



South Kent

ENERGY PARK

Planning Inspectorate Reference: EN0110035

South Kent Energy Park
Environmental Impact Assessment Scoping Report
June 2026



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1. Introduction

1.1 Background

- 1.1.1 South Kent Energy Park Limited (hereafter referred to as ‘the Applicant’) has commissioned this Environmental Impact Assessment (EIA) Scoping Report for South Kent Energy Park (hereafter referred to as the ‘Proposed Development’).
- 1.1.2 The Proposed Development comprises the construction, operation (and maintenance) and decommissioning of solar photovoltaic (PV) generating panels, interconnecting cables, associated Battery Energy Storage System(s) (BESS), a ‘National Grid Substation’, a ‘South Kent Energy Park (SKEP) Main On-Site Substation’ and ‘Additional On-Site Substations’ and other supporting infrastructure including fencing, access tracks, drainage, and biodiversity and landscape enhancements at a proposed site near New Romney (hereafter collectively referred to as the ‘Proposed Development’). Each component is described further in **Chapter 3: The Proposed Development** of this EIA Scoping Report.
- 1.1.3 The Proposed Development is comprised of land parcels north and south of Old Romney and the A259, hereafter referred to as the ‘Main Site’ and interconnecting cables hereafter referred to as ‘Interconnecting Areas’, collectively referred to as the ‘DCO Site Boundary’ as shown in **Figure 1-1: Proposed Development Location Plan**.
- 1.1.4 The Main Site encompasses land required for the generation and storage of electricity through solar PV, BESS, and related infrastructure. The National Grid Reference for the approximate centre of the Main Site is 603332, 125011.
- 1.1.5 The Main Site comprises the area that is being considered for solar arrays, the National Grid Substation, SKEP Main On-Site Substation, Additional On-Site Substations, battery storage infrastructure, and areas for landscape and biodiversity mitigation and enhancement.
- 1.1.6 The Interconnecting Areas encompass land required for underground cabling to connect the land parcels within the Main Site together. There are four Interconnecting Areas in total. Two of the Interconnecting Areas are located to the south of the A259, and two to the north of the A259.
- 1.1.7 The Proposed Development will require a point of connection to the electricity network to allow for the export of electricity.
- 1.1.8 Under the existing grid connection offer held by the Applicant, the point of connection will be to East Kent Connection Node A substation (“EKCNA substation”), a proposed new substation to be developed by National Grid Electricity Transmission (“National Grid”), likely within the vicinity of the existing Dungeness to Sellindge 400 kV overhead line.

- 1.1.9 At the time of this assessment, the precise location of the EKCNA substation has not been confirmed and remains subject to National Grid's ongoing optioneering process.
- 1.1.10 On the basis of information currently available to the Applicant, it is reasonably foreseeable that the EKCNA substation could be located within the DCO Site Boundary.
- 1.1.11 For the purposes of defining the scope of the Proposed Development and undertaking a meaningful environmental impact assessment (EIA), the Applicant has therefore adopted a reasonable working assumption that the EKCNA substation will be located within the DCO Site Boundary. This represents the connection scenario that is currently capable of being described with sufficient specificity for the purposes of scoping, assessment and mitigation.
- 1.1.12 This working assumption is not relied upon as a statement of what connection solution will ultimately be delivered. Rather, it provides a realistic and proportionate basis on which to assess the Proposed Development at this stage, in circumstances where the final location of ECKNA substation remains subject to a separate optioneering process being undertaken by National Grid.
- 1.1.13 Should National Grid subsequently confirm a different substation location, the Applicant acknowledges that further consideration and, where necessary, further environmental assessment would be required. The approach to assessing the National Grid Substation will therefore be kept under review as further information becomes available.
- 1.1.14 Due to its proposed generating capacity, the Proposed Development is classified as a Nationally Significant Infrastructure Project (NSIP) and would therefore require a Development Consent Order (DCO) under the Planning Act 2008 (Ref 1) for its construction, operation (and maintenance), and decommissioning.
- 1.1.15 The DCO Site Boundary is likely to be refined as the Proposed Development design progresses. It is important to note at this stage that **Figure 1-1** shows the expected maximum extent of land that would be included within the DCO Application, which includes all land being considered for the purposes of the Proposed Development and provides a "*plan sufficient to identify the land*" for the purposes of this EIA Scoping Report.
- 1.1.16 This EIA Scoping Report forms a formal request for a Scoping Opinion from the Secretary of State (SoS) under Regulation 10(1) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') (Ref 2).

1.2 Legislative Context and Need for Environmental Impact Assessment

- 1.2.1 This section sets out the legislative context and need for an EIA.

Legislation, National and Local Policies

- 1.2.2 The Proposed Development is defined as a NSIP under Sections 14(1)(a) and 15(2) of the Planning Act 2008 as an onshore generating station in England with a capacity exceeding 100 Megawatt (MW). This means that consent to construct the Proposed Development must be sought via a DCO Application.
- 1.2.3 The requirement to undertake an EIA for NSIP developments is transposed into law through the EIA Regulations. The EIA Regulations specify which developments are required to undergo EIA. Schemes relevant to the NSIP planning process are listed under either of 'Schedule 1' or 'Schedule 2'. Those developments listed in Schedule 1 must be subject to EIA, while developments listed in Schedule 2 must only be subject to EIA if they are considered "*likely to have significant effects on the environment by virtue of factors such as its nature, size or location*". The criteria on which this judgement must be made are set out in Schedule 3 of the EIA Regulations.
- 1.2.4 The Proposed Development is a 'Schedule 2' development under paragraph 3(a) of Schedule 2 of the EIA Regulations, as it constitutes an "industrial installation for the production of electricity, steam and hot water".
- 1.2.5 It is considered that due to its size, nature and location, the Proposed Development has the potential to have significant effects on the environment. The Applicant therefore confirms, under Regulation 8(1)(b) of the EIA Regulations, that an Environmental Statement (ES) will be provided in respect of the application for development consent for the Proposed Development, as it is considered that the Proposed Development meets the criteria set out in Schedule 3 of the EIA Regulations.
- 1.2.6 Following the completion of surveys, assessments and consultation processes outlined in this EIA Scoping Report, and taking into account the Scoping Opinion, an application for a DCO will be made to the SoS for determination in accordance with the Planning Act 2008. The DCO Application will be accompanied by an ES, in accordance with Regulation 5(2)a of the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 ('APFP Regulations') (Ref 3). The ES will set out the methods and findings of a comprehensive EIA undertaken in line with the EIA Regulations.
- 1.2.7 The Localism Act 2011 (Ref 4) appointed the Planning Inspectorate as the government agency responsible for operating the DCO process for NSIPs. The SoS will appoint an Examining Authority from the Planning Inspectorate, who will examine the DCO Application for the Proposed Development and then

make a recommendation to the SoS, who will in turn make the decision on whether to grant or refuse the DCO for the Proposed Development.

- 1.2.8 In accordance with Section 104(2) of the Planning Act 2008, the SoS is required to have regard to “any National Policy Statement (NPS) which has effect in relation to development of the description to which the application relates” amongst other matters, when deciding whether to grant a DCO. The Applicant considers that the Overarching NPS for Energy (EN-1) (Ref 5), NPS for Renewable Energy Infrastructure (EN-3) (Ref 6) and NPS for Electricity Networks Infrastructure (EN-5) (Ref 7) are the national policy statements which are relevant for the Proposed Development’s DCO Application.
- 1.2.9 The EIA approach adopted takes account of the NPS documents which have effect; as well as national and local planning policy and other important and relevant considerations in relation to decision making. The broad national and local planning policy context is set out below, along with a summary provided of the relevant considerations for each technical assessment within each environmental topic (**Chapters 7 to 17**) of this EIA Scoping Report.
- 1.2.10 The National Planning Policy Framework (NPPF), updated in 2025, (Ref 8) sets out the Government’s national planning policies for England. Paragraph 5 of the NPPF sets out that the NPPF “*does not contain specific policies for nationally significant infrastructure projects. These are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework).*”
- 1.2.11 However, Paragraph 5 goes on to add that “National policy statements form part of the overall framework of national planning policy, and may be a material consideration in preparing plans and making decisions on planning applications.” The EIA for the Proposed Development will therefore have regard to the relevant policies of the NPPF as part of the overall framework of national policy.
- 1.2.12 Whilst the NPSs are the primary consideration in deciding applications for NSIPs, policies in Local Development Plans are also ‘important and relevant’ matters and can influence the content of local impact reports (which the host Local Planning Authorities (LPAs) produce following submission of DCO Applications), and which the SoS must have regard to in its decision making in accordance with Section 104(2)(b) of the Planning Act 2008.
- 1.2.13 The Proposed Development is located within the administrative areas of Folkestone and Hythe District Council, and Kent County Council. The relevant Development Plans for the Proposed Development includes the following:
- Kent County Council Minerals and Waste Local Plan 2024 (Ref 9);
 - Kent County Council Mineral Sites Plan 2020 (Ref 10);
 - Kent County Council Pre-submission draft of the Kent Minerals and Waste Local Plan 2024-2039 (Ref 11);
 - Folkestone and Hythe Core Strategy 2022 (Ref 12); and

- Folkestone and Hythe Places and Policies Local Plan 2020 (Ref 13).

1.2.14 This EIA Scoping Report describes the national and local planning policies relevant to the assessment with a summary provided for each environmental topic. The purpose of this EIA Scoping Report is not to assess the Proposed Development against planning policy; this will be undertaken and set out in a Planning Statement. The Planning Statement will be a separate document that will be submitted as part of the DCO Application. The purpose of considering the above-mentioned planning policies at the scoping phase of the EIA is twofold:

- To identify policy that could influence the sensitivity of receptors (and therefore the significance of effects) and any requirements for mitigation; and
- To identify planning policy that could influence the methodology of the EIA. For example, a planning policy may require the assessment of a particular impact or the use of a particular methodology.

1.2.15 A summary of national and local planning policy relevant to each technical assessment is provided for each technical topic (refer to **Chapter 7 to 17** of this EIA Scoping Report).

1.3 Other Relevant Policy

1.3.1 Other policies which are likely to be important and relevant matters to the SoS's decision and are considerations for the EIA technical assessments include:

- The 25 Year Environment Plan (Ref 14), first published in 2018 and last updated in 2023, which sets out the Government's 25 year plan to improve the environment within a generation;
- The Environmental Improvement Plan 2023 (Ref 15) acts as the first revision of the 25 Year Improvement Plan. It builds upon the vision of the 25 Year Environment Plan with a new plan setting out how goals for improving the environment will be delivered, as well as interim targets to measure progress;
- The Energy White Paper (Ref 16) published in December 2020 sets out how the UK will reach net zero emissions by 2050. It identifies the Government's aim for a fully decarbonised, reliable and low-cost power system by 2050; and
- The Clean Power 2030 Action Plan (Ref 17) published in December 2024 sets out how the United Kingdom (UK) government will work with the renewables sector to achieve clean energy targets by 2030. Whilst the Proposed Development would connect after 2030, the preliminary 2035 targets in addition to the 2030 targets paints a clear picture of how the UK government addresses renewable energy for the future.

1.4 Purpose and Structure of the EIA Scoping Report

- 1.4.1 An EIA Scoping Report is produced by an applicant to formally request a Scoping Opinion. Although the Scoping Opinion is sought from the SoS, the process is undertaken by the Planning Inspectorate on behalf of the SoS. An EIA Scoping Report provides information to support such a request and can be used to help inform both the Scoping Opinion and formal consultation with statutory environmental bodies by the Planning Inspectorate.
- 1.4.2 Regulation 10(3) of the EIA Regulations sets out the requirements for requesting a Scoping Opinion stating that the request (EIA Scoping Report) must include:
- A plan sufficient to identify the land;
 - A description of the proposed development, including its location and technical capacity;
 - An explanation of the likely significant effects of the development on the environment; and
 - Such other information or representations as the person making the request may wish to provide or make.
- 1.4.3 The purpose of this EIA Scoping Report is therefore to fulfil these requirements and also to:
- Provide a summary of the Proposed Development;
 - Set out the proposed scope of work and methods to be applied in carrying out the EIA;
 - Identify the likely significant environmental effects of the Proposed Development at an early phase of development to ensure they are considered and addressed throughout the design and consenting process;
 - Provide a justification and rationale for scoping out certain topics from further assessment (for example where no likely significant effects are predicted); and
 - Set out the proposed structure and coverage of the ES to be submitted with the DCO Application.
- 1.4.4 This EIA Scoping Report is set out in accordance with guidance provided by the Planning Inspectorate's Advice Note 7 'Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements' (Ref 18).
- 1.4.5 **Table 1-1** lists the suggested requirements identified in Advice Note 7 and details where they are provided within this EIA Scoping Report.

Table 1-1: Contents for the EIA Scoping Report Based on the Planning Inspectorate Advice Note 7

SUGGESTED SCOPING REPORT CONTENTS	LOCATION IN THIS SCOPING REPORT
Transboundary Screening Matrix	Appendix-A: Transboundary Effects Screening Matrix
The Proposed Development	

SUGGESTED SCOPING REPORT CONTENTS	LOCATION IN THIS SCOPING REPORT
An explanation of the approach to addressing uncertainty where it remains in relation to elements of the Proposed Development e.g. design parameters	Chapter 3: The Proposed Development
Referenced plans presented at an appropriate scale to convey clearly the information and all known features associated with the Proposed Development	Figure 1-1: Proposed Development Location Plan Figure 2-1: Environmental Constraints
EIA Approach and Topic Areas	
An outline of the reasonable alternatives considered and the reasons for selecting the preferred option	Chapter 4: Alternatives Considered
A summary table depicting each of the aspects and matters that are requested to be scoped out allowing for quick identification of issues	Chapter 19: Summary and Conclusions
A detailed description of the aspects and matters proposed to be scoped out of further assessment with justification provided	Chapters 7 to 17 (Technical Topics)
Results of desktop and baseline studies where available and where relevant to the decision to scope in or out aspects or matters	Chapters 7 to 17 (Technical Topics)
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	Chapters 7 to 17 (Technical Topics)
Any avoidance or mitigation measures proposed, how they may be secured and the anticipated residual effects	Chapters 7 to 17 (Technical Topics)
Information Sources	
References to any guidance and best practice to be relied upon	Chapters 7 to 17 (Technical Topics)
Evidence of agreements reached with consultation bodies (for example the statutory nature conservation bodies or local authorities)	Chapters 7 to 17 (Technical Topics)
An outline of the structure of the proposed ES	Chapter 18: Proposed Structure of the ES

- 1.4.6 A glossary and abbreviation list is presented at the back of this EIA Scoping Report.

1.5 The Applicant

- 1.5.1 The Applicant is South Kent Energy Park Limited, which is a subsidiary of Low Carbon Ltd (“Low Carbon”); a privately-owned renewable energy company.
- 1.5.2 Founded in 2011, Low Carbon is committed to making a positive and significant impact on climate change by investing in large-scale renewable energy projects

across a range of energy technologies including utility scale solar, onshore wind and battery storage. Deploying capital at scale into renewables, it invests across the full life cycle from concept through to development, construction, and operation (and maintenance).

- 1.5.3 To date, Low Carbon has deployed more than £1 billion into building renewable infrastructure with more than 1 Gigawatt (GW) of assets currently either in construction or operation. Its proprietary renewable energy pipeline currently stands at more than 16 GW. Since becoming an Independent Power Producer (IPP), more than 450 GWh of renewable energy has been produced from assets owned and operated by Low Carbon - the equivalent of more than 200,000 homes powered with clean electricity and around 150,000 tCO₂e avoided annually.
- 1.5.4 Low Carbon has been active in large-scale solar energy since its formation in 2011. With an established track record in the UK, it also has operations across Europe.

1.6 ISEP Quality Mark

- 1.6.1 AECOM has prepared this EIA Scoping Report on behalf of the Applicant. AECOM is a Registered Impact Assessor with the Institute of Sustainability and Environmental Professionals (ISEP) (formerly known as IEMA) and holds the ISEP EIA Quality Mark as recognition of the quality of its EIA product and continuous training of its environmental consultants. A Statement of Competence will be included within the ES, outlining the relevant expertise or qualifications of the experts who prepared the ES.



2. DCO Site Boundary and Surrounding Area

2.1 Overview

- 2.1.1 The Proposed Development consists of the Main Site and Interconnecting Areas collectively known as the ‘DCO Site Boundary’, as shown in **Figure 1-1: Proposed Development Location Plan**.
- 2.1.2 For the purposes of this Environmental Impact Assessment (EIA) Scoping Report, all electrical connections are anticipated to be delivered via underground cabling (with the exception of short lengths of cabling connecting components such as the down connection from the overhead line to the National Grid Substation) within the Development Consent Order (DCO) Site Boundary.

2.2 The DCO Site Boundary and Surrounding Area

- 2.2.1 This section describes the location and key environmental features of the DCO Site Boundary which is located in the administrative areas of Kent County Council, Folkestone and Hythe District Council. The rationale for the location of the Proposed Development is described in **Chapter 4: Alternatives Considered** of this Scoping Report.
- 2.2.2 The Proposed Development is situated near Romney Marsh, to the north of Dungeness, Kent.
- 2.2.3 The maximum area of land potentially required for the construction, operation (and maintenance), and decommissioning of the Proposed Development is shown in **Figure 1-1: Proposed Development Location Plan**. It is important to note that this may be subject to change, but **Figure 1-1** shows the envisaged maximum extent of temporary and permanent land take. This will be refined as the Proposed Development design progresses, taking into account environmental and technical factors, and consultation responses.
- 2.2.4 The DCO Site Boundary is approximately centred on National Grid Reference 603332, 125011. The total area of the DCO Site Boundary is approximately 859 ha and it is located approximately 2.5 km west of Romney Marsh, and bisected east-to-west by the A259.
- 2.2.5 Several environmental receptors have been identified within and in the vicinity of the DCO Site Boundary, each of which are detailed below and shown on **Figure 2-1: Environmental Constraints**.
- 2.2.6 The landscape features within the vicinity of the DCO Site Boundary consist predominantly of agricultural fields. Land within the DCO Site Boundary consists of arable farmland.

- 2.2.7 There are no international, national, regional or locally designated nature conservation designations within the DCO Site Boundary. The closest environmental constraint is Dungeness, Romney Marsh and Rye Bay, which is a Site of Special Scientific Interest (SSSI), Ramsar site, and Special Protection Area (SPA), and is located approximately 660 m east of the DCO Site Boundary. Dungeness Special Area of Conservation (SAC) is located 2.7 km south of the DCO Site Boundary. Romney Warren Local Nature Reserve (LNR), Dungeness National Nature Reserve (NNR) and Romney Sands SPA are also statutory designations within 5 km of the DCO Site Boundary. A list of statutory designated ecological sites located within the vicinity of the Proposed Development is included in **Table 9-2**. A list of non-statutory ecological designated sites in the vicinity of the Proposed Development is listed in Section 9.5 of this EIA Scoping Report.
- 2.2.8 There are no World Heritage Sites, Registered Parks and Gardens, or Conservation Areas within the DCO Site Boundary. There is one Scheduled Monument within the Main Site and a Grade II Listed building, which is an Abandoned Medieval Church and Graveyard, located at the south-west corner of the Main Site. There is one Grade I Listed Building within close proximity to the Main Site, which is the Church of St Clement's, approximately 125 m from the DCO Site Boundary in Old Romney. There are nine Grade II Listed Buildings near the Main Site, in the village of Old Romney, approximately 25 m from the DCO Site Boundary.
- 2.2.9 For the purposes of this EIA Scoping Report, the Proposed Development is anticipated to include On-Site Substations (South Kent Energy Park (SKEP) Main On-site Substation and Additional On-Site Substations), which would facilitate the aggregation and transformation of electricity generated by the solar photovoltaic (PV) panels and Battery Energy Storage System (BESS) infrastructure. The SKEP Main On-Site Substation would be distinct from the point of connection infrastructure required to interface with the National Grid transmission network. For the purposes of this EIA Scoping Report, it is assumed that this interface would be provided at a point of connection substation located within the Main Site, referred to in this report as the 'National Grid Substation'. Electricity would be exported from the On-site Substations to the National Grid Substation via underground cabling routed through the Main Site and, where necessary, the Interconnecting Areas. This assumption reflects the connection scenario currently capable of being described with sufficient specificity for the purposes of this EIA Scoping Report. The final location and configuration of the National Grid Substation remain subject to ongoing design development and National Grid optioneering and will be kept under review as further information becomes available.

Interconnecting Areas & Point of Connection

- 2.2.10 Four Interconnecting Areas are required to connect the various elements of infrastructure across the Main Site via underground cables. These Interconnecting Areas would facilitate electrical connections between the solar PV panels, BESS and associated substation infrastructure, including the SKEP

Main On-Site Substation and, on the working assumption adopted for this EIA Scoping Report, the National Grid Substation.

- 2.2.11 The Point of Connection is expected to be at a new National Grid Substation which is expected to be approximately 25 m in height and 200 m by 150 m in diameter. Should the footprint of the National Grid Substation be smaller following its concept design, the remaining land may be used for solar PV panels or other associated infrastructure, subject to design development and environmental assessment.
- 2.2.12 The precise alignment of the underground cabling within the Interconnecting Areas has not yet been finalised and will be informed by ongoing survey and design development. The routing of underground cabling will be designed to avoid sensitive receptors where practicable. As the design progresses, defined cable alignments, or appropriate cable route corridors, will be established for the purposes of assessment.

3. The Proposed Development

3.1 Introduction

3.1.1 Solar Photovoltaic (PV) panels and Battery Energy Storage Systems (BESS) are rapidly evolving technologies. As a result, the parameters of the Development Consent Order (DCO) will maintain flexibility to allow the latest technology to be utilised at the time of construction. To inform the scope of the assessment studies, this chapter provides information on:

- Solar and battery energy storage infrastructure and other associated and ancillary equipment required to operate the Proposed Development;
- Construction programme and activities;
- Operation (and maintenance) activities; and
- Decommissioning.

3.1.2 The Environmental Statement (ES) will set out the parameters that have been assessed as part of the EIA, including details on the size (footprint, width, and height relative to Above Ordnance Datum (AOD)), technology, and locations of the different elements of the Proposed Development. The DCO Site Boundary and Surrounding Area chapter within the ES (See **Figure 3-1: DCO Site Boundary and Land Use**) will be supported by drawings and elevations as required.

3.2 Overview of Proposed Development Infrastructure

3.2.1 The Proposed Development will consist of the following key components:

- Solar PV panels;
- Solar PV Mounting Structures;
- Low Voltage (LV), Medium Voltage (MV) and High Voltage (HV) switchgear, protection and control equipment;
- Power Conversion Units;
- South Kent Energy Park (SKEP) Main On-Site Substation and Control Building (400 kV, potentially also operating at lower voltages such as 132 and 33 kV);
- National Grid Substation (400 kV, potentially also operating at lower voltages such as 132 kV and 33 kV);
- Additional On-Site Substations:
 - Additional On-Site 132 kV Substations of which there will be between 1-4, (operating at up to 132 kV);
 - Additional On-Site 33 kV Substations of which there will be an additional number, up to a maximum of 20 (operating at up to 33 kV);
- BESS;
- On-site cabling;
- Ancillary infrastructure (e.g. combiner boxes, weather stations);
- Fencing and security measures;

- Access tracks; and
 - Biodiversity and landscaping enhancements.
- 3.2.2 During the construction phase, one or more temporary construction compound(s) would be established within the DCO Site Boundary as well as temporary roadways to facilitate access to all land within the Proposed Development. Further information on construction activities is provided in Section 3.3.
- 3.2.3 In areas around the arrays and on other land within the DCO Site Boundary, appropriate landscaping, biodiversity enhancements and habitat management would be undertaken.
- 3.2.4 **Table 3-1** sets out the parameters that have been used by each of the technical topics in the EIA Scoping Report to set out the proposed approach and methodology for further assessment.
- 3.2.5 As the design evolves in response to the environmental assessment and consultation processes (which run in parallel), the maximum or minimum parameters may be further developed from those set out in this EIA Scoping Report to deliver the best environmental outcomes for the Proposed Development. The maximum or minimum parameters in the ES will be set out in a Proposed Development Parameters Document submitted with the DCO Application and secured in the DCO.

Table 3-1: Design Parameters Used for the EIA Scoping Report

PROPOSED DEVELOPMENT COMPONENT	PARAMETER TYPE	APPLICABLE DESIGN PARAMETER
Solar PV Panels	Solar PV panel type	Bifacial panels.
	Solar PV panel colour	The solar panels will be either dark grey or black with an aluminium frame.
Solar PV Mounting Structures	Material	Anodised aluminium or steel frame supporting the solar panels in rows. Steel components will be galvanised where a protective finish is required.
	Installation	Solar PV panels would be secured via galvanised steel poles/mounting structure or frame system which would be driven into the ground. The depth will depend on ground conditions but would typically be 1-3 m depth. Tracker systems typically require deeper depth of pile between 3 m and 4.5 m.
Single Axis Tracker Arrays (Option A)	Indicative orientation	Solar PV panels would have a tilt angle + / - 60 degrees from horizontal.
	Minimum height of the lowest part of the Solar PV panel above ground level (AGL)	Solar PV panels would have a minimum clearance of 0.8 m Above Ground Level (AGL) when at maximum tilt.

PROPOSED DEVELOPMENT COMPONENT	PARAMETER TYPE	APPLICABLE DESIGN PARAMETER
	Maximum height of Solar PV panels AGL	Solar PV panels would have a maximum height of 4.5 m AGL at maximum tilt.
	Separation distance between rows	Solar PV panels would be positioned in rows with a minimum separation distance of 2 m to 8 m at the closest point.
Fixed South Facing Arrays (Option B)	Indicative orientation	Solar PV panels would have a fixed tilt angle of between 10 degrees to 45 degrees from horizontal.
	Minimum height of the lowest part of the Solar PV panel AGL	Solar PV panels would have a minimum clearance of 0.8 m AGL.
	Maximum height of Solar PV panels AGL	Solar PV panels would have a maximum height of 4 m AGL.
	Separation distance between rows	Solar PV panels would be positioned in rows with a minimum separation distance of 2 m at the closest point.
Power Conversion Units (PCUs)	Maximum dimensions	16 m by 3.5 m and a maximum height of 3.5 m. PCUs include transformers, switchgear and - where applicable - centralised inverters.
Solar PV Sites Perimeter Fencing	Type	Fencing around solar PV panels will be wooden post and metal wire stock fencing.
	Installation	Directly driven into the ground using a standard post driver to a maximum depth of 1.5 m below ground level.
	Height	Maximum height of 3 m.
Security System	Type	A closed-circuit television (CCTV) camera system would be deployed around the perimeter of the operation (and maintenance) areas of the Main Site.
	Mounting	CCTV cameras would be mounted on posts facing along the fenceline and into the Main Site, with a maximum height of 5 m.
Additional On-site 33 kV Substations	Maximum compound area	The use of 33 kV substations are being considered. They would have a 50 m by 50 m footprint.
	Maximum height	6 m to the top of the busbars.

PROPOSED DEVELOPMENT COMPONENT	PARAMETER TYPE	APPLICABLE DESIGN PARAMETER
	Compound perimeter	A maximum of 4 m security fencing around the compound. This is likely to be metal palisade fencing.
Additional On-site 132 kV Substations	Maximum compound area	The use of 132 kV substations are being considered. They would be estimated to be 60m x 60m footprint.
	Maximum height	9 m to the top of busbars.
	132 kV Relay and Control rooms	Maximum height of 4.5 m and maximum dimensions of 12.5 m by 4 m.
	33 kV switchgear	Maximum height of 4.5 m and maximum dimensions of 12.5 m by 4 m
	Compound perimeter	A maximum of 4 m security fencing around the compound. This is likely to be metal palisade fencing. Lighting columns are likely to be required which will be a maximum height of 10 m.
SKEP Main On-Site Substation	Maximum compound area	4 ha
	Maximum height	13 m to the top of busbars.
	Relay and Control rooms	Maximum height of 4.5 m and maximum dimensions of 12.5 m by 4 m.
	Compound perimeter	A maximum of 4 m security fencing around the compound. This is likely to be metal palisade fencing. Lighting columns are likely to be required which will be a maximum height of 10 m.
BESS Area	Maximum compound area	8 ha
	BESS Battery Container	Maximum dimensions of 8 m by 3 m, and a maximum height of 4.5 m. The BESS is likely to be surrounded by metal palisade fencing.
Access	Access Tracks	Anticipated to follow the alignment of the existing agricultural tracks, where possible. New internal access tracks would typically be 3-4 m and up to 6 m wide constructed of compacted stone with 1:2 gradient slopes on either side (where required). Access tracks to the substation and BESS may have a maximum width of 8 m.
Underground Cables	Cable Type	It is assumed that all grid connection infrastructure will be contained within the DCO Site Boundary, with electricity exported via underground cabling to an 400 kV SKEP

PROPOSED DEVELOPMENT COMPONENT	PARAMETER TYPE	APPLICABLE DESIGN PARAMETER
		Main On-Site Substation and National Grid Substation and down connection from the overhead line to the National Grid Substation.
	Indicative cable trench dimensions	The open cut cable trench would be up to approximately 2 m wide and 2.5 m in depth. The cables will have a minimum depth of 0.9 m.
	Indicative working width	The construction working area for the installation of underground grid connection cables will be limited to areas required within the DCO Site Boundary, with working widths dependent on detailed design and local constraints.
Proposed National Grid Substation	Point of Connection	The Proposed Development includes a National Grid Substation with an expected voltage of 400 kV, which is assumed to provide the point of connection to the National Electricity Transmission System.
	Maximum compound area	200 m x 150 m
	Maximum height	25 m to the top of the busbars
	Relay and Control rooms	The National Grid Substation would include relay and control buildings required for operation (and maintenance). These would be typical of National Grid infrastructure, with detailed dimensions to be confirmed at the detailed design phase.
	Compound perimeter	The National Grid Substation compound would be enclosed by security fencing, likely to be metal palisade or similar. The exact height and specification will be confirmed at the detailed design phase.

Solar PV Infrastructure

Solar PV Panels

- 3.2.6 Solar PV panels convert sunlight into electrical current (as Direct Current (DC)). Individual panels are typically up to 2.4 m in length and up to 1.4 m wide and consist of a series of PV cells beneath a layer of toughened glass. PV technologies are developing rapidly and different generation capacity panels may be available at the time of construction.
- 3.2.7 Each panel could have an approximate DC generating capacity of between 400 and 900 watts (W) or more depending on advances in technology at the time of construction. The panels will be fixed to a mounting structure in groups known

as ‘strings’. Various factors inform the number and arrangement of panel in each string, and it is likely some flexibility will be required to accommodate future technology developments (refer to the ‘3.6 Rochdale Envelope’ section of this chapter).’



Plate 3-1: Illustrative Solar PV Panels

Panel Mounting Structures

- 3.2.8 There are various types of Solar PV Mounting Structures, which are typically built from anodised aluminium and galvanised steel. While fixed south facing mounts are historically the most common for solar PV facilities in the United Kingdom (UK), the ongoing technological advances and economic considerations make other options increasingly more feasible. The options under consideration are:
- Fixed south facing; and
 - Single axis tracker.
- 3.2.9 Each string of panels would be mounted on a metal rack, known as a frame. The frames are usually supported by galvanised steel piles typically driven 1 m or up to 3 m into the ground depending on local geology, with tracker systems typically requiring deeper depth of pile between 3 m and 4.5 m.
- 3.2.10 Each of the currently considered mounting options is described in the paragraphs below. The dimensions presented below are indicative at this stage as the final elevations of the racks would be influenced by various design factors such as local topography, flood risk, inter-row shading and maintenance considerations. Where different designs could materially influence environmental effects, the relevant, technical chapters (**Chapters 7 to 17**) of this EIA Scoping Report consider the reasonable worst-case scenario and the potential scoping implications associated with this option.

- 3.2.11 All dimensions referred to below are indicative at this stage with the design at an early stage. The design will be modified as the Proposed Development progresses to have regard to the outcome of environmental surveys, topography and configuration. For example, row pitch (the distance between the front edge of one row of panels to the front edge of the next row of panels) may vary across the Proposed Development taking account of terrain and potential environmental constraints.



Plate 3-2: Solar panels with south facing configuration



Plate 3-3: Solar panels with single tracker arrays (in the middle of the day)

Fixed South Facing Arrays

3.2.12 The configuration where panels are arranged in rows running from east to west facing to the south at a fixed tilt is commonly seen on existing UK solar farms. Individual panels consist of a series of bifacial, mono-crystalline cells. These panels are then arranged into strings of approximately 30 panels which are fixed to the mounting system. The indicative fixed south facing system parameters (subject to detailed design) are as follows:

- Fixed tilt: 10 to 45 degrees from horizontal;
- Height: up to 4 m;
- Clearance above ground: 0.8 m; and
- Spacing between rows: from 2 m to 12 m.

Single Axis Tracker Arrays

3.2.13 A tracker system involves attaching the PV panels to a motorised table that can move in relation to the sun. This allows for optimal power generation throughout the day. Individual panels consist of a series of bifacial, mono-crystalline cells. These panels are then arranged into strings varied length which are fixed to the mounting system.

3.2.14 There are different types of tracking systems available and, if chosen, the Proposed Development would utilise a single-axis tracker system, which tilts the solar panel around a horizontal north-south axis thus tracking the sun's movement from east to west. The panels begin the day facing east (where the sun rises) and move into a horizontal position during the middle of the day, transitioning into west facing in the evening (where the sun sets). This enables the delivery of a better electricity generation during the year. The panels will typically be set to lie horizontal overnight.

3.2.15 The indicative tracker system parameters (subject to detailed design) are as follows:

- Tracker tilt range: up to + / - 60 degrees from horizontal;
- Height at maximum tilt: up to 4.5 m;
- Clearance above ground at maximum tilt: 0.8 m; and
- Spacing between rows: from 2 m to 8 m.

Power Conversion Units

3.2.16 A Power Conversion Unit comprises an inverter, a transformer, and switchgear, which can be grouped together or distributed throughout the Main Site.

Inverters

3.2.17 It is currently expected that either string or central inverters would be used. Inverters convert the DC electricity collected by the PV panels into alternating current (AC), which allows the electricity generated to be exported to the national electricity transmission network. Inverters are sized to deal with the level of voltage and intensity, which is output from the strings of solar PV panels.

- 3.2.18 String inverters would be situated on the rear of the solar PV panels or, in the case of Single Axis Tracker (SAT) configuration which follow the sun throughout the day, mounted behind each row of panels. Both options negate the need for inverters as part of the Power Conversion Units. The other inverter option is centralised inverters, which are grouped with the transformers and switchgear as part of the Power Conversion Units.



Plate 3-4: Typical string inverter (image reproduced courtesy of Huawei)



Plate 3-5: Typical centralised inverter (without an enclosure)

Transformers

- 3.2.19 LV/MV transformers control the voltage of the electricity generated across the Proposed Development before it reaches the substation. The transformers can also be located inside containers, which are typically externally finished in keeping with the prevailing surrounding environment, often utilising a green painted finish.



Plate 3-6: Typical transformer (without enclosure)



Plate 3-7: Typical transformer cabin (including switchgear)

Switchgear

- 3.2.20 Switchgear are the combination of electrical disconnecter switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment. Switchgear are used both to de-energise equipment to allow work to be done and to clear faults downstream. Similarly, switchgear are generally located within or adjacent to the transformer housing.



Plate 3-8: Typical switchgear

Substations

Point of Connection Substation

- 3.2.21 The National Grid Substation would consist of electrical infrastructure such as the transformers, busbars, overhead down lines, circuit breakers and will be a maximum 25 m in height.

SKEP Main On-Site Substation

- 3.2.22 The SKEP Main On-Site Substation would consist of electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from the Main Site to the National Grid (but excluding the elements contained within the National Grid Substation as described in Paragraph 3.2.21). The SKEP Main On-Site Substation could operate at 400 kV, 132 kV and/or 33 kV and would be located on the Main Site. The largest SKEP Main On-Site Substation (400 kV) compound would have a footprint of around 4 ha and will be a maximum 13 m in height.
- 3.2.23 Within each substation compound there would be electrical infrastructure including switchgear and control buildings associated with 400 kV, 132 kV and 33 kV equipment. This may comprise either separate or combined buildings, depending on the final design. The 400 kV switchgear building could be up to approximately 40 m in length, 20 m in width and 10 m in height. Sizes and layouts of other buildings, including 132 kV and 33 kV equipment and control rooms, will be confirmed at the detailed design phase.
- 3.2.24 It is likely to be a portal steel structure with coloured profile steel cladding, selected to minimise visual impact. The 33 kV switch rooms would each be up to 30 m in length x 10 m in width x 6 m in height and would include office space

and welfare facilities as well as operation (and maintenance) monitoring and maintenance equipment.

- 3.2.25 The 33 kV switch rooms and control building would be block buildings with external colours and painted finishes to be confirmed prior to construction. Maximum parameters for the compound will be defined in the DCO Application, and a reasonable worst case scenario will be assessed and presented in the ES. Each substation would need to be enclosed in a steel palisade fence, around 3 m in height. External lighting would be mounted on columns up to 10 m high. Task specific lighting would be used in the case of emergency works. Passive infra-red controlled lighting would be used where access is required outside of daylight hours. Operational lighting would be directed to within the DCO Site Boundary and would include features designed to reduce light spill beyond the areas required to be lit.
- 3.2.26 The electricity generated by the Proposed Development would be exported to the National Grid via a 400 kV connection between the SKEP Main On-Site Substation, Additional On-Site Substations and the National Grid Substation.
- 3.2.27 Electricity generated by the solar PV panels may also be used to charge the BESS, depending on operation (and maintenance). The BESS may also import electricity from the National Grid for charging and would export electricity back to the National Grid when discharging.
- 3.2.28 In addition, the Proposed Development would require a small amount of electricity to serve on-site loads (e.g. lighting and control equipment), which would be met through a combination of on-site generation, BESS discharge and/or import from the National Grid.
- 3.2.29 The grid connection is expected to comprise underground cabling, including power, earthing and fibre optic cables. Further design development will be undertaken to confirm the detailed layout and installation methodology, informed by survey results and technical considerations.
- 3.2.30 The underground cable is likely to be installed using an open trench method or into ducting that would be installed with the cables pulled through the ducting. Trenches would require a 20 m to 50 m working width, with trench widths approximately 3 m wide and up to 3 m deep. Where the underground cables cross other infrastructure or natural features, such as rivers or streams, and open trenching is not practical, the cables would need to be installed deeper, with specific techniques such as micro-tunnelling, horizontal directional drilling (HDD) or other similar trenchless techniques being used to cross these obstacles.
- 3.2.31 A range of constraints will determine the final optimal cable routing. A number of options are being explored currently.

Control Building

- 3.2.32 A control building will be included within the Proposed Development. The control building would allow around three permanent staff to operate and maintain the plant. The control building would consist of:
- Central control room where all operation (and maintenance) data of the whole plant would be controlled and monitored. This includes the transformers, inverters and switchgear, SKEP Main On-Site Substation, cable and National Grid Substation;
 - Central CCTV and security control of the whole plant, including access gates to fenced areas;
 - Welfare facility for staff and subcontractors;
 - Parking area for staff and subcontractors; and
 - Own power supply, including emergency power back-up.
- 3.2.33 The control building would be around 20 m in length x 15 m in width x 6 m in height.

Underground Cabling

- 3.2.34 LV on-site cabling will connect the solar PV panels and BESS to inverters (typically via 0.6/1 kV cables), and the inverters to the transformers on-site. The dimension of the trenches would vary depending on the number of ducts they contain but could typically be around 4 m in width and around 1.2 m in depth. The cabling trench can increase to 15 m wide near the SKEP Main On-Site Substation where trenches merge. The worst-case scenario will be assessed in the next stage of the EIA.
- 3.2.35 Higher rated cables (likely 33 kV) are then installed between the transformers and the switchgear and from switchgear to the SKEP Main On-Site Substation. The dimension of the trenches would vary depending on the number of ducts/cables they contain but could be typically around 5 m in width and around 2 m in depth
- 3.2.36 Cabling between solar PV panels and the inverters would typically be installed above ground along rows of panels in the case of string inverter configurations. For central inverter configurations, cabling between panels and inverters could also be installed below ground.
- 3.2.37 Data / fibre optic cables would also be installed, typically alongside electrical cables to allow for monitoring during operation (and maintenance), such as the collection of solar data from pyranometers.

Battery Energy Storage System (BESS)

- 3.2.38 The Proposed Development will include an associated BESS at one or more locations within the Main Site. The battery-based electricity storage will allow the storage of energy generated by the solar panels at times of low demand and release energy to the grid at times when demand is high or when solar irradiance is lower, known as load shifting. The BESS will also have the ability to

import power from the grid directly to allow the BESS system to help support the grid through grid balancing mechanisms.

- 3.2.39 The precise number of individual battery storage containers will depend upon the duration of energy storage.
- 3.2.40 The maximum combined compound area of the BESS is 8 ha. The BESS may comprise one or more compounds located within the Site, depending on the final design. The typical dimensions of the battery containers would measure approximately 8 m x 3 m x 4.5m in height. The containers would be located on areas of hardstanding. The containers are typically externally finished in keeping with the prevailing surrounding environment, often utilising a green painted finish. Maximum parameters for the containers will be defined in the DCO Application in order to present and assess a worst-case scenario.

Fencing and Security

- 3.2.41 A security fence would enclose the operation (and maintenance) areas of the Main Site, including the Substation(s) and BESS(s). Perimeter fencing around solar PV areas would typically be up to 3 m in height. Security fencing associated with substations and other electrical infrastructure may be up to approximately 3.4 m in height. Where required, acoustic fencing around BESS compounds may be up to 4 m in height. It is anticipated that this would be metal palisade fencing. Stock proof security fencing will enclose the solar PV panels in Main Site. Public Rights of Way (PRoWs) that cross the Main Site would be preserved with the fence installed on both sides with an appropriate offset to the PRoW and possibly screening measures such as vegetation. Clearances above ground, or the inclusion of mammal gates would be included to permit the passage of wildlife.
- 3.2.42 Pole mounted closed circuit television (CCTV) systems, infrared cameras, and motion sensors are also likely to be deployed around the perimeter of the operation (and maintenance) areas of the Main Site. It is anticipated that these would be up to 5 m in height. The CCTV systems would have fixed views and would be aligned to face along the fence and therefore would not encroach on any private land. The operation (and maintenance) staff would also grant access for operations and maintenance works which are typically CCTV surveyed to prevent unauthorised access.



