regards groundwater receptors, a 1 km buffer area has been assessed, which is considered suitable and sufficient in terms of identifying possible impacts associated with the Scheme.

6.4.3 Data sources to inform the EIA baseline characterisation

The baseline conditions of the study area have been determined using a number of different sources, including:

- Geological maps (bedrock and superficial geology);
- Hydrogeological and groundwater vulnerability maps;
- Soil survey maps;
- Abstraction and discharge records relating to groundwater (Developable Area and Inter Array Connection Corridors only), plus aquifer designation and groundwater source protection zones;
- Environment Agency, local authority and British Geological Survey (BGS) data on the location of waste sites, pollution incidents and potentially contaminated sites (Developable Area and Inter Array Connection Corridors only);
- Mineral sterilisation and geological conservation review sites;
- Publicly available historical mapping for the Site (Developable Area and Inter Array Connection Corridors only); and

- A site-specific ALC survey which was completed for the Developable Areas A – West and B - Central in spring/summer 2024. Surveys of Developable Area C – East will be completed in early 2025.

A significant amount of site-specific information has been obtained from an Envirocheck search covering the Developable Areas. The database results incorporate records from the local authorities, the Environment Agency and BGS and will be provided in full as part of the Preliminary Risk Assessment report (PRA), which will be prepared in support of the DCO application.

As the preferred alignment has yet to be selected, an Envirocheck search has not been completed for the Grid Connection Corridors, however this will be undertaken to inform the PEIR and/or ES.

6.4.4 Surveys to inform the EIA baseline characterisation

A walkover survey of Developable Areas A - West and B-Central and the Inter Array Connection Corridor 1, serving these areas, was conducted on 27-28 August 2024. The Grid Connection Corridors were not included as the preferred alignment is still being optioneered. A walkover of these areas will be undertaken as part of the baseline assessment relating to land, soil and groundwater (to be presented within the PEIR and/or ES).

An ALC survey was completed for Developable Areas A -West and B - Central in spring/summer 2024. An ALC survey of Developable Area C (East), and Inter Array Connection Corridors 1 and 2, are planned for early 2025. Additional ALC surveys will be required once the routeing for the Grid Connection has been progressed, and a preferred alignment selected.

Intrusive site investigation will be undertaken at an appropriate juncture as the Scheme develops. The scope of the site investigation will be informed by the findings of the PRA.

6.4.5 Baseline conditions

Information on baseline conditions for the elements within the land, soil and groundwater chapter has been sub-divided where appropriate.

Designated geological sites

Developable Areas, Inter Array Connection Corridors & Grid Connection Corridors

There are no recorded geological conservation review sites, regionally important geological and geomorphological sites (RIGS) or Local Geology Sites within 250 m of the Site.

Mineral extraction sites and mineral safeguarding areas

Developable Areas A -West and B -Central and Inter Array Connection Corridor 1

There are several Mineral Safeguarding Areas (MSAs) across these parts of the Site, which relate to deposits of sand and gravel, as identified on BGS geological mapping and the Cambridgeshire and Peterborough Minerals and Waste Local Plan (July 2021)[135], and both the Developable Areas A - West and B - Central, and the Inter Array Connection Corridor 1, lie entirely within an MSA relating to chalk extraction. The Minerals and Waste Local Plan also identifies that the Inter Array Connection Corridor 1 lies immediately adjacent to, or possibly encroaches on part of, a Consultation Area (mapping resolution is such that it is difficult to ascertain the boundary of the Consultation Area in relation to the Site's boundary).

Developable Area C - East and Inter Array Connection Corridor 2

Much of Developable Area C - East is situated within MSAs associated with deposits of sand and gravel and chalk extraction. There are no known mineral extraction sites within these parts of the Site according to the Local Plan.

Grid Connection Corridors

Several MSAs relating to deposits of sand and gravel are situated within both Grid Connection Corridors. A Mineral Development Area and associated Consultation Area is identified within Grid Connection Corridor A. Both Grid Connection Corridors are situated within an MSA for chalk extraction.

A Minerals Safeguarding Assessment will form part of the Planning Statement which will be submitted in support of the DCO application and therefore minerals will not be considered within the ES.

Geology

Developable Areas and Inter Array Connection Corridors

The bedrock geology across the Developable Areas and associated Inter Array Connection Corridors is principally composed of the New Pit and Lewes Nodular Chalk Formations, with the Holywell Nodular Chalk formation present in the north-western parts of Developable Areas A - West and B - Central.

Superficial deposits are largely absent from these areas of the Site. Lowestoft Formation (Diamicton Quaternary Glacial Deposits) are present across parts of the south and east of Developable Areas A - West and B - Central and Inter Array Connection Corridor 1 and across the southern and eastern parts of Developable Area C - East and all of Inter

[135] Cambridgeshire County Council and Peterborough City Council (2021) Cambridgeshire and Peterborough Minerals and Waste Local Plan. Adopted July 2021. Accessed at https://www.cambridgeshire.gov.uk/business/planning-and-development/planning-policy/adopted-minerals-and-waste-plan, on 12 September 2024.

Array Connection Corridor 2. The Lowestoft Formation (Sand and Gravel deposits) are shown to be present beneath parts of Developable Area A – West.

There are no mapped area of artificial ground shown on the BGS map database within the Site. Made ground is potentially present in localised areas associated with mineral extraction sites, farm buildings or tracks, but there is no indication that extensive areas of artificial ground or made ground would be present.

An initial review of BGS borehole records was undertaken, and these were in agreement with the recorded geological succession, i.e. superficial deposits generally being absent or not recorded on the borehole records. Depths to the chalk bedrock range from ground level to around 11 m below ground level (m bgl). The majority of BGS borehole records relate to water wells (indicative of the prevalence of groundwater abstraction from the chalk in the area) and detailed descriptions of any superficial deposits present were not included.

Grid Connection Corridors

The bedrock geology across the Grid Connection Corridors also comprise the Chalk Formations described above, with the Zig-Zag and West Melbury Marly Chalk Formations present towards the northern extent of these areas of the Site.

Superficial deposits are also largely absent from the Grid Connection Corridors of the Site. However, Alluvial fan deposits, Head (clay, silt, sand and gravel), Alluvium (clay, silt, sand and gravel) and River Terrace deposits (sand and gravel) are shown at various locations within the Grid Connection Corridor. Peat deposits are shown to be present towards the northern extent of Grid Connection Corridor A (to the west of Burwell).

There are no mapped areas of artificial ground (i.e. made ground) shown on the BGS map database. Made ground is potentially present in localised areas associated with mineral extraction sites, farm buildings or tracks, but there is no indication that extensive areas of artificial ground would be present.

Reviewed BGS borehole records indicate that superficial deposits are not present, with Chalk bedrock being recorded immediately beneath topsoil.

Soil

Developable Areas A - West and B - Central

The Site-specific ALC survey was completed in spring 2024. For the assessed area, the following percentages of soil types were recorded to be present:

- Grade 1 – 1.8 ha (0.2%)
- Grade 2 – 72.4 ha (9.4%)
- Subgrade 3a – 278.9 ha (36.3%)
- Subgrade 3b – 401.5 ha (52.3%)
- Grade 4 – 12.9 ha (1.7%)

Land that is classified as Grade 1, Grade 2 or Grade 3a is considered to be Best and Most Versatile agricultural land (BMV). MV land accounts for approximately 45.9% of the total Developable Area.

The survey identified fine loamy/clayey soils, immediately over chalk. On land with soils of the type found within the Site, the principal limitations to agriculture are soil droughtiness, and in some areas soil wetness and gradient.

Developable Area C – East, Inter Array Connection Corridors and Grid Connection Corridors

An ALC survey of Developable Area C – East, and Inter Array Connection Corridors, is planned for early 2025, subject to access. Once the preferred alignment has been selected for the Grid Connection and construction technique confirmed, the need for ALC surveys will be confirmed. These will be reported in the PEIR and/or ES.

Hydrogeology

Developable Areas, Inter Array Connection Corridors & Grid Connection Corridors

The bedrock deposits underlying the Site form a principal aquifer, with superficial geological units (where present) defined as secondary A aquifers or secondary aquifers (undifferentiated).

Principal aquifers are defined as strategically important rock units that have high permeability and water storage capacity.

A secondary aquifer is defined as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. Secondary (undifferentiated) aquifers may exhibit variable permeability and storage properties.

Depth to groundwater is unconfirmed. It is anticipated that the regional direction of groundwater flow is in line with local topography and towards surface watercourses. Abstraction from groundwater for public and private potable water supply and/or commercial use is likely to have a local or regional scale influence on flow direction and levels.

Sections of all three Developable Areas, the Inter Array Connection Corridor 1 and Grid Connection Corridors are situated within a Zone I Source Protection Zone (SPZ) with respect to groundwater abstraction sources. The entire Site (with the exception of the northern extent of the Grid Connection Corridor) is situated within Zone II (outer protection zone) and Zone III (total catchment) sections of a SPZ. These protection zones are associated with a series of groundwater abstractions in the wider area.

Although the Envirocheck search obtained for the Developable Areas and Inter Array Connection Corridors does not identify any groundwater abstractions situated within these parts of the Site, the BGS Geoindex indicates numerous water wells have been drilled in these areas. Information on groundwater abstraction points has yet to be obtained for the Grid Connection Corridors, with an Envirocheck search to be completed once the preferred alignment is identified. The Envirocheck search obtained for Developable Area C - East, however, does indicate the presence of a potable water

abstraction within Grid Connection Corridor B, which is currently licensed to South Staffordshire Water Plc.

Discharge consents[136]

Developable Areas and Inter Array Connection Corridors

There are no discharge consents within the Site boundary of Developable Areas A - West and B - Central and the associated Inter Array Connection Corridors. Three discharge consents are in place within Developable Area C - East, which relate to agricultural trade effluent.

There are 20 off-site discharge consents within 250 m of the boundary of these areas, which are related to trade agricultural effluent and sewage discharges and private sewage and soakaway discharges.

Grid Connection Corridors

Information has not been obtained for the Grid Connection Corridors, given the ongoing optioneering, but will be obtained once the preferred alignment is identified and an Envirocheck report is obtained.

Historical site usage

Developable Areas A – West and B - Central and Inter Array Connection Corridor 1

Since earliest publicly available historical mapping (1885), the Site has undergone little significant change in terms of land usage, with the area shown as being predominantly agricultural in nature. Although none are indicated on Site, several chalk and gravel pits are shown within 250 m of the Site boundary.

Developable Area C - East and Inter Array Connection Corridor 2

Similarly, these parts of the Site have historically been occupied by agricultural land uses and have undergone no significant changes according to available historical maps. Two former chalk pits are shown on historical mapping within the western part of Developable Area C - East, although these are not associated with landfilling or areas of mapped areas of artificial ground.

Grid Connection Corridors

Information has not been obtained for the Grid Connection Corridors, given the ongoing optioneering, but will be obtained once the preferred alignment is identified.

Landfill sites and waste transfer sites

Developable Areas and Inter Array Connection Corridors

No licensed active waste management facilities or landfill sites are recorded within these areas of the Site. A licensed waste management facility/registered landfill site is situated at Wilbraham Chalk Quarry, approximately 85 m to the north of Developable Area B - Central, which is authorised to manage inert and non-biodegradable (non-construction) wastes. The environmental database indicates that there are no restrictions on the

[136] Relevant abstraction consents are discussed in Section 5.2 Water.

waste sources received at the landfill, but that explosive waste, gas cylinders, offal and clinical waste are prohibited.

Two historical landfill sites are located immediately adjacent to Developable Area C – East; 'Land off Six Mile Bottom Road' located to the west of West Wratting (named) received industrial, commercial and household wastes between 1966 and 1974. No information is available within environmental database search for the Weston Colville historic Landfill site

Grid Connection Corridors

Limited information is currently available for the Grid Connection Corridors as an Envirocheck search has not been obtained for this part of the Scheme. This will be undertaken once a preferred alignment is selected. It should be noted that two of the waste sites described above (Land off Six Mile Bottom Road and Weston Colville) fall within Grid Connection Corridor B . Historical landfill data has been obtained from open source GOV.UK data[137], which indicates the presence of one historic landfill within the Grid Connection Corridor A; Purle waste disposal, Great Wilbraham. This site received industrial waste up to 1968 and is situated within Grid Connection Corridor A, approximately 750 m to the north of the A11 highway and immediately south of the Cambridge – Newmarket railway line that traverses the Site.

Land contamination

Developable Areas and Inter Array Connection Corridors

The Site history indicates that land use has been agricultural. Contamination may be present associated with agriculture, but based on publicly available historical mapping, there is no information suggesting other potential contaminative site uses have occurred. Made ground may be present in limited locations, along tracks and close to farm buildings located within the Site and potentially within unrecorded mineral extraction sites, if present. There is the potential for asbestos-containing materials to be present if made ground deposits are identified.

No significant pollution incidents to Controlled Waters have been recorded on or within 1 km of the Site and only two pollution incidents have been recorded within the Site boundary, both of which involved organic slurry waste and were recorded as minor incidents. There are no contaminated land register entries or notices on or within 250 m of the Site.

Grid Connection Corridors

Information is not currently available for the Grid Connection Corridors, but given the agricultural nature of the Site, land contamination risks are likely to be similar to the Developable Areas and Inter Array Connection Corridors of the Site, although this will be ascertained once an Envirocheck search has been completed.

[137] https://www.data.gov.uk/dataset/17edf94f-6de3-4034-b66b-004ebd0dd010/historic-landfill-sites. Accessed on 28 August 2024.

Natural geological hazards

Developable Areas and Inter Array Connection Corridors

According to the Envirocheck search information, there is the potential for low risks from geological hazards within the Site, as follows:

- Collapsible ground hazards: no hazard to very low hazard;
- Compressible ground hazards: no hazard to very low hazard;
- Running sand hazards: no hazard to very low hazard;
- Shrink/swell hazards: no hazard to low hazard;
- Ground dissolution hazards: no hazard to very low hazard; and
- Landslide hazards: no hazard to low hazard.

Grid Connection Corridors

Information concerning natural geological hazards is not currently available for the Grid Connection Corridors. A small area of peat is shown on BGS mapping towards the northern extent of Grid Connection Corridor A. Superficial deposits, where present, differ to the Developable Area and Inter Array Connection Corridors in that alluvial fan and alluvium are shown to be present according to BGS mapping. Ground conditions, and therefore natural geological hazards are to be further assessed for the Grid Connection Corridor, to inform the PEIR and/or ES.

6.4.6 Additional (secondary and tertiary) mitigation

Construction

The following measures will be incorporated into the oCEMP and oSMP, to ensure that impacts to land, soils, and groundwater can be minimised during the construction phase (please note that these are examples, and not a full list of measures):

- Soil management during works will incorporate guidelines for soil handling, to include replacement of soil in temporary laydown areas;
- During construction works, surface water drains should be designed to carry only uncontaminated water. Foul drains should carry contaminated water to a sewage treatment works under suitable discharge consent; and
- Concrete mixing would be undertaken in designated areas to minimise the potential for impact on watercourses.

Standard mitigation to be applied will be protective of all groundwater resources and groundwater quality will be appropriately protected by mitigation measures implemented via the oCEMP, oOEMP and oDEMP. The oCEMP would also include emergency procedures to manage accidental spillages and leaks and include procedures to mitigate against contaminated land and erosion.

Due to the connection between quality of surface water and quality of groundwater, the Surface Water Management Plan (SuWMP) will also be important in avoiding,

minimising and mitigating effects on groundwater. The SuWMP will include best practice working methods for the protection of surface water from pollution and other adverse impacts, which could have subsequent effects on groundwater.

Operation and decommissioning

No additional mitigation measures would be expected to be required during operational or decommissioning phases beyond the embedded mitigation incorporated into the design of the Scheme and the measures detailed in the oSMP, oOEMP and the oDEMP.

6.4.7 Description of likely significant effects

Land (potential contamination)

Potential contaminative land uses have been identified that could affect soil quality during construction. Whilst these effects are unlikely to be significant, this factor is scoped in for further assessment.

Land (soils and agricultural land)

Due to the nature of the Scheme, soil and agricultural land use will be impacted to a degree during the construction, operation and decommissioning phases. Based on preliminary ALC mapping, BMV land accounts for approximately 45.9% of Developable Areas A - West and B (Central). ALC surveys are to be completed for Developable Area C – East, the Inter Array Connection Corridors and the preferred alignment within the Grid Connection Corridor once confirmed. Once completed, these surveys will identify the presence of BMW land within these areas. There is the potential for likely significant effects relating to the availability of BMV agricultural land (adverse effects during all three phases) and the physical properties of the soil (adverse during construction and decommissioning and beneficial during operation).

Groundwater (potential contamination)

Potential contaminative land uses have been identified that could affect groundwater quality. Whilst these effects are unlikely to be significant given the nature of the Scheme, this factor is scoped in for further assessment

Land (geological hazards)

Based on available baseline data, significant effects associated with geological hazards are unlikely within the Developable Area. BGS mapping indicates that parts of the Grid Connection Corridor are underlain by alluvial fan and peat deposits, hence there may be geological hazards such as soft or compressible ground associated with these geologies that will be identified once the environmental database report is available for this part of the Site.