Plate 3-9: Typical stock proof security fence



Plate 3-10: Typical stock metal palisade fencing

- 3.2.43 To comply with British Standard (BS) EN 62271-1:2017 (Ref 19), if transformers are not enclosed in a container, they would be surrounded by a secure wire mesh. This fence is likely to be around 1.8 to 2.5 m in height.
- 3.2.44 It is likely that lighting sensors for security purposes would be deployed around the electrical infrastructure and potentially at other pieces of critical infrastructure. This would either be switch activated lighting or motion detection lighting, depending on substation type, to assist maintenance staff visiting the Proposed Development during hours of darkness, no areas are proposed to be continually lit.

Access Tracks

- 3.2.45 It is anticipated that on-site access tracks would follow the alignment of the existing agricultural tracks, where possible. Internal access tracks would typically be 3 m to 4 m wide, and a maximum of 6 m wide compacted stone tracks with 1:2 gradient slopes on either side (where required). The main access would be up to 8 m wide to facilitate two-way Heavy Goods Vehicle (HGV) traffic. Where drainage is required, a ditch or a swale may be located downhill of the internal access track to control any potential for surface water run-off.

Surface Water Drainage

- 3.2.46 The detailed operation (and maintenance) drainage design will be carried out pre-construction with the objective of ensuring that drainage of the land to the present level is maintained. The drainage strategy would be designed to accommodate the proposed infrastructure (e.g. access tracks, cable trenches and structure foundations), including potential impacts during construction. Where construction activities interact with or disrupt existing land drainage systems, appropriate new or replacement drainage infrastructure would be installed to maintain effective drainage across the DCO Site.
- 3.2.47 The design of new drainage systems will be based on the Flood Risk Assessment (FRA) and hydrological assessment to be undertaken and provided in the ES. Infiltration drainage design will be in accordance with Building Research Establishment (BRE) Digest 365: Soakaway Design and Sewers for Adoption (Ref 20) and infrastructure would be placed a minimum of 9 m from the top of the watercourse bank, increasing to 10 m where watercourses are found to support riparian mammals.

Biodiversity and Landscaping

- 3.2.48 The existing hedgerows, woodland, ditches, ponds and field margins would be retained where possible within the layout of the solar arrays, with the exception of small breaks and/or crossings required for new access tracks, security fencing and connection routes. Any breaks or crossings will be designed to use existing agricultural gateways/tracks between the fields where possible, and the width of any new breaks will be kept to a minimum.
- 3.2.49 The Proposed Development would involve embedded mitigation measures such as field boundary enhancement and planting of seed mixes within the Main Site. Planting of hedges and small trees would also be used to provide screening where suitable. Minimum offsets from solar infrastructure and ecological features would be incorporated within the design.
- 3.2.50 The enhancements and planting would increase biodiversity throughout the landscape and contribute to the Proposed Development achieving Biodiversity Net Gain (BNG) in line with the requirements of the Environment Act 2021 (Ref 21), the National Planning Policy Framework and local planning policy. The Proposed Development design will aim to achieve BNG levels greater than the minimum 10% required by the Environment Act 2021.

3.3 Construction Programme and Activities

Construction Programme

- 3.3.1 Subject to being granted consent and following a final investment decision, the earliest construction could start is likely Q3 2030, and will require an estimated 24-36 months, with operation (and maintenance) therefore anticipated to commence around 2033. The ES will provide further details of the construction activities, their anticipated duration, and indicative programme of each phase of construction work.
- 3.3.2 It is anticipated that the Proposed Development will be constructed over a continuous period rather than being phased. There is the potential for the BESS to be constructed later, depending on the connection date from National Energy System Operator (NESO). At the time of preparing this EIA Scoping Report, confirmation of the connection date is anticipated by Quarter 1 2027. Once confirmed, this may result in refinement of the indicative construction programme, including the sequencing and duration of BESS works. This will allow the ES to assess a more accurate construction timescale based on the confirmed grid connection arrangements.
- 3.3.3 A reasonable worst-case scenario for the construction programme will be assessed and presented in the ES.

Indicative Construction Activities

- 3.3.4 The types of construction activities that are likely to be required include (non-exhaustive and not necessarily in order):
- Proposed Development preparation to include:
 - Import of construction materials, plant, and equipment to site;
 - The establishment of construction compound(s); fencing and security measures;
 - Upgrading of existing access tracks and highways;
 - Construction of new access tracks, including new and existing access points / bell mouths and highways connections;
 - The upgrade or construction of crossing points (bridges / culverts) over drainage ditches and other watercourses as required;
 - Preparation for advanced planting; and
 - Marking out the location of the infrastructure.
 - Main Site construction to include:
 - Import of components to site;
 - Construction of foundations;
 - Temporary construction site compounds;
 - Erection of Solar PV Mounting Structures;
 - Mounting of solar PV panels;
 - Installation of electric cabling;
 - Installation of transformers;

- Installation of BESS units;
 - Construction of National Grid Substation;
 - Construction of SKEP Main On-Site Substation compound;
 - Construction of Additional On-Site Substations compounds; and
 - Construction of Main Site buildings, car parking and other infrastructure.
- Cable installation (underground cabling):
 - The establishment of mobilisation areas and running tracks;
 - 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;
 - Cable joint installation;
 - Cable pulling;
 - Implementation of crossing methodologies for watercourses, infrastructure (including roads and rail), and sensitive habitats (e.g. Horizontal Directional Drilling, cable bridging, etc.);
 - Import of components to the Proposed Development;
 - Temporary haul routes for construction vehicles;
 - Testing and commissioning; and
 - Proposed Development reinstatement with habitat and ecological enhancement.

Construction Site Access

- 3.3.5 It is anticipated that the main construction access point to the Main Site would be from the A259. Swept path analysis will be undertaken to determine if land take or road widening is required. It is anticipated that abnormal loads would be required for the transformers and SKEP Main On-Site Substation.
- 3.3.6 Provisional construction site accesses are discussed in **Chapter 15: Transport and Access**. All construction access will be confirmed as the Proposed Development design progresses and in consultation with the relevant authorities.
- 3.3.7 Based on the preliminary construction material and equipment requirements, it is anticipated that there could be approximately 64 HGV deliveries (128 movements per day) during the peak construction period, based on the most rapid build out. This number is indicative, excludes construction staff transportation and ancillary construction traffic, and is subject to refinement. A reasonable worst-case scenario will be assessed in the ES.
- 3.3.8 HGVs will use the local road network to access the DCO Site. Many of the roads around the Main Site are currently accessible to farm machinery and agriculture-related HGVs. The need for road upgrades, widening, and new road construction, for example for abnormal loads or to facilitate visibility splays at

site access/egress points, will be determined as the Proposed Development design develops and will be assessed as appropriate.

- 3.3.9 An Outline Construction Traffic Management Plan (OCTMP) will be developed and submitted with the DCO Application.

Construction Staff

- 3.3.10 It is currently estimated that up to a peak of 400 staff per day would work on the Proposed Development during the construction period. This includes construction of the SKEP Main On-Site Substation, export cabling, connection to the proposed National Grid Substation, and establishment of the solar PV and BESS compounds. There would be noticeably fewer workers outside peak activities which would be an average of 100 staff per day.

Construction Environmental Management

- 3.3.11 An Outline Construction Environmental Management Plan (OCEMP) will accompany the DCO Application which will describe the mitigation measures and best practice guidance to be employed during the construction phase. The OCEMP will form the framework for a detailed CEMP that will be agreed with the Local Planning Authorities prior to construction.
- 3.3.12 The aim of the CEMP is to reduce impacts and promote best practice such as those listed below:
- 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;
 - Utilities diversion;
 - Dust generation and mitigation measures;
 - Ecological mitigation;
 - Water pollution prevention measures; and
 - Waste generation.
- 3.3.13 The detailed CEMP would be produced by the appointed construction contractor following grant of the DCO and prior to the start of construction (for example, as part of a requirement attached to the DCO) and will identify the procedures to be adhered to and managed by the Principal Contractor throughout construction.

Site Reinstatement and Habitat Creation

- 3.3.14 Following construction, a programme of site reinstatement and habitat creation would commence. An Outline Landscape and Ecological Management Plan (OLEMP) would be submitted alongside the DCO Application. The OLEMP would set out the principles for how the land would be managed throughout the operation (and maintenance) phase, following completion of construction. The OLEMP would be considered a live document which would be regularly refined

(where required), a detailed LEMP would be further developed once the DCO has been granted.

3.4 Operation and Maintenance Activities

- 3.4.1 During the operation (and maintenance) phase, activity on the Main Site would be minimal and would be restricted to vegetation management, equipment maintenance and servicing, replacement of any components that fail, periodic inspections, and monitoring to allow for the continued effective operation (and maintenance) of the Proposed Development. The solar PV panels and associated infrastructure will be replaced once during the design life of the Proposed Development.
- 3.4.2 Operation (and maintenance) Site access will be determined as the Proposed Development design progresses and in consultation with the relevant highways authorities.
- 3.4.3 It is anticipated that there would be approximately 14 full time workers employed on-site carrying out maintenance and upkeep during the operation (and maintenance) phase. This is indicative and, depending on the nature and complexity of any maintenance activity, could require more workers and equipment.
- 3.4.4 An Outline Operation Environmental Management Plan (OOEMP) will accompany the DCO Application, which will describe the framework of operation (and maintenance) mitigation measures as identified in the ES to be followed, and carried forward to a detailed OEMP prior to operation.

3.5 Decommissioning

- 3.5.1 The design life of the Proposed Development is expected to be 40 years. It is expected that throughout this period, faulty or damaged PV panels and other components would be replaced as part of the normal maintenance. The equipment would be reviewed at the end of its design life to determine whether it remains in a viable condition to continue operation after that time.
- 3.5.2 When the operation (and maintenance) phase ends, the Main Site would be decommissioned. All PV panels, Solar PV Mounting Structures, inverters, transformers, switchgear, BESS, buildings, and fencing would be removed from the Main Site and recycled or disposed of in accordance with good practice and market conditions at that time. It is anticipated that foundations/piles would be removed or cut back below ground level as appropriate. The future of the substation(s) and control building would be agreed with the Local Planning Authority and National Grid prior to the commencement of decommissioning.
- 3.5.3 The mode of cable decommissioning for the interconnecting cables and underground cables would be dependent upon government policy and best practice at that time. Currently, the most environmentally acceptable option for underground cabling in environmentally sensitive locations is generally considered to be leaving the cables in situ (particularly deeper cables), as this

avoids disturbance to overlying land and habitats. Alternatively, the cables can be removed by opening up the ground at regular intervals and pulling the cable through to the extraction point, avoiding the need to open up the entire length of the cable route.

- 3.5.4 The effects of decommissioning are usually similar to, or of a lesser magnitude than, construction effects and will be considered in the relevant sections of the ES. The specific method of decommissioning the Proposed Development at the end of its operational life is uncertain at present as the engineering approaches to decommissioning would evolve over the operational life of the Proposed Development. Assumptions will therefore be made where appropriate and the impact assessment would be based on the worst-case parameters for each technical topic.
- 3.5.5 Decommissioning is expected to take approximately 24 months and could be undertaken in phases. On completion of decommissioning, the Main Site would be returned to its original condition and handed back to the landowners (subject to the terms of any legal agreements reached with them). Areas of habitat planting that do not need to be removed may be left in situ.
- 3.5.6 An Outline Decommissioning Environmental Management Plan (ODEMP) will be prepared as part of the EIA and will set out the general principles to be followed in the decommissioning of the Proposed Development. A detailed DEMP will be prepared and consulted upon with the relevant authorities at the time of decommissioning, in advance of the commencement of decommissioning works, and would include timescales and transportation methods.
- 3.5.7 Decommissioning would be undertaken safely and with regard to the environmental legislation at the time of decommissioning, including relevant waste legislation.

3.6 The Rochdale Envelope

- 3.6.1 The Planning Inspectorate's Advice Note 9: Using the 'Rochdale Envelope' (Advice Note 9) (Ref 22) provides guidance regarding the degree of flexibility that may be considered appropriate within an application for development consent under the Planning Act 2008 (Ref 1) and the application of the 'Rochdale Envelope' to ensure a robust assessment of the likely significant environmental effects of the Proposed Development. Several technical parameters have yet to be finalised for the Proposed Development.
- 3.6.2 The amount of flexibility required will depend upon the progress of the design at the phase that the detailed EIA work is undertaken. Certain aspects of the Proposed Development still require design flexibility. It is therefore necessary for the technical assessments to assess an 'envelope' within which the works will take place. As such, the DCO Application and EIA will be based on maximum and, so far as appropriate, minimum parameters or limits of deviation. To remain in accordance with the EIA Regulations, it will be essential that the parameters are as 'limited' as possible to ensure that the 'likely

significant effects' are identified, rather than unrealistically amplified effects, which could be deemed to be unlikely. It is proposed to use the defined parameters for the Proposed Development in each relevant technical assessment, with each technical assessment defining their reasonable worst-case basis of assessment.

3.6.3 The key elements of Advice Note 9 in relation to the Proposed Development are set out below:

- The application should acknowledge the need for details of a project to evolve, within clearly defined parameters;
- The EIA should take account of the need for evolution within those parameters, and reflect the likely significance of such a flexible project in the ES;
- Within those defined parameters, the level of detail of the proposals must be such as to enable a proper assessment of the likely significant environmental effects and the identification of mitigation measures, if necessary considering a range of possibilities. This may include consideration of a range of possible design parameters and the application of a worst-case approach where appropriate, in accordance with paragraphs 2.3 and 2.4 of Advice Note 9; and
- It is for the decision maker in granting consent, to impose conditions to ensure that the process of evolution keeps within the parameters applied for the assessed.

3.6.4 The advice outlined above has been followed during the EIA scoping process for this Proposed Development to identify and refine the scope of environmental topics.

4. Alternatives Considered

4.1 Introduction

- 4.1.1 Schedule 4, paragraph 2 of the Environmental Impact Assessment (EIA) Regulations (Ref 2) requires ‘a description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects’. This will be included in the Environmental Statement (ES). The assessment will also be in line with Schedule 14(2)(d) of the EIA Regulations which states ‘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’.
- 4.1.2 For the Proposed Development, the alternatives analysis will focus on different layouts, sizing, technologies, site location and design parameters in line with National Policy Statement (NPS) EN-1 4.3.15 (Ref 5) ‘*Applicants are obliged to include information about the reasonable alternatives they have studied in their ES. This should include an indication of the main reasons for the applicant’s choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility*’. A full detailed appraisal of the options considered will be presented as part of the ES, discussing the rationale for the choice of site location, final site layout and design selection, as well as explaining the flexibility sought within the consent in this regard.
- 4.1.3 NPS EN-1 at paragraph 4.3.27 states ‘alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on the grounds that they are not important and relevant to the Secretary of State’s decision’.
- 4.1.4 A ‘no development’ alternative would not deliver the additional electricity generation capacity and other proposed benefits associated with the Proposed Development. The ‘no development’ scenario is therefore not considered a reasonable alternative and will not be discussed within the ES. This does not preclude the use of the ‘no-development’ also referred to as a ‘do nothing’ scenario in certain technical chapters of the ES where this is required to present future baseline conditions in relation to the impact assessment.

4.2 Approach

- 4.2.1 The ES will include a description of the alternatives relevant to the Proposed Development that have been considered, including their specific characteristics, and an indication of the main reasons for selecting the chosen

option, including a comparison of the associated environmental effects. This will include alternative layouts for the Main Site which have been considered during the design process, as well as alternatives for connecting into the National Grid. A full detailed appraisal of the options considered will be presented as part of the ES, discussing the rationale for the final Proposed Development layout and design selection, as well as explaining the flexibility sought within the Development Consent Order (DCO).

- 4.2.2 Further refinements will be made as the Proposed Development design progresses. The ES will confirm the DCO Application boundaries and the layout for the Proposed Development submitted with the DCO Application.

5. Consultation

5.1 Context

- 5.1.1 Effective stakeholder engagement and consultation is intrinsic to The Planning Act 2008 (Ref 1) and fundamental to the success of the Proposed Development.
- 5.1.2 The process of consultation is critical to the development of a comprehensive and balanced Environmental Impact Assessment (EIA). The views of statutory and non-statutory consultees serve to focus the environmental studies and to identify specific issues that require further investigation. Consultation is an ongoing process, which enables impact avoidance and mitigation measures to be incorporated into the Proposed Development design, thereby limiting adverse environmental effects and enhancing environmental benefits.
- 5.1.3 The Proposed Development has a wide range of stakeholders (including landowners, statutory consultees, local communities, and special interest groups) that will require varied levels of consultation. Specific communication activities therefore need to be focused to meet the needs of particular individuals and groups. This requires an understanding of the stakeholders and their interests in the Proposed Development.
- 5.1.4 Stakeholder engagement for the Proposed Development is based on the following principles:
- Early and ongoing engagement to inform and influence the design process;
 - Seeking feedback during the iterative design process and ensuring that comments received are taken into consideration;
 - Building of long-term relationships with key stakeholders throughout the different phases of the Proposed Development design development to help better understand their views;
 - Where possible and practicable, ensuring that stakeholder concerns are addressed; and
 - Ensuring appropriate statutory consultation is undertaken in compliance with requirements of the Planning Act 2008, the EIA Regulations (Ref 2) and associated guidance.

5.2 DCO Consultation Requirements

- 5.2.1 The Planning and Infrastructure Act 2025 (Ref 24) (which received Royal Assent on December 18, 2025) aims to speed up infrastructure delivery in the United Kingdom (UK), including (by Section 5) removing the requirement for statutory consultation for NSIPs under Sections 42, 47 and 49 of the Planning Act 2008. This section is not yet in force. At time of writing, no guidance has been released on future expectations for engagement or transitional measures. Therefore, the Applicant is proposing to undertake consultation part way through undertaking the EIA to inform the community of the plans for the Proposed Development and seek their feedback. If statutory consultation

remains a statutory requirement, then that consultation will be in accordance with the statutory obligations. Feedback from the consultation process will be recorded and used to help inform the Proposed Development design. Consultation, as an ongoing process, enables mitigation measures to be incorporated into the Proposed Development to limit adverse environmental effects and optimise environmental benefits. This approach will remain under review and will become clearer as guidance becomes available and necessary legislation is put into place to fully enact the Planning and Infrastructure Act, and any changes to the proposed approach will be communicated promptly to stakeholders.

5.3 Stakeholder Engagement to Date

- 5.3.1 Meetings with statutory consultees have already taken place, including with Kent County Council, Folkestone and Hythe District Council and the Environment Agency. Consultation with statutory consultees will continue to take place following submission of this EIA Scoping Report to provide an introduction to and seek input on the Proposed Development.
- 5.3.2 A project website has been set up to provide up to date information for stakeholders (www.southkentenergypark.co.uk); along with the provision of a project email (info@southkentenergypark.co.uk), freephone and freepost contact details providing a wide variety of communication channels for stakeholders to make contact.

5.4 Scoping Consultation

- 5.4.1 The Planning Inspectorate (on behalf of the SoS) will consult on this EIA Scoping Report under the EIA Regulations. Views from consultees will be considered and used to inform the Scoping Opinion to be issued by the Planning Inspectorate (on behalf of the SoS).
- 5.4.2 Under Regulation 10(6) of the EIA Regulations, the SoS must undertake consultation with statutory consultation bodies, including environmental bodies (such as Natural England, the Environment Agency (EA) and Historic England) and relevant LPAs (such as Kent County Council, Folkestone and Hythe District Council and local Parish and Town Councils) before adopting a Scoping Opinion.

6. Environmental Impact Assessment Methodology

6.1 Introduction

- 6.1.1 The Environmental Statement (ES) will be based on a number of related activities, as follows:
- Establishing existing baseline conditions;
 - Consultation with statutory and non-statutory consultees throughout the Development Consent Order (DCO) pre-application process;
 - Consideration of relevant local, regional and national planning policies, guidelines and legislation relevant to Environmental Impact Assessment (EIA);
 - Consideration of technical standards for the development of environmental effect significance criteria;
 - Review of secondary information, previous environmental studies and publicly available information and databases;
 - Desk-top studies;
 - Physical surveys and monitoring;
 - Computer modelling (where required); and
 - Expert opinion.
- 6.1.2 The ES will set out the process followed during the EIA including the methods used for the collection of data and for the identification and assessment of impacts. Any assumptions will be clearly identified.
- 6.1.3 The EIA process is designed to be capable of, and sensitive to, changes that occur as a result of design development, including any impact avoidance and mitigation measures that are incorporated into, or developed in response to, the Proposed Development design during the EIA. This is particularly important for this EIA as the design and layout of the Proposed Development is still being refined, and the design is likely to evolve further following submission of this EIA Scoping Report. It is not, however, anticipated that the Proposed Development subject to the EIA and the DCO Application will be materially different from the Proposed Development as detailed in this EIA Scoping Report, as its location, scale, design, design and use of technology, will all be within the parameters set out in **Chapter 3: The Proposed Development** of this EIA Scoping Report.
- 6.1.4 Impacts will be considered on the basis of their magnitude, duration and reversibility. Cumulative and combined effects will also be considered where appropriate. Effect significance will be evaluated on the basis of the scale of the impact and the importance or sensitivity of the receptors/resources being impacted, in accordance with standard assessment methodologies. More information on the assessment methodology is provided in Section 6.6.
- 6.1.5 Where potentially significant adverse environmental effects are identified in the assessment process, measures to mitigate these effects will be put forward in

the form of recommendations to be undertaken as part of the Proposed Development, as far as is practicable.

6.2 Determining Baseline Conditions

6.2.1 In order to predict the potential environmental impacts of the Proposed Development, it is necessary to determine the environmental conditions that currently exist within the DCO Site Boundary and surrounding area in the absence of any development. These are known as ‘baseline conditions’.

6.2.2 Detailed environmental baselines information will be collected and the methodology for the collection process will be detailed within the ES. The baseline information will be gathered from various sources, including:

- Online/digital resources;
- Data searches, for example Historic Environment Record (HER); and
- Baseline surveys of the Proposed Development and its surroundings.

6.2.3 Consideration will also be given to how the baseline conditions may evolve in the absence of the Proposed Development, known as the ‘future baseline’.

6.3 Mitigation

6.3.1 EIA Regulation 14, Part (2c) requires the ES to provide “a description of any features of a proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment”. These are commonly referred to as mitigation measures. Where possible, these measures will be incorporated into the form or design of the Proposed Development.

6.3.2 The Proposed Development will adopt a standard hierarchical approach to identifying mitigation requirements as follows:

- **Avoid or prevent:** In the first instance, mitigation measures should seek to avoid or prevent the adverse effect at source, for example, by appropriate siting and routing of infrastructure within the Main Site, or by locating Photo Voltaic (PV) panels away from sensitive receptors;
- **Reduce:** If an effect is unavoidable, mitigation measures should be implemented which seek to reduce the significance of the effect. For example, the use of noise barriers to reduce the level of construction noise experienced by nearby noise sensitive receptors; and
- **Offset:** If the effect can neither be avoided nor reduced, mitigation should seek to offset the effect through the implementation of compensatory mitigation, for example habitat creation to replace any habitat losses.

6.3.3 Mitigation measures fall into two categories: ‘embedded mitigation measures’ which are built into the design of the Proposed Development, and ‘additional mitigation measures’ which are additional to the Proposed Development design commitments.

Embedded Mitigation Measures

- 6.3.4 The Proposed Development will be developed through an iterative EIA and design process which involves seeking to avoid or reduce and, if possible, offset potential environmental effects. Where possible, these measures will be incorporated into the form or design of the Proposed Development, for example, through the appropriate routing and siting of infrastructure.
- 6.3.5 Once these measures are incorporated into the Proposed Development design, they are termed ‘embedded mitigation’ measures. Embedded mitigation measures relevant to the construction phase will be described within each technical chapter of the ES and listed within **Appendix 1-B: Environmental Mitigation and Commitments Register** that accompanies this EIA Scoping Report. For the operation (and maintenance) phase, such embedded measures will be represented primarily in the Proposed Development design. Therefore, embedded mitigation measures will be incorporated into the Proposed Development design from the outset and/or identified through the iterative EIA process.
- 6.3.6 The ES will also describe industry control measures which are common practice on construction sites as embedded mitigation measures. These will be described in each technical chapter of the ES and included in the Outline Construction Environmental Management Plan (OCEMP) which will be prepared as part of the DCO Application. The OCEMP will provide a structure within which the appointed construction Contractor (including any sub-contractors or suppliers involved in the works) would plan, implement and deliver environmental management, mitigation and monitoring requirements (ensuring the results of such monitoring are used to inform and implement any remedial action required) during the construction phase of the Proposed Development as committed to within the ES. The OCEMP would be secured through the DCO and developed into a detailed CEMP by the appointed construction Contractor prior to the start of construction. It is intended that the detailed CEMP would be a live document and updated as and when there are changes to the construction team or additional information becomes available.

Additional Mitigation Measures

- 6.3.7 The ES will assess the environmental effects of the Proposed Development with embedded mitigation measures in place. Where significant adverse environmental effects are identified to remain after considering these embedded measures, ‘additional mitigation measures’ will be proposed to further avoid or reduce the identified adverse environmental effects. These additional measures will be presented within each of the technical chapters of the ES, where required, and may include measures beyond industry standard controls such as bespoke / site specific measures, including temporary fencing to prevent glint and glare until the vegetation planting has properly established. These additional mitigation measures will also be detailed within the OCEMP.

6.4 Timescales and Assessment Years

Construction Phase Effects

- 6.4.1 For the assessment, construction effects will be taken to be those for which the impact source begins and ends during the Proposed Development construction phase, and do not endure beyond the completion of construction. This covers sources such as construction traffic, noise and vibration from construction activities, dust generation, site runoff, mud on roads, risk of fuel/oil spillage, and the visual intrusion of plant and machinery on-site. Some construction-related effects may last longer than others, for example, impacts related to the establishment of construction compounds are likely to be relatively short in duration in respect of the whole construction period, whereas the construction of energy infrastructure and landscaping activities are likely to persist throughout the entire construction period. By their nature, most construction impacts will be temporary and reversible.

Operation and Maintenance Phase Effects

- 6.4.2 For the operation (and maintenance) assessment, these are the effects that, although they may start during construction, are either permanent, endure a substantial period beyond construction or decommissioning, or represent an extended cumulative effect of construction or decommissioning activity. This includes the effects of the physical presence of the energy infrastructure and its operation, use and maintenance. Timescales associated with these enduring effects are as follows:
- Short term – endures for up to 12 months after construction or decommissioning;
 - Medium term – endures for 1-5 years;
 - Long term – endures for more than 5 years;
 - Reversible long term effects – long term effects, which endure throughout the lifetime of the Proposed Development but which cease once the Proposed Development has been decommissioned (operation (and maintenance) effects will fall into this category); and
 - Permanent effects – effects which cannot be reversed following decommissioning (e.g. where buried archaeology is permanently removed during construction).
- 6.4.3 Environmental management and mitigation measures for the operation (and maintenance) phase of the Proposed Development would be planned, implemented and delivered through an Operation Environmental Management Plan (OEMP), secured through a Requirement in the DCO. An OEMP will be prepared as part of the DCO Application which will set out the general principles to be followed during the operation of the Proposed Development. The Outline Operational Environmental Management Plan (OOEMP) would be developed into a detailed OEMP following the grant of the DCO.

Decommissioning Phase Effects

- 6.4.4 The design life of the Proposed Development is expected to be at least 40 years; however, the design life could be longer than this depending on the condition of the equipment. Should the design life of the Proposed Development be extended, the prescription mitigation and management measures would continue to be in place ensuring that there would be no increased environmental risk. Therefore, it is not anticipated that an extension to the operation (and maintenance) life of the Proposed Development would influence the outcomes of the assessments presented in the ES. This is discussed further in each of the technical chapters (**Chapter 7 to 17**) of this EIA Scoping Report, where relevant.
- 6.4.5 For the assessment, decommissioning effects will be taken to be those for which the source of the effect begins and ends during the decommissioning phase and does not extend beyond the completion of the decommissioning phase. For example, sources of effects arising from decommissioning activities, such as decommissioning traffic, noise and vibration, dust generation, site runoff, mud on roads, risks of fuel/oil spillage and the visual intrusion of plant and machinery. Typically, decommissioning phase effects are similar in nature to those experienced during the construction phase, although they may be of shorter duration and slightly less intensity. As with construction phase activities and effects, some aspects of decommissioning activities and effects would endure for longer than others.

Assessment Years

- 6.4.6 In order to ensure the EIA is robust in considering the likely significant effects of the Proposed Development, appropriate assessment scenarios and years have been identified and discussed below.
- 6.4.7 The peak construction year for the purpose of the EIA is anticipated to be during 2031. This is based on the assumption that the Proposed Development would be built out rapidly (over approximately 24 to 36 months) which is a worst case from a traffic generation point of view as the trip numbers would be compressed into a shorter duration. This would therefore also be the worst case in terms of potential effects on drivers, pedestrians, cyclists and traffic-related air quality and noise effects.
- 6.4.8 The peak construction assessment year will be reviewed as the anticipated construction programme is considered in more detail during the design development. A detailed justification for the reasonable worst-case scenario that is assessed will be provided in the ES.
- 6.4.9 The current date of connection for the Proposed Development is 2033, with an aspiration for the Proposed Development to start operating sooner where possible. The proposed operation (and maintenance) assessment year for the purpose of the EIA is 2033.
- 6.4.10 A future year of 2048 will also be considered for specific technical topics, including landscape and visual amenity, to take account of the maturation of

landscape mitigation planting (i.e. 15 years after the operation (and maintenance) assessment year). This is advised by the Landscape Institute Guidelines, which are discussed further in **Chapter 11: Landscape and Visual** of this EIA Scoping Report.

- 6.4.11 The decommissioning assessment year for the purpose of the EIA is 2073, based on the design life of the Proposed Development, recognising that the operation (and maintenance) life may extend beyond this date.

6.5 Assessment of Impacts and Significance of Effects

- 6.5.1 The evaluation of the significance of an effect is important, as it is the effect significance that determines the resources that should be deployed in avoiding or mitigating a significant adverse effect, or conversely the actual value of a beneficial effect. The overall environmental acceptability of the Proposed Development is a matter for the SoS to determine, having taken into account the environmental information that is set out in the ES, including all likely beneficial and adverse environmental effects, amongst other matters. Where it has not been possible to quantify effects, qualitative assessments will be undertaken based on available knowledge and professional judgement. Where uncertainty exists, this will be noted in the relevant technical chapter of the ES and valid assumptions made/ a worst case approach taken, as appropriate.
- 6.5.2 The significance of residual effects will be determined by reference to criteria developed for each technical assessment. Specific effect significance criteria for each technical assessment are presented in **Chapter 7 to 17** of this EIA Scoping Report, giving due regard to the following:
- Scale of the impact (described as high, medium, low and very low);
 - Effect duration and whether effects are temporary, reversible or permanent;
 - Effect nature (whether direct or indirect, reversible or irreversible, beneficial or adverse);
 - Whether the effect occurs in isolation, is cumulative or interacts with other effects;
 - Performance against any relevant environmental quality standards;
 - Sensitivity of the receptor or resource (described as high, medium, low and very low; and
 - Compatibility with environmental policies.
- 6.5.3 Further guidance relating to the magnitude of change, the sensitivity of receptors / resources, and the significance of any resultant effects is provided in the following sections.

Magnitude of Change

- 6.5.4 General criteria for defining the magnitude of change are set out in **Table 6-1**. Key factors that influence this include:

- **Scale of change:** The scale of change refers to the degree of change to or from baseline environment conditions caused by the impact being described;
- **Spatial extent:** The extent of an impact is the full area over which the impact occurs; and
- **Duration and frequency:** The duration is the period within which the impact is expected to last prior to recovery or replacement of the feature. Frequency refers to how often the impact would occur.

Table 6-1: Magnitude of Change Criteria

MAGNITUDE	CRITERIA
High	Long term and / or regional level loss; or major alteration to key elements/ features of the baseline condition such that post development character / composition of the baseline would be fundamentally changed.
Medium	Medium term loss and/ or local level change (greater than the Proposed Development footprint) or alteration to one or more key elements / features of the baseline conditions such that post development character/ composition of the baseline condition would be materially changed.
Low	Short term, Proposed Development specific and / or a minor shift away from baseline conditions. Changes arising from the alteration would be detectable but not material; the underlying character / composition of the baseline condition would be similar to the pre-development situation
Very Low	Very little change from baseline conditions. Change is barely distinguishable, approximating to a 'no change' situation.

Sensitivity of Receptor/ Resource

6.5.5 The sensitivity (or value) of a receptor or resource is characterised by the vulnerability to change, recoverability and importance of the receptor or resource (see **Table 6-2**). Characterisation of the receptor or resource is achieved by balancing out three considerations to determine the receptor/ resource's sensitivity as follows:

- **Vulnerability:** The vulnerability of the receptor or resource relates to its capacity to accommodate change i.e. the tolerance/ intolerance of the receptor/ resource to change;
- **Recoverability:** The ability of the receptor or resource to return to the baseline state before the Proposed Development impact caused the change; and

- **Importance:** The importance of the receptor or resource is a measure of the value assigned to that receptor/ resource based on biodiversity and ecosystem services, social value and economic value. The importance of the receptor or resource is also defined within a geographical context, whether it is important internationally, national or locally.

Table 6-2: Sensitivity Criteria

SENSITIVITY	DESCRIPTION
High	Receptor/ resource has little or no ability to absorb change without fundamentally altering its character. For example: Receptor/ resource has low/ no capacity to return to baseline conditions within the Proposed Development's life e.g. low tolerance to change and low recoverability such as a physical feature formed over a geological time scale, or loss of access with no alternatives; Receptor/ resource is a designated feature of a protected site or is rare or unique; and/ or; Receptor/ resource is economically valuable.
Medium	Receptor/ resource has moderate capacity to absorb change without significantly altering its character, however some damage to the receptor/ resource would occur. For example: Receptor/ resource has intermediate tolerance to change; Medium capacity to return to baseline condition e.g. >5 of up to 10 years; and/ or The receptor/ resource is valued but not protected.
Low	The receptor/ resource is tolerant to change without significant detriment to its character. Some minor damage to the receptor/ resource may occur. For example: Receptor/ resource has a high tolerance to change; High capacity to return to baseline condition e.g. >5 of up to 10 years; May affect socio-economic behaviour but is not a nuisance to users; and/ or The receptor/ resource is common and/ or widespread.
Very Low	The receptor or resource is tolerant to change with no effect on its character. The activity resulting from the Proposed Development does not have a detectable effect on survival or viability.

Evaluating the Significance of Effect

6.5.6 Once the magnitude of change (impact) and the sensitivity of the receptor or resource has been established, the significance of an effect can be assessed. The significance of residual effects (effects that remain after the implementation of defined mitigation measures) will be evaluated with reference to available definitive standards, accepted criteria, and applicable legislation. For issues where definitive quality standards do not exist, significance will be based on the following:

- Local, district, regional or national scale or value of the receptor or resource affected;
- Number of receptors/ resources affected;

- Sensitivity of these receptors/ resources; and
- Duration of the effect.

6.5.7 In order to provide a consistent approach to expressing the outcomes of the various studies undertaken as part of the EIA, and thereby enable comparison between effects upon different technical topics, the following terminology will be used in the ES to define residual effects:

- **Adverse:** Detrimental or negative effects to an environmental/ socio-economic receptor or resource;
- **Negligible** (also referred to as 'neutral' for some technical topics): Imperceptible effects to an environmental/ socio-economic receptor or resource; or
- **Beneficial:** Advantageous or positive effect to an environmental/ socio-economic receptor or resource.

6.5.8 Where adverse or beneficial effects are identified, these will be assessed against the following scales:

- **Minor:** Slight very short or highly localised effect of no significant consequence;
- **Moderate:** Limited effect (by extent, duration or magnitude) which is likely to be considered significant (to be confirmed in the technical chapters of the ES); and
- **Major:** Considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards. Such effects are considered significant.

6.5.9 Each of the technical chapters of the ES will provide the criteria, including sources and justifications, for qualifying the different categories of effect. Where possible, this will be based upon quantitative and accepted criteria (for example, noise assessment guidelines), together with the use of value judgement and expert interpretation, to establish to what extent an effect is significant. **Table 6-3** illustrates an example of the classification of effects matrix (often referred to as a significance matrix).

Table 6-3: Example Matrix to Classify Environmental Effects

SENSITIVITY OR VALUE OF RECEPTOR/ RESOURCE	MAGNITUDE OF CHANGE			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

6.5.10 Following the classification of an effect, clear statements will be made within the technical chapters of the ES as to whether an effect is significant or not significant. As a general rule, major and moderate effects are considered to be significant (as shown by the shaded cells in **Table 6-3**), whilst minor and

negligible effects are generally considered to be not significant. However professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration/ frequency, whether it is reversible, and/ or its likelihood of occurrence. A precautionary/ worst case approach will be adopted to ensure the recorded effects are not understated. Generic definitions for the classification of effects are shown in **Table 6-4**.

Table 6-4: Generic Effect Descriptions

EFFECT	GENERIC DESCRIPTION
Major	These effects may represent key factors in the decision making process. Potentially associated with sites and features of national importance or likely to be important considerations at a regional or district scale. Major effects may relate to resources or features which are unique and which, if lost, cannot be replaced or relocated.
Moderate	These effects, if adverse, are likely to be important at a local scale and on their own could have a material influence on decision making.
Minor	These effects may be raised as local issues and may be of relevance in the detailed design of the Proposed Development but are unlikely to be critical in the decision-making process.
Negligible	Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error, these effects are unlikely to influence decision making, irrespective of other effects.

6.5.11 Where mitigation measures are identified to eliminate, mitigate or reduce adverse impacts, these have either been incorporated into the design of the Proposed Development; translated into construction commitments; or operation (and maintenance) or managerial standards/ procedures. The ES will highlight ‘residual effects’, which remain following the implementation of suitable mitigation measures, and classify these in accordance with the effect classification terminology as given above.

6.5.12 It should be noted some technical chapters of the ES may use different criteria when undertaking assessments due to differences in industry accepted guidelines and specifications. Where this is the case, the technical chapters (**Chapter 7 to 17**) of this EIA Scoping Report discuss how the assessment methodology or classification of effects differs from the general EIA methodology (as described in this section) and provides justification.

Assessment of Construction and Decommissioning Effects

6.5.13 The identification of construction and decommissioning effects will be made on the basis of existing knowledge, techniques and equipment. A ‘reasonable worst-case’ scenario will be used with respect to the envisaged construction and decommissioning methods, location (proximity to sensitive receptors/ resources), phasing and timing of construction and decommissioning activities. An Outline Decommissioning Environmental Management Plan (ODEMP) will be prepared as part of the EIA and will set out the general principles to be followed during the decommissioning of the Proposed Development. Where specific information relating to decommissioning is not known, it is anticipated

that, as they are expected to be very similar, construction information will be used. A detailed DEMP will be prepared and agreed with the relevant authorities at that time of decommissioning.

- 6.5.14 The assessment of construction and decommissioning effects will assume the implementation of standard good practice measures, for example, the use of temporary noise barriers to reduce noise levels as appropriate and, where practicable control of dust on haul roads (embedded mitigation measures are detailed in Section 6.3). The purpose of this is to focus on the Proposed Development specific effects, rather than generic construction effects that can be easily addressed using generic best practice mitigation measures. Construction and decommissioning assumptions, including good practice measures, will be set out within the ES and OCEMP. The ES will identify and assess construction and decommissioning effects that are likely to remain after these mitigation measures are in place.

6.6 Cumulative Effects

- 6.6.1 In accordance with EIA Regulations (Ref 2), ‘cumulative effects’ will be considered. These are effects that result from incremental changes caused by other past, present or reasonably foreseeable actions together (i.e. cumulatively) with the Proposed Development. For the cumulative impact assessment, two types of impact will be considered:
- The combined effect of individual impacts from the Proposed Development, for example noise or pollutants on a single receptor (these will be referred to as ‘In-Combination Effects’); and
 - The combined effects of several development schemes which may, on an individual basis be insignificant but, cumulatively with the Proposed Development, have a new or different likely significant effect.
- 6.6.2 The assessment will be based on the best available data from other proposed and committed developments and associated information which is currently in the public domain or has been provided. The assessment will assume publicly available information is accurate and is also reliant on effective collaboration between, and information sharing with, a range of statutory consultees, neighbouring authorities and other developers to identify changes in information which may be pertinent to the assessment.
- 6.6.3 Where there are specific limitations associated with data, these will be highlighted in the ES. **Table 6-5** summarises how cumulative and in-combination effects will be reported in the ES.

Table 6-5: Summary of How Cumulative and In-Combination Effects will be Reported in the Environmental Statement

IN-COMBINATION EFFECTS	The interaction and combination of different environmental discipline residual (post-additional mitigation) effects from within the proposed development effecting a single receptor. For example, noise and visual effects on a singly heritage receptor, or noise and air quality effects on a singly residential receptor.	Will be identified in the technical chapter with a summary of effects provided in a separate cumulative chapter supported by a cross discipline effect interaction matrix.
CUMULATIVE EFFECTS	The combined residual (post-additional mitigation) effects of the Proposed Development and another project or projects on a single receptor.	Will be assessed within the technical chapter with a summary of effects provided in a separate cumulative chapter of the ES.

In-Combination Effects

- 6.6.4 There is no established EIA methodology for assessing and quantifying effect interactions that lead to combined effects on sensitive receptors, however, the European Commission (EC) has produced guidelines for assessing effect interactions “*which are not intended to be formal or prescriptive, but are designed to assist EIA practitioners in developing an approach which is appropriate to a project...*” (Ref 25).
- 6.6.5 AECOM has reviewed these guidelines and has developed an approach which uses the defined residual effects of the Proposed Development to determine the potential for effect interactions that lead to combined effects. This approach was undertaken on the Sunnica Energy Farm, Longfield Solar Farm, Gate Burton Energy Park, and Fenwick Solar Project, all of which are solar NSIPs that have completed DCO examination.
- 6.6.6 The EIA will predict beneficial and adverse effects during construction, operation (and maintenance), and decommissioning of the Proposed Development, which are classified as minor, moderate or major. Several effects on one receptor or receptor group could theoretically interact or combine to produce a combined significant overall effect.
- 6.6.7 An exercise which tabulates the effects on receptors or receptor groups will be undertaken to determine the potential for effect interactions and therefore any combined effects. Only adverse or beneficial residual effects classified as minor, moderate or major will be considered in relation to potential effect interactions. Residual effects, which are classified as negligible will be excluded from the assessment of the effects interactions as, by virtue of their definition (see Section 6.5 and **Table 6-5**), they are considered to be imperceptible effects to an environmental/ socio-economic resource or receptor.

Cumulative Effects with Other Developments

- 6.6.8 The Planning Inspectorate's advice on the assessment of cumulative effects (Ref 26) identifies a four-phase approach as follows:

Phase 1 – Establish the NSIP's Zone of Influence (ZOI) and Identify a Long List of 'Other Development'

- 6.6.9 A review of other developments will be undertaken, initially encompassing a 'zone of influence' defined by the environmental topic specialists to prepare a long list of 'other developments'. At this phase, it is anticipated that the long list will be based on up to a 10 km area of search.
- 6.6.10 Shepway Energy Park and South Brooks Solar Farm are DCO Solar Projects within 5 km of the DCO Site Boundary and will be considered within the cumulative assessment contained within the ES. **Figure 6-1: DCO Solar Projects within 5 km of the Proposed Development** shows the proximity of these Schemes in relation to South Kent Energy Park.
- 6.6.11 The long list of 'other development' to be included in the assessment of cumulative effects will be reviewed and developed in consultation with the local planning authorities, statutory consultees and other relevant organisations.
- 6.6.12 Development will be included in the initial long-list based on the following criteria:
- Development currently under construction;
 - Approved applications which have not yet been implemented (covering the past five years and taking account of those that received planning consent over three years ago and are still valid, but have not yet been completed);
 - Submitted applications not yet determined;
 - On the National Infrastructure Planning Programme of Projects;
 - All solar and BESS developments identified within 10 km of the Proposed Development; and
 - Development identified in the relevant Development Plan (and emerging) Development Plans.
- 6.6.13 Criteria will be developed and applied to filter development which may be excluded from the initial long list, having regard to the size and spatial influence of each development. These criteria will be documented and set out within the ES.

Phase 2 – Identify shortlist of 'Other Development' for Cumulative Effects Assessment

- 6.6.14 At Phase 2, to ensure a proportionate approach to the assessment, a detailed review of the long list of other developments will be undertaken. Any developments of a nature or scale without the potential to result in cumulative impacts will be excluded, following discussion with Local Planning Authorities, and consideration of the likely ZOI for each environmental topic. The justification for including or excluding developments from the long list will be

provided in a matrix, modelled on the example given within Appendix E of the Planning Inspectorate's Advice Note 1.

Phase 3 – Information Gathering

6.6.15 Information relating to other developments will be collected from the appropriate source (which may include the Local Planning Authorities, the Planning Inspectorate or directly from the applicant/ developer) and will include, but not be limited to:

- Proposed design and location information;
- Proposed programme of demolition, construction, operation and/ or decommissioning; and
- Environmental assessments that set out baseline data and effects arising from 'other development'.

Phase 4 – Assessment

6.6.16 The assessment will include a list of those developments considered to have the potential to generate a cumulative effect together with the Proposed Development, and this will be documented in a matrix which includes the following:

- A brief description of the development;
- An assessment of the cumulative effect with the Proposed Development;
- Proposed mitigation applicable to the Proposed Development including any apportionment; and
- The likely residual cumulative effect.

6.6.17 The criteria for determining the significance of any cumulative effect will be based upon:

- The duration of effect, i.e. will it be temporary or permanent;
- The extent of the effect, e.g. the geographical area of an effect;
- The type of effect, e.g. whether additive or synergistic;
- The frequency of the effect;
- The 'value' and resilience of the receptor affected; and
- The likely success of mitigation.

6.6.18 Particular consideration will be given to other solar developments proposed within the 10 km area of search and information available at the time of assessment will be used to inform the assessment of cumulative effects.

6.6.19 In reporting the overall significance of cumulative effects, it is appropriate to also acknowledge the relative contributions different projects make to a cumulative effect and carefully consider whether the cumulative effect is significant. For example, where a large-scale project is predicted to result in significant effects and a smaller proposed development would not have significant effects, the cumulative assessment should only conclude there is a significant cumulative effect if effects from both projects together are of greater significance than the larger project in isolation. Consequently, care will be

taken to not simply define such effects as being cumulative, but rather to focus on the nature and scale to which genuine cumulative effects might result.

6.7 Proposed Topics to be included in the ES

6.7.1 The following chapters of this EIA Scoping Report present a discussion of the potential significant environmental effects associated with the Proposed Development that will be considered as part of the EIA and reported in the ES. The methodology and assessment criteria that will be used to assess the identified effects are also outlined. These topics comprise:

- Climate Change (Chapter 7);
- Cultural Heritage (Chapter 8);
- Ecology and Biodiversity (Chapter 9);
- Water Environment (Chapter 10);
- Landscape and Visual (Chapter 11);
- Noise and Vibration (Chapter 12);
- Socio-economics (Chapter 13);
- Agriculture and Soils (Chapter 14);
- Transport and Access (Chapter 15);
- Materials and Waste (Chapter 16); and
- Other Environmental Topics (Chapter 17).

6.7.2 **Chapter 17: Other Environmental Topics** of this EIA Scoping Report provides a summary of environmental topics which have been considered during the preparation of this EIA Scoping Report, but for which standalone chapter are not anticipated to be required in the ES. For these topics, it is considered that, from previous experience, the demonstration of no likely significant effects being expected can be quickly established without the need for detailed information on legislation, policy and baseline conditions being provided. Therefore, technical appendices will be provided for these topics with a short summary in a single chapter of the ES. In the unlikely event that a likely significant effect is identified for a particular topic, a standalone chapter will be produced in accordance with the chapter structure set out in Section 6.9. These topics comprise:

- Air Quality;
- Electromagnetic Fields;
- Glint and Glare;
- Ground Conditions;
- Health;
- Major Accidents and Disasters; and
- Telecommunications.

6.7.3 **Chapters 7 to 17** of this EIA Scoping Report provide an outline of the proposed scope of works for the topics identified above.

6.8 Proposed Elements Scoped Out

- 6.8.1 Based upon the work presented in this EIA Scoping Report, each of the technical chapters (**Chapter 7 to 17**) set out the technical elements to be scoped out of the EIA for that topic. This information is summarised in **Table 19-1**.

6.9 Topic Chapter Structure

- 6.9.1 Each of the technical chapters (**Chapters 7 to 17**) of this EIA Scoping Report is set out as follows:
- Introduction to the topic;
 - Description of the study area for the topic;
 - Legislation, planning policy context and guidance to the topic;
 - Consultation;
 - Baseline conditions;
 - Potential effects and mitigation;
 - Assessment methodology;
 - Limitations and assumptions; and
 - Summary of elements scoped in and out.
- 6.9.2 For **Chapter 17: Other Environmental Topics** of this EIA Scoping Report, a general discussion of each topic is provided, including the elements as listed above where relevant, but the text is not confined to the structure above.

7. Climate Change

7.1 Introduction

- 7.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on climate during construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the Climate Change chapter of the Environmental Statement (ES).
- 7.1.2 To align with the requirements of the Environmental Impact Assessment (EIA) Regulations (Ref 2) and Institute of Sustainability and Environmental Professionals (ISEP) guidance¹ for assessing climate mitigation and adaptation in EIAs, consideration has been given within this chapter to the following aspects of the climate change assessment:
- **Lifecycle greenhouse gas (GHG) impact assessment:** the impact of GHG emissions arising from the Proposed Development on the climate over its lifetime;
 - **In-combination climate change impact (ICCI) assessment:** the combined impact of the Proposed Development and future climate change on the receiving environment; and
 - **Climate change risk assessment (CCRA):** the resilience of the Proposed Development to future climate change impacts.
- 7.1.3 This chapter is supported by **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

7.2 Study Area

- 7.2.1 The study area for the climate change assessments is illustrated in **Figure 3-1: DCO Site Boundary and Land Use**. Further details regarding the study area for each of the aspects of the climate change assessments are provided below.
- 7.2.2 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the Study Area and assessed following the same methodology as outlined in this chapter.
- 7.2.3 The relevant time periods will be assessed for the different phases of the Proposed Development where required including:
- **Construction:** Is likely Quarter (Q) 3 2030, and will require an estimated 24-36 months, with the start of 2033 used in this assessment as a mid-range point;
 - **Operation (and maintenance):** Is anticipated to commence in the first year of 2033 and last 40 years up to around 2073; and

¹ ISEP was formerly known as Institute of Environmental Management and Assessment (IEMA).

- Decommissioning: Is expected to start in 2073 and by completed by 2074.

Lifecycle GHG Impact Assessment

- 7.2.4 The study area for the GHG assessment considers all direct GHG emissions arising from activities undertaken within the DCO Site Boundary during construction, operation (and maintenance), and decommissioning of the Proposed Development. It also includes indirect emissions usually arising outside the DCO Site Boundary, e.g., emissions embedded within the construction materials arising as a result of the energy used for their production, as well as emissions arising from the transportation of materials, waste and construction workers. The study area also considers activities that may be avoided or displaced as a result of the Proposed Development, e.g., as other grid electricity production activities.

Climate Change Risk Assessment

- 7.2.5 The study area for the CCRA assessment considers the impact of climate change at the DCO Site Boundary during construction, operation (and maintenance) and decommissioning of the Proposed Development.

In-combination Climate Change Impact Assessment

- 7.2.6 The study area for the ICCI assessment will be defined taking into account the relevant environmental assessments reported within the ES. This will include all relevant environmental receptors identified within the assessments undertaken and reported within the ES.

7.3 Legislation, Planning Policy Context and Guidance

- 7.3.1 Legislation, planning policy and guidance relating to climate change and pertinent to the Proposed Development comprises:

Legislation

- 7.3.2 Relevant legislation includes:
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017: Section 5(2) and Schedule 4, paragraphs 4 and 5 (Ref 2);
 - The Climate Change Act 2008 (as amended by the Climate Change Act 2008 (2050 Target Amendment) Order 2019 (Ref 28). The Climate Change Act 2008 set a legally binding target for the UK to reduce its GHG emissions from 1990 levels by at least 80% by 2050. This target is supported by a system of legally binding five-year 'carbon budgets' and an independent body to monitor progress, the Climate Change Committee (CCC). The UK carbon budgets restrict the amount of GHG emissions the UK can legally emit in a defined five-year period. The Act was amended in 2019 to revise the existing 80% reduction target and legislate for net zero emissions by 2050;
 - UK Nationally Determined Contribution (2020) (Ref 29);

- UK's 2035 Nationally Determined Contribution (NDC) emissions reduction target under the Paris Agreement (Ref 30);
- The Carbon Budget Order 2011 (sets the carbon budget for the 2023–2027 budgetary period (Ref 31);
- The Carbon Budget Order 2016 (sets the carbon budget for the 2028–2032 budgetary period) (Ref 32);
- The Carbon Budget Order 2021 (sets the carbon budget for the 2033–2037 budgetary period) (Ref 33);
- The 7th Carbon Budget has been submitted to the UK Government by the Climate Change Committee (CCC). The UK's 7th carbon budget, which covers the period from 2038 to 2042, will be set by the government by June 2026;
- The Paris Agreement (2015) (Ref 34) is a legally binding agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with GHG emissions mitigation, adaptation and finance starting in the year 2020. It requires all signatories to set a target, known as a NDC and to strengthen their climate change mitigation efforts to keep global warming to well below 2°C this century and to pursue efforts to limit global warming to 1.5°C. The agreement contains a 'ratchet' mechanism by which NDCs must be strengthened every five years;
- UK Climate Change Risk Assessment (2022) (Ref 35), as required by the Climate Change Act 2008, the UK government completed the third five-year assessment of the risks of climate change on the UK. This is based on the Independent Assessment of the UK Climate Risk, the statutory advice provided by the CCC, commissioned by the UK government and devolved administrations;
- Net Zero Strategy: Build Back Greener (2022 (Ref 36), which sets out policies and proposals for meeting the carbon budget targets and its vision for a decarbonised economy by 2050. The document states that low carbon power is expected to become the predominant form of energy in 2050;
- Energy white paper: Powering our Net Zero future (2020) (Ref 37), details the Government's revised ambitions, setting 2035 as the date by which all the UK's electricity will need to come from low carbon sources, subject to security of supply, whilst meeting a 40–60% increase in demand; and
- UK Infrastructure: A 10 Year Strategy National Infrastructure Strategy (2025) (Ref 38).

National Planning Policy

7.3.3 The following planning policies from relevant NPS have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5) with particular reference to paragraphs 4.10.1 to 4.10.12 in relation to climate change adaptation and resilience; paragraphs 4.10.13 to 4.10.19 in relation to adaptation measures in response to climate projections; and paragraphs

5.8.5 to 5.8.12 in relation to climate projections, flood risk and the importance of relevant mitigation;

- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6), specifically from paragraph 4.1.1 to 4.1.4 which highlights key climate change, adaptation and resilience;
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7) – paragraph 2.3.1 regarding NPS EN-1 and the importance of climate change resilience, and paragraph 2.3.3 in relation to ES requirements regarding climate change resilience; and
- National Planning Policy Framework (December 2024) (Ref 8) – specifically chapter 14 which sets out the need to support renewable and low carbon energy infrastructure to meet the challenge of climate change.

Local Planning Policy

7.3.4 Relevant local planning policy includes:

- Folkestone and Hythe District Council Core Strategy Places and Policies Local Plan (2020) (Ref 13) which sets out the vision for future development across the Folkestone and Hythe district. This includes:
 - Policy CC1: Planning applications for all major new build housing developments and new non-residential buildings of 1,000sqm or more gross floorspace will be required to reduce carbon emissions by a minimum of 10 per cent above the Target Emission Rate;
 - Policy CC2: This policy requires new developments to follow sustainable building principles by using less water, improving energy efficiency, incorporating climate-resilient features like green infrastructure and SuDS, ensuring buildings can adapt over time, and providing suitable waste and recycling storage, with flexibility based on site-specific viability;
 - Policy CC3: Development should manage surface water sustainably by keeping it close to its source, reusing water where possible, using SuDS features that contribute to place-making, ensuring permeable surfaces, preventing runoff from small rainfall events, treating runoff to reduce pollution, and enhancing nearby water bodies, with designs resilient to future climate-driven water scarcity;
 - Policy CC4: Community or commercial-scale wind turbines only where the site is specifically allocated for wind energy in an adopted Neighbourhood Plan;
 - Policy CC5: Small wind turbines for existing buildings only where a single, appropriately scaled turbine is proposed, with no harm to heritage assets, amenity, landscape character, or ecology, is visually unobtrusive, and is removed once no longer in use; and
 - Policy CC6: New or expanded solar farms only where they avoid harming landscape character, scenic views, heritage assets, nearby residents' amenity, or local ecology, include appropriate screening and minimal ancillary works, use visually unobtrusive colours, plan for

decommissioning, consider security impacts, state their generating capacity, and do not take high-quality agricultural land out of use.

- Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022 (Ref 12) includes spatial and delivery focussed planning policy for the Folkestone and Hythe District. This includes Policy SS5 on District Infrastructure Planning where “development should provide, contribute to or otherwise address the district’s current and future infrastructure needs”; and
- Folkestone and Hythe Our District Our World – corporate plan 2025-2030 (Ref 42), sets out the five-year blueprint for Folkestone and Hythe with commitment to deliver sustainable new development by incorporating low-carbon energy sources and new renewable projects to help reduce the use of fossil fuels and to support the transition to net zero.

Relevant Industry Guidance

- 7.3.5 Powering Up Britain: Net Zero Growth Plan (2023) (Ref 39) sets out how the government will enhance our country’s energy security, seize the economic opportunities of the transition, and deliver on our net zero commitments.
- 7.3.6 Relevant industry guidance includes Planning Practice Guidance – Climate Change (Ref 43), which advises how to identify suitable mitigation and adaptation measures in the planning process to address the impacts of climate change.
- 7.3.7 Renewable Energy Action Plan Kent County Council (KCC) 2017 Update (2017) (Ref 40), to support KCC in updating key components of the Kent Renewable Energy Action Plan, detailing scenarios for how new renewables could be deployed and a comprehensive action plan to help unlock this potential.
- 7.3.8 Kent and Medway Energy and Low Emissions Strategy: Agreed Implementation Plan 2024 – 2027 (Ref 41) outlines 10 priorities, of which Priority 7 Renewable Energy Generation is in direct alignment with the Proposed Development.

7.4 Consultation

- 7.4.1 Consultation as part of the EIA process will be undertaken following submission of this EIA Scoping Report with Folkestone and Hythe District Council and KCC if particular interest is raised on climate change targets, aims, commitments, other projects, plans and policy that affect climate and baseline data, as well as any known future developments in close proximity to the Proposed Development.

7.5 Baseline Conditions

Lifecycle GHG Impact Assessment

- 7.5.1 The baseline conditions for the lifecycle GHG assessment is a ‘business as usual’ scenario where the Proposed Development does not go ahead. The current land use within the DCO Site Boundary and the local area consists

predominately of agricultural fields mainly under arable production. Baseline agricultural GHG emissions are dependent on types of soil and vegetation present, fuel use for the operation of vehicles and machinery, and other inputs, e.g., fertiliser and pesticide use. Agricultural emissions displaced from the Proposed Development are not considered, as it is assumed that these agricultural activities would continue in a new location hence no reduction.

- 7.5.2 The future baseline comprises existing carbon stock and sources of GHG emissions resulting from the existing activities within the study area, as well as the existing emissions from the generation of grid electricity if the Proposed Development does not go ahead.
- 7.5.3 GHG emissions from the Proposed Development will be put into context by comparing them with other likely alternative sources of electricity generation. The assessment will therefore measure any variation in emissions due to the generation of the electricity via solar PV as compared to other electricity generation methods. The baseline considered most representative of a scenario in which the Proposed Development does not proceed is the carbon intensity of electricity generated by a Combined Cycle Gas Turbine (CCGT). This is considered an appropriate comparator, as deployment of additional renewable energy capacity would primarily displace fossil fuel generation of this type. For contextual comparison, the national grid average carbon intensity is also presented to illustrate the difference.

Climate Change Risk Assessment (CCRA)

- 7.5.4 The existing baseline condition is the historic and current climate as defined in terms of temperature, rainfall and other climatic factors. Existing baseline data will be gathered for the historic climatic factors from the nearest climate station (Dungeness) to the Proposed Development. Current baseline data from the best available 30-year period for historic climate data is displayed in **Table 7-1**.

Table 7-1: Historic climate data (1991 – 2020) from the UK Met Climate Data Portal (Ref 44) for a 12x12 km grid (Grid ID BQ-94)

CLIMATE VARIABLE	BASELINE (1991 – 2020)
Temperature	
Mean Annual air temperature (°C)	11
Mean Summer air temperature (°C)	17
Mean winter air temperature (°C)	5.4
Number of days of air frost per annum	16.7
Maximum summer temperature for baseline period (°C)	22.0
Minimum winter temperature for baseline period (°C)	2.4
Rainfall	
Mean annual rainfall (mm)	698.0
Mean summer rainfall (mm)	51.0
Mean winter rainfall (mm)	67.3
Wettest month on average (mm)	November (86mm)
Driest month on average (mm)	March (39mm)

- 7.5.5 The future climatic baseline for the Proposed Development will be determined through the UK Climate Impacts Programme UK Climate Projections 2018 (UKCP18) (Ref 57). To provide context, projections highlight the following examples of changes to the climate relative to the 1991 – 2020 baseline, under the Representative Concentration Pathway (RCP) 8.5 scenario (RCP8.5):
- Mean temperatures are expected to increase in both summer and winter;
 - Mean daily maximum and minimum temperatures to increase across the UK in both summer and winter;
 - Winter precipitation is expected to increase, and summer precipitation will decrease; and
 - Increased frequency of extreme weather events.
- 7.5.6 This is based on 50th percentile of the RCP8.5, a trajectory adopted by the Intergovernmental Panel on Climate Change (IPCC) that is considered to be the high-emissions global scenario with the greatest concentration of GHGs in the atmosphere. RCP8.5 has been used for the purposes of this assessment as a worst-case as this predicts a high-emissions or ‘business-as-usual’ scenario.
- 7.5.7 Example of extreme weather events near the Proposed Development that will inform the baseline include:
- Coastline damage due to strong and forceful winds as a result of Storm Goretti in January 2026 (Ref 54); and
 - High river levels as a result of heavy rainfall due to Storm Ciaran in November 2023 (Ref 53).

In-combination Climate Change Impacts (ICCI)

- 7.5.8 The receptors for ICCI are receptors within the surrounding environment that will be impacted by the Proposed Development in combination with future climatic conditions. Baseline conditions for the in-combination climate change impact assessment are determined using the climate change projections data.
- 7.5.9 The historic baseline and future climate baseline data will be the same as the CCRA.

Baseline Surveys/Information Gathering

- 7.5.10 The sources of information used to inform the baseline and assessment methodology include:
- UK Met Office Climate Data Portal for baseline observations (Ref 44);
 - Climate Projections (UKCP) (2018), in accordance with NPS-EN1 (adopted 2025) (Ref 45);
 - NASA Sea Level Projection Tool – IPCC 6th Assessment Report Sea Level Projections (Ref 46);
 - World Business Council for Sustainable Development and World Resources Institute (2001) and the GHG Protocol (Ref 47);
 - Department for Energy Security and Net Zero (DESNZ) (2025) Conversion Factors Database (Ref 48);

- Inventory of Carbon and Energy (ICE) Database v.4.1 (2025) (Ref 49); and
- The British Standards Institution (BSI) (2023) Publicly Available Specification (PAS) 2080:2023, Carbon management in buildings and infrastructure (Ref 50).

7.6 Potential Effects and Mitigation

Lifecycle GHG Impact Assessment

7.6.1 **Table 7-2** provides the lifecycle phases, related activities and primary emission sources from the Proposed Development that will be considered in the GHG assessment, in line with the PAS 2080:2023.

Table 7-2: Potential Sources of GHG emissions

LIFECYCLE PHASE	ACTIVITY	PRIMARY EMISSION SOURCES
Product Phase	Raw material extraction and manufacturing of products required to build the equipment for the Proposed Development. Due to the complexity of the equipment, this phase is expected to contribute to a large proportion of the overall GHG emissions.	Embodied GHG emissions from energy use in extraction of materials and manufacture of components and equipment.
	Transportation of materials for manufacturing.	Emissions of GHG from transportation of products and materials.
Construction process phase	On-site construction activity including emissions from construction compounds.	Consumption of energy (electricity; other fuels) from plant, vehicles, and generators on site.
	Transportation of construction materials (where these are not included in product-phase).	Fuel consumption from transportation of materials to the Proposed Development, where these are not included in product-phase embodied emissions. Due to the nature of the equipment, this could require shipment of certain components over significant distances.
	Travel of construction workers.	GHG emissions from transportation of workers.
	Disposal of waste materials generated by the construction process.	GHG emissions from transportation and disposal of waste.
	Land use change.	GHG emissions from net loss of carbon sink.
	Water use.	Provision of clean water, and treatment of wastewater.

LIFECYCLE PHASE	ACTIVITY	PRIMARY EMISSION SOURCES
Operation (and maintenance) phase	Operation, energy generation from the solar farm, and maintenance and replacement of Proposed Development components.	GHG emissions from energy consumption. These operational emissions are expected to be negligible in the context of the overall Proposed Development GHG impact. Generated renewable energy is exported to the grid. Leakage of potent GHGs, such as SF ₆ , during operation. GHG emissions from material use and waste generation resulting from ongoing site maintenance. Emissions from routine maintenance (including emissions from the transportation of workers) are expected to be negligible, but the periodic replacement of components has the potential to have large associated emissions given the complexity of the equipment involved, and the embodied carbon of the components to be considered.
	On-site decommissioning activity.	Consumption of energy (electricity and other fuels) from plant, vehicles, and generators on the Proposed Development.
	Transportation and disposal of waste materials.	Emissions from the disposal and transportation of waste.
	Worker travel.	GHG emissions from transportation of workers to the Proposed Development.

7.6.2 Carbon sequestration as a result of the additional carbon capture by vegetation and soils as a result of land use change from arable to permanent grassland will also be discussed.

7.6.3 A Construction Environmental Management Plan (CEMP) will be prepared and implemented by the selected Principal Contractor to include a range of good practice construction measures including measures to reduce carbon emissions. An Outline CEMP (OCEMP) will be submitted with the DCO Application.

7.6.4 Further measures to mitigate GHG emissions during construction, operation (and maintenance), and decommissioning of the Proposed Development will be presented in the ES. An OCEMP, Outline Operational Environmental Management Plan (OOEMP) and Outline Decommissioning Environmental

Management Plan (ODEMP) will be submitted with the DCO Application including the proposed mitigation.

Climate Change Risk Assessment (CCRA)

7.6.5 Climate parameters relevant to the CCRA are detailed in **Table 7-3** below.

Table 7-3: Climate parameters for the CCRA of the Proposed Development

PARAMETER	SCOPED IN/OUT	RATIONALE FOR SCOPING CONCLUSION
Extreme weather events	In	The Proposed Development may be vulnerable to extreme weather events, such as storm damage to structures and assets.
Temperature change	In	Any receptors in the surrounding environment may be vulnerable to changes in temperature with potential effects of the Proposed Development identified by technical specialists. Extremes in temperatures may also result in heat stress of materials and structures. It is not expected that projected temperature increases would have impacts on the panels themselves as solar PV schemes operate all over the world in climates which are already much warmer than the predicted future climate of the UK. A detailed assessment will be conducted as part of the ES.
Precipitation change (frequency and magnitude of precipitation events and droughts)	In	The Proposed Development may be vulnerable to changes in precipitation, for example, land subsidence and damage to structures and drainage systems during periods of heavy rainfall. A detailed assessment will be conducted in the Water Environment chapter of the ES.
Wind	In	The Proposed Development may be vulnerable to changing wind patterns, for example, high winds and falling trees could damage structures and assets. A detailed assessment will be conducted as part of the ES.
Sea Level Rise	In	The Proposed Development is located in an area susceptible to sea level rise, based on data in the NASA Sea Level Projection Tool (Ref 46). A detailed assessment will be conducted as part of the Water Environment chapter of the ES.
Flooding	In	The Proposed Development is also located within Flood Zone 3 based on data provided in the flood map for planning (Ref 51). A detailed assessment will be conducted and presented in Water Environment chapter of the ES.

7.6.6 The climate change risk assessment will qualitatively assess the Proposed Development's resilience to climate change. This will be completed in liaison with the project design team and the other EIA technical disciplines by

considering the climate projections for the geographical location and timeframe of the Proposed Development.

- 7.6.7 A statement will be provided within the ES to describe how the Proposed Development will be adapted to improve its resilience to future climate conditions.

In-Combination Climate Change Impacts (ICCI)

- 7.6.8 ICCI identifies how the resilience of various receptors in the surrounding environment is affected by a combination of future climate conditions and the Proposed Development. The climate parameters relevant to the Proposed Development are detailed in **Table 7-4**, together with the rationale for scoping parameters in or out of the assessment. Based on the information presented in **Table 7-4**, an ICCI assessment is proposed to be scoped into the ES.

Table 7-4: Climate parameters for the in-combination climate change impact

PARAMETER	SCOPED IN/OUT	RATIONALE FOR SCOPING CONCLUSION
Temperature change	In	Projected temperature increases in combination with the Proposed Development may lead to heat stress on habitats and species and soil moisture changes. These changes have the potential to impact receptors identified by other environmental disciplines. A detailed assessment will be conducted as part of the ES.
Precipitation change (frequency and magnitude of precipitation events and droughts)	In	Anticipated increases in heavy rainfall events may lead to flash flooding or changes to groundwater levels, while droughts may stress vegetation and water resources. The Proposed Development, in combination with projected changes in precipitation, has the potential to have an impact upon receptors identified by other environmental disciplines. A detailed assessment will be conducted as part of the ES.
Wind	In	Projected changes in wind patterns, combined with the Proposed Development, may influence receptors identified by other environmental disciplines. A detailed assessment will be conducted as part of the ES.
Sea Level Rise	In	The Proposed Development is located in an area susceptible to sea level rise, based on data in the NASA Sea Level Projection Tool (Ref 46), which may increase coastal flood risk and affect drainage and habitat resilience.
Flooding	In	The Proposed Development is also located within Flood Zone 3 based on data provided in the flood map for planning (Ref 51). Combined with climate change, this increases the likelihood of fluvial, pluvial and coastal flooding, which may damage infrastructure and increase pollutant runoff into sensitive habitats.

7.7 Assessment Methodology

Lifecycle GHG Impact Assessment

- 7.7.1 The receptor for the GHG impact assessment is the global climate. The GHG assessment will follow a project lifecycle approach to calculate estimated GHG emissions arising from the construction, operation (and maintenance), and decommissioning of the Proposed Development and to identify GHG ‘hot spots’ (i.e., emissions sources likely to generate the largest amount of GHG emissions). This will enable the identification of priority areas for mitigation in line with the principles set out in GHG Assessment ISEP guidance.
- 7.7.2 In line with the World Business Council for Sustainable Development and World Resources Institute GHG Protocol guidelines, the GHG assessment will be reported as tonnes of carbon dioxide equivalent (tCO₂e) and will consider the seven Kyoto Protocol gases:
- Carbon dioxide (CO₂);
 - Methane (CH₄);
 - Nitrous oxide (N₂O);
 - Sulphur hexafluoride (SF₆);
 - Hydrofluorocarbons (HFCs);
 - Perfluorocarbons (PFCs); and
 - Nitrogen trifluoride (NF₃).
- 7.7.3 Expected GHG emissions arising from the construction activities, embodied carbon in materials and operational and decommissioning emissions of the Proposed Development, as well as baseline emissions, will be quantified using a calculation-based methodology as per the following equation, and aligned with the GHG Protocol:

$$\text{Activity data} \times \text{GHG emissions factor} = \text{GHG emissions}$$

- 7.7.4 Department for Energy Security and Net Zero (DESNZ) 2025 emissions factors (Ref 48) and embodied carbon data from the University of Bath Inventory of Carbon and Energy (ICE) (Ref 49) are among those that will be used as the primary data sources for calculating GHG emissions.

Sensitivity

- 7.7.5 The sensitivity of the receptor (global climate) to increases in GHG emissions is always defined as high as any additional GHG impacts could compromise the UK’s ability to reduce its GHG emissions and therefore meet its future 5-year carbon budgets. Also, the extreme importance of limiting global warming to below 2°C this century is widely accepted by the Paris Agreement (Ref 34) and the climate science community.

Magnitude of Change

- 7.7.6 For the lifecycle GHG impact assessment, the magnitude of change considers the output of the GHG quantification process, i.e. the Proposed Development’s GHG lifecycle footprint, in the context of its contribution to the UK carbon

budgets and the possible impact of the Proposed Development on meeting the net zero targets. GHG emissions will also be contextualised against sectoral budgets as defined by the Power Sector Carbon Budget Delivery Plan published by the UK Government (Ref 31, Ref 32, and Ref 33).

7.7.7 The ISEP guidance on assessing GHG emissions in EIA states:

“GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit, as such any GHG emissions or reductions from a Project might be considered to be significant.”

7.7.8 The UK carbon budgets are in place to restrict the amount of GHG emissions they can legally emit in a five-year period. The UK is currently in the 4th Carbon Budget period, which runs from 2023 to 2027, as detailed in **Table 7-5**. The 3rd, 4th, and 5th Carbon Budgets reflect the previous 80% reduction target by 2050. The 6th Carbon Budget is the first to align with the legislated 2050 net zero commitment.

7.7.9 In order to illustrate the Proposed Development’s trajectory towards net zero by 2050, it is proposed that the CCC’s Balanced Net Zero Pathway is used post-2037 in the absence of any nationally legally binding carbon budgets after using the 6th Carbon Budget. The CCC released their 7th Carbon Budget in February 2025 and advised the UK Carbon Budget to be set at 535 MtCO₂e, which will later be agreed in Parliament and set into UK law. However, this depends on agreement with the UK Government and is therefore subject to change. Additionally, the CCC's feedback may also evolve based on input from the UK Government.

7.7.10 The CCC Balanced Net Zero Pathway is recommended to be divided into five-year periods post-2037 to match the previous six legally binding UK national carbon budgets. The proposed carbon budget periods derived from the net zero pathway encompass the 7th, 8th, and 9th indicative budget periods up to 2050 in line with the UK’s 1.5°C trajectory as detailed in **Table 7-5**.

Table 7-5: UK National and Sectoral Carbon Budgets and Indicative Carbon Budgets Based

CARBON BUDGET	CCC ELECTRICITY SUPPLY BALANCED PATHWAY BASED UPON THE CARBON BUDGET DELIVERY PLAN (MTCO ₂ E)	UK CARBON BUDGET (MTCO ₂ E)	INDICATIVE CARBON BUDGETS BASED UPON THE CCC’S BALANCED NET ZERO PATHWAY (MTCO ₂ E)
3rd (2018-2022)	-	2,544	-
4th (2023-2027)	162	1,950	-
5th (2028-2032)	68	1,752	-
6th (2033-2037)	29	965	-
7th (2038-2042)	22	-	533
8th (2043-2047)	10	-	220
9th (2048-2050)	3	-	23

7.7.11 It is noted that the supplementary carbon budgets beyond 2037 have not been formally adopted by the UK Government or ratified by Parliament and can only

be used as an indicative measure to contextualise the Proposed Development's progress toward the national net zero trajectory.

Determining significance of effect

- 7.7.12 For this assessment, the sensitivity of the receptor (the global climate) to increases in GHG emissions is always defined as high, as any additional GHG impacts could compromise the UK's ability to reduce its GHG emissions and therefore meet its future 5-year carbon budgets.
- 7.7.13 When evaluating significance of the GHG emissions of the Proposed Development, all new GHG emissions contribute to a negative environmental impact; however, some projects will replace existing development or baseline activity that has a higher GHG impact. The significance of a Proposed Development's emissions should therefore be based on its net impact over its lifetime, which may be positive, negative or negligible. The crux of significance is therefore not whether a project emits GHG emissions. Nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050.
- 7.7.14 For further context, the net GHG emissions from the Proposed Development will be assessed through comparison with other alternative sources of electricity generation such as CCGT. The assessment will seek to quantify any emission reductions as result of the Proposed Development. The grid would not decarbonise if Proposed Development's such as this do not go ahead.
- 7.7.15 Essentially, the estimated lifetime generation in megawatt hour (MWh) from the Proposed Development is generation displacing existing grid electricity, and associated reduction in emissions can be quantified by multiplying the lifetime generation in MWh by a representative carbon intensity for electricity generated by CCGT power plants.
- 7.7.16 **Table 7-6** presents the different significance levels as per the latest version of the ISEP guidance (Ref 56) for assessing GHG emissions. This guidance emphasises that:

“a project that follows a ‘business-as-usual’ or ‘do minimum’ approach and is not compatible with the UK’s net zero trajectory, or accepted aligned practice or area-based transition targets, results in a significant adverse effect. It is down to the practitioner to differentiate between the ‘level’ of significant adverse effects e.g. ‘moderate’ or ‘major’ adverse effects”.

Table 7-6: Significance Criteria

LEVEL OF EFFECT	SIGNIFICANCE CRITERIA	SIGNIFICANCE
Major Adverse	The project's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in	Significant Adverse

LEVEL OF EFFECT	SIGNIFICANCE CRITERIA	SIGNIFICANCE
	emissions and does not make a meaningful contribution to the UK's trajectory towards net zero.	
Moderate Adverse	The project's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero.	Significant Adverse
Minor Adverse	The project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero.	Not Significant
Negligible	The project's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions.	Not Significant
Beneficial	The project's net GHG impacts are below zero and it causes a reduction in atmospheric concentration, whether directly or indirectly compared to the without project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact.	Significant Beneficial

Climate Change Risk Assessment (CCRA)

- 7.7.17 The receptor for the CCRA is the Proposed Development itself including its construction, operation (and maintenance), and decommissioning phases. The CCRA will provide a description of how the Proposed Development will be designed to be more resilient to the climate change effects identified during the review of the UKCP18 data.
- 7.7.18 A detailed assessment of climate change projections will be conducted for the study area as part of the ES. CCRA will qualitatively assess the Proposed Development's resilience to climate change using UKCP18 climate projections. These projections are provided for standard 25 km × 25 km grid cells that divide the UK into a consistent set of spatial units. The grid cell covering the Proposed Development location will therefore be used to examine future climate parameters relevant to the Proposed Development.

Magnitude of Change

- 7.7.19 The approach outlined below is aligned with existing guidance, including ISEP guidance (Ref 55). Climate parameters to be considered in the CCRA across all lifecycle phases include the following:

- Extreme weather events;
- Precipitation changes;
- Temperature change;
- Sea level rise;
- Sea temperature rise; and
- Wind.

7.7.20 The following key terms and definitions relating to the CCRA will be used:

- Climate hazard – a weather or climate related event, which has the potential to do harm to environmental or community receptors or assets, for example, increased winter precipitation;
- Climate change impact – an impact from a climate hazard which affects the ability of the receptor or asset to maintain its function or purpose; and
- Consequence – any effect on the receptor or asset resulting from the climate hazard having an impact.

7.7.21 The likelihood of a climate impact occurring is based on the likelihood of the hazard occurring combined with the vulnerability of the Proposed Development, using professional judgement and in discussion with the design team. Embedded mitigation measures will also be taken into account, and a likelihood rating will be assigned as described in **Table 7-7**.

7.7.22 Following the identification of climate hazards, the likelihood and consequences will be assessed according to **Table 7-7** and **Table 7-8** respectively. The categories and descriptions are based on the ISEP climate change resilience and adaptation guidance (Ref 55).

Table 7-7: Likelihood of an impact occurring criteria for risk assessment.

LIKELIHOOD TERM	QUALITATIVE	QUANTITATIVE
Rare	Highly unlikely to occur	5%
Unlikely	Unlikely to occur	20%
Moderate	As likely to occur as not	50%
Likely	Likely to occur	80%
Almost certain	Very likely to occur	95%

Table 7-8: Level of Consequence of a climate change impact occurring

RISK AREAS	MAGNITUDE OF CONSEQUENCE*				
	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC
Asset damage, engineering, operational	Impact can be absorbed through normal activity.	Adverse event that can be absorbed by taking business continuity actions.	A serious event that requires additional emergency business continuity actions.	A critical event that requires extraordinary/emergency business continuity action.	Disaster with the potential to lead to shut down or collapse or loss of the asset/network.

RISK AREAS	MAGNITUDE OF CONSEQUENCE*				
	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC
Health and safety	First aid case.	Minor injury, medical treatment.	Serious injury or lost work.	Major or multiple injuries, permanent injury or disability.	Single or multiple fatalities.
Environment	No impact on baseline environment. Localised in the source area. No recovery required.	Localised within site boundaries. Recovery measurable within one month of impact.	Moderate harm with possible wider effect. Recovery in one year.	Significant harm with local effect. Recovery longer than one year. Failure to comply with environmental regulations/ consent.	Significant harm with widespread effect. Recovery longer than one year. Limited prospect of full recovery.
Social	No negative social impact.	Localised, temporary social impacts.	Localised, long term social impacts.	Failure to protect poor or vulnerable groups. National, long term social impacts.	Loss of social licence to operate. Community protests.
Financial (**2)	x% IRR*** ³ < 2% of turnover.	x% IRR 2-10% of turnover.	x% IRR 10-25% of turnover.	x% IRR 25-50% of turnover.	x% IRR > 50% of turnover.
Reputational	Localised, temporary impact on public opinion.	Localised, short-term impact on public opinion.	Local, long-term impact on public opinion with adverse local media coverage.	National, short-term impact on public opinion. Negative national media coverage.	National, long-term impact with potential to affect the stability of the government.
Cultural heritage and cultural premises (1 ⁴)	Insignificant.	Short term impact. Possible recovery or repair.	Serious damage with wider impact to tourism industry.	Significant damage with national and international impact.	Permanent loss with resulting impact on society.

² (**) Example indicators – other indicators that may be used including costs of immediate/long-term emergency measures; restoration of assets; environmental restoration; indirect costs on the economy, indirect social costs.

³ (***) Internal Rate of Return (IRR)

⁴ (1) Including groups that depend on natural resources for their income/livelihoods and cultural heritage (even if not considered poor) and groups considered poor and vulnerable (and often that have less capacity to adapt) as well as persons with disabilities and older persons.

- 7.7.23 Engagement will be undertaken with relevant environmental disciplines and the engineering design team to discuss the CCRA and identify mitigation measures for incorporation into the design of the Proposed Development.

Significance of Effects

- 7.7.24 The significance of the CCRA will be determined as a function of the likelihood of a climate change impact occurring and the consequence to the receptor if the impact occurs. Effect significance criteria will be assigned in accordance with the matrix as detailed in **Table 7-9**. The assessment will take into account confirmed design and embedded mitigation measures.

Table 7-9: Significance Matrix for CCRA Assessment

		CONSEQUENCE				
		INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC
Likelihood	Rare	Low (NS)*	Low (NS)	Medium (NS)	High (S)	Extreme (S)
	Unlikely	Low (NS)	Low (NS)	Medium (NS)	High (S)	Extreme (S)
	Moderate	Low (NS)	Medium (NS)	High (S)	Extreme (S)	Extreme (S)
	Likely	Medium (NS)	High (S)	High (S)	Extreme (S)	Extreme (S)
	Almost certain	High (S)	High (S)	Extreme (S)	Extreme (S)	Extreme (S)

(*) ("S" Significant "NS" Not Significant)

In-Combination Climate Change Impacts (ICCI)

- 7.7.25 The purpose of the ICCI assessment is to identify any impacts on receptors in the surrounding environment and communities that occurs because of the combined impacts of climate change and the construction and operation (and maintenance) of the Proposed Development.
- 7.7.26 The assessment considers the existing and projected future climate conditions for the geographical location and assessment timeframe. It also identifies the extent to which identified receptors in the surrounding environment are potentially vulnerable to and affected by these factors.
- 7.7.27 The methodology for the ICCI assessment follows the methodology as the CCRA but focuses on different receptors as identified by other discipline chapters.
- 7.7.28 The receptors for ICCI are receptors within the surrounding environment that will be impacted by the Proposed Development in combination with future climatic conditions. Baseline conditions for the ICCI assessment are determined using the climate change projections data in line with the same methodology as the CCRA.
- 7.7.29 Once potential ICCIs have been identified in relation to the Proposed Development, the likelihood of climate impacts occurring during construction,

operation (and maintenance), and decommissioning phases is categorised using the likelihood analysis outlined in **Table 7-10**. This includes consideration of any embedded mitigation measures and good practice. Following this, the ICCI consequence level is assessed based on the consequence analysis outlined in **Table 7-11**.