Construction

- Land (potential contamination).
- Land (soils and agricultural land).

- Groundwater (potential contamination).
- Land (geological hazards) – Grid Connection Corridors only.

Operation

- Land (soils and agricultural land).
- Land (geological hazards) – Grid Connection Corridors only.

Decommissioning

- Land (potential contamination).
- Land (soils and agricultural land).
- Groundwater (potential contamination).
- Land (geological hazards) – Grid Connection Corridors only.

6.4.8 Receptors/matters to be scoped into further assessment

Receptor/Matter	Phase	Justification
Land (potential contamination)	Construction and decommissioning	Potential sources of contamination are likely to be limited to localised areas of made ground associated with mineral extraction, farm buildings or tracks, although uncontrolled burial of materials, fuel, oil or agrichemical spills or animal burial sites may be present within agricultural land. A registered and historical landfill site has been identified within the Grid Connection Corridors and further assessment of these features will be completed as part of the PRA report for the Site. Additional potential sources of contamination may be identified once an Envirocheck search is completed for the Grid Connection Corridors. Given that a PRA report has not yet been completed, and that opportunities for further clarification remain regarding the Grid Connection Corridors, this factor is currently scoped in. Similarly, the exact details of the decommissioning work are to be determined, but may involve exposure of site soils and bedrock, with potential risks

6.4.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		for the mobilisation of any contamination that may be present.
Land (soils and agricultural land)	Construction, operation and decommissioning	Soils are a key resource in the area of the Scheme, and require appropriate handling in order to prevent physical damage to the resource e.g. through compaction, soil erosion during construction. There is also the potential for the Scheme to impact this resource by restricting access to the soils for agricultural usage. Information on the ALC of soils is important when assessing the significance of effects on this resource. Land categorised as Grade 1, Grade 2 or Grade 3a is classified as best and most versatile agricultural land (BMV), and for the Scheme, that accounts for approximately 45.9% of Developable Area A - West and Developable Area B - Central. ALC surveys are to be completed for Developable Area C – East, the Inter Array Connection Corridors and the preferred alignment within the Grid Connection Corridor once confirmed. Due to the presence of BMV land, soil and agricultural land is proposed to be scoped into the EIA for all phases of the development, with additional surveys to be completed to further inform this assessment.
Groundwater (potential contamination)	Construction and decommissioning	The groundwater in bedrock deposits is a Principal aquifer, and in superficial geological units it is either a Secondary A aquifer or secondary aquifer (undifferentiated). SPZs are present across the Site. It is possible that changes to the surface water regime could have a negative impact on the Site groundwater. However, adhering to industry best practice with respect to protection of surface water will

6.4.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		ensure that any adverse effects to surface water are minimised, reducing the potential for corresponding changes within the groundwater. This, in addition to the fact that an Envirocheck search has not yet been obtained for the Grid Connection Corridor, at the current phase of assessment it is considered appropriate that groundwater be scoped in for further assessment. If necessary, a piling risk assessment will be a requirement at a later stage in the project, prior to construction commencing. This will ensure potential risks to groundwater from piling operations are managed appropriately (information to be collected during the site investigation will be required to feed into this risk assessment).
Land (geological hazards) – Grid Connection Corridors only	Construction, operation and Decommissioning	A baseline review has not been fully completed for this area as the Envirocheck data search has yet to be completed. This will be undertaken once the preferred alignment is identified. It is anticipated that the geological hazards will be broadly similar to those identified beneath the Developable Area and Inter Array Connection Corridors. It is noted, however, that BGS mapping indicate the presence of peat deposits towards the northern end of the Grid Connection Corridor (to the west of Burwell). As a result, this factor is currently scoped in.

6.4.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Land (potential contamination)	Operation	Any issues relating to contamination resulting from Scheme activities would be controlled by the requirements of the oOEMP and the oDEMP (e.g., issues relating to storage and use of fuels, or cleaning chemicals and fire prevention). These documents would also address the potential for the Scheme to affect existing contamination.
Groundwater (potential contamination)	Operation	Considering the characteristics of the operational phase of the Scheme there are not likely to be significant effects to groundwater. The quality of groundwater will be appropriately protected by mitigation measures implemented via the oOEMP to be submitted in support of, and secured by, the DCO application. This should describe measures put in place to reduce the potential for contamination during operation, such as measures to prevent discharge, losses or fire from the BESS and information concerning any cleaning agents or other products used during the operational phase.
Land (geological units)	Construction, operation and Decommissioning	Geology comprises bedrock units of chalk with superficial units, where present, primarily of sand and gravel deposits. There are no RIGS or geological related SSSI's situated within the Site or surrounding area and the nature of the Scheme means that there are unlikely to be significant excavations or earthworks operations. As a result, there are no foreseen likely significant effects to the geological units underlying the Site, noting that the aquifer status of the underlying geology in terms of groundwater resource is considered as a separate factor.

6.4.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Land (geological conservation review sites)	Construction, operation and Decommissioning	There are no geological SSSIs on- or within 250 m of the Site, therefore this issue is proposed to be scoped out of the EIA.
Land (mineral safeguarding)	Construction, operation and Decommissioning	The Developable Area and Inter Array Connection Corridor 1 lie almost entirely within a MSA relating to Chalk Extraction and several MSAs relating to deposits of sand and gravel are situated within Developable Area C - East and both Grid Connection Corridors. A Mineral Development Area and associated Consultation Area is identified within Grid Connection Corridor A As a result, it is proposed that an assessment of mineral safeguarding issues will be undertaken in support of the DCO application and presented in the Planning Statement, outwith the EIA. This will include consultation with the Mineral Planning Authority (Cambridgeshire County Council and Peterborough City Council) to ensure that any negative implications for MSAs are minimised and considered as part of the Scheme design. On the basis that the assets installed as part of the Scheme would predominantly be above ground and of a temporary nature, it is anticipated that this assessment would find that any impact to mineral resources is likely to be negligible.
Land (geological hazards) – Developable Areas and Inter Array Connection Corridors	Construction, operation and Decommissioning	The baseline review has not identified any geological hazards that require specific consideration during construction, operation or decommissioning of the Scheme within the Developable Area and Inter Array Connection Corridors. Risks from geological hazards within these areas of the Site are described in the Envirocheck

6.4.9 Receptors/matters to be scoped out of further assessment

Receptor/Matter	Phase	Justification
		search as 'no' hazard to 'low hazard'. Appropriate ground investigation will be undertaken prior to the construction phase, which will include an assessment of the geotechnical properties of the underlying geology and identify any identified risks to the Scheme.

6.4.10 Opportunities for enhancing the environment

No opportunities for environmental enhancement have been identified in respect of land, soils and groundwater at this stage.

6.4.11 Proposed assessment methodology

The following documents are relevant to the preparation of the land and soils assessment:

- Part IIA, Environmental Protection Act, 1990 (relevant in terms of assessment of contaminated land);
- The Environmental Permitting Regulations (England & Wales) 2016 (last revised March 2020) (relevant with respect to environmental permits);
- National Planning Policy Framework, Department for Levelling Up, Housing and Communities, March 2012 (last update September 2023);
- Overarching National Policy Statement for Energy (NPS EN-1) (latest revision March 2023) incorporates principles relating to geological conservation, land use and resource and waste management;
- Land Contamination Risk Management (LCRM), October 2020;
- Natural England Technical Information Note TIN049: Agricultural Land Classification: protecting the best and most versatile land, 2nd edition (2012); and
- Cambridgeshire and Peterborough Minerals and Waste Local Plan, 2036, adopted July 2021.

A desk-based PRA report will be prepared in support of the DCO application, which assesses the potential risks on the existing land, soil and groundwater baseline, including contamination issues. The PRA report conclusions and results of ground investigations will determine necessary mitigation measures to ensure that the construction, operation

and decommissioning of the Scheme do not result in significant effects on the receiving land and soil environment.

The assessment of baseline data will include a review of the information obtained for the Site for the matters that are to be scoped in, and each will be considered using professional judgement to determine whether the level of available information is acceptable (for example a large landfill site that is off-site and separated by a physical barrier such as a valley or stream may not require additional consideration, but a smaller contamination incident closer to the Site may be considered relevant).

The significance of potential impacts is assigned based on a set of definitions, as provided in **Appendix C EIA Significance Criteria**, and professional judgement will be used as appropriate to assess potential risks.

Consideration of cumulative effects will include a regional-scale assessment of impacts, the scope of which will be determined as the assessment progresses.

6.4.12 Difficulties and uncertainties

To ensure transparency within the EIA process, the following difficulties and uncertainties have been identified:

- An Envirocheck search has not yet been obtained for the Grid Connection Corridors. This will be addressed once the preferred alignment has been defined.
- A site survey has not yet been undertaken on the Grid Connection Corridors and Developable Area C - East. This will be addressed once the preferred alignment has been defined.
- Data on site history for the Developable Areas and Inter Array Connection Corridors areas have been obtained from publicly available historical maps, and there may be developments that occurred between map editions that are not evident.
- No intrusive site survey data was available at this stage of the EIA process, but this will be made available as the works associated with the Scheme progress.

6.4.13 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed study areas?
- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Do you agree that the surveys proposed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?

- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of the EIA?
- Do you agree with the proposed factor-specific assessment approach?

6.5 Air quality

6.5.1 Consultation

Consultation with Environmental Health departments at South Cambridgeshire District Council[138] and East Cambridgeshire District Council will be carried out to agree:

- The appropriate data for baseline characterisation;
- Receptor locations to be assessed in the study (such as human receptors and ecologically sensitives sites); and
- The assessment methodology.

6.5.2 Study area

Construction and decommissioning

Based on the Institute of Air Quality Management (IAQM) '*Guidance on the assessment of dust from demolition and construction v2.2*' (2024)[139], the study area for sensitive human receptors for earthworks and general construction activities will be up to 250 m from the Site Boundary. The study area for sensitive ecological receptors (as defined in the IAQM guidance) for earthworks and general construction activities will be up to 50 m from the Site Boundary. For trackout activities, the study area for both sensitive human and ecological receptors will be up to 50 m from the edge of the roads likely to be affected by trackout[140].

Operation

There is no proposed study are for air quality. Operational phase will be scoped out from the assessment as there will be no site activities resulting in significant dust and particulate matter emissions to air and only limited vehicle movements to the Site for operation and maintenance.

[138] South Cambridgeshire District Council's planning service is managed by the Greater Cambridge Shared Planning team.

[139] Institute of Air Quality Management (IAQM) Guidance of the Assessment of Dust from Demolition and Construction (Version 2.2). [Online]. Available at: https://iaqm.co.uk/wp-content/uploads/2013/02/Construction-Dust-Guidance-Jan-2024.pdf

[140] Trackout is defined as the transport of dust and dirt from the construction/demolition sites onto public road network, where it may be deposited and then re-suspended by vehicles using the network.

6.5.3 Data sources to inform the EIA baseline characterisation

An initial review of baseline conditions has been completed to inform the scoping process. This desk-based baseline air quality review will be expanded to establish existing air quality conditions within the study area. Information on air quality will be gathered from the monitoring stations managed by South Cambridgeshire District Council that form a part of the national and/or local networks and from the estimated background air quality maps published by the Department for Environment, Food and Rural Affairs (DEFRA).

6.5.4 Surveys to inform the EIA baseline characterisation

Air quality is considered to be good in the local area (see **Section 6.5.5**) and therefore it is anticipated that on-site air quality monitoring will not be required to provide baseline data to inform the assessment. Consultation with South Cambridgeshire District Council and East Cambridgeshire District Council will be undertaken to confirm.

6.5.5 Baseline conditions

The Scheme is located within the administrative area of South Cambridgeshire District Council, and the Grid Connection Corridors extend within the administrative area of East Cambridgeshire District Council. There is currently no Air Quality Management Area (AQMA) declared within South Cambridgeshire or East Cambridgeshire. Therefore, overall, air quality is considered to be good in the local area.

Developable Areas and Inter Array Connection Corridors

According to the South Cambridgeshire District Council 2024 Air Quality Annual Status Report[141], South Cambridgeshire District Council undertook automatic monitoring at four sites and non-automatic nitrogen dioxide (NO_2) diffusion tube monitoring at 38 locations during 2023.

The nearest monitoring location is an urban background NO_2 diffusion tube location (South Cambridgeshire District Council reference: DT29) on Church Lane in Little Abington, situated approximately 6.8 km southwest from the Scheme. The measured annual average NO_2 concentrations at this diffusion tube site, for years 2019 - 2023, ranged between 6.9 µg/m^3 and 10.9 µg/m^3, which were well below the annual mean NO_2 Air Quality Objective (AQO) of 40 µg/m^3 (national objective).

[141] South Cambridgeshire District Council 2024 Air Quality Annual Status Report (ASR). Available online: https://www.scambs.gov.uk/media/y4nkw32a/asr_2024_website-version.pdf

Estimated background air quality data are available from the UK-AIR website operated by DEFRA[142]. The website provides estimated annual average background concentrations of NO_2, PM_{10} and $PM_{2.5}$ on a 1 km^2 grid basis from Local Air Quality Management (LAQM) background maps. It is noted that estimated 2024 annual average background NO_2, PM_{10} and $PM_{2.5}$ concentrations at the Developable Area were 5.7µg/m^3, 14.8 µg/m^3 and 8.6 µg/m^3 respectively, which were below the relevant AQOs (NO_2 AQO: 40 µg/m^3; PM_{10} AQO: 40 µg/m^3; $PM_{2.5}$ AQO: 20 µg/m^3). The estimated 2025 annual average background NO_2, PM_{10} and $PM_{2.5}$ concentrations at the Developable Area are predicted to be 5.5 µg/m^3, 14.6 µg/m^3 and 8.5 µg/m^3 respectively; the estimated 2026 annual average background NO_2, PM_{10} and $PM_{2.5}$ concentrations at the Developable Area are predicted to be 5.4 µg/m^3 14.6 µg/m^3 and 8.5 µg/m^3 respectively. No exceedances of the relevant AQOs are predicted for years 2024-2026. Background concentrations are in general predicted to fall in time and are not expected to exceed their respective annual mean standards in future years.

Human receptors have been identified within 250 m of the Developable Areas and Inter Array Connection Corridors, including Worsted Lodge to the southwest of Developable Area A West. Several residential areas are located adjacent to land parcels within Developable Area C – East; West Wratting, Willingham Green, Weston Colville and Weston Green. Ecological receptors including Fleam Dyke Site of Specific Scientific Interest (SSSI), Hill Croft ancient and semi natural woodland, and Old Cambridge Road Verges County Wildlife Site (CWS) have been identified within 50 m of the Developable Areas and Inter Array Connection Corridors.

Grid Connection Corridors

According to the East Cambridgeshire District Council 2024 Air Quality Annual Status Report[143], East Cambridgeshire District Council undertook non-automatic nitrogen dioxide (NO_2) diffusion tube monitoring at 27 locations during 2023 and did not undertake any automatic monitoring.

The nearest monitoring location is a suburban NO_2 diffusion tube location (East Cambridgeshire District Council reference: SP3) on Tothill Road in Swaffham Prior, situated approximately 2.4 km northwest from the Grid Connection Corridors. Diffusion tube SP3 is a new monitoring location added in 2023. The measured annual average NO_2 concentrations at this diffusion tube site, for year 2023 was 8.4 µg/m^3, which was well below the annual mean NO_2 AQO of 40 µg/m^3.

According to the LAQM background maps, the estimated 2024 annual average background NO_2, PM_{10} and $PM_{2.5}$ concentrations at the Grid Connection Corridors were

[142] Department for Environment, Food and Rural Affair (Defra) Background Mapping Data for Local Authorities-2018. Available online: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018

[143] East Cambridgeshire District Council 2024 Air Quality Annual Status Report (ASR). Available online: https://www.eastcambs.gov.uk/sites/default/files/2024%20ASR_ECDC%20%281%29.pdf

7.1 µg/m^3, 15.9 µg/m^3 and 9.0 µg/m^3 respectively, which were below the relevant AQOs. The estimated 2025 annual average background NO_2, PM_{10} and $PM_{2.5}$ concentrations at the Grid Connection Corridors are predicted to be 6.8 µg/m^3, 15.7 µg/m^3 and 8.9 µg/m^3 respectively; the estimated 2026 annual average background NO_2, PM_{10} and $PM_{2.5}$ concentrations at the Grid Connection Corridors are predicted to be 6.7 µg/m^3 15.7 µg/m^3 and 8.9 µg/m^3 respectively. No exceedances of the relevant AQOs are predicted for years 2024-2026. Background concentrations are predicted to fall in time and are not expected to exceed the relevant AQOs in future years.

Human receptors have been identified within 250 m of the Grid Connection Corridors including Swaffham Prior, Reach and Burwell to the north and Westley Bottom and Lark Hall to the east. Ecological receptors including Fleam Dyke SSSI, Devil's Dyke SSSI, Newmarket Heath SSSI, Pauline's Swamp, Heath Road/Street Way Green Lanes and Burwell Disused Railway CWSs, and Swaffham Bulbeck protected road verge have been identified within 50 m of the Grid Connection Corridors.