Table 7-10: Level of Likelihood of an ICCI occurring

LIKELIHOOD CATEGORY	DESCRIPTION
Occasional	>50% probability that the impact will occur during the life of the Proposed Development.
Remote	25-50% probability that the impact will occur during the life of the Proposed Development.
Improbable	<25% probability that the impact will occur during the life of the Proposed Development.

Table 7-11: Level of Consequence for ICCI Assessment

CONSEQUENCE OF IMPACT	DESCRIPTION
High	The climate change parameter in-combination with the effect of the Proposed Development causes the significance of the impact of the Proposed Development on the resource/receptor, as defined by the topic, to increase from moderate to major.
Medium	The climate change parameter in-combination with the effect of the Proposed Development causes the significance of the impact of the Proposed Development on the resource/receptor, as defined by the topic, to increase from low to moderate.
Low	The climate change parameter in-combination with the effect of the Proposed Development causes the significance of the impact of the Proposed Development on the resource/receptor, as defined by the topic, to increase from negligible to low.
Very Low	The climate change parameter in-combination with the effect of the Proposed Development does not impact the significance of the impact of the Proposed Development on the resource/receptor, as defined by the topic.

7.7.30 The significance of potential effects is determined using the matrix in **Table 7-12**. Where an effect has been identified as Moderate or Major, these will be classed as a significant ICCI effect. If any likely significant ICCI effects are identified then appropriate additional mitigation measures (secondary mitigation) would be implemented to lower the risk of the significance to an acceptable level.

Table 7-12: Significance Matrix for ICCI Assessment

		LIKELIHOOD OF CLIMATE-RELATED IMPACT OCCURRING		
		Improbable	Remote	Occasional
Measure of	Very Low	Negligible (NS)	Negligible (NS)	Minor (NS)
	Low	Negligible (NS)	Minor (NS)	Moderate (NS)

Medium	Minor (NS)	Moderate (NS)	Major (S)
High	Moderate (NS)	Major (S)	Major (S)

7.8 Limitations and Assumptions

- 7.8.1 Where detailed information is not available regarding energy use, types and quantities of materials used, or the embodied carbon of key features of the assets, precautionary assumptions will be made based on industry approximations and professional best practice.
- 7.8.2 All assumptions and limitations, including any exclusions, together with assumptions for choices and criteria leading to exclusion of input and output data will be documented as part of the assessment reported in the ES.

7.9 Summary of Elements Scoped In and Out

- 7.9.1 A summary of the elements scoped in and out of this chapter is presented in **Table 7-13**.

Table 7-13: Elements scoped in and out of the Climate Change assessment

ELEMENT	SCOPED IN/SCOPED OUT
GHG impact assessment	Scoped In: Product phase – Raw material extraction, manufacturing and transport of products required to build the equipment for the Proposed Development. Scoped In: Construction process phase – On-site construction activity including emissions from construction compounds. Scoped In: Operation phase – Operation and maintenance of the Proposed Development. Scoped In: Decommissioning phase – on-site decommissioning activity.
Climate change risk assessment	Scoped In: Extreme weather events. Scoped In: Temperature change. Scoped In: Sea level rise. Scoped In: Precipitation change. Scoped In: Wind. Scoped In: Flooding.
In-combination climate impact assessment	Scoped In: Temperature change. Scoped In: Sea level rise. Scoped In: Precipitation change. Scoped In: Wind. Scoped In: Flooding.

8. Cultural Heritage

8.1 Introduction

8.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on cultural heritage (comprising archaeology, built heritage and historic landscapes) during the construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the Cultural Heritage chapter of the Environmental Statement (ES).

8.1.2 This chapter is supported by the following figures:

- **Figure 8-1:** Designated Heritage Assets; and
- **Figure 8-2:** Non-designated Heritage Assets.

8.1.3 This chapter is supported by the following appendices:

- **Appendix 8-A:** Known Heritage Assets Gazetteers.

8.2 Study Area

8.2.1 The study areas have been defined to include all designated and non-designated heritage assets with the potential to be affected by the Proposed Development. The relative significance of the different types of heritage assets has been taken into account, as has the likely nature of potential impacts as a result of the Proposed Development.

8.2.2 For designated heritage assets, a 3 km study area from the Development Consent Order (DCO) Site Boundary has been defined. This study area will allow for designated heritage assets to be set within their wider context and for an assessment of the setting of designated heritage assets within the surrounding landscape.

8.2.3 A flexible approach will be taken to the identification of designated heritage assets of high value (i.e., World Heritage Sites, Scheduled Monuments, Grade I and II* Listed Buildings, Registered Parks and Gardens and Conservation Areas containing a number of assets of high value) located outside of the 3 km study area, where there may be an impact through change to their setting. This wider study area will extend up to 5 km beyond the DCO Site Boundary. High value designated heritage assets beyond this distance may also be considered, where identified through consultation with stakeholders or by the Environmental Impact Assessment (EIA) technical discipline team. The selection of those high value designated heritage assets to be included in the assessment presented in the ES will be guided by the Proposed Development's Zone of Theoretical Visibility (ZTV) (to be prepared as part of **Chapter 11: Landscape and Visual Amenity** of this EIA Scoping Report) but will also

consider physical and historical connectivity and relationships with other monuments and the wider landscape.

- 8.2.4 The study area for non-designated heritage assets extends to a distance of 1 km from the DCO Site Boundary. This study area is considered appropriate to provide historical and archaeological context and to assess the potential for the survival of archaeological remains within the DCO Site.
- 8.2.5 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.

8.3 Legislation, Planning Policy Context and Guidance

- 8.3.1 Legislation, planning policy and guidance relating to cultural heritage and pertinent to the Proposed Development comprises:

Legislation

- 8.3.2 Relevant legislation includes:

- Infrastructure Planning (Decisions) Regulations 2017 (Ref 2);
- Ancient Monuments and Archaeological Areas Act 1979 (Ref 58) (amended by the National Heritage Act 1983 (Ref 59) and 2002 (Ref 60); and
- Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref 61).

National Planning Policy

- 8.3.3 The following sections from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5), Section 5.9: Historic Environment which relates to the significance, impact and recording of the historic environment;
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6), Section 2.10: Solar Photovoltaic Generation which provides specific guidance relating to solar photovoltaic sites; and
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7), Section 2.2: Factors Influencing Site Selection and Design which provides specific guidance relating to electricity networks infrastructure, specifically with reference to paragraph 2.2.10 and the desirability of preserving sites, buildings and objects of architectural, historic or archaeological interest.

- 8.3.4 Other relevant national planning and guidance includes:

- National Planning Policy Framework (NPPF), with particular reference to Section 16: Conserving and enhancing the historic environment (Ref 8); and

- Planning Practice Guidance (PPG, as amended August 2023) (Ref 62), which is an interactive on-line document that provides further advice and guidance to accompany policies in the NPPF.

Local Planning Policy

8.3.5 Relevant local planning policy includes:

- Folkestone and Hythe District Council Core Strategy Places and Policies Local Plan (2020) (Ref 13) which contains three relevant policies (Policy HE1 Heritage Assets, Policy HE2 Archaeology and Policy HE3 Local List of Heritage Assets); and
- Folkestone and Hythe District Heritage Strategy (2020) which provides a strategy to ensure that the heritage of the district plays a clear role in shaping development decisions (Ref 63).

Relevant Industry Guidance

8.3.6 Relevant industry guidance includes:

- Historic Environment Good Practice Advice in Planning Note 2. Managing Significance in Decision Taking in the Historic Environment. Historic England (2015) (Ref 64);
- Historic Environment Good Practice Advice in Planning Note 3. The Setting of Heritage Assets. Historic England (2nd edition, 2017) (Ref 65);
- Sustainability Appraisal and Strategic Environmental Assessment. Historic England Advice Note 8 (2016) (Ref 66);
- Statements of Heritage Significance: Analysing Significance in Heritage Assets (Ref 67);
- Historic England Advice Note 12 (2019) (Ref 68);
- Commercial Renewable Energy Development and the Historic Environment. Historic England Advice Note 15 (2021) (Ref 69);
- Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Historic Environment Desk-Based Assessment (DBA) (2020) (Ref 70);
- CIfA Code of Conduct: professional ethics in archaeology (2025) (Ref 71);
- Institute of Environmental Management and Assessment (IEMA) (now Institute of Sustainability and Environmental Professionals (ISEP)), Institute of Historic Building Conservation (IHBC) and CIfA 'Principles of Cultural Heritage Impact Assessment in the UK (2021)' (Ref 72); and
- Association of Local Government Archaeological Officers (ALGAO), Archaeology and Solar Farms Good Practice Guide. Advice for Developers, Archaeological Advisors, Consultants and Contractors (Ref 73).

8.4 Consultation

8.4.1 Consultation as part of the EIA process will be undertaken following submission of this EIA Scoping Report with statutory parties including:

- Historic England (HE);

- Kent County Council Archaeological Advisor and Conservation Officer (KCC); and
- Folkestone and Hythe District Council.

8.5 Baseline Conditions

- 8.5.1 This section describes the historical and archaeological baseline characteristics for the Proposed Development and surrounding areas. To assist with the scoping assessment, data has been considered from the National Heritage List for England (NHLE) and the Kent Historic Environment Record (HER). All heritage assets identified within the DCO Site Boundary and study areas are illustrated on **Figure 8-1** and **Figure 8-2**. They are referred to in the text by a unique identity code in bold and parentheses assigned by the NHLE (e.g. **NHLE 1012338**) and HER (e.g. TR 02 NW 9 or MKE67631).

Designated Heritage Assets

- 8.5.2 There are four Scheduled Monuments, five Conservation Areas and 173 Listed Buildings located within the 3 km study area. Of these, one Scheduled Monument and one Grade II Listed Building are located within the DCO Site Boundary.
- 8.5.3 The abandoned Medieval Church and Graveyard, Midley, is a Scheduled Monument (**NHLE 1012338**) within which lie the Ruins of Midley Church, a Grade II Listed Building (**NHLE 1231503**). These designated heritage assets are located within the DCO Site at the southern end of the Proposed Development.
- 8.5.4 The remaining Scheduled Monuments in the 3 km study area comprise:
- Hope All Saints', remains of church (**NHLE 1003605; NHLE 1231591**) (also Grade II listed) located immediately adjacent to the DCO Site;
 - Part of a Cistercian grange, north of New Romney High Street, also known as Romney Priory (**NHLE 1011803**); located approximately 1.2 km south-east of the DCO Site Boundary; and
 - Moated site and associated fields, 460 m north-east of Pickney Bush Farm (**NHLE 1016682**) approximately 2.8 km north-east of the Proposed Development.
- 8.5.5 Within the 3 km study area there are five Conservation Areas. These are located within the historic cores of settlements and are of early medieval and medieval origins - within Walland Marsh, Denge Marsh and Romney Marsh. These consist of:
- Old Romney Conservation Area, located adjacent to the DCO Site which extends to the north and south of the Conservation Area;
 - New Romney, High Street Conservation Area, approximately 1 km east of the DCO Site Boundary;
 - New Romney, Cannon Street Conservation Area, approximately 1.4 km east of the DCO Site Boundary;

- Lydd Conservation Area, approximately 2.3 km south-east of the DCO Site Boundary; and
 - Brookland Conservation Area, approximately 2.5 km west of the DCO Site Boundary.
- 8.5.6 There are 173 Listed Buildings within the 3 km study area, consisting of seven Grade I, three Grade II* and 163 Grade II Listed Buildings. The Listed Buildings are predominantly concentrated within the settlements, with a large number within the Conservation Areas. The Grade I Listed Buildings are all medieval churches (as well as one belfry), located in the villages surrounding the DCO Site. The closest to the DCO Site is the Church of St Clement in Old Romney (**NHLE 1278132**), approximately 110 m east of the DCO Site Boundary.
- 8.5.7 The remaining Grade I Listed Buildings are:
- Church of St George, Ivychurch (**NHLE 1231321**), approximately 870 m north-west of the DCO Site Boundary;
 - Church of St Nicholas, New Romney (**NHLE 1344057**), approximately 1.3 km east of the DCO Site Boundary;
 - Church of St Mary the Virgin, St Mary in the Marsh (**NHLE 1061102**), approximately 1.9 km north-east of the DCO Site Boundary;
 - Church of All Saints, Lydd (**NHLE 1068932**), approximately 2.4 km south-east of the DCO Site Boundary;
 - Church of St Augustine, Brookland (**NHLE 1230943**), approximately 2.9 km west of the DCO Site Boundary; and
 - Detached Belfry Circa 1 Yard North of Church of St Augustine (**NHLE 1344151**), approximately 2.9 km west of the DCO Site Boundary.
- 8.5.8 There are also three Grade II* Listed Buildings within the 3 km study area. These are all of medieval date and comprise:
- 3 and 4 West Street (**NHLE 1025299**), approximately 1.08 km east of the DCO Site Boundary;
 - St John's Priory, including the Ruins of the Priory (**NHLE 1025316**), approximately 1.2 km south-east of the DCO Site Boundary; and
 - The Church of St Eanswith, Brenzett (**NHLE 1344185**), approximately 2.1 km north-west of the DCO Site Boundary.
- 8.5.9 The 163 Grade II Listed Buildings in the study area are predominantly post-medieval residential buildings located within the surrounding settlements around the DCO Site Boundary. There are also a number of isolated buildings in the landscape mostly consisting of farmhouses. The closest Grade II Listed Buildings to the DCO Site Boundary include seven Listed Buildings in Old Romney, all within approximately 100 m of the DCO Site Boundary. These consist of the 16th century Manor House (**NHLE 1344204**), Marsh Cottage (**NHLE 1231546**), and the Old School House (**NHLE 1344182**), as well as the 18th century Grove House (**NHLE 1061101**), The Shrubbery (**NHLE 1061143**), Jessamine Farmhouse (**NHLE 1231499**), and Norton Cottage (**NHLE 1061142**). To the south of Old Romney are a further two post-medieval houses which are surrounded by the DCO Site Boundary (**NHLE 1344183; 1231479**).

8.5.10 A 5 km study area for high value designated assets has also been applied. Between 3 km and 5 km from the DCO Site Boundary there are an additional six Scheduled Monuments, one Grade I, and two Grade II* Listed Buildings.

8.5.11 The Scheduled Monuments between 3 km and 5 km comprise:

- Medieval farmstead at Pilchers, 340 m north east of Codhall (**NHLE 1016681**), approximately 3.1 km north-west of the DCO Site Boundary;
- Three acoustic early warning devices 2.4 km m east of Jack's Court (**NHLE 1005119**), approximately 3.7 km south-east of the DCO Site Boundary;
- Phoenix Caisson off Littlestone-on-Sea (**NHLE 1415588**), approximately 4.1 km south-east of the DCO Site Boundary;
- World War II underground operational base 500 yds (457 m) south-west of Bentley Cottage (**NHLE 1003123**), approximately 4.2 km north-west of the DCO Site Boundary;
- Part of the Rhee Wall, a medieval canal, at Snargate (**NHLE 1010699**), approximately 4.5 km north-west of the DCO Site Boundary; and
- Lade Fort (**NHLE 1004205**), approximately 5 km south-east of the DCO Site Boundary.

8.5.12 The three high value Listed Buildings between 3 km and 5 km are the:

- Church of St Peter and St Paul, Newchurch, Grade I Listed Building (**NHLE 1278140**), approximately 4.4 km north-east of the DCO Site Boundary;
- Church of St Augustine, Snave, Grade II* Listed Building (**NHLE 1061152**), approximately 3.5 km north-west of the DCO Site Boundary; and
- Church of St Dunstan, Snargate, Grade II* Listed Building (**NHLE 1061105**), approximately 3.8 km north-west of the DCO Site Boundary.

Non-designated assets

8.5.13 The HER records that there are approximately 964 non-designated heritage assets located within the 1 km study area, comprising 62 monuments, 53 buildings, nine crash sites (of which six are protected military remains), and 840 findspots. Of these non-designated heritage assets, 437 are located within the DCO Site Boundary namely 15 monuments, 10 historic buildings, three aircraft crash sites (one of which is defined as protected military remains) and 417 findspots. Assets recorded on the HER across the study area range in date from the Bronze Age (2,200 to 800 BC) to the modern period (1900 to present).

8.5.14 Throughout much of the prehistoric period, the study area was inundated and formed part of the English Channel, until the Late Bronze Age when the area was transformed into wetland to the west and saltmarsh to the east after the formation of a shingle barrier between Dungeness and Hythe (Ref 74). As such, the area would have been unsuitable for settlement prior to the Late Bronze Age (c. 1000 BC) and no archaeological assets, or findspots of an earlier date have been identified. From the Late Bronze Age and throughout the Iron Age (800 BC to 43 AD), the natural resources of the wetland and saltmarsh would likely have been exploited. This activity is attested to by the presence of four isolated findspots across the 1 km study area, one of which is located within the DCO

Site Boundary itself. Six pieces of copper or copper alloy slag were recovered during metal detecting across a single field dated to either the Late Bronze Age or Early Iron Age (HER MKE68997). It has been suggested that they were part of a Bronze Age dispersed hoard which were often ritually deposited in waterlogged environments during this period.

- 8.5.15 During the Roman period (AD 43 to 410), the shingle barrier between Dungeness and Hythe was breached and a tidal estuary formed which was fed by three rivers (Ref 74). The DCO Site is located where the most southern river flowed into the estuary and so sections of the Main Site are thought to have been submerged within the estuary, whilst other parts consisted of low-lying salt marsh. The land on which Old Romney is located was an island within the estuary where a settlement and port known as *Vetus Rumllenum* was established (Ref 75). Whilst no features related to this port have been recorded, a cluster of ten metal findspots have been identified within the DCO Site, in two fields directly north of Old Romney (MKE69069, MKE67682, MKE68544, MKE96775, MKE69127, MKE69128, MKE68057, MKE68142, MKE108463, MKE68195) and two additional metal finds directly south of Old Romney (MKE67738, TR 02 NW 104), are likely related to this port. Seven further findspots have been noted within the DCO Site Boundary, although these are all isolated finds.
- 8.5.16 By the early medieval period (AD 410 to 1066), the tidal estuary had silted up and the rivers which once flowed into it had changed course, with the Wainway Channel flowing directly south of New Romney. The modern A259 Lydd Road follows what would have been the northern bank of this channel, therefore, all finds within the DCO Site of an early medieval date are located to the north of the road. However, the abandoned church at Midley (**NHLE 1012338, NHLE 1231503**) was mentioned in the Domesday Book of 1086 and is thought to be constructed on top of an earlier church, suggesting that settlement activity did occur on the southern bank of the channel. Consolidated efforts to reclaim the coastal marshland began in the early medieval period which transformed the land to the north of the Wainway Channel into arable land. A total of 71 archaeological records in the HER dating to the early medieval period have been noted within the study area, all but one being findspots. The single monument is comprised of a mint which was present at New Romney, approximately 800 m to the south-east of the DCO Site Boundary (TR 02 SE 21). The first coin to be struck at the mint at New Romney was in c. 997, and it was closed in c. 1134. As in the Roman period, a port was located at Old Romney, although no features related to this settlement have been identified. Early medieval activity within the DCO Site is predominantly oriented around this settlement, with 32 findspots consisting of metalwork reported from the fields directly to the north of Old Romney, which lie within the DCO Site (e.g. MKE67688, MKE68047, MKE68056, etc.). A second cluster of 12 early medieval metalwork finds has been noted in the fields between Five Vents Lane and Ashford Road, located within the DCO Site Boundary (e.g. MKE68346, MKE68347, MKE69224, etc.), with three isolated finds also noted across the DCO Site (MKE108387, MKE68240, MKE68271).

- 8.5.17 The medieval period (1066 to 1540) saw an increase in settlement activity across the marsh. In c. 1140 the settlement at Old Romney continued to expand east, which saw the introduction of the prefixes New and Old to differentiate the two ends of the port (Ref 75). During the 12th century, the Wainway Channel began to silt up and Old Romney came to be situated further inland, gradually deteriorating as it could no longer serve as a port. Continued settlement activity, despite the loss of the port, is attested to by a cluster of approximately 166 findspots to the north of Old Romney within the DCO Site Boundary (e.g. MKE67689, MKE68058, MKE68093, etc.). The only extant element of medieval Old Romney is the Church of St Clement (**NHLE 1278132**), with other buildings from this period since redeveloped. A large number of churches were located across the study area during the medieval period, including the abandoned church at Midley and associated graveyard (**NHLE 1012338**, **NHLE 1231503**), which are located at the southern extent of the DCO Site, adjacent to the deserted medieval village of Midley (TR 02 SW 2).
- 8.5.18 To the east of Old Romney, the Church of St Lawrence was located (TR 02 NW 8) which may have been associated with a deserted medieval village (TR 02 NW 16), possibly indicated by 49 findspots reported in the fields between Five Vents Lane and Ashford Road within the DCO Site (e.g. MKE68081, MKE68085, MKE55772, etc.). Along the north-western side of Five Vents Lane, the site of the medieval St Michael's Church was located (TR 02 NW 7) which may also have been surrounded by a medieval village (TR 02 NW 15). Around the church, human remains were recovered which are thought to have been from the graveyard of the church (TR 02 NW 123). Also, along Five Vents Lane, between Old Romney and St Michael's Church, a moated site has been noted (TR 02 NW 6). The church, possible deserted medieval village, possible graveyard and moated site are all located within the DCO Site Boundary.
- 8.5.19 Archaeological evidence from the post-medieval (1540 to 1900) period comprises a number of listed domestic buildings and farms/farm outbuildings, discussed in the previous section, as well as agricultural activity. Agricultural activity across the marsh was largely related to the rearing of livestock, namely sheep. As such, shepherds huts and sheepfolds are located at regular intervals across the study area, with five sheepfolds (MKE88234, MKE88235, MKE88236, MKE88699, MKE88705) and one now demolished shepherds hut (TR 02 SW 42) noted within the DCO Site Boundary. Six demolished farmsteads and outfarms have also been identified within the DCO Site (MKE88182, MKE88217, MKE88218, MKE88233, MKE88237, MKE88238). Two windmills or post mills are recorded as having been located within the DCO Site (TR 02 NW 108, TR 02 NW 109), along the A259 Lydd Road, during the post-medieval period. Both of these have been demolished. Whilst many of the medieval villages had been abandoned by this period, activity continued within Old Romney, as evidenced by the Listed Buildings within the village and 56 findspots noted in the fields surrounding it which lie within the DCO Site Boundary (e.g. MKE69480, MKE68064, MKE68139, etc.).
- 8.5.20 Evidence from within the 1 km study area from the modern period (1900 to the present) is dominated by military remains and events. Directly south-west of

the DCO Site Boundary, the former Lydd Camp and Airfield was located, which was a Second World War airfield (TR 02 SW 149). This airfield was used in the Battle of Britain, as a result of which three aircraft crashed within the DCO Site (TR 02 SW 178, TR 02 SW 115), one of which comprises protected military remains (TR 02 SW 186). A single, now demolished, pillbox has also been recorded within the DCO Site Boundary, plotted on a German map of the area (TR 02 SW 131).

8.6 Potential Effects and Mitigation

- 8.6.1 The Proposed Development has the potential to affect designated and non-designated heritage assets during the construction, operation (and maintenance) and decommissioning stages of the Proposed Development. Such effects could consist of:
- Physical effects on the fabric of a heritage asset; and
 - Effects upon the value (heritage significance) of a heritage asset due to changes to its setting.
- 8.6.2 There is potential for physical effects on non-designated heritage assets and previously unrecorded archaeological remains located within the DCO Site. These remains could potentially be affected during excavation works required during construction and decommissioning including, but not limited to, ground works for the SKEP Main On-site Substation, Additional On-Site Substations and National Grid Substation, Battery Energy Storage System (BESS), Control Building, on-site cabling, the laying and removal of the required interconnecting cables and the establishment and removal of construction compounds and access tracks.
- 8.6.3 There is also potential for impacts on designated and non-designated heritage assets located within the DCO Site Boundary and surrounding study areas through changes to their setting that may affect the heritage value (significance) of the asset, during the construction, operation, and/or decommissioning phases of the Proposed Development.
- 8.6.4 Given the potential for effects on the historic environment, all aspects of cultural heritage, comprising archaeology, built heritage and historic landscape, are scoped into the EIA and no matters are scoped out (see **Table 8-3**).
- 8.6.5 The Proposed Development design will seek to avoid impacts to heritage assets where practicable. This will include avoiding direct physical impacts and impacts arising from changes to the setting of designated and non-designated heritage assets through the use of embedded mitigation measures within the Proposed Development design. Such measures may include the use of buffers or exclusion zones surrounding heritage assets, adjustment of the Proposed Development layout and the use of screening or filtering vegetation.
- 8.6.6 Where potential impacts on heritage assets cannot be avoided through embedded mitigation, additional mitigation measures may be required. This

may include an appropriate programme of archaeological investigation and recording. Additional mitigation measures relevant to cultural heritage will be set out in the Outline Construction Environmental Management Plan (OCEMP), Outline Operational Environmental Management Plan (OOEMP), Outline Decommissioning Environmental Management Plan (ODEMP), and Outline Written Scheme of Investigation (OSWSI), prepared as part of the DCO Application for the construction, operation (and maintenance) and decommissioning phases, respectively. The plans will form the basis of the detailed CEMP, OEMP and DEMP which will be secured through a requirement in the DCO.

- 8.6.7 Mitigation measures relevant to Cultural Heritage matters are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

8.7 Assessment Methodology

- 8.7.1 The assessment of potential effects as a result of the Proposed Development (construction, operation (and maintenance), and decommissioning) on heritage assets will be undertaken using the methodology set out below.
- 8.7.2 The value of a heritage asset (its heritage significance) is guided by its designated status but derived also from its heritage interest which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary). Each identified heritage asset will be assigned a value in accordance with the criteria set out in **Table 8-1**. Using professional judgement and the results of consultation carried out as part of the assessment, heritage assets will be assessed on an individual basis, with regional variations and individual qualities taken into account, where applicable, to assign the value.

Table 8-1: Criteria for Assessing the Value of Heritage Assets

ASSET VALUE	DESCRIPTION
High	World Heritage Sites; Scheduled Monuments; Grade I and II* Listed Buildings; Registered battlefields; Grade I and II* Registered Parks and Gardens; Conservation Areas of demonstrable high value; Non-designated heritage assets (archaeological sites, historic buildings, monuments, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance; and Well preserved historic landscape character areas (HLCAs), exhibiting considerable coherence, time-depth or other critical factor(s).
Medium	Grade II Listed Buildings; Conservation Areas; Grade II Registered Parks and Gardens; Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable regional importance;

ASSET VALUE	DESCRIPTION
	Averagely preserved historic LCAs, exhibiting reasonable coherence, time-depth or other critical factor(s); and Historic townscapes with historic integrity in that the assets that constitute their make-up are clearly legible.
Low	Locally Listed Buildings; Non-designated heritage assets (archaeological sites, historic buildings, monuments, park, gardens or landscapes) that can be shown to have demonstrable local importance; Assets whose heritage interests are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade; and Historic LCAs whose value is limited by poor preservation and/or poor survival of contextual associations.
Very Low	Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic interest; and Historic landscapes with no or little significant historical merit.

8.7.3 Having identified the value of the heritage asset, the next stage in the assessment will be to identify the level and degree of impact/change on an asset arising from the Proposed Development. Impacts may arise during construction, operation (and maintenance) and/or decommissioning and can be temporary, reversible, or permanent. Such impacts may be beneficial or adverse. Impacts can occur to the physical fabric of the asset or affect its setting. The contribution of setting to the value of any affected assets will be subject to assessment.

8.7.4 The level and degree of change (change rating) will be assigned with reference to a four-point scale as set out in **Table 8-2**. The assessment of the level and degree of change will be made in consideration of any embedded mitigation measures for the Proposed Development. If no change is identified, no rating will be given, and no resulting effect reported.

Table 8-2: Factors Influencing the Assessment of Magnitude of Change

MAGNITUDE OF CHANGE	DESCRIPTION OF CHANGE
High	Changes to most or all key components of the asset, such that it is totally altered or destroyed, resulting in a comprehensive impact upon its overall value; and/or Comprehensive alteration, including the total loss or complete restoration, of elements of an asset's setting that cause a fundamental change in our ability to understand and appreciate its heritage interests; thereby resulting in a comprehensive impact upon its overall value.
Medium	Changes to many key components of the asset, such that it is significantly altered or modified, resulting in a noticeable impact upon its overall value; and/or Changes to the setting of an asset which noticeably affect our ability to understand and appreciate its heritage interests, resulting in a noticeable impact upon its overall value.
Low	Changes to some key components of the asset, such that it is slightly altered, resulting in a slight impact on its overall value; and/or

MAGNITUDE OF CHANGE	DESCRIPTION OF CHANGE
	Changes to the setting of an asset that slightly alter our ability to understand and appreciate its heritage interests, resulting in a slight impact upon its overall value.
Very Low	Very minor changes to key components of an asset, resulting in no real change upon its overall value; and/or Changes to the setting of an asset that have little effect on our ability to understand and appreciate its heritage interests, resulting in no real change upon its overall value.

8.7.5 An assessment to classify the effect, having taken into consideration any embedded mitigation, will be determined using the matrix set out in **Table 8-3** guided by the methodology set out in **Chapter 6: Environmental Impact Assessment Methodology** of this EIA Scoping Report (**Table 6-3**).

Table 8-3: Assessment of Effect

MAGNITUDE OF CHANGE	VALUE OF HERITAGE ASSET (HERITAGE SIGNIFICANCE)			
	HIGH	MEDIUM	LOW	VERY LOW
High	Major	Major	Moderate	Minor /Negligible
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor /Negligible	Negligible	Negligible	Negligible

8.7.6 Major and moderate effects will be considered significant. Within NPS EN-1 Section 5.9 paragraphs 5.9.27 to 5.9.32 and NPPF Section 16 paragraphs 212 to 216, impacts affecting the value of heritage assets are considered in terms of harm, and there is a requirement to determine whether the level of harm amounts to ‘substantial harm’ or ‘less than substantial harm’. There is no direct correlation between the classification of effect as reported in the ES and the level of harm caused to heritage significance in accordance with the NPS and NPPF.

8.7.7 Pursuant to NPS EN-1 paragraph 5.9.31, any harmful impact to the value (heritage significance) of a designated heritage asset should be weighed against the public benefit of the Proposed Development, whilst Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2017 (Ref 2) requires the Secretary of State (SoS) to have regard to the desirability of preserving a Listed Building, Conservation Area, or Scheduled Monument, or its setting. In all cases, the determination of the level of harm to the value (heritage significance) of the asset arising from development impact is one of professional judgement and will be undertaken adopting a precautionary approach.

8.7.8 The baseline assessment will be undertaken in accordance with guidance set out by the ClfA and Historic England, in particular the Standard and Guidance for Historic Environment DBA (Ref 70) and the Code of Conduct (Ref 71).

8.7.9 Principles of Cultural Heritage Impact Assessment in the UK (Ref 72) is a guide to good practice in cultural heritage impact assessment published jointly by the

IEMA, the IHBC and the ClfA. The document provides guidance on understanding cultural heritage assets and evaluating the consequences of change and will be considered when undertaking the assessment.

8.8 Sources of Information

Desk-Based Sources

- 8.8.1 A cultural heritage DBA will be prepared in accordance with industry standards and good practice guidelines (Ref 69) and with reference to any statutory consultation responses received as part of the Scoping Opinion.
- 8.8.2 The DBA will inform the cultural heritage chapter of the ES and will be appended to the ES.
- 8.8.3 Sources of information that will be consulted include:
- National Heritage List for England database (Ref 76);
 - Formal searches of the Kent HER for information on non-designated heritage assets, previous archaeological investigations and the Historic Landscape Characterisation data;
 - Portable Antiquities Proposed Development online database for data relating to archaeological finds (Ref 77);
 - The British Geological Survey (BGS) Onshore GeoIndex (Ref 78), for information on geology and topography, including historic borehole data;
 - Published and unpublished literature (including a detailed review of reports for previous fieldwork carried out within close proximity to the DCO Site Boundary);
 - Available geotechnical data;
 - Available LiDAR and aerial photography;
 - Documentary, cartographic and other resources as deposited within the Local Archives and Local Studies Library; and
 - Local Planning Authority plans, Conservation Area appraisals, guidance and lists.

8.9 Surveys

Walkover Surveys

- 8.9.1 A walkover survey of the DCO Site will be undertaken including a survey of known archaeological and built heritage assets identified within the DCO Site Boundary and the immediate vicinity to record their survival, extent, condition, setting and significance.
- 8.9.2 A site visit will also be undertaken to all study areas – as defined in Section 8.2 above – to assess the setting of designated and non-designated heritage assets which could potentially be affected by the Proposed Development. This visit will establish the key features of the asset's setting, alongside any intervisibility with the Proposed Development.

8.10 Additional Survey

- 8.10.1 The desk-based research will be supported by a programme of archaeological evaluation surveys, the scope of which will be informed by the DBA, and through consultation with KCC's Archaeological Advisor.
- 8.10.2 These additional surveys (if required) may include, but not be limited to:
- Geophysical survey to identify the presence/absence of previously unrecorded archaeological remains within the DCO Site; and
 - Targeted archaeological trial trench evaluation may be undertaken within key areas of construction impact e.g. areas of hardstanding infrastructure, or defined areas of archaeological potential, to characterise the nature, extent and level of preservation of archaeological remains and inform an appropriate mitigation response.

8.11 Limitations and Assumptions

- 8.11.1 It is assumed there will be access to all required land to undertake the walkover survey and any additional surveys that may be required to support the cultural heritage assessment. If access is not available, professional judgement will be used, based on available research and data, and reasonable, realistic, worst-case assumptions, to assess the archaeological potential of the area and the setting of any heritage assets within this area if identified.
- 8.11.2 It is assumed that the data provided by third party external sources is accurate.

8.12 Summary of Elements Scoped In and Out

- 8.12.1 A summary of the elements scoped in and out of the Cultural Heritage chapter is presented in **Table 8-4** below.

Table 8-4: Elements scoped in and out of the Cultural Heritage assessment

ELEMENT	SCOPED IN/SCOPED OUT
Archaeology (Construction, Operation, and Decommissioning)	Scoped in – an assessment of impacts on archaeological assets, including physical impacts and changes to their setting that may affect their value (heritage significance).
Built Heritage (Construction, Operation, and Decommissioning)	Scoped in – an assessment of impact on built heritage assets including physical impacts and changes to their setting that may affect their value (heritage significance).
Historic Landscape (Construction, Operation, and Decommissioning)	Scoped in – an assessment of impact on the historic landscape, including physical impacts and changes to their setting that may affect their value (heritage significance).

9. Ecology and Biodiversity

9.1 Introduction

- 9.1.1 This chapter of the Environmental Impact Assessment (EIA) Scoping Report presents an initial overview of the baseline conditions for ecology and nature conservation (collectively referred to as biodiversity in this chapter) that are relevant to the Proposed Development. It identifies the scope of the assessment and the further ecological surveys that will be undertaken to ensure there is appropriate information to accurately characterise the baseline. This chapter sets out the potential impacts of the Proposed Development and provides an overview of the proposed assessment method that will be followed for the Ecological Impact Assessment (EclA) that will be included within the Ecology and Biodiversity chapter of the Environmental Statement (ES).
- 9.1.2 To inform this chapter of the EIA Scoping Report, a Preliminary Ecological Appraisal (PEA) has been undertaken which consisted of three components:
- A desktop study data review, including a request for data from Kent and Medway Biological Records Centre (KMBRC), which was undertaken in July 2022 (see also Paragraph 9.5.2);
 - A walkover survey of accessible areas of land within which the Proposed Development will be located (the Main Site), to record the broad habitats (using UKHab methods (Ref 79)), which was undertaken in March and April 2022, April 2023, and updated in December 2025 and January 2026; and
 - A protected species scoping survey (which was undertaken alongside the walkover survey, above), to inform the likelihood of the habitats within the Main Site supporting protected species and other species of conservation importance.
- 9.1.3 The PEA report (information from which is included in this chapter) confirmed the need for ecological surveys and these commenced within the DCO Site Boundary (where access was permitted) in November 2022 (with surveys for non-breeding birds), to gather detailed baseline ecological information relevant to the Proposed Development. During 2026 and 2027, baseline data gathering will continue across the DCO Site Boundary, within the appropriate seasons and, owing to the validity of survey data (Ref 80), will include updates to surveys that have previously been undertaken (see **Table 9-4**).
- 9.1.4 The Ecology and Biodiversity chapter of the ES will fully identify and characterise any Important Ecological Features (IEFs), including statutorily and non-statutorily designated sites, priority habitats and protected or notable species within the relevant study areas (see Paragraph 9.2.4). The chapter will also consider the effects that the Proposed Development is likely to have on their conservation status, inter-relationships, and contribution to local, regional and (if appropriate) national biodiversity targets.

- 9.1.5 The assessment will identify prevention, avoidance, reduction, mitigation (including provisions for enhancements) and, if necessary, compensation measures that may be required to enable the Proposed Development to proceed, in compliance with relevant legislation and planning policies.
- 9.1.6 This chapter is supported by the following figures:
- **Figure 9-1:** Sites statutorily designated for their biodiversity value at an International (European) level up to 30 km from the DCO Site Boundary;
 - **Figure 9-2:** Sites statutorily designated for their biodiversity value at a National or local level within 5 km of the DCO Site Boundary;
 - **Figure 9-3:** Location of non-statutorily designated sites, ancient woodland and priority habitats within 2 km of the DCO Site Boundary; and
 - **Figure 9-4:** Habitats within the DCO Site Boundary.
- 9.1.7 There are no appendices to accompany this chapter.

9.2 Characterising the baseline

- 9.2.1 Within this chapter, the following terminology is used when referring to the geographic areas within which assessments will be made (the extent of these geographic areas depends on the ecological feature and nature of the impact which is discussed in Section 9.2 and **Table 9-4**):
- Study area – the area within which the Proposed Development will be located and an appropriate radius (as defined in Paragraph 9.2.4) which was and will be subject to collection of background information e.g., the location of non-statutorily designated sites within 2 km of the Proposed Development;
 - Zone of Influence (Zol) – the area over which IEFs may be affected by changes as a result of the Proposed Development and associated activities. Through a review of likely impacts of the Proposed Development and results of the desk study, the scope of field surveys was then defined. The Zol was based on the following criteria, proportionate to the potential for the Proposed Development to impact on each feature:
 - the Proposed Development (a solar farm and associated infrastructure), the associated project activities, and the potential for effects at all stages (construction, operation (and maintenance), and decommissioning) of the Proposed Development;
 - the current land use (predominantly arable) and habitats in the vicinity (majority being arable), their connectivity (e.g. through hedgerows, ditches or grassland margins), and how they may be used by different species;
 - the presence and assemblages of species which may be in the area, identified during the desk study and based on the location of the Proposed Development; and
 - the different habits, behaviours and preferences of different species that could be affected, and how these vary both spatially and seasonally.

- Survey Area – synonymous with the Zol, this is the area within which field survey work was, or will be, undertaken (see **Table 9-4**) which are specific to a given species, group of species or habitat.

Study Area

- 9.2.2 For the Proposed Development, the study area for which data were searched and collated through a desk study was based on the typical maximum distances expected by statutory consultees based on previous experience of similar developments of this extent. The study area captures all designated sites, sensitive habitats, and species of importance that occur within the relevant Zol of the Proposed Development. The study area and Zol reflect standard good practice and are informed by published guidance (Ref 81) and professional judgement.
- 9.2.3 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.
- 9.2.4 The study area within which data were searched and collated through a desk study is within the DCO Site Boundary and up to:
- 10 km for sites within the UK National Site Network (as defined in Section 9.3), (formerly European sites as defined in Regulation 8 of The Conservation of Habitats and Species Regulations 2017 (as amended) (Ref 82)), extended to 20 km where birds with extensive foraging ranges (e.g. Golden Plover *Pluvialis apricaria*) are noted as a qualifying feature and 30 km from any Special Areas of Conservation (SAC) where bats are noted as the, or one of, the qualifying features. In addition, a search beyond these distances was undertaken to determine whether the DCO Site Boundary is hydrologically connected to any sites within the UK National Site Network;
 - 5 km for sites statutorily designated for their biodiversity value at a national level, e.g. Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) or local level (e.g. Local Nature Reserves (LNRs)). In addition, for the purposes of potential air quality impacts, consideration beyond this distance will be given where a designated site is identified as being within 200 m of the Affected Road Network, if appropriate (refer to **Chapter 15: Transport and Access**);
 - 2 km for sites non-statutorily designated for their biodiversity value, e.g. Local Wildlife Sites (LWSs). In addition, for the purposes of potential air quality impacts, consideration beyond this distance will be given where a designated site is identified as being within 200 m of the Affected Road Network, if appropriate;
 - 2 km for ancient woodland, veteran and ancient trees, and priority habitats;
 - 2 km for records (from the preceding ten years) of protected and notable species. Protected and notable species are those listed under:
 - Schedules 1 (birds), 5 (animals, excluding birds) or 8 (plants) of the WCA (Ref 83);

- Schedules 2 (animals) or 5 (plants) of The Conservation of Habitats and Species Regulations 2017;
- Section 41 (S41) of the NERC Act (Ref 84) which lists Species of Principal Importance (SPI) and Habitats of Principal Importance (HaPI) for nature conservation in England; or
- Other habitats and species, such as those included in national, regional or local Red Data Books and Lists (assessed on a case-by-case basis).
- 2 km for records (from the preceding ten years) of protected and notable aquatic species. An additional search of hydrologically connected water bodies within the catchment, upstream of the study area, was undertaken to consider connectivity for migratory fish species;
- 2 km for any applications for European Protected Species Licences (EPSL) (e.g., for bats or Great Crested Newt *Triturus cristatus*) and agri-environment schemes, e.g., Countryside Management Proposed Developments; and
- 2 km for the status of water bodies subject to the Water Framework Directive (WFD) (Ref 85). As impacts may propagate downstream in hydrologically linked surface water bodies, the study area was extended beyond 2 km where data was not available within 2 km.

9.3 Legislation, Planning Policy Context and Guidance

- 9.3.1 Legislation, planning policy and guidance relating to ecology and biodiversity (including designated sites, priority habitats and protected or notable species) and pertinent to the Proposed Development is outlined below.

Legislation

- Habitats Directive – Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Ref 86);
- Birds Directive - Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Ref 87);
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy ('The Water Framework Directive') (Ref 88), later transcribed into UK Statutory Instruments as The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017;
- Regulation (EU) 1143/2014 of the European Parliament and of the Council on the prevention and management of the introduction and spread of invasive alien species (Ref 89);
- Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ref 90);
- Wildlife and Countryside Act 1981 (as amended);
- Environment Act 2021 (Ref 21);
- Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024 (Ref 91);

- Countryside and Rights of Way (CRoW) Act 2000 (Ref 92);
- The Conservation of Habitats & Species Regulations 2017;
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 93);
- The Natural Environment and Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992 (Ref 94);
- The Hedgerows Regulations 1997 (Ref 95);
- Wild Mammals (Protection) Act 1996 (Ref 96);
- Salmon and Freshwater Fisheries Act 1975 (Ref 97);
- The Eels (England and Wales) Regulations 2009 (Ref 98); and
- The Invasive Alien Species (Enforcement and Permitting) Order 2019 (Ref 99).

9.3.2 The above legislation will be referenced when identifying potential constraints to the Proposed Development, design options and mitigation. Compliance with the above legislation may require obtaining relevant protected species licences prior to the implementation of the Proposed Development.

Habitats Regulations Assessment

- 9.3.3 As part of the environmental assessment of the Proposed Development, it is necessary to consider whether the Proposed Development is likely to have a ‘significant’ effect on areas that have been internationally designated for nature conservation purposes (i.e., UK National Site Network sites). UK National Site Network sites (formerly European sites) are protected under The Conservation of Habitats and Species Regulations 2017 (as amended; relevant to England and Wales and hereafter the Habitats Regulations).
- 9.3.4 UK National Site Network sites, designated for their biodiversity value, which include Special Protection Areas (SPA), SACs, potential SPAs (pSPA) and possible SACs (pSACs). Additionally, Ramsar sites and proposed Ramsar sites, which are designated under international convention are also included. Although Ramsar sites are not part of the network of designated sites, paragraph 194 of the National Planning Policy Framework (NPPF) (Ref 8) in England and paragraph 5.4.5 of the Overarching NPS for Energy (EN-1) (Ref 5) extends to Ramsar sites (and proposed Ramsar sites) the same level of protection as UK National Site Network sites.
- 9.3.5 The UK left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (termed the ‘Withdrawal Act’ (Ref 100)). However, the most recent amendments to the ‘Habitats Regulations’ (i.e., The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019) make it clear that the need for Habitats Regulations Assessment (HRA) continues to apply.
- 9.3.6 The HRA will be undertaken with reference to the general EU guidance on HRA (Ref 101), general guidance on HRA published by the UK government in July 2019 (Ref 102), and Planning Inspectorate Guidance on Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (Ref 103). Although the UK has departed the EU, the HRA will nonetheless take account of

relevant EU case law (for instance, the Holohan (Ref 104) and People over Wind (Ref 105) cases) as a precaution and where relevant.

- 9.3.7 Regulation 63 of the Habitats Regulations requires a 'Competent Authority', in this case the Secretary of State (SoS) (who are informed by recommendations of the Planning Inspectorate as the appointed Examining Authority), to undertake an 'Appropriate Assessment' (AA) of any plan or project (alone or in combination with other plans and projects) which is likely to have a significant effect on the features of a UK National Site Network site unless the project is directly connected with the management of the site.
- 9.3.8 Whilst the HRA decisions must be taken by the Competent Authority, the information needed to undertake the necessary assessments must be provided by the Applicant. The information needed for the competent authority to establish whether there are any Likely Significant Effects (LSEs) from the Proposed Development and to assist in carrying out its Appropriate Assessment, will be provided in the HRA Report.
- 9.3.9 All plans and projects should identify any possible effects early in the plan/project making process and then either alter the plan/project to avoid them or introduce mitigation measures to the point where no adverse effects remain. In coming to a conclusion, the Competent Authority must consult with the Statutory Nature Conservation Body (in this case, Natural England) and have regard to their comments.
- 9.3.10 Stage 1 of the HRA process (Screening) will consider the potential impact pathways between the Proposed Development and UK National Site Network sites within the relevant study area (as defined in Paragraph 9.2.4) and whether there is potential to have a significant adverse effect on the integrity of UK National Site Network sites, either alone or in combination with other plans or projects.
- 9.3.11 A HRA Screening Report (Stage 1) will be presented at the consultation stage, and this will be updated as necessary for the DCO Application including a report to inform Appropriate Assessment (Stage 2), if required.

National Planning Policy

- 9.3.12 National Policy Statements (NPS) for energy set out national policy for energy infrastructure. They include relevant sections in relation to solar and the assessment of impacts on, and protection of biodiversity. The Energy NPSs designated by the SoS have been reviewed as the primary policy basis for the assessment. The following NPSs are relevant to the Proposed Development and biodiversity:
- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5), with particular reference to Sections 4.3, 4.6 and 5.4;
 - NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6), with particular reference to Section 2.10 and paragraphs 2.10.67 to 2.10.84; and

- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7), with particular reference to Section 2.5.
- 9.3.13 The National Planning Policy Framework (NPPF) sets out the UK Government's planning policies for England and how these are expected to be applied. While the NPPF does not contain specific policies for Nationally Significant Infrastructure Projects (NSIPs), it remains an important and relevant matter in determining a DCO Application. The NPPF, with particular reference to Section 15 (conserving and enhancing the natural environment), sets out that the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity.
- 9.3.14 The NPPF is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.
- 9.3.15 The NPPF also specifies the obligations that the Local Authorities and the UK Government have regarding sites statutorily designated for their biodiversity value and otherwise protected or notable habitats and protected species under UK and international legislation and how this is to be delivered in the planning system.
- 9.3.16 Priority habitats and protected or notable species are of material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted and significant harm to biodiversity cannot be avoided, then adequate mitigation measures (or as a last resort, compensation) will be required to avoid or minimise impacts on certain habitats and species.

Local Planning Policy

- 9.3.17 Relevant local planning policy includes:
- Folkestone and Hythe Core Strategy Review 2022 (Ref 12), specifically policies:
 - CSD4: Green Infrastructure of Natural Networks, Open Spaces, and recreation; and
 - CSD8: New Romney Strategy.
 - Folkestone and Hythe Places and Policies Local Plan 2020 (Ref 13), specifically:
 - Chapter 14: Natural Environment and Policy NE2 - Biodiversity; and
 - Chapter 15: Climate Change and Policy CC6 – Solar Farms; and
 - St. Mary in the Marsh Neighbourhood Plan 2018 (Ref 106), specifically policy:
 - LA1: Renewable and Low Carbon Energy Development.

Relevant Guidance

9.3.18 Other guidance documents relevant to the assessment of the impacts of the Proposed Development on ecology and biodiversity, are:

- The Chartered Institute for Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland Terrestrial, Freshwater, Coastal and Marine (the CIEEM guidelines);
- Kent County Council, Environment Policy, January 2025 (Ref 107);
- Folkestone and Hythe District Green and Blue Infrastructure Strategy Main Report – July 2023 (Ref 108), specifically Part 1 sub-sections:
 - Biodiversity, Trees and Woodlands; and,
 - Blue Infrastructure and the Coast.
- Environmental Improvement Plan 2023 (Ref 109);
- Biodiversity 2020: A strategy for England’s Wildlife and Ecosystem Services (Ref 110);
- BRE National Solar Centre Biodiversity Guidance for Solar Developments (Ref 111);
- Natural England and Department for Environment, Food and Rural Affairs (DEFRA) Guidance: Protected species and development: advice for local planning authorities (Ref 112);
- The Joint Nature Conservation Committee (JNCC) UK Biodiversity Action Plan (BAP) list of priority habitats and species (Ref 113), succeeded by the JNCC UK Biodiversity Framework (Ref 114);
- The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (Ref 115);
- IUCN Mitigating biodiversity impacts associated with solar and wind energy development: Guidelines for project developers (Ref 116);
- Natural England’s evidence review of the impacts of solar farms on birds, bats and general ecology 2016 (NEER012) (Ref 117);
- Natural England’s Technical Information Note TIN101 Solar parks: Maximising Environmental Benefits (Ref 118);
- The Guidelines for the Selection of Biological Sites of Special Scientific Interest (SSSI) (Ref 119);
- State of Nature 2023 report (Ref 120);
- Kent Nature Partnership Biodiversity Strategy 2020 to 2045 (Ref 121);
- Biodiversity Net Gain for Kent and Medway, Version 1.0 March 2025 (Ref 122);
- Kent County Council’s Draft Kent and Medway Local Nature Recovery Strategy (LNRS) (Ref 123);
- Romney Marshes Area Internal Drainage Board Biodiversity Action Plan 2.0 (Ref 124); and
- Local Wildlife Sites in Kent: Criteria for Selection and Delineation of Wildlife Sites (Ref 125).

9.3.19 Technical guidance that has been used to define the survey methods for habitats and species is included in **Table 9-4** and will be included in the

methods section of the relevant technical appendices, submitted with the ES chapter.

9.4 Consultation

- 9.4.1 Consultation, as part of the EIA process, will be undertaken with statutory parties including Natural England, local council biodiversity officers and the Environment Agency, as well as other non-statutory interested parties. Agreement on the scope and methodology of surveys necessary to inform the assessment, potential Zols as defined by the CIEEM Guidance, and the IEFs to be considered as part of the assessment will be sought.

9.5 Baseline Conditions

- 9.5.1 This section sets out details regarding the baseline conditions within the DCO Site Boundary.

Sources of information

- 9.5.2 KMBRC was contacted in July 2022 to obtain pre-existing ecological information on the location of non-statutorily designated sites and for records of priority habitats, protected and notable species and Invasive and Non-Native Species (INNS) from the preceding ten years. The aim of a desk study is to help characterise the baseline context of a site and provide valuable background information that would not be captured by site surveys alone. Whilst data received from KMBRC are nearly four years old, they provide valuable contextual data on species presence (or absence) in the wider area and have aided the recommendations for surveys within the DCO Site Boundary. At this time, it is considered that there is no requirement to update the data search from KMBRC to include records of species that have been recorded in the study area since 2022. Based on CIEEM guidance for the use of biodiversity data (Ref 126), updated data is unlikely to provide any additional information needed to inform the assessment as field surveys have and will continue to enable the determination of IEFs within the relevant Zols. However, online data sources (presented in Paragraph 9.5.3) will be continually reviewed for up-to-date information on the presence, or otherwise, of IEFs in the Zol.
- 9.5.3 Online data resources that were reviewed for information within the relevant study areas include:
- The Ramsar Sites Information Service (RSIS) website (Ref 127) for site information and designation details of any Ramsar's identified within the relevant study area (refer to Paragraph 9.2.2 of this chapter);
 - The Natural England website (Ref 128) for information on sites statutorily designated for their biodiversity value and to confirm reasons for designation and their condition;
 - Natural England's Impact Risk Zones for SSSI (Ref 129) to determine if the Proposed Development may have an effect on any SSSI or trigger the impact risk zones;

- The Multi-Agency Geographic Information Centre (MAGIC) (Ref 130), to identify the location (and details) of sites statutorily designated for their biodiversity value, Priority Habitats; for any granted European Protected Species Licence applications or agri-environment schemes;
- Natural England's Ancient Woodland (England) inventory (Ref 131) for the location of ancient woodland;
- Woodland Trust's ancient tree inventory (Ref 132), for details of ancient, veteran or notable trees;
- DEFRA and Environment Agency (EA) Ecology and Fish Data Explorer (Ref 133) for aquatic species records of fish, macroinvertebrate and macrophytes;
- DEFRA and EA Catchment Data Explorer (Ref 134) for data on WFD water bodies and water catchments;
- National Biodiversity Network Atlas database (NBN Atlas) for notable species records (NB: only records with licences allowing for commercial use (OGL, CCO and CC-BY) were interrogated (Ref 135);
- Kent Landscape Information System (Ref 136); and
- Records published in relevant documents, such as county bird reports.

Baseline ecological conditions

- 9.5.4 The known or predicted ecological baseline conditions for the DCO Site and surrounding areas with specific reference to designated sites, habitats, and species are summarised in the following sections. These will be fully defined as the Applicant continues to undertake detailed ecological surveys and assessment.

Statutorily designated sites

- 9.5.5 Statutory sites that are designated for their biodiversity value were identified through a review of the MAGIC (Ref 130) website.
- 9.5.6 Within the 10 km study area (see Paragraph 9.2.4), the UK National Site Network sites that have been identified are:
- Dungeness, Romney Marsh and Rye Bay SPA;
 - Dungeness, Romney Marsh and Rye Bay Ramsar site; and
 - Dungeness SAC.
- 9.5.7 These sites are designated for their habitats and the species for which they support, including birds.
- 9.5.8 There are no UK National Site Network sites within 30 km of the DCO Site Boundary for which bats are a qualifying feature and no other UK National Site Network sites within 30 km of the DCO Site Boundary for which birds are a qualifying feature. Further to this there are no additional UK National Site Network sites with hydrological connections to the Proposed Development.
- 9.5.9 A description of UK National Site Network sites within 10 km of the DCO Site Boundary are presented in **Table 9-1**. Designation details are taken from

citation documents, published online by Natural England. The locations of UK National Site Network sites are presented in **Figure 9-1**.

Table 9-1: UK National Site Network sites within 10 km of the Proposed Development.

STATUTORILY DESIGNATED SITE NAME	STATUTORILY DESIGNATED SITE DESCRIPTION	SUMMARY OF QUALIFYING FEATURES	APPROXIMATE DISTANCE (KILOMETRES (KM)) AND DIRECTION FROM CLOSEST POINT OF THE PROPOSED DEVELOPMENT
Dungeness, Romney Marsh and Rye Bay SPA	Dungeness, Romney Marsh and Rye Bay SPA (42,417 ha) is located on the south coast of England between Hythe in Kent crossing the county border of East Sussex to Norman's Bay. This is a large area with a diverse coastal landscape comprising a number of habitats. The sites include the largest and most diverse area of shingle beach in Britain, with low-lying hollows in the shingle providing nationally important saline lagoons, natural freshwater pits and basin fens. Rivers draining the Weald to the north were diverted by the barrier beaches, creating a sheltered saltmarsh and mudflat environment, which was gradually in-filled by sedimentation, and then reclaimed on a piecemeal basis by man. Today this area is still fringed by important intertidal habitats, and contains relict areas of saltmarsh, extensive grazing marshes and reedbeds. Human activities have further modified the site, resulting in the creation of extensive areas of wetland habitat due to gravel extraction. Dungeness, Romney Marsh and Rye Bay SPA includes a diverse range of broadscale habitats within the marine environment which support a variety of prey species for foraging seabirds, including, subtidal and intertidal sand and muddy sand, subtidal biogenic reef, intertidal stony reef, coarse and mixed sediments and moderate energy infralittoral and circalittoral rock. The site is used regularly by over 20,000 waterbirds.	The SPA qualifies under Article 4.1 by regularly supporting $\geq 1\%$ of Great Britain's population of the following Annex 1 species: Bewick's Swan <i>Cygnus columbianus bewickii</i> (wintering); Bittern <i>Botaurus stellaris</i> (wintering); Hen Harrier <i>Circus cyaneus</i> (wintering); Golden Plover (wintering); Ruff <i>Philomachus pugnax</i> (wintering); Aquatic Warbler <i>Acrocephalus paludicola</i> (passage); Marsh Harrier <i>Circus aeruginosus</i> (breeding); Avocet <i>Recurvirostra avosetta</i> (breeding); Mediterranean Gull <i>Ichthyaeetus melanocephalus</i> (breeding); Sandwich Tern <i>Thalasseus sandvicensis</i> (breeding); Common Tern <i>Sterna hirundo</i> (breeding); and Little Tern <i>Sternula albifrons</i> (breeding). The SPA also qualifies under article 4.2 by regularly supporting $\geq 1\%$ of a biogeographical population of the following migratory species: Shoveler <i>Anas clypeata</i> (wintering)	1.59 km south of the Proposed Development.

STATUTORILY DESIGNATED SITE NAME	STATUTORILY DESIGNATED SITE DESCRIPTION	SUMMARY OF QUALIFYING FEATURES	APPROXIMATE DISTANCE (KILOMETRES (KM)) AND DIRECTION FROM CLOSEST POINT OF THE PROPOSED DEVELOPMENT
Dungeness, Romney Marsh and Rye Bay Ramsar site	Dungeness, Romney Marsh and Rye Bay Ramsar site (6,377 ha) is located on the south coast of England, on the border of East Sussex and Kent between Hastings and New Romney. This is a large area with a diverse coastal landscape comprising a number of habitats. The sites include the largest and most diverse area of shingle beach in Britain, with low-lying hollows in the shingle providing nationally important saline lagoons, natural freshwater pits and basin fens. Rivers draining the Weald to the north were diverted by the barrier beaches, creating a sheltered saltmarsh and mudflat environment, which was gradually in-filled by sedimentation, and then reclaimed on a piecemeal basis by man. Today this area is still fringed by important intertidal habitats, and contains relict areas of saltmarsh, extensive grazing marshes and reedbeds. Human activities have further modified the site, resulting in the creation of extensive areas of wetland habitat due to gravel extraction. As a whole, Dungeness, Romney Marsh and Rye Bay Ramsar site is important for breeding, wintering and passage waterbirds, wetland plants, bryophytes and invertebrates and natural or near-natural wetland habitats.	The site qualifies under Criterion 1 as it supports: Annual vegetation of drift lines and the coastal fringes of perennial vegetation of stony banks; and Natural shingle wetlands. The site also qualifies under Criterion 2 as it supports ecologically threatened communities of: Bryophytes; Vascular plants; and Invertebrates. Additionally, the site qualifies under Criterion 2 because it supports the following vulnerable, endangered or critically endangered species: Greater Water-parsnip <i>Sium latifolium</i>; Warne's Thread-moss <i>Bryum warneum</i>; Water Vole <i>Arvicola amphibius</i>; Aquatic Warbler; Great Crested Newt; Medicinal Leech <i>Hirudo medicinalis</i>; Ground beetle <i>Omophron limbatum</i>; Marsh Mallow moth <i>Hydraecia osseola hucherardi</i>; and De Folin's Lagoon Snail <i>Caecum amoricum</i>.	1.59 km south of the Proposed Development.

STATUTORILY DESIGNATED SITE NAME	STATUTORILY DESIGNATED SITE DESCRIPTION	SUMMARY OF QUALIFYING FEATURES	APPROXIMATE DISTANCE (KILOMETRES (KM)) AND DIRECTION FROM CLOSEST POINT OF THE PROPOSED DEVELOPMENT
		The site qualifies under Criterion 5 as it regularly supports 20,000 or more waterbirds The site qualifies under Criterion 6 as it supports 1% of the individuals in the populations of the following species or subspecies of waterbird in any season: Mute Swan <i>Cygnus olor</i> (wintering); and Shoveler (wintering).	
Dungeness SAC	Dungeness has the largest shingle expanse in Europe and is UK's largest shingle structure, representing the habitat type on the south-east coast of England. The total area of exposed shingle covers 1,600 ha, though the extent of the buried shingle ridges is much greater. Despite considerable disturbance and destruction of the surface shingle, the site retains very large areas of intact parallel ridges with characteristic zonation of vegetation. It still has the most diverse and most extensive examples of stable vegetated shingle in Europe, including the best representation of scrub on shingle, notably prostrate forms of Broom <i>Cytisus scoparius</i> and Blackthorn <i>Prunus spinosa</i>. A feature of the site, thought to be unique in the UK, is the small depressions formed within the shingle structure, which support fen and open-water communities. The Dungeness foreland has a very extensive and well-developed shoreline. It is one of two representatives of annual vegetation of drift lines on the south coast of England. The strandline community on this site comprises Babington's Orache <i>Atriplex glabriuscula</i>. Dungeness contains a large number of waterbodies, hosting a large and viable Great Crested Newt population in a range of natural and anthropogenic habitats.	The site is designated under Article 4 as it supports the following Annex 1 habitats: Annual vegetation of drift lines; and Perennial vegetation of stony banks (Coastal shingle vegetation outside the reach of waves). The site is also designated under Article 4 as it supports the following Annex 2 species: Great Crested Newt	2.7 km south of the Proposed Development.

- 9.5.10 There are three statutorily designated sites at a national level within the 5 km study area and a description of these designated sites is presented in **Table 9-2**. Designation details are taken from citation documents, published online by Natural England. The locations of statutorily designated sites at a national or local level within 5 km of the DCO Site Boundary are presented in **Figure 9-2**.
- 9.5.11 Natural England's SSSI Impact Risk Zone (England) website indicates that the Proposed Development falls within the impact risk zones for solar schemes and their associated infrastructure. Therefore, consultation will be undertaken with Natural England regarding potential impacts to nationally designated sites.

Table 9-2: Statutorily designated sites at a national level within 5 km of the Proposed Development.

STATUTORILY DESIGNATED SITE NAME	STATUTORILY DESIGNATED SITE DESCRIPTION	APPROXIMATE DISTANCE (KM / METRES (M)) AND DIRECTION FROM CLOSEST POINT OF THE PROPOSED DEVELOPMENT
Dungeness, Romney Marsh and Rye Bay SSSI	The Dungeness, Romney Marsh and Rye Bay SSSI sits within the SPA and Ramsar of the same name and comprises a diverse range of habitats covering over 9,000 ha. The SSSI regularly supports an assemblage of over 20,000 waterfowl in the non-breeding season, comprising more than 60 species, seventeen of which regularly winter in nationally important numbers.	670 m south of the Proposed Development.
Romney Warren LNR	Dune grassland, willow scrub and ponds, rich in wildlife.	1.8 km east of the Proposed Development.
Dungeness NNR	A series of broadleaved woodlands supporting a number of rare species including Silky Wave Moth <i>Idaea dilutaria</i> , White Admiral <i>Limenitis camilla</i> , Nightingale, as well as two protected species, Great Crested Newt and Hazel Dormouse <i>Muscardinus avellanarius</i> .	3.1 km south of the Proposed Development.

Non-statutorily designated sites

- 9.5.12 There are four sites that are non-statutorily designated for their biodiversity value within 2 km of the Proposed Development (as per the study area in Paragraph 9.2.4). These sites have been designated as LWS for their biodiversity value at a county level. No site descriptions were identified during the desk study, however all LWSs are assumed to be primarily for their habitats and have supporting value to a wide variety of protected and important species.
- 9.5.13 The closest non-statutorily designated site is Midley Chapel Pasture, Hawthorn Corner LWS which is immediately adjacent to the DCO Site Boundary. The LWSs identified within 2 km are presented below in ascending order of distance from the Proposed Development:
- Midley Chapel Pasture, Hawthorn Corner LWS;
 - St George's Churchyard Ivychurch LWS;
 - Lydd Common and Pastures LWS; and
 - St Mary the Virgin Churchyard, St Mary in the Marsh, New Romney LWS.
- 9.5.14 The locations of these non-statutorily designated sites, relevant to the Proposed Development, are presented in **Figure 9-3**.

Ancient Woodland, Veteran and Ancient Trees

- 9.5.15 The desk study, using Natural England's Ancient Woodland (England) Inventory, did not identify any areas of ancient woodland occurring within the study area.
- 9.5.16 A review of the Ancient Tree Inventory indicates that there are no notable or veteran trees within the DCO Site Boundary, but there are notable or veteran trees outside of the DCO Site Boundary and within the 2 km study area. Further survey of trees will be undertaken to determine the location of any veteran or notable trees not recorded in the Inventory, within the DCO Site Boundary.

Habitats

- 9.5.17 A walkover survey of accessible areas of the Main Site, undertaken as part of the PEA (see Paragraph 9.1.2), identified that the majority of habitat within the Main Site is arable farmland, used for the production of crops (e.g., Wheat) (see **Table 9-4**).
- 9.5.18 HaPI under Section 41 of the NERC Act 2006 present, or potentially present (pending further survey) within the Main Site that were identified at the time of writing this EIA Scoping Report (see also **Table 9-4**), include:
- Hedgerows;
 - Grassland;
 - Swamp;
 - Running Water;
 - Standing Open Water/ Ponds; and
 - Field Margins.

9.5.19 These habitats have the potential to support a range of protected and notable species.

9.5.20 Outside of the DCO Site Boundary, but within the 2 km study area, the MAGIC website identified the presence of the following HaPI:

- Coastal vegetated shingle;
- Coastal and floodplain grazing marsh;
- Deciduous woodland;
- Reedbeds; and
- Traditional orchard.

9.5.21 There are three Water Framework Directive (WFD) water bodies that have the potential to be impacted either directly or indirectly by the proposed construction works within the study area (**Table 9-3**). The Romney Marsh between Appledore and West Hythe and New Sewer at New Romney fall within the Reading Cradlebridge and Royal Military Canal (RMC) Operational Catchment. The Royal Military Canal water body has also been scoped in due to the potential for species to migrate between catchments.

Table 9-3: Water Framework Directive (WFD) water bodies within the study area

WATER BODY	WFD WATER BODY ID	ECOLOGICAL STATUS	OPERATIONAL CATCHMENT
GB107040019700	Romney Marsh between Appledore and West Hythe Water Body	Moderate	Reading Cradlebridge and RMC
GB107040013480	New Sewer at New Romney Water Body	Moderate	
GB70710007	Royal Military Canal (West Hythe to sea) Water Body	Good	Reading Cradlebridge and RMC Operational Catchment

Species

Desk Study

9.5.22 The desk study identified records of protected or notable species that are present within the 2 km study area of the DCO Site Boundary, including:

- Protected plant species (including, Snowdrop *Galanthus nivalus*, Butcher's-broom *Ruscus aculeatus*, Autumn Lady's-tresses *Spiranthes spiralis* and Deptford Pink *Dianthus armeria*);
- Great Crested Newt, outside of the DCO Site Boundary,;
- Specially protected bird species such as Peregrine *Falco peregrinus*, Hobby *Falco subbuteo* and Barn Owl *Tyto alba*;
- Reptiles, including Common Lizard *Zootoca vivipara*, Grass Snake *Natrix helvetica* and Slow Worm *Anguis vivipara*;
- Bats, including Common Pipistrelle *Pipistrellus pipistrellus*, Daubenton's Bat *Myotis daubentonii*, Noctule *Nyctalus noctula*, Natterer's Bat *Myotis nattereri*, Nathusius' Pipistrelle *Pipistrellus nathusii*, unknown Pipistrelle

species *Pipistrellus* sp., unidentified *Plecotus* species, *Nyctalus* species and *Myotis* species;

- Badger, of which one record is within the DCO Site Boundary;
- Water Vole, outside of the DCO Site Boundary;
- Notable aquatic macrophyte species within the DCO Site Boundary: Divided Sedge *Carex divisa*, Frogbit *Hydrocharis morsus-ranae*, Tubular Water-dropwort *Oenanthe fistulosa*, Greater Water-parsnip and the Rootless Duckweed *Wolffia arrhiza*;
- No records of notable fish species were found within 2 km of the DCO Site Boundary. However, the migratory species European Eel *Anguilla anguilla* and Brown/Sea Trout *Salmo trutta* were identified at the catchment level and may therefore pass through the Proposed Development during their migration windows and where connectivity exists;
- Notable aquatic macroinvertebrate species within the DCO Site Boundary: the caddisfly *Oecetis furva*; the beetle *Limnoxenus niger*; Water Boatman *Sigara striata*; and three soldier flies: Silver Colonel *Odontomyia argentata*, Ornate Brigadier *Odontomyia ornata* and White-barred Soldier *Oxycera morrisii*;
- Invasive non-native flora species (Nuttall's Waterweed *Elodea nuttalli*, Winter Heliotrope *Petastites fragrans*, Yellow Archangel *Lamiastrum galeobdolon subsp*, Giant Hogweed *Heracleum mantegazzianum*, Water-lily *Nymphaeodes peltata* and Water Fern *Azolla filiculoides*). Yellow Archangel and Nuttall's Waterweed were recorded within the DCO Site Boundary; and
- Invasive non-native fauna species (Western Conifer Seed Bug *Leptoglossus occidentalis* and Marsh Frog *Rana ridibunda*). No aquatic INNS were identified.

9.5.23 Several of the species identified during the desk study are offered full or part protection under the Wildlife and Countryside Act 1981 and, or, are listed as SPI under Section 41 of the NERC Act.

9.5.24 Non-native plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 are those that continue to pose a conservation threat to native biodiversity and habitats, as such it is illegal to plant or to otherwise encourage or cause these plants to grow in the wild.

9.5.25 The desk study, above, indicated the presence of protected and, or, notable species. However, the desk study also indicated the absence of species:

- Polecat is absent from Kent (Ref 138) and is therefore likely to be absent from the DCO Site Boundary. This was further evidenced through field surveys as this species has not been recorded;
- Harvest Mouse, although not recorded within the study area during the desk study, is likely to be a widespread (but under-recorded) species within Kent, based on its known (or likely) distribution in the county and could be present within hedgerows and grassland margins across the DCO Site Boundary;
- Given the absence of records of Hazel Dormouse from within the study area and Romney Marsh, coupled with the absence of continuous species-

rich hedgerows, mature trees and woodland parcels, Hazel Dormouse is likely to be absent from the DCO Site Boundary; and

- Eurasian Beaver was absent from the study area and has not been recorded within the DCO Site Boundary during surveys undertaken to date. Therefore, this species is not identified as an IEF and is not included for assessment. However, the Applicant acknowledges that the species is expanding its distribution in Kent and if evidence to suggest the species is present within the Zol or if ongoing surveys identify this species' presence, then the species will be included for assessment, as appropriate.

Field Surveys

- 9.5.26 Review of ecological data within the study areas enabled the identification of specific areas requiring ecological survey (Survey Areas) (see **Table 9-4**) which are specific to a given species, group of species or habitat. The Survey Areas defined reflect standard good practice and are informed by published guidance for each ecological feature (see **Table 9-4**), consideration of potential impact pathways and professional judgement.
- 9.5.27 **Table 9-4** presents details of the identified surveys, methods and survey periods that have commenced or will be undertaken within the relevant Survey Areas. The extent of the Survey Areas varies according to the ecological feature in question and with regards to the precautionary principle i.e., if there is doubt as to whether or not an area should be surveyed it is included within the Survey Area. Accordingly, the Survey Areas that will be used in the assessment will ensure sufficient data is gathered to meet any design iterations which may change the likely Zol used to undertake the impact assessment.
- 9.5.28 The data gathered from these surveys will be used to inform the final assessment presented in the ES. These surveys will also inform any European Protected Species licences (where required). As part of the DCO Application for the Proposed Development any required licences will be prepared in draft for advisory comment from Natural England.

Table 9-4: Ecological surveys that have been, or will be, undertaken to characterise the baseline conditions within the Site.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
UKHab Survey, including Habitat Condition Assessment for Biodiversity Net Gain	Walkover survey recording habitat types and boundary features, following the standard UKHab method. In addition, where appropriate, a habitat condition assessment, modular river surveys and hedgerows condition assessments will be undertaken for the purpose of BNG assessment.	The land within the DCO Site and a zone of up to 50 m (where visible from within the DCO Site or accessible)	Using professional judgement, 50 m from the DCO Site Boundary is an appropriate Survey Area within which to record habitats, acknowledging that those that are likely to be directly impacted by the Proposed Development are within the DCO Site itself and surveying up to 50 m from the DCO Site Boundary is appropriate in evaluating adjacent habitats and informing on the potential presence, or otherwise, of protected species (e.g. Badger) within the vicinity of the Proposed Development. The information from surveys undertaken within the DCO Site to support the BNG	Surveys to record the broad habitat types were undertaken in March/April 2022 (and updated in April 2023) and have been further updated in December 2025 and January 2026, including surveys of any areas within the Main Site that did not form the initial Survey Area in 2022. Habitat condition assessments have not yet started and will be undertaken between April to October.	The land within the DCO Site Boundary is predominantly arable, bounded by ditches, hedgerows and arable margins. Habitat within the DCO Site Boundary, identified at the time of writing this EIA Scoping Report, pending further detailed survey to determine status of the habitat as a HaPI, include: Hedgerows; Swamp; Running Water; Grassland; Standing Open Water/ Ponds; and Field Margins.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
			assessment will form the basis of the calculation of potential permanent and temporary effects within the EclA.		
Terrestrial Habitat and Flora: Arable Flora Survey Phase 2 botanical/National Vegetation Classification (NVC) Survey	Surveys for important arable flora species involve walking arable field boundaries to record notable species as listed in Great Britain (Ref 139, Ref 140) and England (Ref 141) Red Data Lists or rated as locally, regionally or nationally scarce in 'A vascular plant red list for England'. Grassland surveys (including roadside verges) involve surveying such areas in more detail (i.e.: species lists with abundance ratings) for notable species and species composition with	The DCO Site.	Using professional judgement, areas of terrestrial habitat to be surveyed in further detail are those within the DCO Site that have the potential to be impacted by the Proposed Development, informed by the desk study and as identified from the initial UKHab survey. The surveys will identify any areas of notable habitats or important for flora and inform any required avoidance, mitigation or enhancement.	Arable flora and NVC surveys were undertaken in July 2023 in the DCO Site. Arable flora and NVC surveys will be updated between May and September, including surveys of any areas within the DCO Site that did not form the initial Survey Area in 2023.	At the time of survey in 2023, there were arable fields within the DCO Site that contained scarce arable flora species (of Local importance) and these will be resurveyed as appropriate within the relevant survey period to determine their status as a HaPI or otherwise. NVC surveys undertaken in the Site in 2023 identified the following communities: MG9 - <i>Holcus lanatus</i> - <i>Deschampsia cespitosa</i> grassland; MG1 - <i>Arrhenatherum elatius</i> grassland (with some calcareous influence and some scrub development) and areas of S4 – <i>Phragmites australis</i> swamp and reed beds; and S4d - <i>Phragmites australis</i> swamp and reedbeds <i>Atriplex prostrata</i> sub-community. These will be resurveyed as appropriate within the relevant survey period.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
	the rarity of higher plants given based on 'New Flora of the British Isles' (Ref 142).				
Hedgerows	Hedgerows will be surveyed in accordance with the methodology as outlined in DEFRA's Hedgerow Survey Handbook (Ref 143), to assess their 'importance' against the Wildlife and Landscape Criteria, detailed in the Hedgerows Regulations and to determine whether a hedgerow is species-poor or species-rich.	The DCO Site.	Using professional judgement, surveying all hedgerows within the DCO Site is appropriate, acknowledging that those hedgerows that are likely to be impacted by the Proposed Development are within the DCO Site itself. Hedgerows outside of the DCO Site Boundary will remain intact and unaffected by Proposed Development.	Hedgerow surveys were undertaken in July 2023 within the DCO Site only. Surveys will be updated between May and September, including surveys of any areas within the DCO Site that did not form the initial Survey Area in 2023.	Surveys in 2023 identified a limited network of native hedgerows within the DCO Site, that mostly bordered roads. These will be resurveyed as appropriate within the relevant survey period to determine their status as a HaPI or otherwise.
Aquatic habitat and species surveys including for any invasive non-native species (potentially including River Habitat Surveys	An aquatic scoping survey comprising a desk-based assessment of available aquatic ecology data and a walkover survey will inform site selection for further	Up to 2 km from the DCO Site Boundary for the desk study and up to 250 m for field survey.	Up to 250 m from the DCO Site Boundary is an appropriate Survey Area to determine any potential impacts arising from the Proposed Development both upstream and	Aquatic scoping surveys and macroinvertebrate surveys were undertaken within the DCO Site in Spring 2023 only. Surveys across the DCO Site will be undertaken in 2026, where access is permitted.	Aquatic scoping surveys identified numerous aquatic habitats across the DCO Site in spring 2023. Where macroinvertebrates surveys were completed, the following notable species were identified: Medicinal Leech and the three beetles (<i>Hydrochus elongatus</i> , <i>Helochaeres punctatus</i> and <i>Peltodytes caesus</i>).

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
(RHS), pond Predictive System for Multimetrics (PSYM), macrophytes, macroinvertebrates and fish surveys)	surveys. Selected waterbodies (ponds, ditches, rivers) likely to be impacted will be surveyed and assessed using relative standard methodologies for aquatic macrophytes (Ref 144), aquatic macroinvertebrates (Ref 145), River Habitat Surveys (Ref 146), Fish (Ref 147) and PSYM specifically for ponds (Ref 148).		downstream (the desk study will assess a wider 2 km area).		
Terrestrial invertebrates scoping survey	A walkover survey to identify areas of likely greater importance to terrestrial invertebrates.	The DCO Site.	Using professional judgement, surveying habitat within the DCO Site only is appropriate, acknowledging that habitats that have the potential to be permanently impacted (i.e. lost) by the Proposed Development and potentially supporting notable terrestrial	Scoping walkover undertaken in July 2023 and will be updated between April and September to ensure that there have been no significant land use changes that will alter the initial findings, including surveys of any areas within the DCO Site that did not form the initial Survey Area.	Areas of greater interest to terrestrial invertebrates within the DCO Site, identified at the time of writing this EIA Scoping Report, include hedgerows, ditches and a tussocky grassland field.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
			invertebrates or assemblages are within this area. The surveys identified any areas likely to be important for terrestrial invertebrates and informed any required avoidance, mitigation or potential enhancement.		
Amphibians, including Great Crested Newt	Water bodies within 500 m of the DCO Site Boundary were identified during the desk study. Habitat Suitability Index (HSI) surveys to evaluate the suitability of ponds and their potential to support Great Crested Newt (Ref 149). Further to the HSI assessment, suitable (as defined by the results of the HSI survey) and accessible water bodies identified within the Survey	HSI surveys will be undertaken on water bodies within 250 m of the DCO Site and, where further survey identified as being required (based on the HSI score), using eDNA methods.	With reference to published guidance, habitats within and up to 250 m of the DCO Site could constitute significant foraging areas, hibernation or resting sites for Great Crested Newt, which typically utilise terrestrial habitat up to 500 m from their breeding ponds (Ref 151). However, 250 m is an appropriate Survey Area from the DCO Site for determining Great Crested Newt populations within the Zol of the Proposed	eDNA surveys undertaken on water bodies within the DCO Site in June 2022 and June 2023. HSI and eDNA surveys will be refreshed between mid-April and 30 June within water bodies in the DCO Site, including any water bodies that did not form part of the initial Survey Area in 2022 and 2023. Surveys within the Survey Area will be undertaken in 2026, where access is permitted.	In 2022, Great Crested Newt was found to be present in three water bodies within the DCO Site, north of the A259. Common Frog and Smooth Newt are also present although surveys are not required for such species, as they receive limited legislative protection and as such surveys will not be specifically undertaken for these species.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
	Area will then be scoped in for Environmental DNA (eDNA) survey (Ref 150) to determine presence or absence of Great Crested Newt.		Development through HSI and eDNA surveys, acknowledging that there is a notable decrease in abundance of Great Crested Newt beyond a distance of 250 m from a breeding pond (Ref 152).		
Reptiles	A Habitat Suitability Assessment will determine the suitability of the DCO Site for reptiles. If required, presence/absence surveys of terrestrial habitats for reptiles using artificial refugia and observations of species in accordance with standard guidance for survey (Ref 153, Ref 154).	Presence/absence surveys, if required will be undertaken in suitable habitat for reptiles (such as grassland) within the DCO Site that is potentially directly impacted by the Proposed Development.	With reference to published guidance, any surveys that are required within the Survey Area will provide sufficient information on reptile presence within the DCO Site, acknowledging that good quality habitats, potentially supporting populations of reptiles and where these may be permanently impacted (i.e. lost) by the Proposed Development are within this area.	If presence/absence surveys are required, these will be undertaken between May to June and August to September.	Casual observations of reptiles within the DCO Site have been made and recorded individual Grass Snake and Common Lizard.
Non-breeding birds (including farmland birds)	Non-breeding bird surveys, using an adapted walkover survey method,	For the general non-breeding bird assemblage,	Whilst standardised survey zones for assessing the impacts of development on	Surveys of non-breeding birds have been undertaken on the	Mobile species with larger foraging ranges, namely Golden Plover and Bewick's Swan, were recorded using the DCO Site in 2023/2024.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
	including frequent stopping points to view and observe bird behaviour and movements across the DCO Site. Also includes nocturnal observations and consideration of tidal state (Ref 153, Ref 154).	the land within the DCO Site and up to 50 m from the DCO Site will be surveyed. For species of greater conservation value and/ or higher sensitivity to potential noise or visual disturbance (e.g. Golden Plover), the Survey Area will be extended up to 500 m from the DCO Site.	bird populations do not exist, the Survey Area provides information on the non-breeding bird population within the area immediately surrounding and contiguous with the DCO Site, where birds may potentially be adversely affected, either directly or indirectly. Therefore, the Survey Area is sufficient to determine the likely impacts of the Proposed Development on non-breeding bird species occurring or likely to occur in the area.	DCO Site in the following periods: January to March 2022 (three monthly visits within a reduced Site boundary); November 2022 to March 2023 (six monthly visits); November 2023 and April 2024 and again between September and October 2024 (16 survey visits (twice monthly) Non-breeding bird surveys in the DCO Site, including any areas that did not form part of the initial Survey Area have been undertaken between October 2025 and March 2026.	Assemblage of non-breeding birds, including SPI species such as Skylark, are present across the DCO Site.
Breeding birds (including farmland birds)	Surveys for breeding birds are based on a standard territory mapping method for surveying breeding birds (Ref 157, Ref 158) and were adapted where necessary to include species-specific methods	For the general breeding bird assemblage, the Survey Area is the land within the DCO Site and up to 50 m from the DCO Site. For	Standardised survey zones for assessing the impacts of development on bird populations do not exist, however, the Survey Areas provide information on the breeding birds within the area immediately surrounding and	Surveys of the general breeding bird assemblage undertaken on the DCO Site between March and June 2022 (within a reduced Site boundary) and March and June 2023. Surveys of breeding birds in the DCO Site, including any areas that did not form part of the initial Survey Area will be	Assemblage of breeding birds, including WCA Schedule 1 species and SPI specie such as Skylark, are present within the DCO Site.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
	(as detailed in 'Bird Monitoring Methods' (Ref 157)) for other species, as required.	species of greater conservation value and/ or higher sensitivity to potential noise or visual disturbance, where any such species are recorded, the Survey Area will be extended up to 250 m from the DCO Site.	contiguous with the DCO Site, where birds may potentially be adversely affected. Published guidance (Ref 158) on disturbance distances for specially protected species e.g. those listed on Schedule 1 of the WCA was used to define the Survey Area for any such species likely to be present.	undertaken between March and mid-June for the general breeding bird assemblage, with additional survey effort as necessary in August and September to record any late-breeding species (e.g. Hobby <i>Falco subbuteo</i>).	
Bats – Daytime Bat Walkover (DBW) Survey	Trees (and structures, if present) will be subject to a DBW survey in accordance with The Bat Conservation Trust guidance (Ref 159).	Relevant features within the DCO Site and a minimum of 10 m from the DCO Site, where accessible and likely to be impacted by the Proposed Development.	Information collated on the location of trees and structures that are suitable for roosting bats will inform design and offset buffers to avoid direct effects upon potential roost sites. Furthermore, the information will form the basis of the scope for roost surveys (as detailed below).	Not yet commenced. Surveys can be undertaken at any time of year, but winter months are best when there is little foliage on the trees (November to February)	Not applicable – no survey results.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
Bats – Roost Surveys including Ground Level Tree Assessment (GLTA) and aerial survey	Where any works to trees potentially supporting bat roosts (as recorded during the DBW survey) has been confirmed prior to ES submission, a GLTA and aerial survey and/ or bat emergence surveys will be undertaken in accordance with standard survey guidance (Ref 159).	Features with bat roost suitability within the DCO Site that will be impacted by the Proposed Development (i.e. if the design cannot avoid the loss of trees).	It is anticipated that impacts to potential roosts are likely to be avoided and that any further survey work, if required, is likely to be minor (i.e. possibly a few individual trees) and undertaken on a precautionary basis.	If required, these will be undertaken between May and September.	Not applicable – no survey results.
Bats – Night-time Bat Walkover (NBW)	Walked transect routes, to cover representative habitats within the Main Site, with each transect surveyed once in spring, summer and autumn. The survey method is based upon published guidance (Ref 159) and supplemented by the deployment of static bat detectors, (at least one per transect).	The DCO Site.	Using professional judgement and with reference to published guidance, the Survey Area will provide sufficient information on bat activity (commuting and foraging) of the DCO Site and where impacts are predicted, assessing commuting and foraging habitat and nearby roosts, and enabling determination of impacts on bat populations occurring	Surveys completed within the DCO Site Boundary in summer and autumn 2022, and spring and summer 2023. Surveys of bat activity in the DCO Site, including any areas that did not form part of the initial Survey Area in 2022 and 2023 will be undertaken between May and September.	Full analysis of survey data, collected in 2022 and 2023 has not yet been completed, however a small number of bat species were recorded using boundary features as commuting and foraging routes.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
			within, or adjacent to, the DCO Site		
Riparian mammals (Water Vole, Otter <i>Lutra lutra</i> , Eurasian Beaver <i>Castor fiber</i> and the INNS, American Mink <i>Mustela vison</i>)	A Habitat Suitability Assessment will determine the suitability of each watercourse or water body for riparian mammals. Watercourses and water bodies, deemed suitable for riparian mammals (as identified during the Habitat Suitability Assessment) will then be surveyed for evidence of riparian mammals, following standard guidance for surveying Water Vole (Ref 160, Ref 161) and for Otter (Ref 162, Ref 163, Ref 164). Any evidence of Eurasian Beaver and American Mink will also be recorded, using	All water bodies and watercourses within the DCO Site (and to a maximum of 10 m from the DCO Site where access is permitted), identified as being potentially suitable for Water Vole. Note that where suitable habitat for Otter is present then the survey will extend 200 m upstream and downstream (where accessible). Additional surveys of woodland in the vicinity of water courses	With reference to published guidance and using professional judgement, surveying riparian habitats up to 10 m (Water Vole) and 200 m (Otter) from the DCO Site is sufficient to determine presence or absence of riparian mammals within, or adjacent to, the DCO Site as it covers the appropriate avoidance buffers around Water Vole burrows or Otter holts (which may be present outside of the DCO Site).	Surveys for riparian mammals were undertaken within the DCO Site in 2023. Surveys across the DCO Site, including any areas within the Main Site that did not form the initial Survey Area in 2023, will continue between May to September 2026.	Evidence of occasional use of larger watercourses by Otter, was made in the DCO Site in 2023. A limited number of watercourses within the DCO Site support small numbers of Water Vole. There was no evidence of American Mink or Eurasian Beaver anywhere across the DCO Site and no incidental sightings have been made of these species since 2023 during the course of other ecological surveys.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
	these survey methods.	will also be checked for Otter holts.			
Badger	A walkover survey, searching for signs of Badger activity (such as setts and latrines), and following standard survey guidance (Ref 165, Ref 166).	Within the DCO Site and to a maximum of 50 m from the SDCO Site, where viewable from within the DCO Site or where access is permitted.	With reference to published guidance and applying professional judgement, 50 m beyond the DCO Site is an appropriate Survey Area as it covers the 30 m distance of avoidance around setts at which direct or indirect effects on Badger setts could occur.	Surveys for Badger activity were undertaken in 2023 and have been updated between January and March 2026, including surveys of any areas within the DCO Site that did not form the initial Survey Area.	Numerous Badger setts, including main setts, around the DCO Site, mostly associated with boundary features.
Other SPI mammals (such as Hedgehog <i>Erinaceus europaeus</i> , Brown Hare <i>Lepus europaeus</i> and Harvest Mouse <i>Micromys minutus</i>)	No formal surveys have, or will be, undertaken for such species and observations will be recorded when noted during other ecological surveys.	The land within the DCO Site.	Using professional judgement, recording these species within the DCO Site is appropriate, acknowledging that any potential impacts (such as habitat loss) are within the DCO Site itself.	In progress.	Brown Hare has been recorded within the DCO Site. No observations of other SPI mammals have been made. The habitat within the DCO Site could support Hedgehog and Harvest Mouse, although no evidence of either species has been made during ecological surveys since 2022. At this time, the presence of Harvest Mouse and Hedgehog will be assumed and assessed as appropriate.
Invasive non-native species (INNS)	INNS species observations will be recorded when noted during other ecological surveys.	The land within the DCO Site and a zone of 50 m (where visible	Using professional judgement, INNS will be recorded within the DCO Site and to a maximum of 50 m to	In progress. Any time of year, but April to September is the optimal period for recording INNS plants.	Marsh Frog <i>Pelophylax ridibundus</i> are present in the majority of watercourses across the DCO Site.