6.5.6 Additional (secondary and tertiary) mitigation

Construction and decommissioning

Construction phase site-specific dust mitigation measures, in addition to the embedded mitigation measures (see **Section 4.8**), will be proposed based on the results of the pre-mitigation dust impacts assessment, which will also be applied to the decommissioning phase, where relevant (to be determined during the assessment stage). Construction and decommissioning phases mitigation measures will be outlined within the oCEMP and the oDEMP to be submitted as part of the DCO application.

Operation

Impacts on local air quality during operational phase are expected to be negligible as there will be no site activities resulting in significant dust and particulate matter emissions to air and only limited vehicle movements to the Site for operation and maintenance. Best practice mitigation measures will be implemented to further reduce any adverse effects on air quality and will be outlined within the oOEMP.

6.5.7 Description of likely significant effects

Construction and decommissioning

Construction and decommissioning works have the potential to release dust, including fine particulate matter, which can impact nearby sensitive human and ecological receptors. Appropriate dust control measures can be highly effective for controlling emissions from potential dust generating activities, and adverse effects can be greatly reduced or eliminated. With suitable dust mitigation measures in place, the effect of dust and particulate matter emissions during construction is likely to be not significant.

Operation of non-road mobile machinery[144] (construction and decommissioning equipment) will result in exhaust gases emissions to the atmosphere. Mitigation measures such as use of low emissions equipment and restriction on construction working hours can greatly reduce its impacts to air quality. With appropriate mitigation measures in place, the effect of exhaust emissions from non-road mobile machinery during construction and decommissioning is considered to be not significant.

Construction and decommissioning traffic will comprise haulage/construction vehicles and vehicles used for workers' trips to and from the Site. The greatest potential impact on air quality due to emissions from construction phase vehicles will be in areas adjacent to the Site access and nearby road network. Based on the temporary nature of the construction and decommissioning activities, it is considered unlikely that significant numbers of vehicle movements associated with staff commuting to and from the Site will be generated (approximately 10 staff permanently on site during operation), meaning impacts on local air quality are not considered to be significant effect.

Operation

It is anticipated that there will be no site activities resulting in significant dust and particulate matter emissions to air during operational phase. The Scheme will be operated remotely and therefore there will be limited movements of vehicles to the Site for operation and maintenance. Best practice mitigation measures will be implemented to further reduce any adverse effects on air quality and therefore, the effect of dust and particulate matter emissions and road traffic emissions during operational phase is likely to be not significant.

6.5.8 Receptors/matters to be scoped into further assessment

Receptor/Matter	Phase	Justification
Dust and particulate matter emissions resulting from Site activities (earthworks, construction, trackout, and demolition (during decommissioning phase only))	Construction and decommissioning	Sensitive human and ecological receptors are located within 250 m and 50m of the Site Boundary respectively. A qualitative, desk-based assessment of site activities is proposed to identify the type of mitigation required.
Exhaust emissions from non-road mobile	Construction and decommissioning	The operation of site equipment and machinery during construction and

[144] Non road mobile machinery (NRMM) is any mobile machine, transportable equipment, or vehicle fitted with internal combustion engines but not made to transport good or passengers on roads e.g. bulldozers, construction machinery, industrial trucks, forklifts, mobile cranes.

6.5.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
machinery (construction and decommissioning equipment)		decommissioning phases will result in emissions to the atmosphere of exhaust gases. A qualitative, desk-based assessment is proposed to identify the type of mitigation required.
Road traffic exhaust emission (including emissions from haulage/construction vehicles and vehicles used for workers' trips to and from the Site)	Construction and decommissioning	A screening level qualitative assessment is proposed. Road traffic data is required to undertake the qualitative assessment, which is not yet available. However, based on the temporary nature of the construction and decommissioning activities, it is anticipated that vehicle movements associated with staff commuting to and from the Site during the construction and decommissioning phases will not have a significant effect on local air quality. This will be confirmed by the qualitative assessment.
6.5.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Dust and particulate matter emissions resulting from demolition works	Construction	There are no demolition works proposed during construction phase.
Dust and particulate matter emissions resulting from the Site activities (operation of the Scheme) and maintenance activities) and road traffic exhaust emissions during operation	Operation	Given the nature of the Scheme, no site activities resulting in significant emissions to air are anticipated during operation and there will only be limited movement of vehicles to the Site for maintenance. According to the assessment of the operational phase road traffic exhaust emissions (including maintenance) for two recent Solar DCO applications (Springwell Solar Farm (Planning Inspectorate Scheme Reference: EN010149)-1,280 hectares and Peartree Hill Solar Farm (Planning Inspectorate Scheme Reference:

6.5.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
		EN010157)-891hectares of land)[145], which are similar in scale and proposed operation to the Scheme, the operational phase road traffic projections fall below the Environmental Protection United Kingdom and IAQM guidance 'Land-Use Planning & Development Control: Planning for Air Quality' (2017)[146] screening criteria. The effect of the operational phase road traffic exhaust emissions without mitigation measures is considered to be not significant and best practice mitigation measures documented within the oOEMP Plan can further reduce any residential effects on air quality. Therefore, the potential impacts of dust and particulate matter emissions and road traffic exhaust emissions during operational phase are unlikely to be significant.

6.5.10 Opportunities for enhancing the environment
No opportunities to enhance the environment from an air quality perspective are envisaged at this stage.

6.5.11 Proposed assessment methodology
Construction and decommissioning The potential construction and decommissioning activities will be assessed and reported within the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES).

[145] Both in draft and have not been submitted with the Development Consent Order (DCO) applications yet.

[146] Environmental Protection United Kingdom and Institute of Air Quality Management Land-Use Planning and Development Control: Planning for Air Quality. Available online: https://www.iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

Dust and particulate matter emissions

An assessment of the likely significant effects of construction phase dust and particulate matter at sensitive receptors will be undertaken following the IAQM '*Guidance on the assessment of dust from demolition and construction v2.2*' (2024)[139], using the available information from the project team and professional judgement.

The assessment will consider the risk of potential dust and particulate matter effects from the following four sources: demolition (during decommissioning phase only), earthworks, construction and trackout. It will take into account the nature and scale of the activities undertaken for each source and the sensitivity of the area to increases in dust and particulate matter levels to assign a level of risk. Dust risks (as defined in the IAQM guidance) will be described in terms of negligible, low, medium or high. Once the level of risk has been ascertained, the site-specific mitigation proportionate to the level of risk will be identified, and the significance of residual effects will be determined.

Non-road mobile machinery

A qualitative, desk-based assessment will be undertaken with reference to the Greater London Authority 'Non-Road Mobile Machinery Practice Guide v.6' (2024)[147] to identify the type of mitigation required to reduce exhaust emissions from construction and decommissioning equipment. The type of construction and decommissioning equipment to be used during construction and decommissioning phases will be outlined in the ES.

Road traffic exhaust emissions

A screening level qualitative assessment will be undertaken with reference to the Environmental Protection United Kingdom (UK) and IAQM guidance entitled 'Land-Use Planning & Development Control: Planning for Air Quality' (2017)[146], using professional judgement and by considering the following information, where available:

- The number and type of road traffic and site equipment likely to be generated;
- The number and proximity of sensitive receptors to the Site and along the likely routes to be used by construction vehicles; and
- The likely duration and the nature of the construction/decommissioning activities undertaken.

6.5.12 Difficulties and uncertainties

It is assumed that Scheme traffic flows during construction and decommissioning phases will be below the relevant criteria at this stage.

[147] Greater London Authority Non-Road Mobile Machinery Practice Guide v.6. Available online: https://www.london.gov.uk/sites/default/files/2024-05/NRMM-Practical-Guide-Accessible-May2024.pdf

The Applicant will be able to confirm whether a detailed construction/decommissioning phase traffic emissions modelling assessment is required following a review of the relevant traffic data at a later stage.

6.5.13 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed study areas?
- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?
- Do you agree with the proposed primary and additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of the EIA?
- Do you agree with the proposed factor-specific assessment approach?

6.6 Noise and vibration

6.6.1 Consultation

The Environmental Health departments at South Cambridgeshire District Council[148] and East Cambridgeshire District Council will be consulted regarding the proposed methodology detailed below. Consultation will be sought in order to seek agreement on the following primary items:

- Baseline noise survey locations and programme of monitoring.
- Guidance and standards pertinent to the assessment(s).
- Receptors for inclusion in the assessment(s).
- Agreement on relevant criteria.

6.6.2 Study area

The study area for the construction and decommissioning phase assessments will consider noise and vibration sensitive receptors that are located within 300 m of the Site Boundary and road links included within the scope of the Traffic and Transport assessment. This has been determined based on the guidance set out in BS 5228:2009+A1:2014 *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Noise*[149], BS 5228-2:2009+A1:2014-- *Code of Practice for Noise and Vibration Control on Construction and Open Sites – Vibration*[150] and including *Design Manual for Roads and Bridges (DMRB) LA 111 – Noise and Vibration'*[151].

For the assessment of operational phase noise levels, the study area extends out to the nearest or most exposed noise sensitive receptors to the proposed noise-emitting installations, as identified through analysis of noise model outputs and digital mapping.

6.6.3 Data sources to inform the EIA baseline characterisation

The following sources of information have informed the EIA baseline characterisation:

[148] South Cambridgeshire District Council's planning service is managed by the Greater Cambridge Shared Planning team.

[149] British Standards Institution (2014), 'British Standard 5228-1: 2009+A1: 2014, Code of practice for noise and vibration control on construction and open sites – Noise'.

[150] British Standards Institution (2014), British Standard 5228-2: 2009+A1: 2014, Code of practice for noise and vibration control on construction and open sites – Vibration'.

[151] Design Manual for Roads and Bridges (2020), LA 111 Noise and Vibration.

- Site Boundary – detailing extents of the Scheme location and proximity to nearby receptors;
- Online aerial imagery – determine locations of nearest receptors to inform both the baseline survey and future assessment(s);
- Natural England SSSI map (Defra) and citations (to identify noise sensitive features);
- Potential receptors identified within the cultural heritage scoping study (**Section 6.3**); and
- Renewable Energy Planning Database[152] (reviewed for context, specifically the existing Wadlow Wind Farm).

Additional data sets which will be used to inform the assessment (post-scoping) include:

- Third-party noise assessments, where available and applicable; and
- Baseline noise surveys for the Scheme at selected noise sensitive receptors, to establish the prevailing pre-development acoustic environment (as defined in Section 6.6.4 below).

6.6.4 Surveys to inform the EIA baseline characterisation

To determine the impacts of the Scheme, a baseline noise survey is proposed to quantify and characterise the existing noise environment across the study area.

It is proposed that the baseline noise survey will be undertaken in accordance with British Standard (BS) 7445-1:2003 '*Description of environmental noise – Guide to quantities and procedures*'[153], and the equipment used will conform to the Class 1 requirements of BS EN 61672-1:2013 '*Electroacoustics. Sound level meters. Specifications*'[154] and BS EN IEC 60942:2018 '*Electroacoustics, Sound calibrators*'[155].

Monitoring will be undertaken in the form of long-term noise measurements, typically of one-week duration, to quantify the existing acoustic environment and nature of the sound sources experienced by the surrounding receptors. Monitoring would be continuous throughout daytime and night to establish baseline conditions during the likely operational times of components of the Scheme (i.e. 24 hours per day, 7 days per

[152] Available at : https://www.gov.uk/government/publications/renewable-energy-planning-database-monthly-extract

[153] British Standards Institution (2003), British Standard 7445-1:2003, Description and measurement of environmental noise – Part 1: Guide to quantities and procedures.

[154] British Standards Institution (2013), British Standard EN 61672-1:2013, Electroacoustics. Sound level meters. Specifications.

[155] British Standards Institution (2018), British Standard EN IEC 60842:2018 Electroacoustics, sound calibrators.

week). Baseline monitoring would be used to derive suitable assessment criteria for both the construction, operational and decommissioning phases.

Monitoring would occur at the nearest surrounding receptors (or suitable representative locations).

6.6.5 Baseline conditions

Review of aerial imagery indicates that the baseline environment at receptors surrounding the Developable Areas is likely be influenced by vehicle movements on the A11 and existing farming / agricultural activity. Additional road traffic noise from the A14 or other local road links is likely to be present at some receptors located within and adjacent to the Grid Connection Corridors.

Receptors to the south east of the Scheme are located at greater distance from industrial or transport infrastructure, therefore the baseline acoustic environment is likely characterised by sources such as wind-swept vegetation, birdsong, farm machinery and non-continuous traffic from local roads, which will vary in influence depending on weather conditions and time of day.

In areas where the acoustic environment is dominated by transport infrastructure, such as roads, there is potential for an increase in the traffic flows in the future baseline scenario. In absence of significant alterations to the wider network, the variation in traffic flows is expected to be incremental and therefore unlikely to give rise to perceptible changes in the acoustic environment.

From review of aerial imagery, the area surrounding the Scheme includes several towns, villages and isolated residential properties. These are considered to have the highest level of sensitivity to noise and vibration. The most densely populated area immediately bordering the Developable Area is to the south east, which includes the areas of West Wratting, Weston Colville, Wallingham Green and Weston Green.

Fleam Dyke SSSI intersects the Inter Array Connection Corridor 1 and Grid Connection Corridor Option A. Roman Road SSSI is located approximately 300 m to the south of Developable Area A - West. Newmarket Heath SSSI is within Grid Connection Corridor B, and Devils Dyke SSSI within Grid Connection Corridors A&B, whilst Devils Dyke SAC is c. 900 m east of Grid Corridor B. Based on the citations for these designated sites, they are not considered to be sensitive receptors in terms of noise and vibration.

Scheduled Monuments have been identified within and immediately adjacent to the Site, including long and bowl barrows, Roman and Iron Age settlements. These would typically be considered of medium to low sensitivity to vibration, subject to review of structural condition.

The extent and number of receptors to be included within the study area will be determined following refinement of a preferred alignment within the Grid Connection Corridors and location of the associated infrastructure.

6.6.6 Additional (secondary and tertiary) mitigation

Potential measures to mitigate noise and vibration during the construction, operational and decommissioning phases are outlined below:

Construction

In developing the control measures during the construction phase, best practicable means (BPM), as defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990, would be applied during all construction works to minimise noise and vibration at neighbouring residential properties and other sensitive receptors. In doing so, due consideration would be given to the recommendations contained within BS5228:2009+A1:2014[156,157].

Measures to minimise levels of noise and vibration during the construction phase may include:

- The use of lower emitting noise level plant items;
- Management of operations to more appropriate periods;
- Use of noise barriers / temporary enclosures;
- Sensitive routing of construction traffic, both within the Site and on the public highway; and
- Preparation of a Noise and Vibration Management Plan, forming part of a wider oCEMP.

Operation

If deemed necessary following the outcome of the operational phase assessment, noise control measures will be introduced. When choosing attenuation measures or implementing an effective noise reduction program, there are two possible approaches for treatment:

- Mitigation at source – modify the source or adopt alternative plant / equipment to radiate at a lower sound power level.
- Mitigation through transmission – increase, deflect or block the acoustic path of noise.

This list of mitigation is not exhaustive, the specifics of which (and the extent) would be determined as part of the assessment when the location and type of noise-generating

[156] British Standards Institution (2014), 'British Standard 5228-1: 2009+A1: 2014, Code of practice for noise and vibration control on construction and open sites – Noise'.

[157] British Standards Institution (2014), British Standard 5228-2: 2009+A1: 2014, Code of practice for noise and vibration control on construction and open sites – Vibration'.

equipment is known. Best practice mitigation measures to be implemented will be outlined within the oOEMP.

Decommissioning

Measures outlined above as part of the construction phase would likely be applied during the decommissioning phase. Decommissioning phase mitigation measures will be outlined within the oDEMP.

6.6.7 Description of likely significant effects

Construction

Noise and vibration generated by equipment and activities associated with construction, including movements along the road network, have the potential to impact nearby sensitive receptors. This may result in temporary significant adverse effects.

Operation

Noise arising due to the operation of the solar PV, BESS, overhead lines and substation elements of the Scheme have the potential to lead to significant adverse noise effects at sensitive receptors surrounding the Site.

Noise impacts associated with each element would be assessed in detail (accounting for mitigation where necessary) to ensure the Scheme can operate within appropriate noise levels.

Decommissioning

Noise and vibration levels associated with decommissioning related activities and traffic have the potential to impact nearby sensitive receptors, resulting in significant adverse effects.

6.6.8 Receptors/matters to be scoped into further assessment

Receptor/Matter	Phase	Justification
Noise and vibration	Construction and decommissioning	Noise and vibration due to construction plant and activities has the potential to impact sensitive receptors surrounding the Site.
Road traffic noise	Construction and decommissioning	Increase in HGV / vehicle movements has the potential to impact sensitive receptors surrounding the Site.
Noise	Operation	Noise arising from the operation of inverters, transformers, HVAC, and other ancillary electrical infrastructure required for the solar PV / BESS infrastructure has the potential to

		impact sensitive receptors surrounding the Site.

6.6.9 Receptors/matters to be scoped out of further assessment

Receptor/Matter	Phase	Justification
Vibration	Operation	Levels of vibration associated with the solar PV and BESS will be low and are highly unlikely to be perceptible over the distance ranges between the plant and the nearest residential dwelling.
Road traffic noise	Operation	The increase in road traffic during operation is likely to be negligible, with approximately 10 staff on site and other routine maintenance activities.
SSSIs and SACs	Construction Operation Demolition	SSSIs and SACs within and in close proximity respectively to the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridor are not considered to be sensitive to noise and vibration.

6.6.10 Opportunities for enhancing the environment

No opportunities to enhance the environment from a noise and vibration perspective are envisaged at this stage.

6.6.11 Proposed assessment methodology

The proposed assessment methodology for the construction, operational and decommissioning phases are outlined below. A summary of the standards and guidance used to determine appropriate significance criteria is set out in **Appendix C**.

Construction

The construction assessment would account for the following (primary) activities:

- Groundworks – general earthworks, access tracks, site establishment.
- Cable installation works, including trenchless techniques where applicable.
- Vehicle / HGV movements.
- Installation of infrastructure including PV system, BESS and Scheme Substation(s), grid connections and overhead lines.

The noise contribution of the different construction activities would be assessed in line with the guidance in BS 5228-1:2009+A1:2014 '*Code of practice for noise and vibration control on construction and open sites – Noise*'. Where construction noise levels are considered to be excessive or intrusive, recommendations for noise control measures would be made.

The effect of construction traffic on the existing road network would be calculated using the methodology set out in the Calculation of Road Traffic Noise Memorandum (CRTN) and assessed in accordance with the requirements of Design Manual for Roads and Bridges (DMRB) *'LA 111 Noise and Vibration, 2020'*. The assessment would determine the level of noise increase in the short term, due to the inclusion of construction traffic on the existing network.

Activities which may have the potential to generate perceptible levels of vibration at sensitive receptors include, but are not limited to, piling, rolling and compaction. Where these activities are identified as occurring within the construction programme and within a short separation distance from a sensitive receptor, predictions of possible vibration levels will be made using guidance contained within BS 5228-2:2009+A1:2014 '*Code of practice for noise and vibration control on construction and open sites – Vibration*', and through empirical formulae. Predicted vibration levels would be assessed against appropriate criteria within BS 5228-2:2009+A1:2014. Where there is potential for significant adverse effects as a result of construction induced vibration, control measures will be recommended.

Operation

An operational phase assessment of the noise emitting infrastructure associated with the Scheme will be undertaken to the requirements of BS 4142:2014+A1:2019 '*Methods for rating and assessing industrial and commercial sound*'. This would account for the following (primary) noise generating elements:

- Inverters / transformers
- Substations
- BESS containers
- New overhead lines

Noise predictions of the proposed infrastructure will be derived from computer noise modelling or spreadsheet calculations, as appropriate, and will be compared with the measured prevailing background sound level (L_{A90}) at the nearest, or most exposed, receptors to determine the magnitude of impacts and significance of effects.

The assessment will utilise information regarding the location, number, type and noise emission data for the proposed plant operating on the Site. Where the assessment identifies potential and unreasonable impacts, guidance on potential noise control methods for the fixed plant and machinery will be provided (typically noise barriers, enclosures etc.). This will enable the final design of the proposed installations to be developed, incorporating the required noise mitigation.

Decommissioning

The impact of decommissioning will follow the assessment outlined above as part of the construction phase. At this stage, it is assumed that activities would not be significantly different to those proposed during construction, but would be undertaken in reverse order.

6.6.12 Difficulties and uncertainties

To ensure transparency within the EIA process, the following difficulties and uncertainties have been identified:

- The overview of baseline acoustic conditions is based on desk-based studies only at scoping stage.
- The preferred alignment(s) within the Grid Connection Corridors and location of associated infrastructure is yet to be confirmed; this will inform the baseline monitoring strategy and study extents.
- The construction assessment will assume the use of standard construction techniques appropriate for the type of works being undertaken. The final techniques, plant selection and programme are expected to be determined by the appointed contractor, in consultation with relevant authorities prior to commencement of construction.
- Details of noise emitting plant / equipment associated with the Scheme have not been confirmed at this stage, in terms of both specification and location within the Site.
- Verification of residential dwellings considered in the assessment will be achieved through the consultation process and through visit(s) to the Site and the surrounding area.

6.6.13 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed study areas?
- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?
- Do you agree with the proposed primary and additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of further assessment?

- Do you agree with the proposed factor-specific assessment approach?

6.7 Traffic and transport

6.7.1 Consultation

The key consultees will be the local highway authority and planning authority which may be impacted during the construction phase of the Scheme, as well as National Highways. Anticipated consultees are:

- South Cambridgeshire District Council.
- East Cambridgeshire District Council.
- Cambridgeshire County Council.
- National Highways (due to the proximity of the A11 and A14 trunk roads).

Engagement on the following is required:

- A traffic and movement study area (potentially separately for heavy and light vehicles) for construction traffic;
- Issues to be considered and addressed in the Environmental Statement; and
- Assessment methodologies, particularly in relation to sensitive receptors.

6.7.2 Study area

The Developable Area, Inter Array Connection Corridors and the Grid Connection Corridors are treated separately for the purposes of defining the study area due to the differing levels of design maturity around these. Further refinement of the study area for the Grid Connection Corridors will be undertaken once the preferred alignment for the connection is defined, which will be completed to inform the PEIR and/or ES.

Based on Rules 1 and 2 of the Institute of Environmental Management and Assessment (IEMA) '*Guidelines for the Environmental Assessment of Traffic and Movement*' (2023)[158], the study area is likely to comprise the following links within the highway network, which will be kept under review as the project develops. It is proposed that both the A11 and A14 are excluded, notwithstanding the fact that parts of these roads lie within the study area. This is proposed on the basis that both form part of the Strategic Road Network (SRN) and, as such, will carry high traffic volumes and thus it is highly unlikely that the Rule 1 and Rule 2 criteria (as defined in **Section 6.7.11**) will be met. Private roads will not be assessed as they fall outside of the highway network as defined by the IEMA Guidelines.

Developable Area and Inter Array Connection Corridors

- Balsham Road/Cambridge Road

[158] Institute of Environmental Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023).

- A1304 London Road
- Mill Road
- Six Mile Bottom Road
- B1052 West Wratting Road/Honey Hill
- High Street / The Common, West Wratting
- Southbound Off-Slip from the A11 near Worsted Lodge
- B1052 Weston Colville Road
- Chapel Road, Weston Green
- Grange Road
- B1052, Bull Lane
- Mill Hill
- Common Road
- Brinkley Road
- Brook Lane (limited accessibility)

Grid Connection Corridors

- A1304 London Road
- A1303 Newmarket Road
- Brinkley Road
- Wilbraham Road
- Angle End, Great Wilbraham
- High Street, Great Wilbraham
- Westley Bottom Road
- Grange Road
- Station Road, Dullingham
- B1102 Burwell Road
- Swaffham Heath Road, Swaffham Bulbeck
- Rogers Road, Swaffham Prior
- Swaffham Road, Swaffham Prior
- Fair Green, Reach
- Heath Road, Burwell
- Reach Road, Burwell
- Burwell Road, Burwell

- Weirs Drove, Burwell

This study area has been identified assuming that the majority of the total construction traffic (including staff trips) would travel to the Site along the above links to access the Site, as shown in **Figure 2-3**. Given that the alignment of a preferred alignment(s) within a Grid Connection Corridor has not been defined at this stage, some links may need to be added to or removed from the list as the project develops.

The extent of the study area is to be discussed and agreed with consultees prior to assessment within the PEIR and ES, and following agreement of the access locations and construction traffic routing.

It should be noted that the phasing of construction (the order in which the Developable Areas are constructed/assembled) and location of site compound(s) have not yet been determined, but once confirmed, will determine for how long each route experiences construction traffic.

6.7.3 Data sources to inform the EIA baseline characterisation

Existing relevant Department for Transport (DfT) traffic count data are available along the following links within the study area. These will be reviewed in reference to construction traffic routing to each respective access and will be considered in line with traffic volume data for the construction phase of the Scheme.

The DfT count data in the immediate proximity of the Developable Areas and Inter Array Connection Corridors is somewhat limited; however, there are data available for the wider area which could potentially be used to infer traffic flows within the study area. There is reasonably good coverage by count data sites in the vicinity of the Grid Connection Corridors. Again, there are other count sites just outside the Grid Connection Corridors study area boundary which could potentially be used to infer traffic flows within the study area.

Developable Areas & Inter Array Connection Corridors DfT Count points (see Appendix K for figure)

Count Point ID	Road Name	Road Type	Year of Most Recent Manual Count
800008	B1052	Minor	2023
931553	The Common	Minor	2009
807436	Low Road	Minor	2019
940968	Fenn Lane	Minor	2008
942979	Bell Road	Minor	2009
940994	Willingham Green Road	Minor	2008
800008	B1052	Minor	2023
931553	The Common	Minor	2009
951516	Dean Road	Minor	2008

801449	Back Road	Minor	2021
Count Point ID	**Road Name**	**Road Type**	**Year of Most Recent Manual Count**
28828	A1307	Major	2017
809865	Carlton Green Road	Minor	2023
940969	Common Road	Minor	2009
805427	Chapel Road	Minor	2023
931553	The Common	Minor	2009

Grid Connection Corridors DfT Count points (see Appendix K for figure)

Count Point ID	Road Name	Road Type	Year of Most Recent Manual Count
801465	Fair Green	Minor	2023
956610	Swaffham Road	Minor	2009
805351	B1102	Minor	2023
940980	Swaffham Heath Road	Minor	2019
37626	A1303	Major	2021
27590	A1303	Major	2018
800343	Wilbraham Road	Minor	2018
809595	Angle End	Minor	2019
808167	High Street	Minor	2019

Information on the adopted highway boundary is required and will be requested from local highway agency, once the proposed access routes and points are known. The extent of the highway boundary will be important for identifying where mitigation such as passing places/access points can be achieved.

Personal Injury Collision data will be obtained using DfT STATS19 Personal Injury Collision database and or Cambridgeshire County Council. The most recent three year period available will be reviewed for the identified highway links to identify any patterns or clusters which may need to be considered as part of the assessment.

6.7.4 Surveys to inform the EIA baseline characterisation

Supplementary traffic surveys may be required where there is no up to date existing and relevant traffic data or local highway authority data available, such as in the immediate vicinity of the Developable Areas and Inter Array Connection Corridors, or the data cannot be used/is out of date.

At some of the links identified above, it may be necessary to carry out directional, classified traffic surveys to determine the existing flows across a neutral[159] 24 hour period. It may also be necessary to carry out classified turning counts at selected junctions. Before the surveys are carried out, consultation will be undertaken to establish whether there is any annual average daily traffic (AADT) link count data for the identified links in the study area, further to the above. Where this is unavailable, surveys will be required. The traffic data obtained will be used to determine the assessment year flows, the likely impact of development-related traffic on AADT flows and driver delay impacts

It is likely that a topographical survey/OS mapping data would be used for the purpose of undertaking Swept Path Assessments (SPA) and access junction designs (concept design) where required. Site visits will be undertaken to understand where proposed vehicle access routes are particularly narrow and how any constraints can be overcome without a significant adverse impact.

6.7.5 Baseline conditions

The existing land use of the Site and areas surrounding the Site is predominantly agricultural with some small villages and some larger villages and towns in the vicinity of the Grid Connection Corridors There are several Scheduled Monuments and dikes which pass through or near the Site, which may present constraints to access. There are also a number of Local Wildlife Sites on the verges of the local road network.

Developable Areas and Inter Array Connection Corridors

The Developable Areas and Inter Array Connection Corridors are in proximity to the villages of Balsham, West Wratting and Brinkley and the smaller residential settlements of Weston Colville, Weston Green and Willingham Green. Two Scheduled Monuments – Fleam Dyke and the former Roman Road – run through or near the Site. As detailed in **Section 6.8.5**, there are other footpaths and PRoW in the vicinity, such as Harcamlow Way and Icknield Way. All of the above may form constraints to site access.

Grid Connection Corridors

The Grid Connection Corridors are in proximity to the residential settlements of Dullingham, Great Wilbraham, Little Wilbraham, Bottisham, Swaffham Bulbeck, Swaffham Prior, Reach and Burwell.

The Cambridge to Ipswich rail line passes through the study area in the vicinity of Dullingham and Newmarket.

National Cycle Network Route 51 passes through the villages of Bottisham, Swaffham Bulbeck, Swaffham Prior, Burwell and the town of Newmarket.

The tables below set out the baseline condition of identified road links.

[159] "Neutral" refers to typical traffic conditions avoiding holiday periods, unusual events etc.

A high-level review indicates that much of the relevant highway network is currently relatively uncongested. Some peak hour congestion is observed; mostly on A roads and in the immediate vicinity of the A11.

Baseline Condition of Road Links - Developable Area and Inter Array Connection Corridors

Road Link	Standard	Configuration (Sufficient space for 2-way traffic to pass)
Balsham Road /Cambridge Road	B Road	Yes
A1304 London Road	A Road	Yes
Mill Road	Unclassified Minor Road	Yes
Six Mile Bottom Road	Unclassified Minor Road	Yes
B1052 West Wratting Road/Honey Hill	B Road	Yes
High Street/The Common, West Wratting	Unclassified Minor Road	Yes
Southbound Off-Slip from the A11 near Worsted Lodge	Slip Road	One Way Link
B1052 Weston Colville Road	B Road	Yes
Chapel Road, Weston Green	Unclassified Minor Road	Yes
Grange Road	Unclassified Minor Road	No
B1052, Bull Lane	B Road	Yes
Mill Hill	Unclassified Minor Road	Yes
Common Road	Unclassified Minor Road	No
Brinkley Road	Unclassified Minor Road	Yes

Road Link	Standard	Configuration (Sufficient space for 2-way traffic to pass)
Brook Lane	Unclassified Minor Road	No
A1304 London Road	A Road	Yes
Mill Road	Unclassified Minor Road	Yes
Six Mile Bottom Road	Unclassified Minor Road	Yes

Note: The "Configuration" column reflects the findings of a visual review to ascertain whether a specific link can accommodate two streams of traffic passing each other. It is an initial indicative analysis and is not intended to be viewed as being definitive.

Baseline Condition of Road Links - Grid Connection Corridors

Road Link	Standard	Configuration (Sufficient space for 2-way traffic to pass)
A1304 London Road	A Road	Yes
A1303 Newmarket Road	A Road	Yes
Brinkley Road	Unclassified Minor Road	Yes
Wilbraham Road	Unclassified Minor Road	Yes
Angle End, Great Wilbraham	Unclassified Minor Road	Yes
High Street, Great Wilbraham	Unclassified Minor Road	Yes
Westley Bottom Road	Unclassified Minor Road	No
Grange Road	Unclassified Minor Road	No
Station Road, Dullingham	Unclassified Minor Road	Yes
B1102 Burwell Road	B Road	Yes

Road Link	Standard	Configuration (Sufficient space for 2-way traffic to pass)
Swaffham Heath Road, Swaffham Bulbeck	Unclassified Minor Road	Yes
Rogers Road, Swaffham Prior	Unclassified Minor Road	Yes
B1102 Swaffham Road, Swaffham Prior	B Road	Yes
Fair Green, Reach	Unclassified Minor Road	Yes
Heath Road, Burwell	Unclassified Minor Road	Yes
Reach Road, Burwell	Unclassified Minor Road	Yes
B1102 Burwell Road, Burwell	B Road	Yes
Weirs Drove, Burwell	Unclassified Minor Road	Yes

Note: The "Configuration" column reflects the findings of a visual review to ascertain whether a specific link can accommodate two streams of traffic passing each other. It is an initial indicative analysis and is not intended to be viewed as being definitive.

6.7.6 Additional (secondary and tertiary) mitigation

Construction

It is likely that some highway works may be required to facilitate access to both the Developable Areas and Inter Array Connection Corridors, and the Grid Connection Corridors. Where detailed assessments demonstrate mitigation is required, then options will be explored (such as temporary or permanent passing places or small increases in carriageway width (subject to available highway or third-party land)). The Local Wildlife Sites on the verges of the local road network will be avoided when developing mitigation measures.

An outline Construction Traffic Management Plan (oCTMP) will be developed and submitted in support of the DCO application. It is anticipated that a detailed CTMP will be secured by a DCO requirement to mitigate against the effects of construction traffic on the local highway network, both in terms of traffic routing, timing of construction arrivals and departures and minimising any mud and debris on the highway. Any required

construction staff/HGV movement measures such as start-end times for example, will also be considered within the oCTMP.

An oPRoWMP and outline Travel Plan may also be required to support the DCO application.

Operation

It is proposed that all effects of the operational phase of the Scheme are largely scoped out with the possible exception of consideration of large / hazardous loads[160]. There may be a need to replace specific equipment during the operational phase of the Scheme. This may necessitate the use of abnormal loads which could require route investigation, swept path analysis and agreement with relevant highway authorities. Hence, with the exception of consideration of abnormal loads, no mitigation measures are envisaged at this stage.