SURVEY	SURVEY METHOD	SURVEY AREA	JUSTIFICATION FOR SURVEY AREAS	STATUS OF SURVEY AND SURVEY TIMING	SURVEY RESULTS
	Plants will include notes on precise location and stand size. Aquatic and riparian INNS will be surveyed for as part of the aquatic ecology baseline.	from within the DCO Site or accessible).	avoid and reduce the spread of any INNS species before, during and after construction.		

Future Baseline

- 9.5.29 The future ecological baseline of the DCO Site, in the absence of the Proposed Development, is not anticipated to materially change between now and the beginning of the construction and operation (and maintenance) phases as the land will continue to be in agricultural management. Habitats within the DCO Site (such as arable fields (cropped on rotation), mature trees, hedgerows, ponds) have and will continue to provide a number of species with potential habitat for foraging and reproduction.
- 9.5.30 In the longer term, in the absence of the Proposed Development, habitats within the DCO Site will continue to be under agricultural management and therefore the low biodiversity of this landscape and the damaged soil, poor water quality and artificially low water tables will remain, making recovery of these ecosystems harder to achieve. The distribution of some species will change in response to changes in crop type, whilst the assemblages are likely to remain broadly the same.
- 9.5.31 Irrespective of whether the Proposed Development were to proceed or not, the current national, regional and local trend is for a decline in species diversity and abundance e.g., farmland birds. These declines are likely to continue in the landscape surrounding the Proposed Development throughout its duration.

9.6 Potential Effects and Mitigation

Potential effects

- 9.6.1 With reference to **Chapter 3: The Proposed Development**, prior to the implementation of any mitigation, the Proposed Development has the potential to affect ecology and biodiversity (positively or negatively) during construction, operation (and maintenance) and decommissioning in the following ways:

Construction (assumed to be 2031)

- 9.6.2 Impacts on biodiversity features during construction of the Proposed Development (including construction of compounds, access tracks (including vehicle movements), installation of PV panels (Solar PV Mounting Structures), installation of interconnecting cables and substations) potentially include:
- Habitat loss – direct impacts associated with changes in land use resulting from the construction of the Proposed Development, for example temporary works associated with site clearance (e.g. for site compounds and access), installation of buried cables, and permanent land-take (mainly arable land) associated with the installation of PV panels;
 - Fragmentation of populations or habitats – indirect impacts due to the Proposed Development potentially dividing a habitat, group of related habitats, site or ecological network, or the creation of partial or complete barriers (e.g. where any watercourses may be crossed) to the movement of species, with a consequent impairment of ecological function;

- Disturbance – indirect impacts resulting from a change in normal conditions (e.g., light, noise, vibration and human activity) that result in individuals or populations of species changing behaviour or range;
- Habitat degradation – direct or indirect impacts resulting in the reduction in the condition of a habitat and its suitability for some or all of the species it supports, for example changes in chemical water quality, increased sedimentation and dust deposition, or changes in surface flow or groundwater;
- Species injury and/or mortality – direct impacts on species populations associated with mortalities due to construction activities, for example vegetation removal; and
- Introduction and, or, spread of invasive species, due to the movement of personnel, equipment and plant machinery, potentially facilitating the introduction of invasive species.

Operation and maintenance (assumed to be 2033)

9.6.3 With reference to **Chapter 3: The Proposed Development**, impacts on biodiversity features during operation and maintenance of the Proposed Development could include:

- Potential avoidance by species using the DCO Site, such as bats, due to indirect impacts through, for example, noise displacement of foraging/commuting bats by the presence of solar PV panels;
- Disturbance or displacement of sensitive species whereby infrastructure may act as a barrier effect;
- Disturbance or displacement of sensitive species during operational maintenance activities;
- Disturbance or displacement of sensitive species (e.g. fish) caused by Electro-Magnetic Fields (EMF) created by buried electric high voltage cables during operation (and maintenance) (refer to **Chapter 17: Other Environmental Topics**). This will be further explored if the design of the Proposed Development interacts with watercourses containing migratory fish species; and
- Fragmentation of habitats causing a barrier effect to some species, e.g., due to fencing.

Decommissioning (assumed to be 2073)

9.6.4 Impacts on ecological features during decommissioning of the Proposed Development are likely to be the same as those during the construction phase. Field surveys would be required in advance of decommissioning to define the ecological baseline at the time of decommissioning and to ensure that impacts on ecological features are identified, avoided and, or, mitigated. Upon decommissioning, the above-ground physical infrastructure will be removed and the DCO Site returned to landowners in the condition as at the end of operation and maintenance, including the established habitats.

Design, Avoidance and Mitigation

- 9.6.5 The design for the Proposed Development will include consideration of IEFs and will incorporate, where reasonably practicable, measures to avoid or reduce the potential for adverse effects on these, in accordance with the mitigation hierarchy (as presented in Paragraph 9.6.16) and relevant planning policy. The measures that will be identified and adopted include those that are inherent to the design of the Proposed Development and those that can realistically be expected to be applied as part of environmental best practice, or as a result of legislative requirements.
- 9.6.6 Mitigation measures relevant to ecology and biodiversity are identified below and included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.
- 9.6.7 Standard best practice construction measures will be set out within an Outline Construction Environmental Management Plan (OCEMP), secured through the DCO, to reduce the effect of potentially harmful impacts on IEFs, in compliance with relevant legislation. The OCEMP will detail and formalise measures that will be implemented prior to and during construction of the Proposed Development to mitigate construction-related effects on IEFs. A detailed CEMP will be produced in accordance with the OCEMP following DCO consent to implement the measures outlined in the OCEMP for the Proposed Development.
- 9.6.8 The Proposed Development will avoid direct impacts to statutorily and non-statutorily designated sites and, through best practice construction methods, will minimise or remove any potential indirect impacts.
- 9.6.9 The Proposed Development will occur mostly on lower value habitats (i.e. arable farmland). The use of these lower value habitats substantially reduces the potential for the Proposed Development to result in significant adverse effects on ecological features.
- 9.6.10 The Proposed Development will be designed so that impacts upon HaPI (e.g. woodland, hedgerows, arable margins and watercourses) are avoided or reduced, where reasonably practicable and compensated for where not, through the creation of replacement habitat.
- 9.6.11 The Proposed Development will aim to avoid, protect and retain notable habitats and species where practicable, all of which will be included in the design. This will include retention, avoidance and offsets of:
- A minimum of 9 m from the top of the watercourse and water bodies, extended to a minimum of 10 m from where any such watercourses are found to support riparian mammals. Greater buffers are likely to be required where water bodies or watercourses support species, such as Great Crested Newt;
 - The Proposed Development will aim to avoid laying cabling directly on the channel bed of watercourses and they will be buried at a depth that aims to avoid warming or EMF effects on fish;

- 10 m from any type of woodland features; and
- At least 5 m from hedgerows without trees, where practicable, noting that there may be small incursions into hedgerows to facilitate access, fence-lines and any cabling. Woodland and retained trees will be protected, in line with British Standard Recommendations with undeveloped buffers concordant with the requirements for each individual tree, (based on their root protection areas) both within and outside the DCO Site. Where protected species (e.g. bat roosts) are recorded within trees, then this buffer will be extended as appropriate (Ref 167). Fencing, as appropriate, will be included around working areas to protect above-ground vegetation and below-ground root systems.

9.6.12 The Proposed Development will also aim to avoid, protect and retain protected or notable species, where practicable, including:

- Retaining ponds and watercourses within the DCO Site, particularly those supporting Great Crested Newt;
- Retaining boundary features where practicable, supporting breeding and non-breeding birds, commuting and foraging bats and other fauna, with undeveloped zones as presented in Paragraph 9.6.11;
- Retaining Badger setts, as far as is practicable, with an undeveloped zone of at least 30 m from the sett (dependent on the activity); and
- Retaining trees with the potential to support roosting bats, with a minimum undeveloped zone concordant with the Root Protection Area (RPA) of the tree and dependent on the bat roost categorisation.

9.6.13 With the incorporation of enhancements into the design of the Proposed Development, there are likely to be beneficial effects following completion of the Proposed Development that will ensure no net loss of habitats and will provide an overall net gain in biodiversity, ensuring compliance with planning policy relating to this. These beneficial effects are likely to include:

- Increases in permanent grassland habitat of greater floristic diversity than arable farmland, increasing invertebrate assemblages and abundance;
- Increased ecological connectivity across the DCO Site and into the wider area, through planting of trees and hedgerows;
- Potential to contribute to nature recovery strategies in Kent;
- Areas of habitat creation, such as fields and margins that provide permanent (and undisturbed) nesting and foraging habitats for farmland birds, small mammals and reptiles;
- Potential increases in abundance and distribution of species, due to lack of human disturbance and changes in habitat (such as agricultural practices) within the DCO Site; and
- Indirect beneficial impacts through a possible reduction of agricultural chemical inputs to watercourses/reduction in pesticide use on crops within the local area resulting in an increase in invertebrate abundance and diversity.

Biodiversity Net Gain (BNG)

- 9.6.14 BNG is a quantitative process applied to development and the CIEEM defines BNG (Ref 168) as “*development that leaves biodiversity in a better state than before*” and involves “*an approach where developers work with local governments, wildlife groups, landowners and other stakeholders in order to support their priorities for nature conservation*”. BNG is achieved when measurable improvements for biodiversity are delivered in association with a development through the creation of new habitats or enhancement and long-term management of existing habitats. Whilst BNG allows for these measures to be provided within the DCO Site Boundary, outside of this, or in combination, it is currently anticipated that the Proposed Development would seek to deliver BNG within the Main Site, through the implementation of measures such as field boundary enhancements and the establishment of appropriate grassland habitats.
- 9.6.15 Paragraph 4.6.6 of NPS EN-1 (Ref 5) also sets out how BNG should be addressed for Energy NSIP proposals stating that “proposals should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, where possible”; and, in paragraph 4.6.10 that “biodiversity net gain should be applied after compliance with the mitigation hierarchy (as presented in Paragraph 9.6.16 of this chapter) and does not change or replace existing environmental obligations”.
- 9.6.16 Compliance with planning policy in the NPS EN-1 and the NPPF requires that the Proposed Development considers and applies a mitigation hierarchy, requiring the highest level to be applied, where practicable. The mitigation hierarchy presented below, based on the CIEEM principles of avoidance, minimisation, restoration and compensation, is also fundamental to BNG and there are four sequential steps that must be taken throughout the lifecycle of a project, where there is potential for impacts on relevant ecological features:
- Avoidance – actions taken to avoid causing impacts to the environment prior to beginning development (e.g. moving part of the Proposed Development to a different location);
 - Minimisation – measures taken to reduce the duration, intensity, extent and/ or likelihood of the unavoidable environmental impacts caused by the Proposed Development (e.g. adapting the design of the Proposed Development to minimise impacts); and
 - Restoration or rehabilitation – actions taken to repair environmental degradation or damage following unavoidable impacts caused by the Proposed Development.
 - Compensation – measures taken as a last resort to offset residual adverse effects that cannot be avoided, minimised and/or restored.
- 9.6.17 The currently approved method for calculating changes in biodiversity value of a site is DEFRA’s Statutory Biodiversity Metric Tool (Ref 169). The change in biodiversity units is calculated pre- and post-development for three habitat modules of the metric: habitat area units, watercourse units and hedgerow

units and indicates whether the Proposed Development would result in a net loss, no net change or a net gain in biodiversity value.

- 9.6.18 Surveys to record the pre-development biodiversity metrics, used to inform the BNG assessment, are undertaken by appropriately trained and experienced surveyors. Biodiversity metrics provide a measure of overall biodiversity value based on habitat type, area, condition, strategic significance and distinctiveness and surveyors record the area (or length) of each habitat along with a habitat condition assessment in line with UKHab and guidance for river and ditch condition assessment (Ref 170, Ref 171).
- 9.6.19 The BNG assessment, therefore, will identify the opportunities of the Proposed Development, to contribute to delivery of measurable BNG, in line with the requirements of the Environment Act 2021, NPS EN-1, the NPPF, CIEEMs Biodiversity Net Gain Good Practice Principles for Development (Ref 173) and local planning policy (see Paragraph 9.3.17).
- 9.6.20 Measures for the establishment, long term management and monitoring of habitat creation measures that would deliver BNG will also be included within the Outline Landscape and Ecological Management Plan (OLEMP), submitted as part of the DCO Application.

9.7 Assessment Methodology

- 9.7.1 The assessment of potential effects as a result of the Proposed Development (construction, operation and maintenance and decommissioning) on ecology and biodiversity will be undertaken using the methodology set out below.

Assessment Criteria

- 9.7.2 The approach used for the EclA will be undertaken in accordance with best practice guidance, issued by the CIEEM (the CIEEM guidelines).
- 9.7.3 The aims of the assessment will be to:
- Identify (from a combination of desk-based study and field survey work) and evaluate any IEFs, which include designated sites, priority habitats, protected species and INNS, that are present and might be impacted by the Proposed Development (both those likely to be present at the time works begin and those predicted to be present at a set time in the future), placing their relative nature conservation importance into geographic context, which is then used to define the IEFs that need to be considered further;
 - Identify the changes or perturbations predicted to result as a consequence of the Proposed Development (i.e., the potential impacts) that could potentially affect IEFs (either directly or indirectly) and their conservation designations and contribution to local (and if appropriate county, regional and national) biodiversity. Established best-practice, legislative requirements or other incorporated design measures to minimise or avoid impacts are also described and are taken into account;

- Describe and quantify the likely effects (positive or negative) on IEFs and whether these may be significant (taking into account impacts avoidance design measures and management activities);
- Set out what steps will be taken to adhere to legal requirements relating to the relevant ecological features concerned;
- Develop, where practicable, measures to avoid or reduce any predicted significant effects, in conjunction with other elements of the design (including mitigation for other environmental disciplines) and if necessary includes measures to compensate for effects on IEFs, where the level of detail provided is proportionate to the scale of the development and the complexity of its potential impacts; and
- Report any residual effects of the Proposed Development and where enhancement and net gains in biodiversity (i.e., BNG) are included.

9.7.4 It is not necessary in the assessment to address all habitats and species with potential to occur in the relevant study areas. Instead, the focus is on those that are “relevant” i.e., IEFs that are considered to be potentially affected by the Proposed Development. This does not mean that efforts should not be made, where practicable and appropriate, to safeguard wider biodiversity including any combined and cumulative effects.

Determining Importance

- 9.7.5 To support a focussed assessment, there is a need to determine the scale at which the relevant IEFs are of value. The value (or sensitivity, as termed elsewhere within the EIA), of each relevant IEF has been defined with reference to the geographical level at which it matters, informed through relevant planning policy and legislation which is important in demonstrating how the Proposed Development will comply with statutory requirements and policy objectives for biodiversity, in accordance with Section 4.3 of the CIEEM guidelines.
- 9.7.6 Species populations are valued on the basis of their size, recognised status (such as through published lists of species of conservation concern and designation of BAP status) and legal protection. For example, bird populations exceeding 1% of published data for national populations are considered to be of national importance (and therefore of high sensitivity), and so on.
- 9.7.7 In assigning values to species populations, it is important to take into account the status of the species in terms of any legal protection. However, it is also important to consider other factors such as its distribution, rarity, population trends and the size of the population which would be affected. For example, whilst the Great Crested Newt is protected as a European protected species under the relevant legislation and therefore conservation of the species is of significance at an international level, this does not mean that every population of Great Crested Newt is internationally important. It is important to consider the particular population in its context. Therefore, in assigning values to species, the geographic scale at which they are important has been considered. The assessments of value rely on the professional opinion and judgement of experienced ecologists and will be set out clearly in the ES.

- 9.7.8 Plant communities are assessed both in terms of their intrinsic value and as habitat for protected species whose habitat is also specifically protected and for species of nature conservation concern which are particularly associated with them.
- 9.7.9 Due regard will also be paid to the legal protection afforded to species during the development of mitigation and compensation measures to be implemented for the Proposed Development. For European protected species, such as Great Crested Newt, there is a requirement that the Proposed Development should not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.
- 9.7.10 For the purposes of the assessment, only ecological features of at least Local importance are considered as IEFs that require assessment for potential significant effects. Whilst consideration of impacts at all geographic scales is important, features of less than Local importance (i.e. of Site importance) are common and widespread (therefore of no local value) and are not legally protected or included within local planning policy. The CIEEM guidelines make it clear that there is no need to *“carry out detailed assessment of ecological features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable”*.
- 9.7.11 Assessing the value of features requires consideration of both existing and future predicted baseline conditions. Therefore, the description and valuation of ecological features will take account of any likely changes, such as trends in the population size or distribution of species which may arise either naturally through habitat changes or as a result of increased conservation effort, likely changes to the extent of habitats and the effects of other developments or land use changes.
- 9.7.12 A summary of the value (sensitivity) of ecological features and the geographical frames of reference used in the assessment, based on Section 4.7 in the CIEEM guidelines, is presented in **Table 9-5**.

Table 9-5: Summary of sensitivity of ecological features, according to geographic context.

SENSITIVITY (VALUE)	GEOGRAPHIC FRAME OF REFERENCE	EXAMPLES
Very High	International (or European)	Sites included in the UK National Site Network, such as SACs (including candidate SACs), SPAs (including potential SPAs), normally within the geographic area of Europe. Ramsar sites (including proposed sites), which are designated under international convention are also included. Areas of habitat that would meet the selection criteria for inclusion in the UK National Site Network or as a Ramsar site. Species occurring in numbers approaching that of international importance (i.e., >1% of a biogeographic population) that would meet the selection criteria for inclusion in the UK National Site Network or as a Ramsar site. Qualifying species connected to an SAC (such as bats).

SENSITIVITY (VALUE)	GEOGRAPHIC FRAME OF REFERENCE	EXAMPLES
High	UK or National (Great Britain), but considering the potential for certain ecological features to be more notable (of higher value) in England, with context relative to Great Britain as a whole	Statutorily designated sites, protected through national legislation, such as a SSSI or NNR. HaPI, considering factors such as its size, distribution and the size of the habitat which would be affected. This includes irreplaceable habitats such as ancient woodland and ancient or veteran trees. Species occurring in numbers approaching that of national importance (i.e., >1% of the UK population) that would meet the relevant SSSI selection criteria.
Medium / High	Regional (South East)	Species, including SPI, occurring in numbers of greater geographical importance than within the county of Kent but does not reach the threshold to be of National importance.
Medium	County (Kent) and/or District (Folkestone and Hythe)	Non-statutorily designated sites, such as LWSs. HaPI not representing a nationally important habitat but recognised as a habitat which would or may fulfil the criteria for selection as a LWS. Species occurring in numbers approaching that of county or district importance (i.e., >1% of the county or district (if known) population).
Low	Local (the DCO Site Boundary and up to 2 km from the DCO Site Boundary)	Areas of habitat that do not meet criteria for selection as LWS in Kent but are considered to enrich the local area. Species of conservation interest (e.g. SPI, red-listed or legally protected species) that are common and widespread but contribute to the local biodiversity.
Negligible	The DCO Site (the DCO Site Boundary)	Species that are common and widespread and are not legally protected or included within local planning policy (e.g. Field Vole <i>Microtus agrestis</i>). Areas of habitat that are widespread and of no local value (such as a fence-line or hard-standing).

Characterising Ecological Impacts and Effects

9.7.13 In accordance with Section 1.21 in the CIEEM guidelines, the terminology used within the assessment will draw a clear distinction between the terms ‘impact’ and ‘effect’. For the purposes of the EclA these terms are defined as follows:

- Impact – actions resulting in changes to an ecological feature. For example, construction activities of a development removing a hedgerow; and
- Effect – outcome resulting from an impact acting upon the conservation status or structure and function of an ecological feature e.g., the effects on a population of bats as a result of the loss of a bat roost.

9.7.14 When describing potential impacts (and where relevant the resultant effects) consideration is given to the following characteristics likely to influence this:

- Positive or negative - i.e., is the change likely to be in accordance with nature conservation objectives and policy and is that change:

- Positive - a change that improves the quality of the environment, or halts or slows an existing decline in quality e.g., increasing the extent of a habitat of conservation value; or
- Negative - a change that reduces the quality of the environment e.g., destruction of habitat.
- Spatial extent - the spatial or geographical area or distance over which the impact or effect may occur under a suitably representative range of conditions;
- Magnitude of change - the 'size', 'amount' or 'intensity' and 'volume' of an impact - this is described on a quantitative basis where possible;
- Duration - the time over which an impact is expected to last prior to recovery or replacement of the resource or feature. Consideration has been given to how this duration relates to relevant ecological characteristics such as a species' lifecycle. However, it is not always appropriate to report the duration of impacts in these terms. The duration of an effect may be longer than the duration of an activity or impact;
- Timing and frequency - i.e., consideration of the point at which the impact occurs in relation to critical life-stages or seasons; and
- Reversibility - i.e., is the impact temporary or permanent:
 - A temporary impact is one from which recovery is possible or for which effective mitigation is both possible and enforceable. Temporary impacts for BNG are temporary losses of habitat that are restored to their original condition within two years.
 - A permanent effect is one from which recovery is either not possible or cannot be achieved within a reasonable timescale i.e., the 40-year lifespan of the Proposed Development (in the context of the feature being assessed).

9.7.15 Combined, these characteristics form the magnitude of change criteria for effects of the Proposed Development on IEFs as summarised in **Table 9-6**.

Table 9-6: Magnitude of change criteria.

MAGNITUDE	MAGNITUDE CRITERIA
High	Changes to the ecological feature pre-development (baseline) condition that almost always have an effect (positively or negatively) on its integrity or conservation status. Such changes may be long-term, permanent and/or irreversible.
Medium	Changes to the ecological feature baseline condition that in some circumstance may affect (positively or negatively) its integrity or conservation status. Although such changes may be long-term, they are potentially reversible.
Low	Changes to the ecological feature baseline condition that do not usually affect the baseline condition and are often short-term and/or reversible.
Very Low	There is no noticeable change to the ecological feature baseline condition.

Significance Criteria

- 9.7.16 For each ecological feature, only those characteristics relevant to understanding the ecological effect of the Proposed Development and determining the significance are described. The determination of the significance of effects has been made based on the predicted effect on the structure and function, or conservation status, of relevant IEFs, as follows:
- Not significant means that there is no effect on structure and function, or conservation status; and
 - Significant means that the structure and function, or conservation status is affected.
- 9.7.17 Sections 5.24 to 5.28 of the CIEEM guidelines state that effects should be determined as significant (a significant effect) when: *“an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general. Conservation objectives may be specific (e.g., for a designated site) or broad (e.g., national/local nature conservation policy) or more wide-ranging (enhancement of biodiversity). Effects can be considered significant at a wide range of scales from international to local. A significant effect is an effect that is sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project. In broad terms, significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution)”*.
- 9.7.18 Using this information and professional judgement, it is determined whether the effects will be ‘significant’ or ‘not significant’ on the structure and integrity of site or ecosystems or conservation status of habitats and, or species of each ecological feature and the impact significance is determined at the appropriate geographical scale, as presented in **Table 9-5**.
- 9.7.19 There are a number of approaches for determining the significance of effects on ecological features. Whilst the CIEEM guidelines recommend the avoidance of the use of the matrix approach for categorisation (major, moderate and minor), in order to provide consistency of terminology within this chapter, the terminology used in the CIEEM guidelines for impact assessment have been translated into the classification of effects scale, as outlined in **Table 9-7**, but still remain consistent with the CIEEM guidelines.
- 9.7.20 As a rule, major and moderate effects are considered to be significant, whilst minor and neutral/ negligible effects are considered to be not significant. However, professional judgement will be applied, including taking account of whether the effect is permanent or temporary, its duration and frequency, whether it is reversible, and/ or its likelihood of occurrence.
- 9.7.21 Beneficial effects, as described in **Table 9-7**, are assessed as those where there has, or will be, a change from the ecological baseline that improves (e.g. an increase in habitat or species population). Adverse effects are assessed as

those where there will be a change from the ecological baseline that worsens (e.g. a reduction in habitat or decline in species population).

Table 9-7: Significance criteria for impacts and effects.

EFFECT CLASSIFICATION TERMINOLOGY	EQUIVALENT CIEEM TERMINOLOGY
Major beneficial (Positive)	1) Beneficial effect on structure/function or conservation status at a regional, national or international level; and 2) The extent, magnitude, frequency, and/or timing of an impact positively affects the integrity or key characteristics of the resource.
Moderate beneficial (Positive)	1) Beneficial effect on structure/ function or conservation status at a county level; and 2) The extent, magnitude, frequency, and/or timing of an impact positively affects the integrity or key characteristics of the resource.
Minor beneficial (Positive)	1) Beneficial effect on structure/function or conservation status at a local level; and 2) The extent, magnitude, frequency, and/or timing of an impact does not affect the integrity or key characteristics of the resource.
Negligible	No effect on structure/function or conservation status.
Minor adverse (Negative)	1) Adverse effect on structure/function or conservation status at a local level; and 2) The extent, magnitude, frequency, and/or timing of an impact does not affect the integrity or key characteristics of the resource.
Moderate adverse (Negative)	1) Adverse effect on structure/function or conservation status at a county level; and 2) The extent, magnitude, frequency, and/or timing of an impact negatively affects the integrity or key characteristics of the resource.
Major adverse (Negative)	1) Adverse effect on structure/function or conservation status at a regional, national or international level; and 2) The extent, magnitude, frequency, and/or timing of an impact negatively affects the integrity or key characteristics of the resource.

9.8 Limitations and Assumptions

9.8.1 Baseline ecological surveys are ongoing and these surveys may highlight new IEFs with potential to be significantly affected that have not been identified (or considered not to be significant) at this stage of the assessment. These would be discussed on a case-by-case basis with the local authorities and Natural England as appropriate. Arboricultural surveys will be undertaken to inform the detailed design stage of the Proposed Development.

9.8.2 An assumption has been made that the following habitats will be retained as part of the Proposed Development:

- water bodies (including ponds);
- watercourses (assuming watercourses are not lost as a whole and small crossings of minor watercourses could be required but any main rivers would be crossed using trenchless techniques); and

- the majority of hedgerows (assuming hedgerows are not lost as a whole, but could require either a temporary or permanent gap, which would be minimised to smallest extent necessary).
- 9.8.3 It is currently assumed that should there be the requirement for the potential mitigation of ecological features and recommended enhancement measures, suitable on-site areas will be made available to deliver the required outcomes.
- 9.8.4 Any compound and material storage areas will be contained within the DCO Site.

9.9 Summary of Elements Scoped In and Out

- 9.9.1 The potential impacts of the Proposed Development on biodiversity are set out in Paragraphs 9.6.1 to 9.6.4. The ecological features scoped into the assessment are presented in **Table 9-8**. The assessment will consider the potential impacts identified above on the ecological features identified below.

Table 9-8: Elements scoped in and out of the ecology and biodiversity assessment.

ECOLOGICAL FEATURE	SCOPED IN/ SCOPED OUT
Statutorily designated sites at an International (European) level (UK National Site Network sites)	Scoped In – National Site Network sites up to 10 km from the DCO Site and up to 30 km from the DCO Site with mobile species as qualifying criteria (30 km for bats, 20 km for birds). Potential for impact pathways to include indirect impacts such as disturbance and habitat degradation as per Section 9.6 of this EIA Scoping Report. This EIA Scoping Report has identified National Site Network sites within 10 km of the DCO Site (see Section 9.5.6) and the assessments presented in the ES will determine whether the potential impact pathways identified in Section 9.6 of this Scoping Report will impact upon identified sites. The sites to be considered in the assessment are Dungeness, Romney Marsh and Rye Bay SPA, Dungeness, Romney Marsh and Rye Bay Ramsar site and Dungeness SAC. There are no UK National Site Network sites within 30 km of the DCO Site for which bats are a qualifying feature and no other UK National Site Network sites within 30 km of the DCO Site for which birds are a qualifying feature. Further to this there are no additional UK National Site Network sites with hydrological connections to the Proposed Development.
	Scoped out – National Site Network sites greater than 10 km from the DCO Site and with no mobile species as qualifying criteria and such sites beyond 30 km from the DCO Site are scoped out as there are no potential impact pathways (identified in Section 9.6 of this EIA Scoping Report) during any phase (construction, operation and maintenance and decommissioning) of the Proposed Development which could interact with sites not identified above.
Statutorily designated sites of National importance	Scoped In – Statutorily designated sites of national importance, designated for their biodiversity value and within 5 km of the DCO Site. Where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES. The sites to be considered in the assessment are Dungeness, Romney Marsh and Rye Bay SSSI, Romney Warren LNR and Dungeness NNR. In addition, should any further sites not already listed be within 200 m of the Affected Road Network, then these will be included in the assessment.
	Scoped out – Statutorily designated sites of National importance, greater than 5 km from the DCO Site, are scoped out as there are no potential impact pathways (identified in Section 9.6 of this EIA Scoping Report) during any phase (construction, operation and maintenance and decommissioning) of the Proposed Development which could interact with sites not identified above.
Non-statutorily designated sites	Scoped In – non-statutorily designated sites within 2 km of the DCO Site. Four non-statutorily designated sites are present within the 2 km study area. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES. The sites to be considered in the assessment are Midley Chapel Pasture, Hawthorn Corner LWS, St George's Churchyard Ivychurch LWS, St Mary the Virgin Churchyard, St Mary in the Marsh, New Romney LWS and Lydd Common and Pastures LWS. In addition, should any further sites not already listed be within 200 m of the Affected Road Network, then these will be included in the assessment.

ECOLOGICAL FEATURE	SCOPED IN/ SCOPED OUT
	Scoped Out – Non-statutorily designated sites, greater than 2 km from the DCO Site are scoped out as there are no potential impact pathways (identified in Section 9.6 of this EIA Scoping Report) during any phase (construction, operation and maintenance and decommissioning) of the Proposed Development which could interact with sites not identified above.
Habitats	Scoped In - Habitats categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. At this stage this includes the HaPI within the Zol of the DCO Site, as presented in Paragraphs 9.5.18 and 9.5.20. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES.
	Scoped Out – habitats not categorised as IEFs based on the criteria set out in sections 9.7.5-9.7.12 and Table 9-5. Although no formal assessment of non-priority habitats is required due to an absence of legal protection or direction from relevant policy, there will be no direct impact to habitats outside of the DCO Site and good practice construction methods will ensure that there are no indirect impacts to habitats outside of the DCO Site. Therefore, there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Proposed Development.
Biodiversity Net Gain	Scoped In. The ES will follow the mitigation hierarchy and will make a clear distinction between measures that are considered to be mitigation for potential effects and where measures are enhancement compared to the existing baseline conditions. Furthermore, any ecological mitigation proposed for loss of habitat will not be double counted as enhancement.
Terrestrial invertebrates	Scoped In – notable terrestrial invertebrate species and assemblages categorised as IEFs based on the criteria set out in sections 9.7.5-9.7.12 and Table 9-5. Notable terrestrial invertebrate species have been identified within the study area. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this Scoping Report will be considered in the assessment provided in the ES.
	Scoped Out –Terrestrial invertebrates not categorised as IEFs based on the criteria set out in sections 9.7.5-9.7.12 and Table 9-5. The design of the Proposed Development will, however, follow the principles of the mitigation hierarchy in seeking to avoid those habitats of higher value, including to terrestrial invertebrates. This may be through the retention of the majority of habitats (e.g. woodland, hedgerows and ditches) within the Proposed Development, avoidance of habitats outside the DCO Site and following good practice environmental methods during any phase (construction, operation and maintenance and decommissioning) of the Proposed Development.
Aquatic Macroinvertebrates	Scoped In – notable aquatic macroinvertebrate species and assemblages categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. There are potential impact pathways for direct and indirect impacts to aquatic invertebrates as per Section 9.6 of this EIA Scoping Report, and where necessary an assessment of these will be provided in the ES.

ECOLOGICAL FEATURE	SCOPED IN/ SCOPED OUT
	Scoped out – Aquatic Macroinvertebrates not categorised as IEFs based on the criteria set out in sections 9.7.5-9.7.12 and Table 9-5. The design of the Proposed Development will, however, follow the principles of the mitigation hierarchy in seeking to avoid those habitats of higher value, including to aquatic macroinvertebrates. This may be through the retention of the majority of habitats (e.g. ponds, watercourses and ditches) within the Proposed Development, avoidance of habitats outside the Proposed Development and following good practice environmental methods during any phase (construction, operation and maintenance and decommissioning) of the Proposed Development.
Aquatic Macrophytes	Scoped In - notable aquatic macrophyte species and assemblages categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. There are potential impact pathways for direct and indirect impacts to aquatic macrophytes as per section 9.6 of this EIA Scoping Report, and where necessary an assessment of these will be provided in the ES.
Fish	Scoped In - notable fish species and assemblages categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. There are potential impact pathways for direct and indirect impacts to fish as per Section 9.6 of this EIA Scoping Report, and where necessary an assessment of these will be provided in the ES.
Amphibians including Great Crested Newt	Scoped In – amphibian species categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. Great Crested Newt have been identified within the DCO Site. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES. Scoped Out – other amphibians not categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. This includes Common Frog and Smooth Newt. Observations of these species will be recorded during other ecological surveys. Embedded mitigation described and included in the ES, submitted as part of the DCO Application, will minimise the risk of injury or killing of such species (where present) during construction of the Proposed Development.
Reptiles	Scoped In. Reptiles have been identified within the DCO Site and study area. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES.
Breeding and non-breeding birds	Scoped In. Bird species categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5. Protected and notable bird species have been identified within the study area. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES.
Bats	Scoped In.

ECOLOGICAL FEATURE	SCOPED IN/ SCOPED OUT
	Roosting and foraging/commuting bats have been identified within the study area. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES.
Riparian mammals	Scoped In – Water Vole and Otter Water Vole and Otter have been identified within the DCO Site. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES.
Badger	Scoped In. Badger have been identified within the DCO Site. Therefore, where appropriate, the potential impact pathways identified in Section 9.6 of this EIA Scoping Report will be considered in the assessment provided in the ES.
Other SPI mammals, including Brown Hare, Hedgehog and Harvest Mouse	Scoped In. Mammal species categorised as IEFs based on the criteria set out in Paragraphs 9.7.5-9.7.12 and Table 9-5 . Brown Hare has been identified with the DCO Site and Hedgehog and Harvest Mouse have the potential to be present, based on the habitat within the DCO Site. Therefore, the species will be assumed to be present and assessed as such. Incidental records of these species will be recorded during other ecological surveys and any required mitigation measures formalised in the OCEMP secured as part of the DCO requirements.
Hazel Dormouse and Eurasian Beaver	Scoped Out. Although present in Kent, neither species is currently known to be present in the study area and neither species has been recorded during surveys undertaken to date within the DCO Site. However, the status and distribution of both species will be kept under review and if evidence suggests a change in range, then either species may be scoped back in at a later stage, if necessary.
INNS	Scoped In.

10. Water Environment

10.1 Introduction

- 10.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on the water environment during construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the water environment chapter of the Environmental Statement (ES).
- 10.1.2 This chapter is supported by the following figures:
- **Figure 10-1:** Surface Water Features and their Attributes;
 - **Figure 10-2:** Bedrock Aquifers;
 - **Figure 10-3:** Groundwater Features and their Attributes;
 - **Figure 10-4:** Fluvial and Tidal Flood Risk; and
 - **Figure 10-5:** Surface Water Flood Risk.
- 10.1.3 There are interrelationships with other disciplines. Therefore, this chapter should also be read in conjunction with the following chapters:
- **Chapter 9: Ecology and Biodiversity**, particularly aquatic ecology and assessment of ponds; and
 - **Chapter 17: Other Environmental Topics**, particularly the assessment of contaminated land in Ground Conditions.

10.2 Study Area

- 10.2.1 A study area of 1 kilometre (km) from the DCO Site Boundary (including both the Main Site and Interconnecting Areas) has been considered in order to identify water features that could reasonably be affected by the Proposed Development. This study area is illustrated on **Figure 10-1: Surface Water Features and their Attributes, Figure 10-3: Groundwater Features and their Attributes, Figure 10-4: Fluvial and Tidal Flood Risk, and Figure 10-5: Surface Water Flood Risk.**
- 10.2.2 The 1 km study area is based on professional judgment and is an accepted distance for a water environment and flood risk study area for proposed developments of this type. However, given that water quality and flood impacts may propagate downstream, the assessment also considers a wider study area where relevant, which extends as far downstream as a potential impact may influence the quality or quantity of the water body (in this case a few km beyond the study area, extending to the English Channel). This is to ensure that all relevant attributes of potentially affected water features are identified and considered when determining the importance of that feature. Professional judgement has been applied to identify the extent to which such features are considered. In this case the final receptor would be the English Channel (i.e.

the Water Framework Directive (WFD) designated Kent South and Sussex East coastal water bodies), which are located approximately 5 km and 9 km downstream respectively of the DCO Site Boundary (and connected via New Sewer and White Kemp Sewer).