Decommissioning

It is expected that impacts during the decommissioning phase will not be more than those during the construction phase. As such, it is proposed that mitigation measures proposed for the construction phase are reviewed to consider whether there will also be a requirement for these in the decommissioning phase. This would be secured within the oDEMP as required.

6.7.7 Description of likely significant effects

Potential impacts against the following categories will be considered in the assessment in line with the IEMA Guidelines (para. 3.3 - Environmental Assessment of Traffic and Movement, 2023)[161]:

(a) Severance of communities;

(b) Road vehicle driver and passenger delay;

(c) Non-motorised user delay;

(d) Non-motorised amenity;

(e) Fear and intimidation on and by road users;

(f) Road user and pedestrian safety; and

(g) Hazardous/large loads.

The majority of impacts would be expected during the construction phase and would be as a direct result of increased traffic flows on the surrounding roads being used by HGVs and construction workers. The potential for likely significant effects on each receptor/resource scoped into the assessment is set out in **Section 6.7.8** below.

[160] "Large / hazardous loads" is a generic term using in the IEMA Guidelines: Environmental Assessment of Traffic and Movement (2023).

[161] Institute of Environmental Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023).

6.7.8 Receptors/matters to be scoped into further assessment

Potential traffic and movement receptors to be scoped in are listed below. These are shown separately for the Developable Areas and Inter Array Connection Corridors, and the Grid Connection Corridors. Since the alignment of the preferred alignment(s) within a Grid Connection Corridor has not yet been defined, some further receptors may need to be added to or removed from the list.

List of Receptors
Developable Area & Inter Array Connection Corridors
A1304 London Road
Balsham Road/Cambridge Road
Mill Road
Six Mile Bottom Road
B1052 West Wratting Road/Honey Hill
High Street / The Common, West Wratting
Southbound Off-Slip from the A11 near Worsted Lodge
B1052 Weston Colville Road
Chapel Road
Grange Road
B1052 Bull Lane
Mill Hill
Common Road
PRoW within the Developable Area and Inter Array Connection Corridors
Harcamlow Way
Icknield Way
Local Wildlife Sites on road verges
Non-Motorised Users / Equestrians
Grid Connection Corridors
A1304 London Road
A1303 Newmarket Road
Brinkley Road
Wilbraham Road
Angle End, Great Wilbraham
High Street, Great Wilbraham
Westley Bottom Road
Grange Road
Station Road, Dullingham
Westley Bottom Road
Grange Road
B1102 Burwell Road

Rogers Road, Swaffham Prior
Swaffham Road, Swaffham Prior
Heath Road, Burwell
Reach Road, Burwell
Burwell Road, Burwell
Weirs Drove, Burwell
Cambridge to Ipswich rail line
National Cycle Network Route 51
Various PROWs crossing the corridor
Local Wildlife Sites on road verges
Non-Motorised Users / Equestrians

Potential matters to be scoped in to the assessment are shown in the table below (matters to be scoped in are indicated with an "✓"). These are shown separately for the Developable Areas and Inter Array Connection Corridor and the Grid Connection Corridors.

It is not expected that it will be necessary to analyse every matter for each receptor identified above. This will be considered on a case-by-case basis as further information is gathered, and refined ahead of the PEIR and/or ES.

Matters Scoped In	**Phase**		
	Construction	**Operation**	**Decommissioning**
Developable Area & Inter Array Connection Corridors			
(a) Severance of communities	✓		✓
(b) Road vehicle driver and passenger delay	✓		✓
(c) Non-motorised user delay	✓		✓
(d) Non-motorised amenity	✓		✓
(e) Fear and intimidation on and by road users	✓		✓
(f) Road user and pedestrian safety	✓		✓
(g) Hazardous/large loads	✓	✓	✓
Grid Connection Corridors			
(a) Severance of communities	✓		✓
(b) Road vehicle driver and passenger delay	✓		✓

Matters Scoped In	Phase		
	Construction	Operation	Decommissioning
(c) Non-motorised user delay	✓		✓
(d) Non-motorised amenity	✓		✓
(e) Fear and intimidation on and by road users	✓		✓
(f) Road user and pedestrian safety	✓		✓
(g) Hazardous/large loads	✓	✓	✓

Most matters are scoped out for the Operational phase; flexible assessment of the replacement of specific equipment, potentially using large loads, may be considered within the chapter.

Impacts during the decommissioning phase will mirror those during the construction phase.

6.7.9 Receptors/matters to be scoped out of further assessment

Potential matters to be scoped out of the assessment are shown in the table below (matters to be scoped out are indicated with an "×". These are shown separately for the Developable Area and Inter Array Connection Corridors, and the Grid Connection Corridors.

Matters Scoped Out	Phase		
	Construction	Operation	Decommissioning
Developable Area & Inter Array Connection Corridors			
(a) Severance of communities		×	
(b) Road vehicle driver and passenger delay		×	
(c) Non-motorised user delay		×	
(d) Non-motorised amenity		×	
(e) Fear and intimidation on and by road users		×	
(f) Road user and pedestrian safety		×	

Matters Scoped Out	Phase		
	Construction	Operation	Decommissioning
Grid Connection Corridor			
(a) Severance of communities		×	
(b) Road vehicle driver and passenger delay		×	
(c) Non-motorised user delay		×	
(d) Non-motorised amenity		×	
(e) Fear and intimidation on and by road users		×	
(f) Road user and pedestrian safety		×	

Impacts on the local road system during the operational phase are expected to be limited/negligible. Access will be required for on-site staff (approximately 10) and from time to time for routine maintenance, and less frequently for other periodic maintenance and upgrades. Therefore, it is expected that the changes in traffic on the existing network will not exceed the IEMA Rule 1 and 2 guidance related to vehicle movements during the operational phase[162].

6.7.10 Opportunities for enhancing the environment

Traffic and movement opportunities for enhancing the environment might include:

- Encouraging sustainable travel to and from the Site and use of sustainable vehicles where possible during construction;
- Local transport enhancements such as passing places, which could be kept in place permanently to benefit the travelling public; and
- Enhancements to existing or proposal of PRoW/Permissive Paths (see also **Section 6.2 Landscape and visual amenity** and **Section 6.8 Population**).

[162] Institute of Environmental Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023).

6.7.11 Proposed assessment methodology

Construction

The assessment of the traffic and movement environmental impacts and their significance will be undertaken in accordance with the IEMA guidance. This guidance provides two broad rules to be used as a screening process to identify the appropriate extent of the assessment area and likelihood of impacts. These are:

- *"Rule 1 - Include highway links where traffic flows would increase by more than 30% (or the number of HGVs would increase by more than 30%); and*
- *Rule 2 - Include highway links of high sensitivity where traffic flows have increased by 10% or more."*

Where the predicted increase in traffic flow is lower than the thresholds, the Guidelines suggest the significance of the effects can be stated to be low or insignificant and further detailed assessments are not warranted.

Where construction traffic flows are predicted to exceed these thresholds, the significance of traffic and movement effects (including cumulative) will be determined by assessing the sensitivity of receptors against the magnitude of change to categorise significance as 'Major', 'Moderate', 'Minor' or 'Negligible'. The environmental effects that will be assessed are those set out previously in **Sections 6.7.8** and **6.7.9**.

Further detail on the significance criteria that will be applied is presented in **Appendix C**.

Note on percentage vs. absolute traffic/HGV increases

*The assessment will be undertaken in accordance with the "Guidelines for the Environmental Assessment of Traffic and Movement" (IEMA, 2023) Rules 1 and 2. It should, however, be noted that the majority of the road network which it is necessary to scope in will experience a very low **absolute** increase in HGV trips even though this may result in a large **percentage** increase in HGVs (compared to existing traffic flows). For example, some of the minor roads assessed are 'No Through' C class Roads and only serve a single farm. Clearly in these cases, a professional view will be taken during assessment as to whether the impact is significantly adverse.*

Decommissioning

A qualitative assessment will be undertaken for the decommissioning phase based on the analysis described above for the construction phase.

6.7.12 Difficulties and uncertainties

The following difficulties and uncertainties have been identified:

- The preferred alignment(s) within a Grid Connection Corridor are being optioneered and therefore the study area and list of receptors may need to be updated as the design is progressed;

- The overview of baseline conditions is based on desk-based studies only at Scoping stage on data available at the time of writing;
- The construction phase assessment will assume the use of standard construction techniques commensurate with the type of works being undertaken. The final techniques, plant selection and programme are expected to be determined by the appointed contractor, in consultation with relevant authorities prior to commencement of construction; and

Traffic estimates for any stage of the Scheme are not confirmed at this time and may be subject to change but will be confirmed prior to assessment.

6.7.13 Scoping questions

Considering Traffic and Movement matters:

- Do you agree with the proposed consultees to be engaged with on this topic?
- Do you agree with the proposed study areas?
- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Do you agree that the surveys proposed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?
- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of the EIA?
- Do you agree with the proposed factor-specific assessment approach?

6.8 Population

6.8.1 Consultation

Consultation will be undertaken with Cambridgeshire County Council, South Cambridgeshire District Council and East Cambridgeshire District Council in relation to Public Rights of Way (PRoW) and tourism receptors.

6.8.2 Study area

The potential effects on population[163] in relation to the Scheme will be assessed at different spatial extents depending on the natural of the impact.

There is no statutory guidance when assessing potential impacts to population. However, the Design Manual for Roads and Bridges (DMRB) '*LA 112 Population and Human Health*' document (hereafter referred to as 'LA 112')[164] provides direction when assessing the impacts of a project in relation to population and human health. While it is recognised that the DMRB is primarily used for assessing transport-related development, in the absence of other guidance, the LA 112 scoping methodology has been adopted as a starting point and is combined with professional judgement.

As detailed in LA 112; the study area for an assessment of likely significant effects relating to private property and housing, community land and assets, agricultural land holdings, walkers, cyclists and horse riders (via impacts to PRoW) will include all land within the Site Boundary and the land extending 500 m in all directions beyond the Site Boundary. If during the assessment, it is identified there are other receptors just beyond this study area, they will also be considered in the ES.

The assessment on employment (i.e., job creation through the Scheme and the potential loss of agricultural jobs) and associated gross value added (GVA) in relation to the Scheme will focus on the effects within the Cambridgeshire County Council administrative boundaries.

As detailed in **Section 6.2.2**, it is considered unlikely that there would be anything other than negligible, distant and filtered glimpses of the solar PV modules and substation/switchgear beyond 3 km. A 3 km study area has been selected as the extent

[163] The term 'population' in this chapter relates to the impacts to the population primarily in relation to the socio-economic effects which may occur as a result of the construction, operation and decommissioning of the Scheme.

[164] Design Manual for Roads and Bridges (DMRB): LA 112 Population and Human Health 2020. Available online: https://www.standardsforhighways.co.uk/search/1e13d6ac-755e-4d60-9735-f976bf64580a

of visibility between tourism receptors and the Scheme. The view of solar infrastructure is likely to be the main influence on visitor experiences in the area.

The assessment of occupancy rates as a result of the construction workforce staff will be based on a 16 km radius from the Site Boundary. The 16 km radius has been chosen to encompass the nearest major settlement of Cambridge.

6.8.3 Data sources to inform the EIA baseline characterisation

The following data sources have been used to inform the baseline:

- Aerial photography and mapping including Google Maps (2024) has been used to describe the baseline of the surrounding area in relation to population;
- OS Mapping, Defra Magic Maps has been used to describe the baseline of the surrounding area in relation to population;
- 'Visit South Cambs' website has been used to identify tourist receptors within the study area;
- 'Explore East Cambs' website has been used to identify tourist receptors within the study area;
- 'Capturing Cambridge' website has been used to identify tourist receptors within the study area;
- The Visit England website will be used to consider the presence of tourist assets within the study area and for data relating to the occupation of beds within accommodation providers in the study area; and
- DMRB LA 112 and professional judgement will be used to guide the information presented in the subsequent PEIR and ES baseline descriptions.

6.8.4 Surveys to inform the EIA baseline characterisation

No surveys have been undertaken and none are proposed specifically for the population factor, baseline information from other environmental factors (e.g. BMV agricultural land) will be used where necessary.

6.8.5 Baseline conditions

Private property and housing

There are no commercial or residential buildings at risk of demolition in order to construct/operate the Scheme.

The Site is not allocated for residential development and no new planning applications have been submitted for housing developments within the Site Boundary.

Development land and businesses

The Wadlow Wind Farm is located within the Developable Area B - Central. The wind farm has been operational since September 2012 and comprises of 13 2MW turbines. There are various businesses located within the study area near the Developable Areas, and Inter Array Connection Corridors including (but not limited to); a shooting events arena and a number of businesses located on the outskirts of Worsted Lodge, West Wratting, Weston Colville, Willingham Green and Brinkley.

There are various businesses located within Grid Connection Corridor A, including four events facilities. Within 500 m of the Grid Connection Corridor A there are numerous businesses mostly located on the outskirts of settlements such as Burwell.

There are no businesses within the boundaries of the Grid Connection Corridor B. Within 500 m of Grid Connection Corridor B, there are multiple businesses including the Suffolk Polo Club (located in Six Mile Bottom; approximately 320 m west of Grid Connection Corridor B and 780 m east of Grid Connection Corridor A).

Agricultural land holdings

The Site comprises of land used for agricultural purposes with associated farm holdings and private tracks.

There are at least four agricultural land holdings within Developable Areas A, B and C, and Inter Array Connection Corridors. There are at least six agricultural land holdings within Grid Connection Corridor A and four within Grid Connection Corridor B.

An ALC survey has been undertaken of the of Developable Area A- West and Developable Area B - Central in spring 2024, which identified these areas (total of 781 ha) as the following grades of land:

- Grade 1: 1.8 ha (0.2%)
- Grade 2: 72.4 ha (9.4%);
- Subgrade 3a: 278.9 ha (36.3%);
- Subgrade 3b: 401.5 ha (52.3%); and
- Grade 4: 12.9 ha (1.7%).

ALC Grades 1, 2 and subgrade 3a are defined as BMV agricultural land, of which 45.9% of the soils in Developable Area A- West and Developable Area B – Central are classified as BMV. An ALC survey of Developable Area C – East, and Inter Array Connection Corridors, is planned for early 2025. Additional ALC surveys will be required once the optioneering for the Grid Connection has been progressed, and a preferred alignment(s) selected.

Walkers, cyclists and horse riders

There are numerous PRoWs which are within, intersect or are located within 500 m of the Site with many transversing the Developable Areas, Inter Array Connection Corridors and Grid Connection Corridors. A full list of PRoW that could be impacted is included at **Appendix L Public Rights of Way (PRoW) within study area**, however prominent walking routes and National Cycle Network (NCN) routes are detailed below:

- The Icknield Way Path is a walking route from Buckinghamshire to Norfolk. It is an ancient route that consists of prehistorical pathways. The Icknield Way transverses from Brinkley to Balsham through Developable Area C - East and Grid Connection Corridor B.
- Harcamlow Way is a waymarked walking route which runs in a figure of eight from Harlow to Cambridge and back again. The Harcamlow Way runs in a south easterly direction from Fulbourn to Balsham and transverses areas of Grid Connection Corridor A and Inter Array Connection Corridor 1 and runs alongside the boundary of Developable Area B - Central.
- The E2 Scotland and England (eastern variant) is a European long distance path which runs through areas of Developable Area B – Central and Developable Area C - East and Grid Connection Corridor B. This route runs through Willingham Green to Balsham.

There are two NCN routes within the Grid Connection Corridor A. These are:

- NCN route 51: located 167 m west of the Site Boundary and traverses the connection area in an east west alignment; and
- NCN route 11: traverses the Site Boundary in a northwest/ southeast alignment in three areas.

NCN route 51 is located east of the Site Boundary at the north of Grid Connection Corridor B and runs from Exning to Burwell.

Community land and assets

LA 112 defines community land as '*common land*, *village greens*, *open green space*, *allotments*, *sports pitches*'.

The following community assets are located in or within 500 m of Developable Area C - East:

- Brinkley Woodland Cemetery, located approximately 230 m north of Developable Area C - East on Grange Road;
- Weston Colville Cricket Club, located approximately 75 m from Developable Area C - East on Horseshoe Lane;
- Church End Playing Fields, in Weston Colville, are located within Developable Area C - East (to be excluded from developable area);
- St Mary's (Weston Colville), located approximately 20 m from Developable Area C - East on Church End;
- West Wratting Tennis Club, located approximately 60 m from Developable Area C - East on Bull Lane;
- West Wratting Playground, located approximately 100 m from Developable Area C - East on Bull Lane; and
- Saint Andrew's Church West Wratting, located approximately 20 m from Developable Area C - East on The Causeway.

The following community assets are located in or within 500 m of Grid Connection Corridor A:

- Priory Wood (a woodland trust wood), is located west of the village of Burwell within the boundary of Grid Connection Corridor A;
- Burwell Recreational Park: is located north west of the village of Burwell within the boundary of the Grid Connection Corridor A;
- Swaffham Prior Church of England Primary School: located approximately 465 m from the Grid Connection Corridor A;
- St Mary's Church Swaffham Prior: located approximately 300 m west of the Grid Connection Corridor A;
- Swaffham Prior Village Hall, located approximately 425 m west of Grid Connection Corridor A;
- St Cyriac's Church: located approximately 290 m west of the Grid Connection Corridor A;
- Pauline's Swamp: located approximately 105 m east of Grid Connection Corridor A;
- Burwell Community Fire & Rescue Station: located 225 m east of Grid Connection Corridor A;
- Reach Cricket Ground: located 70 m west of Grid Connection Corridor A; and
- Reach Play Park: located 185 southwest of Grid Connection Corridor A

There are no known community land or assets located within the Developable Areas A - West and Developable Area B - Central, Inter Array Connection Corridors, Grid Connection Corridor B or their study areas.

Tourism

Within the study area, there are several recreational areas (such as Meg's Mount and Gunners Hall Trig Pillar) and walking trails (Icknield Way Path, Harcamlow Way and E2 Scotland and England) , which are located in or within 500 m of the Developable Areas.

Devil's Dyke is a linear earthen barrier which runs 11 km from Reach to Woodditton. It is a Scheduled Monument and is located within Grid Connection Corridor A. Wilbraham Temple (Grade II Park and Garden) and Swaffham Prior House (Grade II Park and Garden) are located approximately 100 m southwest and 230 m west respectively of Grid Connection Corridor A.

Accommodation

There are a number of camping sites and other accommodation located within the local area including in Balsham, Little Abington, Brinkley and in surrounding settlements such

as Cambridge and Newmarket. The Explore East Cambs[165] website lists 59 properties (including hotels, B&Bs, self-catering, marinas and camping sites) to stay within East Cambridgeshire, whereas 71 properties are listed within South Cambridgeshire[166].

Population, employment and productivity

As the Scheme is within both the East and South Cambridgeshire District Councils' administrative boundaries, this section details the population, employment and productivity of each area.

The population of East Cambridgeshire is approximately 87,700 with the population increasing by 4.6% between the last two censuses (2011 and 2021)[167] compared to South Cambridgeshire which has a population of 162,000 which is an increase of 8.9% from 2011 to 2021[168].

Between July 2023 and June 2024, the total number of people East Cambridgeshire that were in employment was 50,100 (85.1%) and 1,500 (2.8%) were unemployed[169] compared to South Cambridgeshire where 83,400 (82.7%) were in employment and 2,500 (3%) were unemployed[170].

In 2023, the largest sectors for employment in South Cambridgeshire include professional, scientific and technical activities (25.6%), manufacturing (11.1%) and wholesale and retail trade; repair of motor vehicles and motorcycles (10.0%)[170]. In East Cambridgeshire 14.1% were employed in wholesale and retail trade; repair of motor vehicles and motorcycles, 12.5% in education and 10.9% in manufacturing[169].

In East Cambridgeshire; approximately 2,000 people (6%) are employed in the agricultural sector and 2,500 people (7%) are in the construction industry[171]. While in

[165] East Cambridgeshire District Council (2024). Where to stay in East Cambs. Available at: https://www.exploreeastcambs.co.uk/stay

[166] South Cambridgeshire District Council (2024) Best places to stay near Cambridge. Available at: https://visitsouthcambs.co.uk/stay/

[167] Office of National Statistics (2022) How the population changed in East Cambridgeshire: Census 2021. Available online: https://www.ons.gov.uk/visualisations/censuspopulationchange/E07000009/

[168] Office of National Statistics (2022) How the population changed in South Cambridgeshire: Census 2021. Available online: https://www.ons.gov.uk/visualisations/censuspopulationchange/E07000012/

[169] Office of National Statistics (2024) Labour Market Profile - East Cambridgeshire. Available online: https://www.nomisweb.co.uk/reports/lmp/la/1946157206/report.aspx#tabrespop

[170] Office of National Statistics (2024) Labour Market Profile – South Cambridgeshire. Available online: https://www.nomisweb.co.uk/reports/lmp/la/1946157209/report.aspx#tabrespop

[171] Cambridgeshire & Peterborough Combined Authority (2024) East Cambridgeshire District Figures. Available at: https://cambspeterboroughlmi.co.uk/lmi-for-leaders/districts/east-cambridgeshire/

South Cambridgeshire; 1,500 people (2%) work in the agricultural sector and 6,000 (7%) work in construction[172].

GVA is a measure of economic productivity that quantifies the contribution of an entity (company, industry or area) to an economy, producer or sector. The regional GVA output of Cambridgeshire in 2022 was £23,844 million[173]. The regional GVA in 2022 in East Cambridgeshire[174] is:

- £188 million by the construction industry (for all construction related activities);
- £247 million by agriculture, mining, electricity, gas, water and waste;
- £40 million by employment activities; tourism and security services; and
- £48 million by accommodation and food service activities.

Whereas the regional GVA for South Cambridgeshire[175] is:

- £646 million by the construction industry (for all construction related activities);
- £132 million by agriculture, mining, electricity, gas, water and waste;
- £127 million by employment activities; tourism and security services; and
- £94 million by accommodation and food service activities.

6.8.6 Additional (secondary and tertiary) mitigation

In addition to the mitigation measures below, setback distances from residential dwellings and community assets will be determined during the finalisation of the design and route of the Scheme. Further mitigation measures, where required, will be identified as the Scheme design develops and assessment work is completed.

[172] Cambridgeshire & Peterborough Combined Authority (2024) South Cambridgeshire District Figures. Available at: https://cambspeterboroughlmi.co.uk/lmi-for-leaders/districts/south-cambridgeshire/

[173] Office of National Statistics (2024) Regional gross value added (balanced) per head and income components. Available online: https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalregionalgrossvalueaddedbalancedperheadandincomecomponents

[174] Office for National Statistics (2024) Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available online: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region

[175] Office for National Statistics, (2024). Regional gross value added (balanced) by industry: local authorities by ITL1 region. Available online: https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/regionalgrossvalueaddedbalancedbyindustrylocalauthoritiesbyitl1region

Construction

During construction, where it is not possible to avoid diversions or closures of existing PRoWs; any new permanent and alternative PRoW will be designed to the same standard or better than the existing PRoW route, in respect of quality, safety and accessibility. Any proposed changes to a PRoW will be agreed in consultation with Cambridgeshire County Council, South Cambridgeshire District Council and East Cambridgeshire District Council, to ensure there are suitable diversions/replacements in place.

An oPRoWMP will be produced and submitted with the DCO application. The oPRWMP will detail any proposed changes to PRoWs and how these changes/diversions will be agreed/managed to minimise effects on receptors such as walkers, cyclists and horse riders.

Operation

Once operational, it is anticipated that a PRoW will either be available to use in the same manner as pre-construction or if a new route for a PRoW is in place, this will be open for use. No additional mitigation during operation is therefore proposed.

Decommissioning

It is anticipated that during the decommissioning phase where it is not possible to avoid diversions or closures of existing PRoWs; any alternative PRoWs will be designed in consultation with Cambridgeshire County Council, South Cambridgeshire District Council and East Cambridgeshire District Council. The decommissioning phase is likely to have a similar impact as that of the construction phase, albeit for a shorter duration.

6.8.7 Description of likely significant effects

Private properties and housing

There are no properties or houses at risk of demolition as a result of the construction, operation or decommissioning of the Scheme. As detailed in Section 6.2.8 there is the potential for views of the Scheme in neighbouring settlements (i.e., Worsted Lodge, West Wratting, Weston Colville, Willingham Green and Brinkley) and scattered residential dwellings. However, minimising the potential visibility on these receptors will be a key consideration when finalising the design and route of the Scheme. It is therefore anticipated that there will be no significant effects on private property or housing as a result of the Scheme (i.e., visibility of the Scheme or at risk of demolition), when considering the receptor in the context of the 'population' factor.

Development land and businesses

There are a number of businesses located within the study area. There is the potential for significant effects to businesses associated with impacts to visual amenity and noise. A number of events businesses have been identified within the study area (Grid Connection Corridor A), where changes to visual amenity may potentially affect the visitor experience at these receptors there is the potential for impact to the business (i.e., through loss of business/revenue).

Agricultural land holdings

The Scheme will cover a large area of privately owned agricultural land. The majority of this land, within the Developable Area, will be taken out of full production for the lifetime of the Scheme (40 years), reducing the land available for agriculture. There may be businesses, tenants or occupiers currently undertaking agricultural operations across the Site who may cease production during construction and operation of the Scheme, and as such there may be loss of agricultural employment opportunities in the area.

The Applicant is in discussions with the landowners of the Developable Area and are in the process of negotiating lease agreements. Where possible, the land may be used for light grazing and hay cropping during the construction, operation and decommissioning phases and that use of this land for solar will provide a diversified source of income for those landowners.

The agricultural land holdings within the Inter Array Connection Corridors and Grid Connection Corridors, where not avoided entirely by the preferred alignments, will be temporarily disturbed during the construction phase and only a minor loss of land associated with the OHL towers is anticipated.

As detailed in **Section 6.4.7**; 45.9% of the Developable Areas A - West and B - Central have been classified as BMV. The development of this land for PV instead of continuing the existing agricultural operations, has the potential to lead to a loss of employment and therefore impact the agricultural economy of Cambridgeshire during the lifespan of the Scheme.

Walkers, cyclists and horse riders

All PRoWs will be retained in their existing alignment, where practicable. However there is the possibility that PRoWs within and around the Site will need to be permanently or temporarily diverted as a result of the construction and operational phase. Minimising the need for permanent closures of any PRoWs will be a key consideration when finalising the design and route of the Scheme. If a PRoW is permanently closed, the PRoW will be replaced to the same standard or better than the existing PRoW route, in consultation with the LPA.

As a result of these changes, it is possible that PRoWs users will be inconvenienced (i.e., having to use a different or potentially longer route). Should any permanent diversions be required, efforts will be made to ensure that a diversion will take the shortest feasible route and enhancement is provided to existing routes.

There is also the potential that the inconveniences resulting from temporarily/permanently diverted or new PRoWs (to replace a permanently closed PRoW) may increase users' journey duration or present a barrier which could restrict or prevent their use. Barriers to people undertaking travel and/or exercise will be avoided where possible. Where impacts may occur, the oPRoWMP will detail the proposed mitigation measures to remove or minimise the potential for impacts. This will be submitted in support of, and secured by, the DCO application.

As detailed in LA 112, an increase in the length of a PRoW by 250-500 m could create a moderate level of effect on users, with an increase of more than 500 m to have a major effect. At this stage, it is unknown if any changes to a PRoW will exceed these distances.

In addition there is potential for significant effects relating to disturbance and inconvenience for PRoWs users, depending on the sensitivity on the receptors.

Community land and assets

There are multiple identified community land and assets located within the study area, which may be impacted by construction phase noise/traffic and operational visual/amenity impacts.

Although the Church End Playing Fields, in Weston Colville, are located within Developable Area C – East, the fields have been excluded from the PV developable area and will not be used for access.

Given the temporary nature of construction and that access to these assets will not be impacted, it is anticipated that there will be no significant effects on community land or assets.

Tourism

Wilbraham Temple, Swaffham Prior House, Devils Dyke and several recreational/hiking areas are located within the study area. Potential significant effects to tourism are associated with construction noise (temporary) and visual amenity. These areas could be directly impacted visually by the Scheme which could result in a decrease in the number of visitors and therefore a reduction in local revenue and potential loss of employment opportunities.

Occupancy rates

The number of construction/operational staff is to be confirmed, however there is a potential for a proportion of staff to require temporary accommodation, which will impact capacity rates.

Employment and productivity

The number of construction/operational staff is to be confirmed but there is potential for likely significant beneficial effects to employment rates and GVA in East and South Cambridgeshire associated with the construction phase. There is also the potential for adverse effects relating to employment and GVA from the resulting temporary reduction/loss of agricultural land.

6.8.8 Receptors/matters to be scoped into further assessment

LA 112 sets out the following receptors to be covered in relation to population:

- Private property and housing;
- Development land and businesses;
- Agricultural land holdings;
- Walkers, cyclists and horse riders; and
- Community land and assets.

For completeness, based on experience of similar projects elsewhere and professional understanding, the potential for effects on employment, productivity (i.e., GVA), tourism and accommodation occupancy rates have also been considered.

As noted in **Section 5.8**, a human health chapter will not be prepared, as the potential effects on human health will be covered in the air quality, landscape and visual, noise and vibration, and transport and access and population assessments.

The following receptors/matters have been assessed and will be scoped in for further assessment.

Receptor/Matter	Phase	Justification
Development land and businesses	Construction, operation and decommissioning	There is potential for significant effects to businesses such as impacts to visual amenity which will change the current rural landscape. Event facilities could see reduced visitor numbers which may lead to loss of revenue.
Agricultural land holdings	Construction, operation and decommissioning	There is potential for significant effects to agricultural land holdings through the reduction or cessation of agricultural production (refer to **Section 6.4** for details on BMV).
Walkers, cyclists and horse riders via impacts to PRoWs	Construction, operation and decommissioning	There is potential for significant effects to walkers, cyclists and horse riders as a result of temporary and/or permanent diversions of any PRoWs/NCNs relating to inconvenience and barriers accessing existing PRoWs/NCNs.
Employment and GVA	Construction, operation and decommissioning	There is potential for significant effects to local employment and GVA. The loss of productive land (BMV) may impact the agricultural economy of Cambridgeshire

6.8.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		and employment opportunities. However, it is anticipated that the construction of the Scheme will result in a large number of construction staff, resulting in employment opportunities and increase spending in the local area. It is anticipated that a small number of jobs will be created during operation of the Scheme.
Tourism	Construction, operation and decommissioning	The existing pylon line is a prominent visual feature viewed from Devil's Dyke. Wilbraham Temple and Swaffham Prior House are relatively well self-contained with views being curtailed by vegetation (as detailed in **Section 6.2**). These registered gardens/parks are privately owned and are not open to the public. Due to the potential limited visibility from the tourism assets (existing screening), the existing OHL being visible from Devil's Dyke and the temporary nature of construction, it is anticipated that there will be no significant effects on these tourism receptors.

6.8.8 Receptors/matters to be scoped into further assessment		
Receptor/Matter	**Phase**	**Justification**
		There is however potential for likely visual effects on key recreational routes (i.e., E2 European Long Distance Route, Icknield Way Trail and Harcamlow Way) the which may affect visitor numbers and subsequently local revenue.
Accommodation occupancy rates	Construction and decommissioning	The additional construction/decommissioning workers in the area may have an impact on visitor accommodation and occupancy rates.
6.8.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Private properties and housing	Construction, operation and decommissioning	There will be no commercial buildings or houses at risk of demolition as a result of the construction, operation or decommissioning of the Scheme. The land allocated for the Scheme is not allocated for residential development and no new planning applications have been submitted for housing developments within the Site Boundary, this will be monitored until the DCO application is submitted. No significant effects are expected in relation to private property and housing.

6.8.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
Common land and community assets	Construction, operation and decommissioning	There are multiple identified community land and assets located within the study area. Including the Burwell Recreational Park, Priory Wood and other community assets located within the villages of Burwell, Reach, West Wratting, Weston Colville, Willingham Green, Brinkley and Swaffham Prior. The Scheme will not impact the access to any community land or assets, including the Church End Playing Fields which is within the boundary of Developable Area C – East. These fields have been excluded from the PV developable area and will not be used for access. In addition noise and traffic effects associated with construction will be temporary. Minimising the potential visibility on these receptors will be a key consideration when finalising the design and route of the Scheme, visual impacts associated with the operational phase of the Scheme will be detailed in the landscape and visual impact assessment. It is anticipated that there will no significant impacts on community land or assets.

6.8.9 Receptors/matters to be scoped out of further assessment

Receptor/Matter	Phase	Justification
Accommodation occupancy rates	Operation	Although the number of operational staff is to be confirmed, it is anticipated that these positions will be permanent and therefore will be filled by staff living within a commutable distance of the Scheme. Therefore, it is considered that there is unlikely to be significant impacts to local occupancy rates during operation.

6.8.10 Opportunities for enhancing the environment

There are opportunities to create new or to enhance the current condition of affected PRoWs, including upgrading access, signage or safety.

An outline Employment, Skills and Supply Chain Plan (oESSCP) will be prepared and submitted with the DCO application. An oESSCP can be used as the basis of ensuring that local people are given access to training resources which will allow them to develop new skills or enhance existing knowledge in areas such as renewable energy, construction, maintenance and supply chains.

6.8.11 Proposed assessment methodology

In accordance with LA 112, the assessment will consider the likelihood of significant effects for land use and accessibility relating to:

- Agricultural land holdings;
- Businesses and employment land; and
- Walkers, cyclists and horse riders via impacts to PRoWs.

In the absence of other guidance, professional judgement will be used to inform the assessment of effects on receptors to be included in the assessment but are not listed in LA 112 guidance. These receptors are:

- Employment and GVA; and
- Tourism and occupancy rates.

To provide continuity, it is proposed that the terminology and significance criteria detailed in LA 112 will be used regardless of whether the receptor is listed in LA 112 or

not. Further detail on the significance criteria (listed below) that will be applied is presented in **Appendix C**.