- 10.2.3 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.

10.3 Legislation, Planning Policy Context and Guidance

- 10.3.1 Legislation, planning policy and guidance relating to Water Environment and pertinent to the Proposed Development is listed in this section.

Legislation

- 10.3.2 Relevant legislation includes:

- Environment Act 2021 (Ref 21);
- Flood and Water Management Act 2010 (Ref 174);
- Water Resources Act (Amendment) (England and Wales) Regulations 2009 (Ref 175);
- Marine and Coastal Access Act 2009 (Ref 176);
- Land Drainage Act 1991 (Ref 177);
- Water Resources Act 1991 (Ref 178);
- Environmental Protection Act 1990 (Ref 179);
- Salmon and Freshwater Fisheries Act 1975 (Ref 180);
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 181);
- Environmental Damage (Prevention and Remediation) Regulations 2017 (as amended) (Ref 182);
- Environmental Permitting (England and Wales) Regulations 2016, as amended 2018 (Ref 183);
- Building Regulations 2010 (Ref 184), Document Part H: Drainage and Waste Disposal (2010);
- Eels (England and Wales) Regulations 2009 (Ref 185);
- The Control of Substances Hazardous to Health (Amendment) Regulations 2004 (Ref 186);
- Control of Pollution (Oil Storage) (England) Regulations 2001 (Ref 187);
- The Anti-Pollution Works Regulations 1999 (Ref 188); and
- The Water Framework Directive (WFD) (Standards and Classification) Directions 2015 (Ref 189).

National Planning Policy

- 10.3.3 The following planning policies from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- The Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5) with particular reference to Section 5.8 Flood Risk and Section 5.16 Water Quality and Resources. The Secretary of State needs to satisfy itself that a development proposal has regard to the River Basin Management Plans and meets the requirement of Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (including regulation 19);
- Section 5.8 of NPS EN-1 states that a site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3. For Flood Zone 1, an assessment is required where the site is greater than 1 ha, as is the case with regard to the Proposed Development. Details of the contents required within the flood risk assessment are detailed in paragraph 5.8.15. The use of mitigation for surface water runoff should include the use of Sustainable Drainage Systems (SuDS) as detailed in paragraph 5.8.25. NPS EN-1 also includes a section on water quality and resources, namely Section 5.16. This states that applications need to undertake assessment of the existing status of water quality/ resources/ physical characteristics of the water environment;
- The NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6) highlights the importance of considering potential impacts on water quality, water resources and flood risk, considering climate change. Of particular note are paragraphs 2.10.77 to 2.10.80 which contain the requirement that where access tracks are needed, permeable tracks should be used, and localised SuDS should be used to control runoff. In addition, it states that culverting existing watercourses/ drainage ditches should be avoided. When this is unavoidable, it should be demonstrated that no reasonable alternatives exist and where necessary it will only be for the construction period; and
The NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7) sets out considerations that applications and the Secretary of State should take into account in order to ensure that electricity networks infrastructure is resilient to the effects of climate change, particularly with regard to flood risk. The NPS reiterates that major developments should incorporate SuDS unless there is clear evidence that this would not be appropriate.

10.3.4 Other relevant national planning and guidance includes:

- The National Planning Policy Framework (NPPF) (Ref 8): Section 14 Meeting the challenge of climate change, flooding and coastal change, and Section 15 Conserving and enhancing the natural environment. The NPPF is currently being revised, all updates will be monitored and incorporated into future EIA phases, draft relevant chapters are likely to be as follows: Chapter 18 Managing Flood Risk and Coastal Change and Chapter 19 Conserving and enhancing the natural environment (Ref 191);
- UK Government Environmental Improvement Plan 2023 (Ref 192);
- UK Government's Plan for Water: Our Integrated Approach to Delivery Clean and Plentiful Water 2023 (Ref 193);
- UK Government's 25 Year Environment Plan (Ref 14);
- The UK Government's Future Water Strategy (2011) (Ref 194);

- National standards for sustainable drainage systems (SuDS) (Ref 195); and
- Building Research Establishment (BRE) Digest 365: Soakaway Design and Sewers for Adoption (7th Edition, 2012) (Ref 196).

Local Planning Policy

10.3.5 The Proposed Development lies within the administrative areas of Folkestone and Hythe District Council and Kent County Council. The following local planning documents are of relevance to the water environment, drainage and flood risk assessment:

- Kent County Council: Flooding, drainage and water management policies and guidance (Ref 197). Relevant policies include:
 - Drainage and planning policy statement;
 - Kent spatial risk assessment for water;
 - Flood response plan; and
 - Land drainage policy.
- Folkestone and Hythe Core Strategy Review 2022 (Ref 12);
- Folkestone and Hythe Places and Policies Local Plan 2022 (Ref 13). Relevant policy includes Policy CC3 Sustainable Drainage Systems (SuDS);
- Folkestone and Hythe District Green and Blue Infrastructure Strategy (2023) (Ref 198);
- Rother and Romney Catchment Flood Management Plan (Ref 199). The policy that covers the study area is Policy 3;
- Kent County Council (2017) Flood Risk to Communities – Shepway, in partnership with the Environment Agency and Folkestone, Hythe and Romney Marsh Shepway District Council (Ref 200);
- Shepway District Council Phase II Strategic Flood Risk Assessment (SFRA) (Ref 201); and
- Kent County Council adopted the Kent Minerals and Waste Local Plan 2024-2039 in March 2025 (Ref 9).

10.3.6 The whole of England's South East Region is classed by the Government as being seriously water stressed meaning the amount of water available is limited. Within the vicinity of the study area, water is managed by Southern Water, South East Water and Affinity Water (Ref 202), the Water Resources Management Plans (WRMPs) of each of these water companies will be taken into account at future EIA phases in terms of water resourcing. The WRMPs are as follows:

- Affinity Water: Water Resources Management Plan 2024 (Ref 203);
- Southern Water: Water Resources Management Plan 2025-2075 (Ref 204); and
- South East Water: Water Resources Management Plan 2025-2075 (Ref 205).

10.3.7 Revisions to these documents will be taken into account at later phases of assessment as the Proposed Development progresses.

Relevant Industry Guidance

10.3.8 Relevant industry guidance includes:

- The National Planning Policy Guidance (NPPG) (Ref 208), updated in 2024, provides guidance for local planning authorities on assessing the significance of water environment effects of projects. The NPPG for Flood Risk advises on how to take account of and address the risks associated with flooding and coastal change in the planning process. It outlines a number of main steps to be followed which are designed to ensure that if there are better sites in terms of flood risk, or if a project cannot be made safe, it should not be permitted. These steps include: assess flood risk; avoid flood risk; and manage and mitigate flood risk. The guidance states that developers and applicants need to consider flood risk to and from the development site and it is likely to be in their own best interests to do this as early as possible. In addition, the guidance provides detail on the application of the Sequential Test and the Exception Test;
- The national guidance for the implementation of sustainable drainage measures (SuDS) was recently updated 'National Standards for SuDS Guidance' (Ref 206);
- The Environment Agency's Flood Risk Assessments Climate Change Allowances (Ref 207) which provides guidance on how to apply climate change allowances to FRAs; and
- Guidance on Pollution Prevention Notes and Construction Industry Research and Information Association (CIRIA) guidance (Ref 209):
 - CIRIA (2001) Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532) (Ref 210);
 - CIRIA (2006) Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648) (Ref 211);
 - CIRIA (2023) Environmental good practice on site (5th edition) (C811) (Ref 212); and
 - CIRIA (2016) Groundwater control: design and practice (second edition) (C750) (Ref 213).
 - The Environment Agency provides their current guidance/ position statements on the approach to protection of groundwater (Ref 214). This includes:
 - Regulatory Position Statement (RPS) A (Risk Based Approach);
 - RPS B (Protection of Water Intended for Human Consumption);
 - RPS G (Discharge of Liquid Effluents into the Ground); and
 - RPS N (Groundwater Resources and Abstraction).
- The Environment Agency provides further guidance on groundwater abstractions and protection through the following:
 - Environment Agency (2007) Hydrogeological impact appraisal for groundwater abstractions. Science Report – SC040020/SR2 (Ref 215);
 - Environment Agency (2007) Hydrogeological impact appraisal for dewatering abstractions. Science Report – SC040020/SR1 (Ref 216);
 - Environment Agency (2017) Protect groundwater and prevent groundwater pollution (Ref 217); and

- Environment Agency (2017) Groundwater protection technical guidance (Ref 218).
- The Water Framework Directive UK Risk assessment of groundwater-dependent terrestrial ecosystems from the Technical Advisory Group (TAG) (Ref 219) outlines guidance in relation to habitats directly impacted by groundwater.

10.4 Consultation

- 10.4.1 Consultation as part of the EIA process will be undertaken following submission of this EIA Scoping Report with statutory parties including the Romney Marshes Area Internal Drainage Board (IDB), Folkestone and Hythe District Council and Lead Local Flood Authority (LLFA), as well as other non-statutory interested parties. Also, local water companies, Affinity Water, Southern Water and South East Water will be consulted.
- 10.4.2 Additionally, a Freedom of Information Request will be submitted to the Environment Agency to obtain baseline information to inform the water environment, drainage and flood risk assessment. The request will include resources (pollution incidents), licenced and unlicenced (private) water abstractions, and water activity permits (i.e. consented discharges), hydrogeology (e.g. groundwater levels), WFD data and flooding data that is not available online. The Local Authorities will also be contacted for details of any private water supplies (PWS).

10.5 Baseline Conditions

- 10.5.1 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to the water environment.
- 10.5.2 The water environment baseline conditions have been determined by a desk study of available information, and various online data sources including:
- British Geological Survey (BGS) Geoindex website (Ref 220);
 - BGS Geology Viewer; BGS Geology Viewer (BETA) (Ref 221);
 - Department for Environment, Food and Rural Affairs (DEFRA) hydrology data explorer website (Ref 222);
 - Environment Agency Public Registers website – Environmental Permitting Regulations – Discharges to water and groundwater (Ref 223);
 - Environment Agency Catchment Data Explorer website (Ref 224);
 - Environment Agency Water Quality Explorer (Ref 225);
 - Environment Agency Online Interactive Flood Maps:
 - Flood map for planning (rivers and sea) (Ref 226);
 - Risk of flooding from surface water, reservoirs and flood warning areas and risk (Ref 227); and
 - Statutory Main River Map (Ref 228).
 - Internal Drainage Board Map (Ref 229);

- Multi Agency Geographical Information for the Countryside (MAGIC) map website (Ref 130);
- Meteorological Office website, UK Climate Averages (Ref 231);
- National Soil Resources Institute Soilscales (1:250,000) website (Ref 232);
- National Library of Scotland Historical Imagery (Ref 233);
- Online Ordnance Survey (OS) online maps (Ref 234);
- OSM Landuse Landcover maps (Ref 235);
- South East River Basin Management Plan (RBMP) (Ref 236); and
- United Kingdom Topographic map (Ref 237).

10.5.3 Where relevant, water features and their attributes have been presented in a series of figures that support this chapter. **Figure 10-1: Surface Water Features and their Attributes** presents details of the surface water environment, **Figure 10-2: Bedrock Aquifers** and **Figure 10-3: Groundwater Features and their Attributes** the groundwater environment, **Figure 10-4: Fluvial and Tidal Flood Risk** presents the Environment Agency fluvial and tidal flood zones (including the location of flood defences and areas benefitting from flood defences), whilst **Figure 10-5: Surface Water Flood Risk** presents surface water flood risk.

10.5.4 Following submission of the EIA Scoping Report, further assessments will be undertaken to inform the water environment baseline for later phases of assessment:

- Further review of existing geological plans, hydrogeological data and site investigation data will be carried out to support the assessment of local ground and groundwater conditions;
- Summarised flood data will be recorded and provided within an Outline Flood Risk Assessment (OFRA) and will be used to inform the Outline Surface Water Drainage Strategy (OSWDS). The OFRA and OSWDS will form technical appendices to the ES and comply with the legislative and policy requirements set out above; and
- A general walkover and hydromorphological survey of the DCO Site Boundary will be undertaken in order to inform the assessment.

Topography, Land Use and Climate

10.5.5 The topography across the Proposed Development and the wider study area is relatively flat and consistent throughout, being below 10 m above ordnance datum (AOD) given its location wholly within Romney Marsh on the coastal fringe of the English Channel.

10.5.6 The study area is contained within land that is predominantly used for agriculture, mainly of an arable nature, with small patches of woodland, grassland and rural residences located across the area. The villages of Old Romney and Ivychurch are located within the study area, as well as the outskirts of the village of New Romney to the east of the study area.

10.5.7 Romney Marsh is partly below sea level and consists of reclaimed land which utilises a complex drainage system to ensure suitability for agricultural use and

prevention of flooding. There is a dense network of drains across the area, many known as 'sewers'. These drains are managed by the Romney Marsh Area IDB and Environment Agency. The drains can receive water for irrigation purposes from the Royal Military Canal when rainfall is low, with the canal being located in the north of the study area (see **Figure 10-1: Surface Water Features and their Attributes**), or when water levels across the marsh are high, water can be discharged from the drains/ sewers within the marsh via pumping stations back to the Royal Military Canal, or via a number of sluices and outfalls to the sea at St Mary's Bay or Jury's Gap. There is the potential that these sewers may become tide locked during high tides, which may affect the flow, conveyance and water quality. This will be investigated at later phases of the EIA process.

- 10.5.8 Based on the Meteorological Office website (Ref 231), the nearest rainfall station is Dungeness B (NGR: TR0815116831; 5 mAOD) which is positioned approximately 7 km to the southeast of the study area. Using data from this weather station for the period 1981 to 2010, it is estimated that the study area experiences approximately 705 mm of rainfall per year, with it raining more than 1 mm on approximately 115 days per year, which are both low in the UK context. This is relevant to the whole study area.

Hydrogeology

- 10.5.9 A review of the study area on the Soilscales website (Ref 232) shows the area is underlain by loamy and clayey soils of coastal flats with naturally high groundwater. The geology underlying the study area has been taken from the BGS Geoindex site.
- 10.5.10 Tidal Flat Deposits (TFD) underlie the majority of the study area. They occur in two distinct types, sand-dominated (sand flats) and clay/silt dominated (mud flats). These TFD are comprised of unconsolidated sediment, in this case either sand or clay/silt, formed through the rise and fall of the tide.
- 10.5.11 Two outcrops of Blown Sand deposits occur beneath the southernmost part of the DCO Site Boundary, with two additional areas identified in the far eastern portion of the study area, adjacent to Storm Beach deposits. Blown Sands are composed of sand that has been transported and reworked by wind. In contrast, Storm Beach deposits typically comprise rounded, coarse materials such as gravels and cobbles that accumulate under the force of powerful storm waves.
- 10.5.12 The DCO Site Boundary is entirely underlain by the Wealden Group, a series of thick interbedded formations of sandstones, siltstones and mudstones of mainly non-marine facies. This group can be up to 850 m thick across the Wealden Basin.
- 10.5.13 A summary of the geology and associated aquifers encountered within the study area can be found in **Table 10-1**.

Table 10-1: Aquifer Designations across the study area

STRATUM	UNIT	DESCRIPTION	AQUIFER DESIGNATION ⁵
Superficial Geology	Tidal Flat Deposits - Sand	Sand dominant, silt and clay	Secondary A
	Tidal Flat Deposits - Clay and silt	Silt and clay dominant, sand	Unproductive Strata
	Storm Beach Deposits	Gravels	Secondary A
	Blown Sand	Sand	Secondary A
Bedrock Geology	Wealden Group	Sandstone, siltstone and mudstones	Secondary A

Groundwater Levels and Flow

10.5.14 Groundwater level information within the study area is limited. There are no Environment Agency groundwater monitoring boreholes present within the study area. Two borehole locations providing information on the superficial deposits are available on the BGS Geoindex. Borehole TR02NW1, located near Chapel Land Farm, is a 10.5 m deep installation within the superficial deposits and recorded groundwater levels to be approximately 1.2 m below ground level. Groundwater flow within the superficial deposits will predominantly occur within the higher permeability deposits such as sands and gravels. The degree of flow and flow direction will be controlled by the interconnectivity of these deposits. Groundwater within the low permeability deposits such as clays and silts will be restricted.

10.5.15 No available groundwater monitoring data exists for the Wealden Group, therefore groundwater levels within the underlying bedrock are unknown. Within the Wealden Group, groundwater is likely to flow through intergranular and fracture flow due to the low permeability of the mudstone and siltstone formations within the Group. This flow is likely to be in a south/south-east direction towards the English Channel.

Surface Water Features

10.5.16 The surface water features are all located within the WFD Rother Management Catchment. The northern part of the study area is within the Reading Cradlebridge and Royal Military Canal (RMC) WFD Operational Catchment; the central part of the DCO Site is within the Rother Levels WFD Operational Catchment; and the southern part of the DCO Site and study area is within Romney Marsh South WFD Operational Catchment. Surface water features in the study area are outlined in **Table 10-2**.

⁵ Secondary A Aquifers: Aquifers comprise permeable layers that can support local water supplies and may form an important source of base flow to rivers.

Unproductive Strata: Area is largely unable to provide usable water supplies and is unlikely to have surface water and wetland ecosystems dependent on them.

- 10.5.17 Main Rivers are defined according to criteria set under the Water Resources Act 1991 as usually larger rivers and streams with a potentially significant flood risk associated with this designation. There are three Main Rivers within the study area (see **Figure 10-1: Surface Water Features and their Attributes**), and one Main River which is a downstream receptor, for which the Environment Agency is the regulating authority for flood risk (Ref 228). All other watercourses are 'ordinary watercourses' managed by the LLFA or Romney Marshes Area IDB (RMAIDB).
- 10.5.18 Many of the watercourses in **Table 10-2** have been classified using online IDB maps, however due to the nature of the area, some of the hydrological connections cannot be established. **Table 10-2** provides a best estimate of the watercourses in the study area. This will be clarified at a later phase during consultation with the RMAIDB, LLFA and the EA, and following a site walkover.

Table 10-2: Surface Water Features within the study area or potentially impacted by the Proposed Development

SURFACE WATER FEATURE	DESCRIPTION	CONSIDERED FOR ASSESSMENT?
New Sewer	The New Sewer is a Main River and WFD waterbody (New Sewer at New Romney, GB107040013840). The New Sewer headwaters are Sedbrook Sewer and Engine Sewer, both arising south of Royal Military Canal. The New Sewer flows in an easterly direction through the study area to discharge to the English Channel at St Marys Bay. The 'New Sewer' enters the DCO Site Boundary at TR 02035 26174, flows for approximately 2.7 km and exits at TR 04536 26530. Two Ordinary Watercourse tributaries also labelled as New Sewer by the IDB. These two tributaries both originate within the study area: 'New Sewer Ivychurch Arm' and 'New Sewer Old Romney Arm'. The entirety of 'New Sewer Old Romney Arm' flows through the DCO Site Boundary, for a distance of approximately 870 m from TR 02700 25668 to its confluence with the New Sewer at TR 02248 26155. The 'New Sewer Ivychurch Arm' originates in the village of Ivychurch and joins the New Sewer at TR 02258 26162, having flowed south for 2.1 km.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Brenzett Sewer (tributary of New Sewer)	The Brenzett Sewer is an IDB watercourse with five branches, all of which originate in Romney Marsh in the region of Brenzett Village and Ivychurch Village. The Brenzett Sewer is a tributary of the New Sewer and confluence at different points along the Abbatridge Sewer/New Sewer. The sewers all flow in a south-westerly direction towards Brenzett Village. One branch of the Brenzett Sewer flow through the study area, the '3rd Brenzett' crosses the DCO Site Boundary at two points, flowing south. It flows for approximately 700 m through the DCO Site Boundary from TR0415527089 to TR0394226420 where it joins the New Sewer. The branch of '3rd Brenzett' lies within both the Romney Marsh between Appledore and West Hythe and New Sewer at New Romney (ID: GB107040013480) water body catchments. The downstream reach of the '3rd Brenzett' is a Main River, from the study area boundary to the Ashford Road, other than this stretch, the Brenzett Sewer is an IDB Ordinary Watercourse.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Wallingham Sewer (tributary of New Sewer)	The Wallingham Sewer in its upstream section is an IDB ordinary watercourse, it turns into a Main River at TR 05456 25090. It is a tributary of the New Sewer and lies fully within the 'New Sewer at New Romney' water body catchment. Its extent lies mainly within the study area, it reaches a confluence on the New Sewer at TR 06532 26251, this point lies 12 m outside the study area. The IDB section of the sewer is labelled 'Wallingham Lesser Sewer' and flows east for 1.8 km towards New Romney Town. This section also runs alongside part of the DCO Site Boundary, from TR 03855 25394 to TR 04823 25272, for a distance of 1 km. The rest of the sewer lies within the study area but away from the DCO Site Boundary.	Yes - flows alongside DCO Site Boundary with hydrological connectivity to the Proposed Development.
Sheaty Sewer (Bilsington Sewer tributaries)	The Sheaty Sewer is an IDB watercourse with four branches, all of which originate in Romney Marsh between the villages of Newchurch and New Romney. These are all tributaries of the Bilsington Sewer, which discharges to the English Channel at Dymchurch, and flow in a generally east direction to the confluence with Bilsington Sewer. One	Yes - flows alongside DCO Site Boundary with hydrological connectivity to the Proposed Development.

SURFACE WATER FEATURE	DESCRIPTION	CONSIDERED FOR ASSESSMENT?
	branch of the Sheaty Sewer flows through the study area, the '1st Sheaty Lesser Sewer' flows alongside the northernmost edge of the DCO Site Boundary at TR 04700 27012. The '1st Sheaty Lesser Sewer' branch falls within both the Romney Marsh between Appledore and West Hythe and New Sewer at New Romney waterbody catchments and is an IDB Ordinary Watercourse.	
White Kemp Sewer	The White Kemp Sewer is a Main River that mapping indicates arises to the South of Old Romney, within the DCO Site Boundary. White Kemp Sewer flows in a western directly and then south-westerly direction to flow into the Union Canal west of the DCO Site Boundary, which then flows into the River Rother. Online mapping indicates that there may be some interaction with Jury's Gut Sewer, however this is to be confirmed prior to the future assessment. The sewer flows west through the DCO Site Boundary. It has numerous named tributaries and is a Main River. It is located within the 'Lower Rother from Etchingham to Scot's Float' water body catchment (GB107040013640). It flows for nearly 4 km through the DCO Site Boundary between TR 01579 24364 and TR 03933 23453.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Cutter's Bridge Petty Sewer (tributary of White Kemp Sewer)	The Cutter's Bridge Sewer is an IDB watercourse made up of two stems, both of which lie within the DCO Site Boundary. This ordinary watercourse flows for a combined distance of 2.5 km through the southwest corner of the DCO Site Boundary. The two tributaries, 'Cutters Bridge Petty Sewer' and 'Cutters Bridge' merge at TR 01343 23775, before reaching the White Kemp Sewer at TR 01131 23854. Both tributaries are located fully in the 'Lower Rother from Etchingham to Scot's Float' water body catchment.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Coldharbour Petty Sewer (tributary of White Kemp Sewer)	Coldharbour Petty Sewer is an IDB watercourse located within the 'Lower Rother from Etchingham to Scot's Float' water body catchment. It is made up of one channel, which first flows north before turning around 90 degrees to travel east towards the DCO Site Boundary. At no point does the Coldharbour Sewer enter the DCO Site Boundary (however its tributaries do) and is therefore a downstream receptor, flowing within 80 m at its nearest point. Coldharbour Sewer reaches a confluence with the Millbank Sewer at TR 01946 25081, a point which lies within the Sycamore Farm Solar Farm.	Yes - within study area with hydrological connectivity to the Proposed Development via drainage ditches / tributaries.
Millbank Sewer (tributary of White Kemp Sewer)	Millbank Sewer is an IDB watercourse which rises just south of the Lydd Road at TR 02471 25594, it flows south for approximately 1450 m, entering the DCO Site Boundary at TR 02001 25038. Millbank Sewer is located fully within the 'Lower Rother from Etchingham to Scot's Float' water body catchment. The sewer flows into Coldharbour Petty Sewer, which then flows into the White Kemp Sewer at TR 01846 24689.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Oliver House Petty Sewer (tributary of White Kemp Sewer)	The Oliver House Sewer is an IDB watercourse which originates within the DCO Site Boundary at TR 02594 23533, just north of the rail line. It lies wholly within the 'Lower Rother from Etchingham to Scot's Float' water body catchment and flows north for around 1 km to a confluence with the White Kemp Sewer at TR 02977 24235. The entire length of the sewer lies in the DCO Site Boundary.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.

SURFACE WATER FEATURE	DESCRIPTION	CONSIDERED FOR ASSESSMENT?
Baynham Petty Sewer (tributary of White Kemp Sewer)	The Baynham Petty Sewer is an IDB watercourse located wholly within the south west corner of the study area. The sewer lies entirely within the 'Lower Rother from Etchingham to Scot's Float' water body catchment. It originates at TR 00778 23452 flowing west, then turning to flow north towards the White Kemp Sewer. The Baynham Sewer reaches a confluence with the White Kemp Sewer at TR 00531 23782. The sewer is approximately 700 m in length.	Yes - within study area with hydrological connectivity to the Proposed Development via drainage ditches / tributaries.
Jury's Gut Sewer	The Jury's Gut Sewer is a Main River that arises south of New Romney, potentially within the DCO Site Boundary, and flows in a southerly direction to the English Channel at Jury's Gap. It is within the 'White Kemp and Jury's Gut Sewer' waterbody catchment (GB107040013470). The interaction between White Kemp Sewer is not known and will be investigated prior to the future assessment.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Caldecot Petty Sewer (tributary of Jury's Gut Sewer)	The Caldecot Petty Sewer is an IDB watercourse which rises at TR 01846 24689, near the Town of New Romney and flows generally southwest for approximately 2.7 km before reaching a confluence with the Jury's Gut Sewer at TR 03869 23372. It lies across two water body catchments, the 'White Kemp and Jury's Gut Sewer' and 'Dengemarsch Sewer' catchments. Caldecot Sewer crosses a small section of the DCO Site Boundary, entering at TR 04977 24583 and exiting at TR 04863 24483, flowing for around 165 m within the DCO Site Boundary.	Yes - within DCO Site Boundary with hydrological connectivity to the Proposed Development.
Kemps Hill Sewer (tributary of Jury's Gut Sewer)	Kemps Hill Sewer is an IDB watercourse which originates within the study area at TR 05834 24160, near New Romney, it joins the Caldecot Sewer at TR 04042 23420 and flows southwest for approximately 2.2 km. It lies across two water body catchments, the 'White Kemp and Jury's Gut Sewer' and 'Dengemarsch Sewer' catchments. At no point does the Kemps Hill Sewer enter the DCO Site Boundary.	Yes - within study area with hydrological connectivity to the Proposed Development via drainage ditches / tributaries.
Tore Petty Sewer (tributary of Jury's Gut Sewer)	The Tore Petty Sewer is an IDB watercourse which lies partially within the study area. It originates at TR 02114 23167, just south of Midley Wall Road and Lydd Model Flying Club. Within the study area, Tore Petty Sewer is within the 'Waland Marsh at East Guldeford' water body catchment', flowing generally southeast for around 1.4 km. Tore Petty Sewer joins the Jury's Gut Sewer outside of the study area at TR 02125 20734	Yes - within study area with hydrological connectivity to the Proposed Development via drainage ditches / tributaries.
Prospect Petty Sewer (tributary of Jury's Gut Sewer)	Prospect Petty Sewer is an IDB watercourse which flows west for approximately 750 m in the southeastern portion of the study area. Approximately half of the sewer is located within the study area, this includes its confluence with the Kemps Hill Sewer at TR 04766 23358. The entire sewer is within the 'White Kemp and Jury's Gut Sewer' water body catchment.	Yes - within study area with hydrological connectivity to the Proposed Development via drainage ditches / tributaries.
Royal Military Canal (RMC)	The RMC is a WFD waterbody and designated Main River which flows east for around 22 km. It is a WFD designated artificial water body (the 'Romney Marsh between Appledore and West Hythe Water Body', WFD ID GB107040019700)	Yes – major receptor in the area with hydrological

SURFACE WATER FEATURE	DESCRIPTION	CONSIDERED FOR ASSESSMENT?
	and has a catchment of 51.9 km ² . It terminates at TR 18828 34895 within the coastal town of Seabrook. It flows approximately 6 km to the west and north of the study area and is a major receptor in Romney Marsh.	connectivity to the Proposed Development via drainage ditches / tributaries.
English Channel	All watercourses in the study area ultimately flow into the English Channel either at St Mary's Bay, Littlestone on Sea, Dymchurch, via the River Rother or Jury's Gap. These outputs flow into either the Kent South WFD waterbody (ID: GB640704540001) or the Sussex East WFD waterbody (ID: GB640704540002). Both water bodies are described as heavily modified and have a surface area of 131.49 km ² and 247.95 km ² respectively.	No - despite having potential hydrological connectivity to the Proposed Development, the distance downstream and its large scale (with significant dilution and dispersal potential) would rule out any significant impacts from the Proposed Development. Mitigation measures applied to protect watercourses will also reduce any risk.

- 10.5.19 In addition to those water features listed in **Table 10-2**, there are numerous unnamed Ordinary Watercourses located throughout the study area (see **Figure 10-1: Surface Water Features and their Attributes**).
- 10.5.20 From the desk study, there are no notable ponds, lakes or other lentic habitats identified within the study area, other than small agricultural ponds. Potential impacts on ponds would be covered in **Chapter 9: Ecology and Biodiversity**.
- 10.5.21 There are no flow gauging sites within the study area or 5 km upstream or downstream of the DCO Site Boundary (Ref 239). Due to the nature of the majority of the watercourses, it can be assumed that all drains and ditches experience a low flow and may experience tidal locking under some tidal conditions.

Hydromorphology

- 10.5.22 The study area consists of a network of drainage channels. The most notable WFD waterbody that would interact with the Proposed Development is the 'New Sewer at New Romney Water Body' (GB107040013480). The DCO Site Boundary flanks this Water Body at both the northern and southern edge of the banks (**Figure 10-1: Surface Water Features and their Attributes**). There is substantial evidence of historic anthropogenic modification to this Water Body. It is a single-thread, low sinuous and morphologically homogenous river that is disconnected from the floodplain. The channels appear to be generally trapezoidal, and from aerial imagery, appears to have low hydrological variance with generally slow-moving water. The presence of aquatic plants extending across the width of the channel, commonly associated with lentic-type habitats support this.
- 10.5.23 The Water Body is positioned below the land, due to the over-deep form maintained by artificial confinement. It is not known of the substrate character; however, it is assumed to consist of fine sands and silts with the latter derived predominately from catchment-wide intensive agriculture and urbanisation noted within the region. The adjacent riparian zone is severely depleted. The banks, which at places consist of intentional embankment formation, are maintained for the purposes of flood management and land drainage which limits the potential for the development of a high-functioning riparian zone. This seems to improve closer to 'Kent South Water Body' where complex tree species are present.
- 10.5.24 The study area was not glaciated during the Quaternary Period and therefore there is little in terms of heterogenous sediment fill and availability; the superficial geology deposits show tidal flat deposits consisting of sand, silts and clay. The lack of alluvium deposits suggests that watercourses within the study area are typically passive systems and are unlikely to actively re-work or transport coarse sediment under current conditions. However, due to reduced sediment budgets, any increase in flow energy associated with drainage, channel modification, or catchment disturbance may lead to more localised and potentially widespread scouring of channel beds and banks.

- 10.5.25 Soil parent materials generally consist of clay to clayey loam and sand to loam with spring lines and perched aquifers common. As such, the study area is assumed to be naturally wet and boggy and consistent with wet brackish coastal flood meadows. As such, the abundance of drains is to improve suitability for agriculture and again, suggests they are of limited hydromorphological variation or value.
- 10.5.26 The study area interacts with other WFD River Water Body Catchments (refer to **Table 10-3**) and by means of hydrologic connectivity via drainage ditches has the potential to impact further downstream. 'Kent South Water Body' and 'Sussex East Water Body' are notable for being the furthest downstream receptors.

WFD Classification

- 10.5.27 The study area interacts with six WFD River Water Body Catchments and is with hydrological connection to two Coastal Water Bodies, the extent of these catchments is shown in **Figure 10-1: Surface Water Features and their Attributes**. An overview summary of their current WFD status and classification is provided in **Table 10-3**.
- 10.5.28 The study area is located within the Kent Romney Marsh Groundwater Body (GB40702G503900) (Ref 247) which is classified as having Poor overall status due to pollution from rural areas. The quantitative status is good, whereas the Chemical (GW) status is poor.

Table 10-3: WFD Water Bodies potentially impacted by the Proposed Development (Cycle 3, 2022)

WFD WATERBODY AND ID	MANAGEMENT CATCHMENT	OPERATIONAL CATCHMENT	TYPE	DESIGNATION	STATUS	
'New Sewer at New Romney Water Body' (GB107040013480)	Rother	Reading Cradlebridge and RMC	River	Artificial	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Bad)
					Chemical	Does not require assessment
					Hydromorphology	Not high
					Target Status	Good 2027-Low confidence
'White Kemp and Jury's Gut Sewer Water Body' (GB107040013470)	Rother	Romney Marsh South	River	Artificial	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Good)
					Chemical	Does not require assessment
					Hydromorphology	Not high
					Target Status	Good 2027- Low confidence
'Lower Rother from Etchingham to Scot's Float Water Body' (GB107040013640)	Rother	Rother Levels	River	Heavily Modified	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Good)
					Chemical	Does not require assessment
					Hydromorphology	Not high
					Target Status	Moderate 2015
'Dengemarsh Sewer Water Body' (GB107040013450)	Rother	Romney Marsh South	River	Artificial	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Good)
					Chemical	Does not require assessment
					Hydromorphology	Not high
					Target Status	Moderate 2015
'Walland Marsh at East Guldeford Water Body' (GB107040013420)	Rother	Romney Marsh South	River	Artificial	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements High)
					Chemical	Does not require assessment
					Hydromorphology	Not high

WFD WATERBODY AND ID	MANAGEMENT CATCHMENT	OPERATIONAL CATCHMENT	TYPE	DESIGNATION	STATUS	
					Target Status	Moderate 2015
'Romney Marsh between Appledore and West Hythe Water Body' (GB107040019700)	Rother	Reading Cradlebridge and RMC	River	Artificial	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Good)
					Chemical	Does not require assessment
					Hydromorphology	Not high
					Target Status	Moderate 2015
'Kent South Water Body' (GB640704540001)	South East TraC	Kent East Coast	Coastal Water	Heavily Modified	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Good)
					Chemical	Does not require assessment
					Target Status	Good 2027- Low confidence
'Sussex East Water Body' (GB640704540002)	South East TraC	East Sussex Coast	Coastal Water	Heavily Modified	Overall	Moderate
					Ecology	Moderate (Biological Quality Elements Good)
					Chemical	Does not require assessment
					Target Status	Good 2027- Low confidence
Kent Romney Marsh (GB40702G503900)	South East GW	Kent Romney Marsh	Ground-water	N/A	Overall	Poor
					Quantitative	Good
					Chemical (GW)	Poor
					Target Status	Good 2040

Water Quality

- 10.5.29 This section sets out the baseline water quality monitoring data that is publicly available pertaining to the study area.
- 10.5.30 Baseline water quality is accessible via the Environment Agency's Water Quality Explorer website (Ref 225). There are two water quality monitoring stations within the study area located on relevant water bodies and a further six located outside the study area. Details of these stations are given in **Table 10-4**. In the case of this Proposed Development, no new water quality monitoring is being proposed, data will be utilised from the identified monitoring stations.
- 10.5.31 The importance of water features will be determined from a holistic review of water body features and does not rely on water quality due to the principle that no controlled water may be polluted. Water quality impacts will be based on a risk assessment basis that does not require input of raw background water quality data. Therefore, no water quality sampling is proposed to support the water environment assessment.

Table 10-4: Summary of water quality monitoring stations relevant to the Proposed Development

FIGURE ID	WATERCOURSE	SAMPLING POINT	ID	COMMENT	SUMMARY
WQ1	Tributary of White Kemp Sewer	Old Romney Sewage Works	SO-E0001529	Within DCO Site Boundary, behind residential properties on Elm Fields Road, NGR: TR0312424916	Single sample from March 2025 of final effluent
WQ2	White Kemp Sewer	Midley Wall Bridge	SO-E0007392	Within study area, south of Old Romney, NGR: TR0302022374	Single sample February 2025 testing for pH, temperature, conductivity, ammonia, nitrogen, nitrate, nitrite, alkalinity, orthophosphate, salinity, dissolved oxygen
WQ3	Royal Military Canal	Royal Military Canal Bilsington	SO-E0001479	Approximately 6km north of the study area, next to Newchurch road bridge over Royal Military Canal, NGR: TR0410533896	Two samples from February and March 2025, testing for same parameters as 'Midley Wall Bridge'
WQ4	Sheaty Sewer	Wades Close Sewage Treatment Works, Adjacent To Star Inn, St Mary-In-The-Marsh, Romney Marsh (Formerly Housing Development STW)	SO-E0009754	Located within 2 km of DCO Site Boundary, in St Mary in the Marsh Village, NGR: TR0647427966	Single sample from May 2025 of final effluent
WQ5	New Sewer	New Sewer Winford Bridge	SO-E0007057	Located within 2 km of DCO Site Boundary, along St Mary's Road, NGR: TR0707526654	Three samples from January, February and March 2025 testing for same parameters as 'Midley Wall Bridge'
WQ6	St Mary's Bathing Water	St Marys Bay Beach Bathing Water Survey Station (13700)	SO-E0000101	Located at NGR: TR0930227702 at St Mary's Bay Bathing Water	21 samples taken from May to September 2025, testing E.Coli, temperature and salinity.
WQ7	Littlestone Bathing Water	Littlestone Beach Bathing Water Survey Station (13800)	SO-E0000102	Located at NGR: TR0840123901 at Littlestone Bathing Water	27 samples from February to September 2025, testing pH, salinity, E.Coli, temperature, conductivity and dissolved oxygen.
WQ8	Dymchurch Bathing Water	Dymchurch EC Bathing Water (Site Moved From E0000099) (13600)	SO-E0004745	Located at NGR: TR1024229299 at Dymchurch Bathing Water	31 samples from February to September 2025, testing pH, salinity, E.Coli, temperature, conductivity and dissolved oxygen.

- 10.5.32 There are three designated bathing waters located downstream of the Proposed Development; Littlestone-on-Sea, St Mary's Bay and Dymchurch. Both Littlestone and Dymchurch have poor water quality with bathing not recommended according to the 2025 classifications. Additionally, both of these bathing water profiles list pollution from nearby drains as a possible issue. St Mary's Bay has 'sufficient' water quality meaning bathing is permitted (Ref 238). Littlestone-on-Sea bathing water lies approximately 1.4 km from the sewer outlet; St Mary's Bay lies approximately 400 m and Dymchurch lies approximately 200 m from their respective sewer outlets.
- 10.5.33 Due to the levels of dilution in the bathing waters, they will not be considered in further assessments, in line with the decision made on the English Channel in the Surface Water Features Section.

Water Resources, Abstractions and Discharges

- 10.5.34 There is a Drinking Water Protected Area (DrWPA) that crosses the southern half of the DCO Site Boundary. The Lower Rother from Etchingam to Scot's Float DrWPA (ID: SWSGZ4221) covers nearly all of the DCO Site Boundary south of Lydd Road and is at risk from pesticides. Due to the nature of this Proposed Development, pesticide levels are unlikely to be affected.
- 10.5.35 There are no Drinking Water Safeguard Areas (DrWSA) within the study area. The study area there is covered by one Abstraction Licensing Strategy, the Rother Abstraction Licensing Strategy (Ref 240). This shows the water resource available 95% of the time in the northern section of the DCO Site Boundary and 50% in the southern section.
- 10.5.36 No information is available at this scoping phase regarding specific licensed or unlicensed (i.e. PWS) abstractions and consented discharges to/from the surface water and groundwater environment. However, this will be requested from the Environment Agency and third parties for inclusion at a later phase of assessment.
- 10.5.37 There are no Nitrate Vulnerable Zones within or in the vicinity of the study area, the nearest being approximately 7.3 km northwest of the study area (Ref 230). There are no Source Protect Zone (SPZ) within the study area. The closest SPZ is located approximately 2.8 km southeast of the study area.

Internal Drainage Boards

- 10.5.38 The study area is contained wholly within one IDB, the RMAIDB. The RMAIDB district covers the area in Kent and East Sussex broadly situated between Hythe to the east, Cliff End near Pett to the south, Heathfield to the west and Tenterden to the north (Ref 229).

Nature Conservation Sites and Protections

- 10.5.39 This section describes the statutory sites designated for nature conservation that are relevant to the water environment. For further information relating to ecology, refer to **Chapter 9: Ecology and Biodiversity**.

- 10.5.40 Within the study area is there one water dependent designated site, the Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI). At its nearest point, this SSSI lies approximately 670 m south of the DCO Site Boundary and is hydrologically linked by the Kemps Hill Petty Sewer and the White Kemp Sewer (**Figure 10-1: Surface Water Features and their Attributes**). This is a nationally important site due to a diverse range of biological and geological features, specifically the coastal geomorphology of Dungeness and Rye Harbour and the following nationally important habitats: saltmarsh, sand dunes, vegetated shingle, saline lagoons, standing waters, lowland ditch systems, and basin fen..
- 10.5.41 Dungeness, Romney Marsh and Rye Bay SSSI is also classified by the Environment Agency as a Groundwater Dependent Terrestrial Ecosystem (GWDTE).
- 10.5.42 Additionally, there are three other statutory sites in the vicinity of the study area, the Dungeness Special Area of Conservation (SAC) and the Dungeness, Romney Marsh and Rye Bay Ramsar and Special Protection Area (SPA).
- 10.5.43 The SAC lies approximately 1.8 km from the study area at its nearest point and is designated for its Annex I habitats (annual vegetation of drift lines and perennial vegetation of stony banks) and Annex II species (Great crested newt (GCN) *Triturus cristatus*). The SAC is hydrologically linked to the study area via various drains and ditches.
- 10.5.44 Both the Dungeness, Romney Marsh and Rye Bay Ramsar site and the SPA site lie approximately 600 m away from the study area at the nearest point. The SPA is designated for a range of aquatic birds including the Aquatic Warbler, Avocet, Bewick's Swan and Marsh Harrier. The Ramsar site is designated for its representative, rare and/or unique examples of natural and near-natural wetland types. This includes annual vegetation of drift lines and the coastal fringes of perennial vegetation of stony banks, and natural shingle wetlands such as, saline lagoons, freshwater pits and basin fens. Both the SPA and Ramsar site are hydrologically connected to the DCO Site Boundary by various drains and ditches. These will not be assessed as separate receptors, however, will decide on the importance of each of the drains and ditches, and as such are scoped in and will be assessed for the future assessment.
- 10.5.45 There are no Nutrient Neutrality Catchments, designated shellfish waters or chalk rivers within or in the vicinity of the study area. As such, these will be scoped out of future assessments from a water environment perspective.