The assessment will include the likely effects during all phases of the Scheme i.e., construction, operation and decommissioning.

Consideration will be given to the presence and number of receptors within the study area through the baseline assessment.

Unless identified through the baseline assessment, receptors that are outside the study areas will not be considered. If a receptor is absent from the study area, no further consideration will be given to the potential for significant effects.

Professional judgement will be used to consider the likely effects that the Scheme would have and whether the effect is likely to be beneficial, neutral or adverse. The effect will be quantified with regards to the nature of the impact, the probability of the impact and the duration, frequency and reversibility of the impact.

For any level of adverse impacts identified through this process, consideration will be given to the implementation of mitigation measures to remove, reduce or mitigate the level of effect. If the effect is positive, consideration will be given to the measures that could be implemented in order to enhance the level of effect.

Residual effects will then be assessed which will take into account any proposed mitigation measures.

6.8.12 Difficulties and uncertainties

To ensure transparency within the EIA process, the following difficulties and uncertainties have been identified:

- As the Scheme does not have a fixed layout, it is currently not possible to determine the number and length of PRoWs and the percentage of BMV that will be affected. This information will be determined to inform the ES and DCO application;
- The number of construction and operational workers is yet to be confirmed, therefore the impacts on employment and productivity is unknown. This information will be determined to inform the ES and DCO application; and
- As the Inter Array Connection Corridor and Grid Connection Corridor routes are to be optioneered and designed, a preferred alignment and installation technique is to be confirmed. Therefore the scope of the population assessment will be reviewed ahead of the PEIR and/or ES as this information becomes available to ensure the receptors are scoped in/out appropriately.

6.8.13 Scoping questions

- Do you agree with the proposed consultees to be engaged with on this topic?

- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?
- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of the EIA?
- Do you agree with the proposed factor specific assessment approach?

6.9 Climate

6.9.1 Consultation

Based on previous experience with solar DCO projects, no specific consultation in relation to climate change is envisaged, over and above the consideration of comments received to this EIA Scoping Report.

6.9.2 Study area

Greenhouse gas (GHG) emissions

The GHG assessment will consider GHG emissions from within the Site Boundary and those indirect emissions from activities outside the Site. Scope 1 (direct emissions released from sources that are owned or controlled by the Applicant) emissions will include those emitted directly from all facilities and infrastructure under the operational control of the Scheme, and likely within the Site Boundary. However, scope 2 (indirect emissions associated with off-site generation of purchased energy) and any relevant scope 3 (all other indirect emissions sources not accounted for within scope 1 and 2) emissions will occur outside the proposed Site Boundary. These emissions will be estimated based upon project-specific data that may relate to activities outside the Site Boundary (e.g., water provision and wastewater treatment outside of the Site Boundary, transport of materials to the Scheme or the embodied carbon within construction materials and solar PV modules).

The receptor to GHG emissions is the global climate, and so when assessing the impact and significance of GHG emissions, the national (Climate Change Act 2008 and associated Carbon Budgets) and global context (Paris Agreement) is considered.

Climate Change Risk

As the climate change risk assessment is an assessment of the impact of the effects of climate change on the Scheme itself, the study area is the Site Boundary.

6.9.3 Data sources to inform the EIA baseline characterisation

GHG emissions

The GHG baseline characterisation will be conducted in accordance with the IEMA *Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance* (2022)[176], having consideration also for PAS 2080:2023 Carbon Management in Infrastructure[177]

[176] Institute of Environmental Management and Assessment (IEMA) (2022) Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance. [Online].

[177] PAS 2080:2023 (2023), Carbon management in buildings and infrastructure.

and Royal Institution of Chartered Surveyors (RICS) Whole life carbon assessment for the built environment (2023)[178].

Standard emission factors will be applied, sourced from reputable agencies, such as Defra UK Government GHG Conversion Factors for Company Reporting (2023)[179].

Data pertaining to the expected construction and operational activities will be sourced from the Applicant and, where necessary, from other comparable developments to estimate applicable scope 1, 2 and 3 emissions. This includes construction energy consumption, expected maintenance requirements, product specification (e.g., solar PV modules and BESS), total materials needed for construction and details on construction workforce.

Climate change risk

Flood risk in the area within which the Scheme will be taking place was assessed using the UK Government's flood map for planning tool (2024)[180], which ranks an areas flood risk probability from different sources as either Flood Zone 1 (less than 0.1% chance of flooding annually), Flood Zone 2 (between 0.1% and 1% chance of river flooding annually, or between 0.5% and 1% chance of sea flooding annually), or Flood Zone 3 (greater than 1% chance of river flooding annually, or greater than 0.5% chance of sea flooding annually).

6.9.4 Surveys to inform the EIA baseline characterisation

No surveys have been undertaken to date, and none are expected or planned to take place for this assessment.

6.9.5 Baseline conditions

The baseline conditions describe the conditions of a business-as-usual scenario whereby the Scheme is not undertaken.

GHG emissions

The Site is located within the administrative boundaries of South Cambridgeshire District Council, East Cambridgeshire District Council, and Cambridgeshire County Council. The Site baseline comprises existing carbon stock and sources of GHG emissions of the existing activities on-site. The Site predominantly comprises arable

[178] Royal Institute of Chartered Surveys (2023), Whole life carbon assessment for the built environment.

[179] Department for Energy Security and Net Zero (2023), UK Government GHG Conversion Factors for Company Reporting.

[180] UK Government (2024) Flood map for Planning. Available online: https://flood-map-for-planning.service.gov.uk/

fields divided by hedgerows and interspersed with smaller areas of woodland, grassland and scrub.

To assess the GHG savings of the Scheme, operational emissions from a Combined Cycle Gas Turbine have been used as a comparison, as it is currently the most carbon-efficient fossil-fuelled technology available. In the July 2024 Decision Letter for Gate Burton Energy Park[181] the Secretary of State commented that it considered a Combined Cycle Gas Turbine an inappropriate baseline for these comparisons as "2011 NPS EN-1 requires all combustion power stations with a capacity over 300MW to be constructed Carbon Capture Ready". This still holds true in NPS EN-1 (2023)[182]. The future energy baseline is uncertain, and whilst there are requirements for all combustion power stations with a capacity over 300 MW to be constructed to be 'Carbon Capture Ready', this does not guarantee the application of carbon capture technology, nor the timeframes to which it may be applied. As such, and in the absence of any more appropriate identified methodology, a comparison to Combined Cycle Gas Turbine emissions remains a robust and appropriate method to understand the level of GHG savings from the Scheme.

Climate change risk

According to the UK Government's flood map for planning tool[183] (2024) the Scheme is mainly located within Flood Zone 1, showing either no flood risk or very low flood risk (less than a 0.1% chance) of surface water flooding, river flooding and coastal flooding. Some small sections of the Site fall within flood zone 3, showing a greater than 1% chance of river flooding annually. For more information relating to flooding please refer to **Section 5.2 Water.** The 'Flood Map for Planning' has been represented in **Appendix D Water Figures, Figure D2** with the spatial extents of the Site and study area.

[181] Department for Energy Security and Net Zero (2024) Final decision letter for the Application for Development Consent for the Gate Burton Energy Park. Available online: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010131/EN010131-001744-Gate%20Burton%20Final%20Decision%20Letter.pdf

[182] Department for Energy Security and Net Zero (2023) Overarching National Policy Statement for Energy (EN-1). Available online: https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1

[183] UK Government (2024) Flood map for Planning. Available online: https://flood-map-for-planning.service.gov.uk/

6.9.6 Additional (secondary and tertiary) mitigation

GHG emissions

Construction

An oCEMP would be implemented to identify good working practices in line with appropriate standards, including low carbon practices. Some mitigation measures that are anticipated to be considered are:

- Embed carbon reduction practices as a core principle for the design team. Where reduction ideas are suggested during the design process, they should be recorded and the potential impact quantified. Earlier engagement with carbon reduction allows for the greatest returns;
- Where technical specifications allow, maximise the recycled content of construction materials such as concrete and steel;
- Maximise the specification of materials with an environmental product declaration with the aim of reducing embodied carbon emissions;
- Staff carpooling will be encouraged and facilitated where possible and practical;
- Incentivise use of local suppliers with a view to shorten project supply chains and environmental footprint;
- On-site mobile and non-mobile plant should conform to the latest emissions standards, with mobile vehicles conforming to EURO 6 standards as a minimum. All plant should investigate the option of using HVO fuels or electric versions where possible; and
- Require main contractors to report on energy data, water usage and waste disposal and their GHG emissions as part of the oCEMP.

Operation

Given the nature of the Scheme as a renewable energy project it is anticipated to have an overall positive effect on the climate during operation. Despite this, adherence to best practice relating to the maintenance and replacement of components of the Scheme should be followed at all times. Any replacement and maintenance which takes place should also follow the mitigation measures proposed within the construction phase where applicable.

Decommissioning

The decommissioning process is likely to result in GHG emissions, particularly from waste disposal of solar PV modules and any BESS. Additional mitigation can be employed that aligns with the hierarchy for managing project-related emissions (avoid, reduce, substitute and compensate). An oDEMP will be submitted as part of the DCO application, which will set out how the waste will be managed and detail opportunities for re-use and recycling.

Climate Change Risk

Construction

Electrical infrastructure and construction laydown areas are anticipated be sited in locations at low risk of flooding and/or set at the necessary minimum heights above flood levels. An oCEMP will be implemented which will include measures to decrease the risk of climate hazards during the construction phase. These are anticipated to include:

- Weather forecasts to be monitored on a daily basis. Forecasts would be used to inform the sequencing of activities and the use of appropriate personal protective equipment (PPE);
- Provision of welfare facilities including breaks, shade, and hydration facilities, as well as first aid amenities;
- Provision of an Emergency Response Plan, to include on-site fire prevention, suppression, and evacuation procedures;
- Provision of an Incident Response Plan that identifies flooding as a key site risk and identifies the correct policies and procedures to follow in the event of such;
- Monitoring and maintenance of plant and equipment to ensure compliance of machinery with design specifications and flexibility in the construction activities programme to account for climatic variation;
- Appropriate on-site storage of plant and equipment; and
- Hazardous materials would be maintained in a safe storage area when not in use. This would be away from Site access and egress points. Disposal of hazardous waste would be undertaken appropriately, taking into account the risks associated with high temperatures and increased rainfall, as outlined in the Site Waste Management Plan

Operation

The condition and integrity of assets would be regularly assessed, and maintenance undertaken as early as required, giving consideration to materials with enhanced tolerance to fluctuating temperatures and exposure to rainfall.

Decommissioning

Anticipating the most appropriate additional mitigation measures to be implemented during the decommissioning stage is difficult due to the potential advancements in technology and best practice between the present and the time in which decommissioning will take place. Despite this, general adherence to the additional mitigation measures proposed during the construction phase is advised.

6.9.7 Description of likely significant effects

GHG - construction

GHG emissions will occur during the construction phase. Main GHG emissions sources are likely to be through fuel consumption of staff and materials travelling to site, as well as of plant onsite, and the embodied GHG emissions of materials.

It is not expected that the GHG emissions from construction will compromise the ability of the UK to meet its carbon reduction targets. However, in view of the cumulative contribution of all emissions towards climate change, and the fact that the global climate is highly sensitive to fluctuations in GHG emissions, the GHG emissions associated with the construction of the Scheme will have a negative effect upon the climate.

GHG - operation

The operation of the Scheme is unlikely to contribute a significant amount of GHG emissions, and can be viewed as achieving GHG emissions savings by offering additional renewable electricity generation in place of fossil fuel electricity generation. GHG emissions savings will persist for the entirety of the Scheme's lifespan, and will contribute cumulatively towards GHG reduction targets set both locally and nationally. The GHG savings from the operational phase are anticipated to be greater than the GHG emissions associated with the construction and decommissioning phases, and will contribute to the decarbonisation of the National Grid.

GHG - decommissioning

GHG emissions will occur during the decommissioning phase, again due to the necessary use of heavy machinery, waste disposal, and staff and material movements. As is the case with construction, the receptor is not confined to the immediate vicinity of the Site; instead, it is the global atmosphere. As such, the receptor is highly sensitive, in view of the cumulative contribution of all emissions towards climate change. With this in mind, the GHG emissions associated with the decommissioning of the Scheme will have a negative effect upon the climate.

Climate change risk – construction, operation, and decommissioning

No significant effects are anticipated concerning climate change risk, due to the embedded resilience of solar PV panels and the low risk of flooding at the Site.

6.9.8 Receptors/matters to be scoped into further assessment

Receptor/Matter	Phase	Justification
GHG emissions	Construction, operation & decommissioning	Aligned with IEMA guidance, a project that causes GHG emissions to be avoided has a beneficial effect that is significant. It is important to include all GHG emissions when considering the overall lifecycle GHG

		emissions of the Scheme, to determine an accurate 'carbon-payback' time.

6.9.9 Receptors/matters to be scoped out of further assessment

Receptor/Matter	Phase	Justification
Climate change risk	Construction, operation & decommissioning	UK Climate Projections (2018) (UKCP18)[184] projections suggest that climate change will lead to hotter drier summers, warmer wetter winters, increased likelihood of extreme weather events (e.g., heat waves, high rainfall events) and sea-level rise. Due to the embedded resilience of solar PV modules, as well as other ancillary components, to high heat and wind speeds these factors are not expected to significantly impact on the construction, operation or decommissioning of the Scheme. Given the projected effects of climate change anticipated through UKCP18, as well as the timeframes in which those effects are anticipated to take place, climate change specifically is not expected to pose a significant risk to human health in either the short or medium term (i.e. during the lifespan of the Scheme). Potential risks to human health will likely be reviewed in greater detail within specific chapters (e.g., Land, soils, and groundwater; population; major accidents and disasters; flooding). Electrical infrastructure (substations, inverters, BESS and switchgear) are anticipated to be sited in locations at low risk of flooding and/or set at the necessary minimum ground levels determined by the Flood Risk Assessment and in agreement with the relevant prescribed consultees. The vulnerability of the Scheme to flooding and its potential to exacerbate flooding will

[184] UK Climate Projections 2018. Available online: https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index

6.9.9 Receptors/matters to be scoped out of further assessment		
Receptor/Matter	**Phase**	**Justification**
		be covered in more technical detail in the stand-alone Flood Risk Assessment to be submitted as part of the DCO application. Therefore, climate change risk has been scoped out of the climate deliverables.
In-combination impact assessment	Construction, operation & decommissioning	The resilience of receptors identified in other chapters is unlikely to be affected by a combination of future climate change (e.g. temperature change, sea level rise, or wind), and the impacts of the Scheme. Climate change may lead to an increase in extreme rainfall events, however, no significant impact on surface water or groundwater levels are expected as a result of precipitation changes, in combination with the Scheme, as the flow of precipitation to ground will not be significantly hindered. Given some sections of the Site are located within Flood Zone 3, the potential in-combination impacts of heavy precipitation and the Scheme will be assessed in more technical detail within the Flood Risk Assessment to be submitted as part of the DCO application. Therefore, the in-combination impact assessment has been scoped out of the climate deliverables.

6.9.10 Opportunities for enhancing the environment
The Scheme is expected to have a net beneficial impact on the climate, in that it will reduce GHG emissions associated with electricity consumption on a national scale. Opportunities exist to further increase the environmental benefit of the Scheme by ensuring that GHG emissions associated with the construction and decommissioning process are minimised. This can be ensured by the adoption of various additional mitigation measures, as detailed above.

There is scope to further improve the Site in terms of ecological enhancements and habitat creation, which can have a positive effect in terms of carbon sequestration. These will be documented in the oLEMP, which will be submitted as part of the DCO application.

6.9.11 Proposed assessment methodology

The assessment of the effects of GHG emissions arising from the Scheme will be carried out in accordance with:

- The Institute of Environmental Management and Assessment '*Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance*' (2022 edition)[185];
- PAS 2080:2023 Carbon Management in Infrastructure[186]; and
- Royal Institute of Chartered Surveys (RICS) Whole life carbon assessment for the built environment (2023)[187].

The assessment will quantify applicable Kyoto Protocol GHGs as measured in tonnes of carbon dioxide equivalence (tCO_2e), where equivalence means having the same warming effect as CO_2 over 100 years.

The GHG baseline characterisation will be conducted using a desk-based assessment of current land use, existing carbon stock and any activities that could cause GHG emissions. However, in line with the IEMA guide, any agricultural land can generally be considered to have zero baseline emissions to ensure reasonable worst-case approach to establishing net GHG effect.

Data associated with the activities contributing to the construction, operation and decommissioning of the Scheme will be provided by the Applicant. Where it is not possible to collect this data, as this assessment represents a forecast of emissions and some information may not yet be known, secondary data (such as estimates, extrapolations, benchmarks and proxy data such as distance travelled) will be used. Emissions will then be quantified by applying the most relevant and up-to date emission factors.

The significance criteria that will be applied in the assessment is set out in **Appendix C**.

[185] IEMA (2022), Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance.

[186] PAS 2080:2023 (2023), Carbon management in buildings and infrastructure.

[187] Royal Institute of Chartered Surveys (2023), Whole life carbon assessment for the built environment.

6.9.12 Difficulties and uncertainties

To ensure transparency within the EIA process, the following difficulties and uncertainties have been identified:

- The accuracy of a GHG assessment depends on the quality of the data provided. Primary data will always be used where available. Where it is not possible to collect these data, as this assessment represents a forecast of emissions and some information may not yet be known, secondary data (such as estimates, extrapolations, benchmarks and proxy data such as distance travelled) will be used, based upon industry approximations and professional best practice. Assessments such as this, based largely on secondary data should only be viewed as an estimate of GHG emissions impact, and actual emissions may vary significantly. Thus, when necessary, a conservative approach will be undertaken to ensure a robust assessment of possible emissions sources. All assumptions and limitations, including exclusions, will be documented as part of the assessment.
- An emission factor is a representative value that relates the quantity of a pollutant released into the atmosphere with an activity associated with the release of that pollutant. Emission factors are typically available from government publications, independent agencies, and scientific research journals; however, the quality and accuracy of such factors can vary significantly. Factors can differ depending on the research body and/or underlying methodologies applied. Emission factors will therefore only be sourced from reputable sources, such as the Department for Energy Security and Net Zero (2023)[188].

6.9.13 Scoping questions

- Do you agree that the data sources listed to inform the EIA baseline characterisation are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the EIA?
- Do you agree with the proposed additional (secondary and tertiary) mitigation measures and is this mitigation appropriate?
- Do you agree with the receptors/matters that are proposed to be scoped in and out of further assessment?

[188] Department for Energy Security and Net Zero (2023), UK Government GHG Conversion Factors for Company Reporting.

7 CUMULATIVE EFFECTS

7.1 Proposed assessment methodology

7.1.1 Schedule 4 paragraph (5)(e) of the EIA Regulations states that the ES should include *"a description of the likely significant effects of the development on the environment resulting from… the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources"*.

7.1.2 Regulation 5(2) states that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of the "*proposed development*" on the following factors: population and human health; biodiversity, land; soil; water; air and climate; material assets; cultural heritage; and the landscape. Regulation 5(2)(e) refers to the need to assess *"the interaction between [those] factors"*.

7.1.3 Cumulative effects occur as a result of several actions on an environmental receptor which may overlap or act in combination. The following types of cumulative effects will be considered in accordance with the EIA Regulations and best practice guidance:

- **Intra-project combined effects** – the interaction and combination of different environmental residual (post-additional mitigation) effects from within the Scheme affecting a receptor; and
- **Inter-project cumulative effects** – the combined residual (post-additional mitigation) effects of the Scheme and 'other existing development and/or approved development' on a single receptor/resource.

7.1.4 Relevant guidance has been considered during the preparation of this EIA Scoping Report and will also be employed in the production of the PEIR and ES, comprising primarily the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[189] on inter-

[189] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment'. [Online] Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

project cumulative effects and guidance from the Institute of Environmental Management and Assessment (IEMA)[190].

7.1.5 The following approach will be adopted for the assessment of cumulative effects, based on previous experience, the types of receptors being assessed, the nature of the Scheme, the other existing development and/or approved development under consideration and the information available to inform the assessment.

7.1.6 It is proposed that a single Cumulative Effects chapter be included in the ES, considering both intra-project combined effects and inter-project cumulative effects.

Intra-project combined effects

7.1.7 The approach to the assessment of interactions of environmental effects (intra-project combined effects) will consider the changes in baseline conditions at common sensitive receptors (i.e., those receptors that have been identified as experiencing likely significant environmental effects by more than one environmental factor) due to the Scheme. The assessment will be based upon residual (post-additional mitigation) effects of 'slight/minor' or greater significance only ('negligible' residual effects will not be considered). The assessment will also include consideration of where multiple non-significant effects could combine to become significant. The study area for the assessment of intra-project combined effects will be informed by the study areas for the individual environmental factor assessments.

7.1.8 The assessment of the intra-project combined effects will be undertaken using a two-stage approach:

Stage 1 – Screening

7.1.9 Screening will be undertaken to determine whether a sensitive receptor is exposed to more than one type of residual (post-additional mitigation) effect during the construction, operation and/or decommissioning phases of the Scheme. Those common sensitive receptors exposed to two or more types of residual (post-additional mitigation) effects, with significance of 'slight/minor' or greater, will be taken forward to Stage 2 of the assessment.

7.1.10 If there is only one type of effect on a sensitive receptor (i.e., only one environmental factor assessment chapter has identified effects on that

[190] Institute of Environmental Management and Assessment (IEMA) (2011) 'The State of Environmental Impact Assessment in the UK'. Available at: https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impact-assessment/2011-State-of-EIA-IEMA.pdf

sensitive receptor), then it will be considered that there are no potential intra-project combined effects and the sensitive receptor will not be taken forward to Stage 2 of the assessment.

Stage 2 – Assessment of intra-project combined effects

7.1.11 A quantitative assessment of the overall significance of the intra-project combined effects on common sensitive receptors identified at Stage 1 will be undertaken, based on technical information provided in the environmental factor assessment chapters and supporting appendices, as well as professional judgement. Given that the types of effects may be very different in some cases, a quantitative assessment may not be possible, and it may be necessary to apply professional judgement in determining the significance of each individual effect.

7.1.12 The evaluation at the receptor level will consider: the magnitude of change at the common receptor; previously identified sensitivity; duration and reversibility of interaction. The focus will be on determining a change in the level of effect likely to be experienced and whether this is significant or not.

Inter-project cumulative effects

7.1.13 The approach to the assessment of inter-project cumulative effects will consider the deviation from the baseline conditions at common sensitive receptors as a result of changes brought about as a result of the Scheme in combination with one or more other existing development and/or approved development(s). The assessment of the inter-project cumulative effects will be based upon the residual (post-additional mitigation) effects that have been identified in the various environmental factor assessments for the Scheme, as well as available environmental information for the other existing development and/or approved developments.

7.1.14 In accordance with the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[191], the identification of other existing development and/or approved developments will comprise two clear stages, as follows:

- **Stage 1**: establish a long list of other existing development and/or approved developments based on appropriate spatial and temporal limits.
- **Stage 2**: apply a clear rationale to establish a short list of other existing development and/or approved developments which, in combination

[191] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment'. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

with the Scheme, have the potential to result in a significant cumulative effect for inclusion within the assessment.

Stage 1: Long list methodology

7.1.15 In accordance with the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[192], the first task in establishing the long list of relevant 'other existing development and/or approved development(s)' is to determine the 'search area'. The 'search area' will be determined by affording consideration to the Zone of Influence (ZoI) for each environmental factor assessed.

7.1.16 The ZoI for each environmental factor is defined as the spatial area over which an effect is likely to be experienced. The ZoI for each environmental factor will be identified based on the extent of the likely effects as identified as the study area in each of the individual environmental factor assessments, whilst also reflecting any additional area over which cumulative effects may occur for particular cumulative scenarios (e.g. sequential cumulative visual effects on users of linear routes).

7.1.17 The overall combined 'search area' for the long list of relevant 'other existing development and/or approved development(s)' will be based on the largest ZoI in terms of distance.

7.1.18 Following the adoption of the ZoI, a planning application search will be undertaken to identify other existing development and/or approved developments within the ZoI, using the planning portals of Cambridgeshire County Council, Greater Cambridge Shared Planning (covering South Cambridgeshire District Council and Cambridge City Council), East Cambridgeshire District Council and the Planning Inspectorate. However, it is recognised that Cambridge City Council, as the 'host' local planning authority, may be aware of additional proposals not yet fully in the public domain and hence comment is sought on any further developments that should, in the authority's opinion, be included in the inter-project cumulative effects assessment process.

7.1.19 Only the following types of other existing developments and/or approved developments will be considered for inclusion on the long list, as the Applicant considers that any development that does not fall within these types would not likely give rise to a significant cumulative effect:

[192] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

- Employment developments;
- Residential developments of 10+ dwellings;
- Minerals and waste applications;
- Industrial developments;
- NSIP developments (as defined by the Planning Act 2008)
- Transport infrastructure developments (rail, trunk roads or motorways only); and
- Energy infrastructure developments.

7.1.20 Furthermore, of the development types listed above, only those that meet one or more of the following criteria will be included on the long list (in accordance with the 'Tier 1' and 'Tier 2' descriptions in the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[193]):

- Projects that are under construction but that would not be completed prior to the Scheme commencing[194];
- Projects with planning permission within the last five years[195] (whether under the Planning Act 2008 or other regimes), but not yet implemented;
- Submitted applications (whether under the Planning Act 2008 or other regimes), but not yet determined;
- Projects on the Planning Inspectorate's Programme of projects where an EIA Scoping Report has been submitted, but for which an application has not yet been submitted.

7.1.21 The Applicant's interpretation of last bullet point above is that this solely relates to NSIPs. However, the Applicant will widen this particular criteria to

[193] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

[194] In accordance with the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment, other projects that are expected to be completed before construction of the Scheme, and the effects of those projects have been fully determined within their respective applications, are considered as part of the baseline.

[195] A five-year period is considered a reasonable time period to capture all other existing development and/or approved developments that still have the potential to be built. Standard planning permission conditions typically state that development must be begun no later than the expiration of three years from the date of permission. Developments with planning permission older than five years will likely have been built or will not likely be built at all.

include projects screened as EIA development under other regimes where an EIA Scoping Report has been submitted, but for which an application has not yet been submitted.

7.1.22 It should be noted that with reference to 'Tier 3' descriptions in the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[196], the following other existing development and/or approved development(s) will not be considered for inclusion in the long list. None of the below will have sufficient environmental assessment information freely and publicly available to inform the inter-project cumulative effects assessment, nor a high level qualitative assessment. The Applicant therefore does not consider the below to be 'existing development and/or approved development':

- Projects on the Planning Inspectorate's Programme of projects where an EIA Scoping Report has not been submitted;
- Projects that have been identified in the relevant Development Plan(s) (and emerging Development Plans); and
- Projects identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

7.1.23 Only if the other existing development and/or approved developments meet the Stage 1 criteria will they then be taken forward to Stage 2. The long list will be kept under review, with the intention of agreeing the long list with Cambridgeshire County Council prior to the completion of the ES to allow for a robust assessment of inter-project cumulative effects.

Stage 2: Short list methodology

7.1.24 Following the formation of the long list, the eligible other existing development and/or approved developments identified require further assessment (Stage 2) to establish a short list of other existing development and/or approved developments which, in combination with the Scheme, have the potential to result in significant cumulative effects.

7.1.25 The criteria used to determine whether to include or exclude an existing development and/or approved development on the short list will reflect the process established by the Planning Inspectorate's Nationally Significant

[196] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

Infrastructure Projects: Advice on Cumulative Effects Assessment[197] and have regard to relevant policy and guidance documents and consultation with the appropriate statutory consultation bodies (Cambridgeshire County Council, Greater Cambridge Shared Planning (covering South Cambridgeshire District Council and Cambridge City Council), and East Cambridgeshire District Council). The Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[198] states that the criteria should address the following:

- **Temporal scope:** The relative construction, operation and decommissioning programmes of the other existing and/or approved developments identified in the ZoI together with the Scheme, to establish whether there is overlap and any potential for interaction.
- **Scale and nature of development:** The scale and nature of the other existing and/or approved developments identified in the ZoI that are likely to interact with the Scheme. Statutory definitions of major development and EIA screening thresholds may be of assistance when considering issues of scale.
- **Other factors:** For example, the nature and, or capacity of the receiving environment, which could make a significant cumulative effect with the other existing and/or approved developments more or less likely. Consider using a source-pathway receptor approach to inform the assessment.

7.1.26 The Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[199] suggests that professional judgement may also be used to supplement the threshold criteria and in order to avoid excluding 'other existing development and/or approved development' that is:

- *"Below the threshold criteria limits but has characteristics likely to give rise to a significant effect; or*

[197] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

[198] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

[199] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

- *Below the threshold criteria limits but could give rise to a cumulative effect by virtue of its proximity to the proposed NSIP [i.e. the Scheme]."*

7.1.27 The Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[200] also notes *"Professional judgement could be applied to support the exclusion of other existing and, or approved development that exceeds the thresholds but may not give rise to evident effects. All the other existing and, or approved development considered should be documented and the reasons for inclusion or exclusion clearly stated*."

7.1.28 Taking the above into consideration, the other existing development and/or approved developments on the long list will be reviewed against the following criteria to form the short list of other existing development and/or approved developments:

- **Criteria 1**: The other existing development and/or approved development has a construction, operational and/or decommissioning phase that may overlap with any phase of the Scheme.
- **Criteria 2**: The other existing development and/or approved development and the Scheme share common sensitive receptors/resources which are assessed and described in the supporting environmental documentation, and have the potential to be significantly affected by the combination of the other existing development and/or approved development and the Scheme.
- **Criteria 3**: The other existing development and/or approved development has sufficient environmental assessment information readily and publicly available (including traffic flows) to inform the inter-project cumulative effects assessment. The assessment of each existing development and/or approved development on the short list will be proportionate to the environmental assessment information available[201].

7.1.29 Where an existing development and/or approved development meets all of the above criteria, it will be included on the 'short list' and will be taken forward

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[200] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

[201] In the unlikely event that a Tier 1 or 2 development, which it is known will be progressed, but has insufficient environmental assessment information, a detailed inter-project cumulative effects assessment may not be possible. It may, however, still be prudent to consider the development in the inter-project cumulative effects assessment. The assessment may therefore take the form of listing the development and why it hasn't been considered in detail, or the potential inter-project cumulative effect could be discussed at a high level (qualitatively) using professional judgement.

for further consideration in the assessment. The short list will be kept under review, with the intention of agreeing the short list with Cambridgeshire County Council prior to the completion of the ES to allow for a robust assessment of inter-project cumulative effects.

7.1.30 Where existing development and/or approved developments are discounted from the short list, they will continue to be monitored to ensure that any changes to those existing development and/or approved developments are identified and their omission from the short list is reassessed prior to undertaking the cumulative assessment for the ES.

7.1.31 As the individual environmental disciplines have yet to define their ZoI, a review of potential short list developments has not been completed. However, it is anticipated that consideration will need to be given to the Sunnica Energy Farm located to the north east of Newmarket which connects to a substation at Burwell, and Anglian Water's Cambridge Waste Water Treatment Plant Relocation Project to the west. Both are within the typical maximum ZoI defined (10km) and could have overlapping construction periods. Equally smaller solar schemes in the area (e.g. 6 Oaks Renewable Energy Park) will be considered.

Stage 3: Information gathering

7.1.32 The other existing development and/or approved developments that form part of the short list will be subject to a review of environmental information, where available, including details of:

- Location;
- Programme, including construction, operation and decommissioning;
- Baseline data;
- Effects arising from such other existing development and/or approved developments on common sensitive receptors; and
- Proposed design.

Stage 4: Assessment

7.1.33 There is no formal guidance on the criteria for determining significance of inter-project cumulative effects. The following principles will be considered when assessing the significance of inter-project cumulative effects, in accordance with the Planning Inspectorate's Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment[202] and in

[202] Planning Inspectorate (September 2024) Nationally Significant Infrastructure Projects: Advice on Cumulative Effects Assessment. Available online: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-advice-on-cumulative-effects-assessment

consideration of any mitigation measures required to avoid, prevent, reduce or, if possible, offset any identified significant adverse inter-project cumulative effects:

- The duration of effect (temporary or permanent);
- The extent of effect (the geographical area);
- The type of effect (whether additive or synergistic);
- The frequency of the effect;
- The value and resilience of the receptor affected; and
- The likely success of mitigation.

7.2 Approach to the proposed Burwell South substation

7.2.1 National Grid is currently investigating suitable sites close to the existing Burwell substation for a proposed new substation, which would facilitate the grid connection for the Scheme. The proposals are in the early stages of development, however it is proposed that an assessment of inter-project effects between the Kingsway Solar Farm and the new substation be undertaken, given the reliance of the Scheme on the new substation. A number of assumptions may need to be made in order to complete a high-level appraisal of the effects, subject to the progress being made with the new substation.

7.2.2 Although GHG emissions associated with the National Grid Burwell South substation are outside the scope of the GHG assessment for the Scheme, in light of recent case law and experience on other energy projects that connect into infrastructure that is consented separately (the most common example at the moment being carbon capture and storage projects), it is considered that it may be helpful to provide information on potential emissions associated with the proposed National Grid substation into which the Scheme will connect. Therefore, for contextual purposes, an outline of the GHG emissions associated with the proposed National Grid Burwell South substation will be provided (assuming sufficient information available at time of assessment).

7.3 Limitations and assumptions

7.3.1 The assessment of inter-project cumulative effects will be limited to publicly available information obtained from the relevant planning applications on the planning portals of Cambridgeshire County Council, Greater Cambridge Shared Planning (covering South Cambridgeshire District Council and Cambridge City Council), East Cambridgeshire District Council and the Planning Inspectorate. For some of the identified other existing development and/or approved developments, relevant information for this assessment may not be available. Where this is the case, the inter-project cumulative effects assessment will be based upon assumptions and professional judgement, reliant on the review of

mitigation measures proposed as part of the other existing development and/or approved developments rather than the Scheme.