Flood Risk from all Sources

- 10.5.46 Section 14 of the NPPF (Ref 8) and the 2025 Flood Risk and Coastal Change NPPG (Ref 208) both advise how the planning process can take account of the risks associated with flooding. The main sources of flooding that are used to steer development at the planning phase are Main Rivers and the sea. The predicted flood risk from these sources are shown on the Environment Agency's Flood Map for Planning (Ref 226) which outlines three main zones of risk as follows:

- **Flood Zone 1 ‘low probability of flooding’:** This zone comprises land assessed as having a less than 0.1% annual exceedance probability (AEP) of river or tidal flooding;
- **Flood Zone 2 ‘medium probability of flooding’:** This zone comprises land assessed as having between a 1% and 0.1% AEP of river flooding, or between a 0.5% and 0.1% AEP of tidal flooding;
- **Flood Zone 3a ‘high probability of flooding’:** This zone comprises land assessed as having a 1% or greater AEP of river flooding, or a 0.5% or greater AEP of tidal flooding; and
- **Flood Zone 3b ‘functional floodplain’:** A sub-part of Flood Zone 3, this zone comprises of land having a 3.3% or greater AEP of flooding, with existing flood risk management features and structures operating effectively, or land that is designed to flood (such as a flood attenuation Proposed Development), even if it would only flood in more extreme events (such as 0.1% AEP). This zone is not included within the Environment Agency Flood Map for Planning and is calculated where necessary during detailed hydraulic modelling.

10.5.47 The NPPF dictates what development is suitable within each Flood Zone based upon the level of vulnerability of the development which is shown in **Table 10-5**. The vulnerability classifications suggest the Proposed Development is considered to be ‘Essential Infrastructure’.

Table 10-5: Flood Risk Vulnerability and Flood Zone Incompatibility

FLOOD RISK VULNERABILITY CLASSIFICATION	ESSENTIAL INFRASTRUCTURE	WATER COMPATIBLE	HIGHLY VULNERABLE	MORE VULNERABLE	LESS VULNERABLE
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	✓	Exception Test Required	✓	✓
Zone 3a	Exception Test Required ⁶	✓	X	Exception Test Required	✓
Zone 3b	Exception Test Required ⁷	✓	X	X	X

Key:

✓ Exception test is not required

X Development should not be permitted

10.5.48 In accordance with **Table 10-5**, the construction of Essential Infrastructure is permitted in Flood Zones 1 and 2, and an Exception Test is required for Flood Zones 3a and 3b. As well as fluvial and tidal flooding, it is also necessary to consider flood risk from all other sources, including surface water,

⁶ In Flood Zone 3a essential infrastructure should be designed and constructed to remain operational and safe in times of flood.

⁷ In Flood Zone 3b essential infrastructure that has passed the Exception Test, should be designed and constructed to: remain operational and safe for users in times of flood, result in no net loss of floodplain storage, and not impede water flows and not increase flood risk elsewhere.

groundwater, Ordinary Watercourses, artificial drainage systems and infrastructure failure.

10.5.49 The flood risk for the Proposed Development from all sources is summarised in **Table 10-6. Figure 10-4: Fluvial and Tidal Flood Risk** shows the flood zones associated with fluvial and tidal sources while **Figure 10-5: Surface Water Flood Risk** shows the risk from surface water.

Table 10-6: Flood Risk from all Sources

FLOOD RISK SOURCES	COMMENTS
Tidal	From a review of the Environment Agency's Flood Map for Planning (Ref 226), the majority of the DCO Site Boundary is situated within Flood Zones 2 and 3 which is associated with flooding from the sea. There are some small, isolated areas of the DCO Site Boundary which are located within Flood Zone 1. It should be noted that the Environment Agency Flood Zones do not take into account the presence of flood defences. When reviewing the Environment Agency's Long Term Flood Risk Map (Ref 227) which shows flooding from rivers and the sea taking into account flood defences, it shows that the Proposed Development is situated within areas which are considered to have a very low chance of flooding (less than 0.1% AEP). According to the Environment Agency's Asset Information and Management dataset (Ref 242), the flood defences in the area consist of a series of flood walls and embankments situated along the coast. These have a design Standard of Protection of between 1% and 0.5% AEP. Hydraulic modelling data will be requested from the Environment Agency to confirm the tidal flood risk, including the relevant climate change allowances. This will be detailed within a site-specific Flood Risk Assessment (FRA) at later phases of assessment.
Tidal – Residual Risk	There is a residual risk of tidal flooding to the Proposed Development if the flood defences are breached. The Environment Agency will be contacted to request modelled breach results as part of a site-specific FRA.
Fluvial	The White Kemp Sewer Main River flows west to east through the south of the DCO Site Boundary and the New Sewer Main River flows west to east through the north of the DCO Site Boundary. A number of land drains are also located across the DCO Site Boundary, which are regulated by the RMAIDB. According to the Flood Map for Planning (Ref 226), the majority of the DCO Site Boundary are situated within Flood Zones 2 and 3. The Flood Map for Planning (Ref 226) does not specify whether the flood risk arises from tidal or fluvial sources and instead shows a combined risk from both sources. The Flood Zones on the Flood Map for Planning (Ref 226) at the study area appear to be associated with tidal sources, and as a result, the fluvial flood risk to the Proposed Development is currently unknown. Data will be requested from the Environment Agency, Kent County Council (as LLFA) and RMAIDB to confirm the fluvial risk from surrounding watercourses, which will be detailed within a site-specific FRA.
Surface Water	From a review of the Environment Agency's Long Term Flood Risk Map (Ref 227), the risk of surface water flooding across the DCO Site Boundary is generally very low to low. There are isolated areas at low, medium and high risk of flooding, however, these areas are likely associated with areas of low topography where surface water sits and pools rather than draining away or show areas at risk of flooding from local land drains. High risk means that the area has a chance of flooding of greater than 3.3% each year, and medium risk means that the area has a chance of flooding of between 1% and 3.3% each year. Low risk means that the area has a chance of flooding of between 0.1% and 1% each year, and very low risk means that the area has a chance of flooding of less than 0.1% each year.

FLOOD RISK SOURCES	COMMENTS
Groundwater	With regards to groundwater flood risk, the Shepway Phase II SFRA (Ref 201) states that the whole of the Shepway district, including the DCO Site Boundary, is located within a low risk area. It should be noted that the high level mapping used for this assessment does not take into account the more localised causes of groundwater flooding that can be associated with low-lying land. Further understanding of groundwater levels across the DCO Site Boundary will be ascertained from information requests to the Environment Agency and from future ground investigations.
Sewers	All areas of the Proposed Development are located in rural areas, however where areas are located adjacent to a highway/settlement there is potential for flooding from sewer sources. Southern Water and Kent County Council will be contacted for sewer flooding records at later phases of assessment.
Reservoirs	From a review of the Environment Agency's Long Term Flood Risk Map (Ref 227), the Proposed Development is not located in an area expected to flood from reservoirs when river levels are normal, or when there is also flooding from rivers.

10.6 Potential Effects and Mitigation

10.6.1 This section sets out the potential effects of the Proposed Development on the water environment, flood risk and drainage.

10.6.2 Mitigation measures relevant to **Chapter 10: Water Environment** are set out below and included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Construction

10.6.3 During construction the following adverse impacts have the potential to occur if not mitigated:

- Pollution of surface water or groundwater due to deposition or spillage of soils, sediments, oils, fuels, or other construction chemicals, through uncontrolled site run-off including dewatering of excavations or piling, or the risk of a 'break-out' event if using horizontal directional drilling (HDD) to install cables beneath a watercourse;
- Temporary impacts on the hydromorphology of watercourses from open-cut watercourse cable crossings or temporary vehicle access crossings as may be required;
- Potential impact on localised and potentially widespread scouring of channel beds and banks from increased flows associated with drainage, channel modifications or change of flow pathways;
- Temporary changes in flood risk from changes in surface water runoff (e.g. disruption of stream flows during any potential culvert construction works), and exacerbation of localised flooding, due to deposition of silt, sediment in drains, ditches;
- Potential impact on flood conveyance routes if materials are stored within the floodplain;
- Potential change in flood risk as a result of cables crossing any watercourses, depending on the crossing method;

- Potential impact on groundwater flood risk whilst laying any underground cables;
- Potential impacts on groundwater resources and local water supplies (licenced and unlicenced abstractions) and potentially the baseflow to watercourses/ groundwater dependent features from temporary dewatering of excavations, emplacement of sub-surface structures or changes in hydrology; and
- Potential for impact of foul drainage/ water supply in the study area from services at construction compounds and water demand during construction.

Operation

10.6.4 During the Proposed Development operational phase, the following water environment, drainage, and flood risk impacts may occur:

- Impacts on water quality in watercourses and groundwater from run-off and the potential for accidental spillages from new permanent hardstanding and maintenance activities, assuming surface water run-off ultimately drains to a surface watercourse rather than simply to ground;
- Potential for impact on groundwater or surface water from firewater runoff in the event of a fire in the battery storage areas or other electrical infrastructure;
- Potential impacts on surface water hydrology as a result of the Proposed Development. This may also have a subsequent effect on aquatic habitats and water-dependent nature conservation sites;
- Potential for permanent physical impacts to watercourses if crossings are required for permanent access and depending on the design of the structure used;
- Potential impacts on the rate and volumes of surface water run-off entering local watercourses and increasing the risk of flooding;
- Impediment and alteration of groundwater flow regime arising from foundations and subsurface structures, resulting in groundwater mounding up the hydraulic gradient and reduced groundwater levels down hydraulic gradient;
- Migration of contaminants following preferential pathways provided by the foundations of structures to non-contaminated soils, geology and groundwater;
- If the FRA confirms that the DCO Site Boundary is located in Flood Zones 2 and 3 associated with fluvial sources, there may be potential change in fluvial flood risk off site and to third parties;
- Potential flooding of Proposed Development elements such as BESS, substations and panels if not appropriately designed so they are not at risk of flooding from tidal/fluvial sources;
- Potential for impact of foul drainage/ water supply in the study area due to the offices/ maintenance facilities required as part of the Proposed Development, water supply for fire-fighting and/ or requirement for regular PV panels cleaning;

- The current arable fields are likely treated with fertiliser and pesticides. During the life of the Proposed Development the use of such chemicals would be ceased or reduced which would lead to potential beneficial impacts on the water environment; and
- Potential impacts on groundwater resources and local water supplies, which may include reduced irrigation demand which might lead to improvements in flow regime, especially during the summer.

10.6.5 There is a potential risk that heat generated by the buried cables could affect groundwater quality. To prevent overheating or mutual heating effects, the cables are typically spaced approximately 0.3 – 1 m apart. Groundwater within the superficial deposits occurs in laterally discontinuous lenses with limited movement, meaning any thermal effects from the cables would remain confined to the immediate area. As no wider impact pathway exists, this potential effect has been scoped out.

Decommissioning

10.6.6 During decommissioning, potential impacts would be similar to the construction phase, although it is anticipated that the power cables may be left in situ beneath watercourses and there would be less excavation works required close to watercourses. There may also be some additional wastewater in pipework of above ground installations that would need to be removed, tested, and potentially treated as waste rather than discharged to a watercourse or to the ground.

Mitigation

10.6.7 Where practicable, mitigation measures will be incorporated into the Proposed Development design and/or how it shall be constructed. Through iterative assessment, potential impacts will be predicted and opportunities to mitigate them identified with the aim of preventing or reducing impacts as far as practicable. This approach provides the opportunity to prevent or reduce potential adverse impacts from the outset. This embedded mitigation/mitigation by design approach will be taken into account when evaluating the significance of the potential impacts of the Proposed Development.

10.6.8 During the construction phase, standard pollution prevention and construction good practices would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures would be included in an Outline Construction Environmental Management Plan (OCEMP), which will be prepared as part of the DCO application. The OCEMP would be developed into a detailed (or construction issue) CEMP by the appointed construction Contractor prior to the start of construction. In addition, the following mitigations may apply:

- It is anticipated that monitoring of watercourses at risk of pollution during the construction phase will be required;
- It would be a requirement that all watercourses are reinstated following construction based on a pre-works Riparian and Hydromorphological

Survey. At this phase it is assumed that water required for construction would be either connected to mains water supply or otherwise potable water would be supplied from another commercial source. Water for construction could also be augmented by rainwater harvesting (e.g. for haul road dust suppression). It is also assumed that foul drainage from temporary compounds would be connected to the Public Sewer or otherwise captured by a sealed cesspit or tank for offsite disposal. No new abstractions or discharges of foul wastewater to surface or groundwater are proposed. If this changes then relevant abstraction and discharge licences would be obtained where required, following consultation with relevant authorities;

- As a worst case, it is assumed that any cable crossings of the principal watercourse (such as Main Rivers, e.g. White Kemp Sewer and New Sewer) crossed by the Proposed Development would be below ground and installed using non-intrusive techniques beneath the bed at a sufficient depth to avoid exposure. Crossings of other drainage features would be risk assessed on a case-by-case basis as the assessment progresses. Consultation with the Environment Agency, LLFAs and IDBs is required to agree the design of any required watercourse crossing structures;
- Any access crossings of the principal watercourse (such as Main Rivers, e.g. White Kemp Sewer and New Sewer) would be a clear span structure. Crossings of other drainage features would be risk assessed on a case-by-case basis as the assessment progresses. Temporary access structures would apply the following hierarchy: (1) use existing; (2) use existing modified as necessary; (3) temporary clear span crossing; (4) suitably designed culvert. Consultation with the Environment Agency, LLFAs and IDBs is required to agree the design of any required watercourse crossing structures;
- The nature of the Proposed Development means there would be limited physical disturbance of aquifers and groundwater. The need for piling or non-intrusive techniques for permanent above ground infrastructure has yet to be determined but will be confirmed in the ES;
- Should dewatering be required during construction works, necessary permits and approvals will be obtained prior to works commencing;
- If the FRA identifies a risk of flooding across the DCO Site Boundary, construction compounds and material/ plant storage will be located in outside of areas susceptible to flooding where possible, and have in place emergency flood response procedures; and
- Where not disapplied by the DCO and replaced by Protected Provisions there are a number of secondary consents that may be required such as: Flood Risk Activity Permits, Water Activity Permits, Water Resource Licences, and Land Drainage Consent.

10.6.9 Operational mitigation will include design measures which will be identified at later phases of assessment and incorporated into the final Proposed Development design, this is likely to include:

- The DCO Site Boundary design will include an appropriately designed surface water collection and treatment system;

- Sustainable drainage systems (SuDS) will be incorporated to attenuate runoff from the Proposed Development to a rate agreed with the Environment Agency and / or the LLFA to avoid increasing flood risk, and to reduce the quantities and concentration of diffuse urban pollutants found in runoff. Their design and use would depend on factors, such as site-specific constraints. Further information is provided below related to the surface water drainage strategy;
- The DCO Site Boundary will include design measures to ensure that the Proposed Development does not generate any adverse flood risks to adjacent areas (e.g. appropriate design of watercourse crossings and potential floodplain compensation provisions);
- Watercourses will be buffered from permanent new infrastructure by 9 m from the top of the watercourse and water bodies extending to 10 m (where any such watercourses are found to support riparian mammals assessed on a case-by-case basis depending on importance and potential impacts) as measured from the water's edge, as shown on digital maps, other than where crossings are required, drainage or other essential infrastructure that has to be located nearer to the watercourse;
- At this phase it is assumed that water required for operation and maintenance would be connected to Mains water supply (with agreement from Affinity Water) or another commercial source. It is also assumed that foul drainage from temporary compounds would be connected to the Public Sewer or otherwise captured by a sealed cesspit or tank for offsite disposal. No new abstractions or discharges of foul wastewater to surface or groundwater are proposed. If this changes then relevant abstraction and discharge licences would be obtained, following consultation with relevant authorities; and
- The more vulnerable elements of the Proposed Development such as the BESS, substations, Power Conversion Units (PCUs) and panels will be sequentially located to areas of lowest risk of flooding. Where this is not possible, these elements will be designed accordingly with some elements potentially raised above the design flood level.

10.6.10 The decommissioning phase would apply similar design and mitigation measures as the construction phase although it is anticipated that the power cables may be left in situ beneath watercourses and there would be less excavation works required close to watercourses. Standard pollution prevention and construction best practices would be adopted to mitigate potential impacts upon the water environment where required and reasonably practicable. Such measures would be included in a Decommissioning Environmental Management Plan (DEMP). A detailed DEMP would be prepared and agreed with the relevant authorities at the time of Proposed Development decommissioning.

10.7 Assessment Methodology

10.7.1 The assessment of potential effects as a result of the Proposed Development (construction, operation (and maintenance) and decommissioning) on the water environment will be undertaken using the principles of the guidance and

criteria set out in the Design Manual for Roads and Bridges LA113 Road Drainage and the Water Environment (Ref 245), the methodology is set out below.

10.7.2 Potential impacts of the Proposed Development on the water environment, drainage, and flood risk will be assessed by:

- Considering the existing (baseline) status of the water environment within the DCO Site Boundary and relevant surrounds with respect to flood risk, surface water, groundwater and drainage, following the source-pathway-receptor approach;
- Identifying potential impacts of the Proposed Development on the water environment, drainage and flood risk during the operational and maintenance, construction and decommissioning phases, as well as cumulative effects;
- Proposing suitable mitigation measures to be incorporated into the Proposed Development design, construction, operation and maintenance, and decommissioning to offset any adverse impacts (i.e. embedded mitigation); and
- Reviewing any residual impacts and presenting additional mitigation measures to limit impacts.

Source-Pathway-Receptor Approach

10.7.3 The water environment, drainage, and flood risk impact assessment will be based on a source-pathway-receptor model. For an impact on the water environment to exist the following is required:

- An impact source (such as the release of polluting chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or the loss or damage to all or part of a water body);
- A receptor that is sensitive to that impact (i.e. water features and the services they support); and
- A pathway by which the two are linked.

10.7.4 The first phase in applying the Source-Pathway-Receptor model is to identify the causes or 'sources' of potential impact from a development. The impact sources will be identified through a review of the details of the Proposed Development, including the size and nature of the Proposed Development, potential construction, operation (and maintenance), and decommissioning methodologies and timescales. The next step is to undertake a review of the potential receptors, that is, the water environment receptors that have the potential to be affected. Water features including their attributes will be identified through desk study and Site surveys, building on the baseline information provided in this chapter. The last phase of the model is, therefore, to determine if there is a viable exposure pathway or a 'mechanism' linking the source to the receptor. This will be undertaken in the context of local conditions relative to the water receptors within the study area, such as topography, geology, climatic conditions and the nature of the impact (e.g. the mobility of a

liquid pollutant or the proximity to works that may physically impact a water body).

- 10.7.5 The assessment of the likely significant effects is qualitative, and will consider the construction, operation (and maintenance), and decommissioning phases, as well as cumulative effects with other developments.
- 10.7.6 To support the assessment of effects on the water environment some sub-topic specific assessments will be undertaken. These are described in more detail in the following sections.

Water Quality and Resource Assessment

- 10.7.7 Relevant data will be requested from the Environment Agency to supplement the publicly available online data sources described in Section 10.5. A site walkover survey will be undertaken by a hydromorphologist and a water resources specialist. This will be to observe surface water features in the study area and to make observations about their current condition and character, the presence of existing risks and any potential pathways for construction, operation (and maintenance), and decommissioning impacts as a result of the Proposed Development. Further site surveys may be required as the Proposed Development develops.
- 10.7.8 Water quality data for the watercourses in the area will be drawn from Environment Agency monitoring, if available. The importance of water features will be determined from a holistic review of water body features and does not rely on water quality due to the principle that no controlled water may be polluted. Water quality impacts will be based on a risk assessment basis that does not require input of raw background water quality data. Water quality monitoring is also only effective when there is a clear purpose for it and may require monitoring over a long period of time to ensure reliable and robust results. Therefore, no water quality sampling is proposed to support the water environment assessment.
- 10.7.9 A qualitative assessment of potential effects on surface water quality from construction, operation (and maintenance) and decommissioning of the Proposed Development will be undertaken. This will consider the risk to surface water features resulting from construction, decommissioning works or future operation and maintenance activity using the source-pathway-receptor approach. Where there is a risk of pollution, mitigation measures will be described with reference to best practice guidance (e.g. Guidance on Pollution Prevention Notes and CIRIA guidance, Ref 209).
- 10.7.10 The appropriateness of the surface water drainage measures in terms of providing adequate treatment of diffuse pollutants will be assessed with reference to the Simple Index Assessment method described in the SuDS Manual (Ref 243). The Simple Index Approach follows three steps:
- Step 1 – Determine suitable pollution hazard indices for the land use(s);

- Step 2 – Select SuDS with a total pollution mitigation index that equals or exceeds the pollution hazard index (for three key types of pollutants: total suspended solids, heavy metals and hydrocarbons); and
- Step 3 – If the discharge is to a water body protected for drinking water, consider a more precautionary approach.

10.7.11 The SuDS Manual (Ref 243) only provides a limited number of land use types and so those selected will be the most suitable for the components of the Proposed Development, based on professional judgement. Where more than one pollution hazard category applies to a component of the Proposed Development, the worst pollution hazard will be selected.

10.7.12 As part of the groundwater assessment, a groundwater risk analysis will be undertaken of each location where there would be a trenchless watercourse crossing. This will compare the likely depth of excavation for instance for HDD exit and entry pits or for deep foundations with available estimates of groundwater level at each location.

Hydromorphology and Water Framework Directive (WFD) Assessment

10.7.13 Due to the potential for impacts upon WFD water bodies, a WFD Screening and Scoping Assessment will be undertaken in advance of the ES, in keeping with the Planning Inspectorate Advice on the Water Framework Directive (Ref 241). If the screening and scoping assessment concludes that a full WFD impact assessment is required, then this will be undertaken at the ES phase, where further construction and design information will be available.

10.7.14 This assessment will be updated in order to determine the potential for any non-compliance of the Proposed Development with WFD objectives for affected water bodies, using readily available information and any Site observations. This will include a qualitative examination of the potential construction, operation (and maintenance), and decommissioning phase impacts of the Proposed Development on relevant WFD hydromorphological, biological and physio-chemical parameters. Depending on the outcomes of the assessment, more detailed investigations may be required, which will be determined in consultation with the Environment Agency.

Surface Water Drainage Strategy

10.7.15 The design of drainage systems aims to ensure that there will be no increase in flood risk elsewhere, during storms up to and including the 1 in 100 (1% Annual Exceedance Probability (AEP)) annual probability design flood, with an allowance for climate change.

10.7.16 An OSWDS will be prepared alongside the Flood Risk Assessment to ensure the risk of surface water flooding is not increased as a result of the Proposed Development, taking into account climate change.

10.7.17 Careful consideration of the SuDS features, in keeping with local planning policy and through liaison with the LLFA, the Romney Marshes IDB and

Environment Agency, will be undertaken to ensure that the Surface Water Drainage Strategy adequately attenuates and treats runoff from the Proposed Development, whilst minimising flood risk to the DCO Site Boundary and surrounding areas.

10.7.18 In accordance with planning policies of Kent County Council and Folkestone and Hythe District Council, and general good practice, mitigation will be provided by restricting surface water discharge rates to greenfield rates and providing on-site attenuation, primarily via SuDS, such as Rural SuDS (RSuDS) techniques or other appropriate solutions.

10.7.19 A water quality risk assessment of all solar infrastructure will be undertaken using the Simple Index Approach described in The SuDS Manual (Version 6) (CIRIA C753) and also summarised above. This will inform what, if any, treatment measures are required to manage the risk from diffuse urban runoff to watercourses or ground.

Flood Risk Assessment

10.7.20 A FRA will be prepared for the Proposed Development which will be a technical appendix to the ES. The FRA will include a review of the current and future flood risk to the Proposed Development from all sources (including surface water, groundwater, tidal and fluvial sources and residual flood risks), in keeping with NPPF guidance (Ref 191), to inform the Proposed Development design and set out any proposed mitigation requirements.

10.7.21 The NPPF includes solar farms as ‘Essential Infrastructure’, as categorised in Annex 3: Flood risk vulnerability classification.

10.7.22 With the exception of any above ground infrastructure (e.g. substations, BESS) and temporary works during installation, cable routes are not generally considered in flood risk terms. However, the approach to the Sequential and Exception Tests for the Interconnecting Areas will be clarified with the Environment Agency and Kent County Council as required.

10.7.23 The Flood Map for Planning (Ref 226) does not specify whether the flood risk arises from tidal or fluvial sources and instead shows a combined risk from both sources. The Flood Zones on the Flood Map for Planning at the study area appear to be associated with tidal sources, and as a result, the fluvial flood risk to the Proposed Development is currently unknown. Data will be requested from the Environment Agency, Kent County Council (as LLFA) and RMAIDB to confirm the fluvial risk from surrounding watercourses, which will be detailed within a site-specific FRA. Where required, hydraulic modelling will be undertaken to understand the risk from fluvial sources.

10.7.24 If the FRA confirms that the Proposed Development is located in Flood Zones 2 and 3 associated with fluvial sources, there may be a requirement for the construction of flood compensation or mitigation measures to ensure no detrimental effect to flooding potential within or from the affected watercourses in the catchment once the Proposed Development is operational. This will be assessed as part of the FRA.

- 10.7.25 As the Proposed Development is classified as 'Essential Infrastructure' and the majority of the DCO Site Boundary is located in Flood Zones 2 and 3, an Exception Test is required to be undertaken as part of the FRA. For the Exception Test to be passed allowing development in Flood Zone 3, the FRA will be required to demonstrate that the development would be safe for its lifetime, taking into account the effects of climate change. This requirement will influence positioning of infrastructure within the DCO Site Boundary (in particular the BESS and substations) and the heights of panels.
- 10.7.26 The benefits from coastal flood defences, however it may still be at risk from a defence breach. This residual risk will need to be considered during both construction and operation and maintenance, with panels and sensitive equipment being designed accordingly.

Nutrient Neutrality

- 10.7.27 Folkestone and Hythe District Council is the local planning authority which covers the Proposed Development and the wider study area. This council area has significant portions of land within which nutrient neutrality has to be demonstrated in order to allow certain developments to proceed due to the unfavourable status of designated habitats site within their areas (i.e. Stodmarsh designated sites). However, the Natural England Nutrient Neutrality Catchments (England) viewer confirms that none of the study area falls within the area affected by nutrient neutrality, and on this basis, this will not be considered further (Ref 244).

Determining the Significance of Effects

- 10.7.28 The significance of effects will be determined using the principles of the guidance and criteria set out in the Design Manual for Roads and Bridges LA113 Road Drainage and the Water Environment (Ref 245) adapted to take account of hydromorphology. This can be applied to all development types and represents the most robust and nationally accepted criteria for the determination of potential effects on the water environment.
- 10.7.29 The criteria that will be used to determine receptors importance are presented in **Table 10-7**.
- 10.7.30 In accordance with the phases of the methodology, there are three phases to the assessment of effects on water environment, drainage, and flood risk as follows:
- A level of importance (low to very high) is assigned to the water resources receptor from **Table 10-7** and is based on a combination of attributes (such as water supply, biodiversity, recreation) and on receptors to flood risk based on the vulnerability of the receptor to flooding (i.e. as shown in **Table 10-7**, essential infrastructure would be very high importance, to water compatible development which would be of low importance);
 - The magnitude of potential and residual impact (classed as negligible, minor, moderate or major adverse/ beneficial) is determined based on the criteria listed in **Table 10-8** and the assessor's knowledge of the Proposed

Development. Embedded or standard mitigation measures are considered in the initial assessment, but any other mitigation is not considered until the assessment of residual effects. The magnitude of change will be determined considering the likelihood of the effect occurring. The likelihood of an effect occurring is based on a scale of certain, likely or unlikely, as defined in Ref 245. Likelihood has been considered in the case of water resources only, as likelihood is inherently included within the flood risk assessment; and

- A comparison of the importance of the resource and magnitude of the impact (for both potential and residual impacts) results in an assessment of the overall significance of the effect on the receptor using the matrix presented in **Table 10-9**. The significance of each identified effect (both potential and residual) will be classed as very large, large, moderate, slight or neutral and either beneficial or adverse significance.

Table 10-7: Criteria to Determine Receptor Importance (adapted from DMRB LA 113 (Ref 245))

IMPORTANCE	GENERAL CRITERIA	SURFACE WATER	GROUNDWATER	HYDROMORPHOLOGY	FLOOD RISK
Very High	The receptor has little or no ability to absorb change without fundamentally altering its present character, is of very high environmental value, or of international importance.	Watercourse having a WFD classification as shown in a River Basin Management Plan (RBMP) and $Q95 \geq 1.0 \text{ m}^3/\text{s}$. Site protected / designated under UK habitat legislation (SAC, SPA, SSSI, Water Protection Zones, Ramsar site). Species protected by UK legislation. Critical social or economic uses (e.g. public water supply and navigation).	SPZ 1. Principal aquifer providing a regionally important resource and/or supporting a site protected under UK legislation. Groundwater locally supports GWDTE. Water abstraction: $>1,000 \text{ m}^3/\text{day}$.	Unmodified, near to or pristine conditions, with well-developed and diverse geomorphic forms and processes characteristic of river and lake type.	Essential Infrastructure or highly vulnerable development.
High	The receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of national importance.	Watercourse having a WFD classification as shown in a RBMP and $Q95 < 1.0 \text{ m}^3/\text{s}$; Species protected under UK habitat legislation. Critical social or economic uses (e.g. water supply and navigation). Important social or economic uses such as water supply, navigation or mineral extraction.	Principal aquifer providing locally important source supporting river ecosystem; SPZ 2; Groundwater supports GWDTE; Water abstraction: $500\text{-}1,000 \text{ m}^3/\text{day}$.	Conforms closely to natural, unaltered state and will often exhibit well-developed and diverse geomorphic forms and processes characteristic of river and lake type. Deviates from natural conditions due to direct and/or indirect channel, floodplain, bank modifications and/or catchment development pressures.	More vulnerable development.
Medium	The receptor has moderate capacity to absorb change without significantly altering its present character, has some environmental value or is of regional importance.	Watercourses not having a WFD classification shown in a RBMP and $Q95 > 0.001 \text{ m}^3/\text{s}$. May be designated as a local wildlife site and support a small/ limited population of protected species. Limited social or economic uses.	Secondary Aquifer providing water for agricultural or industrial use with limited connection to surface water SPZ 3. Water abstraction: $50\text{-}499 \text{ m}^3/\text{day}$.	Shows signs of previous alteration and/or minor flow/ water level regulation but still retains some natural features or may be recovering towards conditions indicative of the higher category.	Less vulnerable development.

IMPORTANCE	GENERAL CRITERIA	SURFACE WATER	GROUNDWATER	HYDROMORPHOLOGY	FLOOD RISK
Low	The receptor is tolerant of change without detriment to its character, is low environmental value, or local importance.	Watercourses not having a WFD classification shown in a RBMP and Q95 <0.001 m ³ /s. Low aquatic fauna and flora biodiversity and no protected species. Minimal economic or social uses.	Generally Unproductive Strata. Water abstraction: <50 m ³ /day.	Substantially modified by past land use, previous engineering works or flow/ water level regulation. Watercourses likely to possess an artificial cross-section (e.g. trapezoidal) and will probably be deficient in bedforms and bankside vegetation. Watercourses may also be realigned or channelized with hard bank protection or culverted and enclosed. May be significantly impounded or abstracted for water resources use. Could be impacted by navigation, with associated high degree of flow regulation and bank protection, and probable strategic need for maintenance dredging. Artificial and minor drains and ditches will fall into this category.	Water compatible development.
Negligible	The receptor is resistant to change and is of little environmental value	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Table 10-8: Magnitude of Change Criteria (adapted from DMRB LA 113 (Ref 245))

MAGNITUDE OF CHANGE	DESCRIPTION
Major Adverse	Results in a loss of attribute and/or quality and integrity of the attribute.
Moderate Adverse	Results in impact on integrity of attribute, or loss of part of attribute.
Minor Adverse	Results in some measurable change in attribute's quality or vulnerability.
Negligible	Results in impact on attribute, but of insufficient magnitude to affect the use or integrity.
Minor Beneficial	Results in some beneficial impact on attribute or a reduced risk of negative impact occurring.
Moderate Beneficial	Results in moderate improvement of attribute quality.
Major Beneficial	Creation of new attribute or major improvement of attribute quality.
No change	No loss or alteration of characteristic, features of elements; no observable impact in either direction.

10.7.31 The importance of the receptor (**Table 10-7**) and the magnitude of change (**Table 10-8**) are determined independently from each other and are then used to determine the overall significance of effects (**Table 10-9**). Options for mitigation will be considered and secured where possible to avoid, minimise and reduce adverse impacts, particularly where significant effects may have otherwise occurred. The residual effects of the Proposed Development with identified mitigation in place will then be reported. Effects of moderate or major are considered significant in EIA terms (i.e. the shaded cells in **Table 10-9**).

Table 10-9: Matrix for Assessment of Significance of Effects (DMRB LA 104 (Ref 246))

IMPORTANCE OF RECEPTOR (TABLE 10-7)	MAGNITUDE OF CHANGE (TABLE 10-8)				
	MAJOR	MODERATE	MINOR	NEGLIGIBLE	NO CHANGE
Very High	Very large	Large or very large	Moderate or large	Slight	Neutral
High	Large or very large	Slight or moderate	Slight or moderate	Slight	Neutral
Medium	Moderate or large	Moderate	Neutral or slight	Neutral or slight	Neutral
Low	Slight or moderate	Slight	Neutral or slight	Neutral or slight	Neutral
Very Low	Slight	Neutral or slight	Neutral or slight	Neutral	Neutral

10.7.32 The following significance categories will be used for both potential and residual effects:

- **Beneficial:** A beneficial/ positive effect on the quality of a water resources receptor; or
- **Adverse:** A detrimental/ negative effect on the quality of a water resources receptor.

10.8 Limitations and Assumptions

- 10.8.1 The location and layout of certain elements of infrastructure (including the point of connection, construction methodologies and mitigation), have not yet been determined. This is of particular importance when considering impacts associated with watercourse crossings, the quality of surface water runoff, impacts to hydromorphology and channel hydraulics. It is assumed that the protection of water environment receptors would be taken into account within the iterative design process, including the choice of crossing methodology and use of best practice methodologies for construction.
- 10.8.2 The locations of PWS and licensed water abstractions have not yet been obtained, and so these are not included as receptors at this time. Water activity permits (i.e. permitted discharges) are also not yet known in detail and have not been considered in the current baseline. These receptors and water feature attributes will be considered as further assessment is undertaken.
- 10.8.3 Hydraulic modelling data will be requested from the Environment Agency to understand fluvial and tidal flood risk (including breach scenarios) within the study area. Where this is not available, hydraulic modelling may need to be undertaken as part of the FRA. This will be discussed and agreed with the Environment Agency and Kent County Council as required.
- 10.8.4 Visual surveys will be undertaken of accessible water/ drainage features to inform the Surface Water Drainage Strategy, impact assessment and WFD assessment. However, it may not be possible to survey all significant locations (such as crossing locations) or structures due to access constraints or visibility issues (e.g. dense vegetation). Where this is the case, a survey close to the area of interest will be attempted and this data used as a proxy. In addition, some watercourses may be small, ephemeral and flow only intermittently, and these may not be identified in the field or observed when flowing.
- 10.8.5 Other than the site walkover survey, the FRA and OSWDS will be based on desktop surveys and best available site layout proposals in line with best practice. Where available, topographical data will be used to support the FRA. In the absence of topographical data, LiDAR data will be used to inform the FRA and the OSWDS.
- 10.8.6 As part of the EIA, the risk from surface water drainage to surface or groundwater features from new above ground development will be assessed according to the Simple Index Approach presented in the C753 The SuDS Manual (Ref 243). Given the very low risk the need for treatment measures is expected to be minimal. Furthermore, given the availability of space it is not anticipated that there would be any issues providing any treatment of diffuse pollutants, should the Simple Index Approach assessment identify such a need.
- 10.8.7 Groundwater level data for the study area is limited. Further understanding of groundwater levels across the study area will be ascertained from information requests to the Environment Agency and from future ground investigations.

10.8.8 It is assumed that wastewater generated from the Proposed Development would be managed appropriately. Options may include connecting to the nearest available public sewer or a self-contained independent non-mains domestic storage and/or treatment system. The alternative where this is not possible, would be for a self-contained foul drainage system to a cess pit or similar. These tanks would be regularly emptied under contract with a registered recycling and waste management contractor. Wastewater generation would be disposed according to environmental legislation, with either online or offline solutions.

10.9 Summary of Elements Scoped In and Out

10.9.1 Due to the potential for impacts and effects on water receptors and resources from the Proposed Development, a full water environment impact assessment will be included in the ES. This will also be supported by an FRA and an OSWDS and a WFD Assessment. The scope for these assessments and how the significance of effects will be determined is described in Section 10.7. A summary of the elements scoped in and out of this chapter is presented in **Table 10-10**.

Table 10-10: Elements scoped in and out of the water environment assessment

ELEMENT	SCOPED IN / SCOPED OUT
Groundwater (construction, operation and maintenance, and decommissioning)	Scoped in - potential for impacts due to construction, operation (and maintenance), and decommissioning of the Proposed Development. Scoped out – impact on local potable water supplies and from foul drainage on the basis that these are regulated industries, that suitable sources of water not involving a new local abstraction will be used (this will be kept under review). Impact from heat emissions from buried cables.
Hydromorphology (construction, operation and maintenance, and decommissioning)	Scoped in - potential for impacts due to watercourse crossings by structures, and cable crossings.
Surface water (construction, operation and maintenance, and decommissioning)	Scoped in - potential for impacts to land-based surface water features due to construction, operation, and decommissioning of the Proposed Development. Scoped out – potential impacts to the Kent South and Sussex East coastal WFD waterbody can be scoped out given distance downstream (beyond the core study area) and its scale (offering significant dilution and dispersal potential). Scoped out – impact on local potable water supplies and from foul drainage on the basis that these are regulated industries, that suitable sources of water not involving a new local abstraction will be used. This will be kept under review.
Nature conservation sites (SSSI, SPA, SAC, Ramsar, NVZ, chalk rivers)	Scoped out - potential for impacts to designated sites including SSSI, SPA, SAC and Ramsar will not be assessed as individual receptors, however, will be included as attributes of water features Scoped out – NVZs and chalk rivers, as neither lies in the vicinity of the Proposed Development

ELEMENT	SCOPED IN / SCOPED OUT
Flood risk, including drainage (construction, operation and maintenance, and decommissioning)	Scoped in - potential for impacts on flood risk from all sources within the Proposed Development, downstream on watercourses and on surface water runoff.
Nutrient neutrality assessment (construction, operation and maintenance, and decommissioning)	Scoped out – the Proposed Development is not located within a nutrient neutrality catchment.

11. Landscape and Visual Amenity

11.1 Introduction

11.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on landscape and visual amenity during the construction, operation (and maintenance), and decommissioning phases of the Proposed Development, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the landscape and visual amenity chapter of the Environmental Statement (ES).

11.1.2 This chapter is supported by the following figures:

- **Figure 11-1:** Landscape and Visual Study Area;
- **Figure 11-2:** Zone of Theoretical Visibility (ZTV) DCO Site Boundary, North – Bare Earth; and
- **Figure 11-3:** ZTV DCO Site Boundary, South – Bare Earth.

11.1.3 This chapter is supported by the following appendices:

- **Appendix 11-A:** Extracts of the Landscape Assessment of Kent;
- **Appendix 11-B:** Extracts of the Kent Downs Landscape Character Assessment and the High Weald Character Assessment; and
- **Appendix 11-C:** Extracts of Shepway District Council's (now Folkestone and Hythe District Council (FHDC) Landscape Character Appraisals and Assessments.

11.1.4 Landscape effects relate to an assessment of the Proposed Development on the landscape as a resource (i.e. the change to the physical features of the landscape and/or the aesthetic, perceptual and experiential characteristics that make different landscapes distinctive).

11.1.5 Visual effects relate to an assessment on people's views, and the potential change to the composition of their views due to the introduction of new features and/or the removal of existing features due to the Proposed Development.

11.2 Study Area

11.2.1 The purpose of the landscape and visual study area is to identify the geographic area across which there is the potential for significant landscape and visual effects during the construction, operation (and maintenance), and decommissioning phases of the Proposed Development.

11.2.2 With reference to **Figure 11-1: Landscape and Visual Study Area**, the DCO Site Boundary is located around Old Romney and to the north and south of the A259.

- 11.2.3 The DCO Site Boundary is located across generally low-lying land, forming part of Romney Marsh, which extends eastwards and southwards to the coast. The landform remains low lying to the north of the DCO Site Boundary for approximately 7.5 km, before rising to form part of the Kent Downs scarp slope and land within the Kent Downs National Landscape⁸. This tract of elevated land extends in an 'arc', to the north-west of the Proposed Development and west of the Proposed Development, to Appledore and Stone in Oxney, and parts of the High Weald National Landscape.
- 11.2.4 With reference to **Figure 11-1: Landscape and Visual Study Area**, the landscape and visual study area is therefore proposed to extend up to 10 km from the centre of the DCO Site Boundary, so that the study area incorporates the tract of elevated land bordering Romney Marsh, within the Kent Downs National Landscape and High Weald National Landscape (circa 5.7 km north and 7 km west from the edge of the DCO Site Boundary, respectively). The geographic extent of the study area is aligned to the coastline to the east and south of the Proposed Development and is therefore less than 10 km in these directions.
- 11.2.5 With reference to the following sections of this chapter, the study area has been informed by desk-based reviews of relevant studies, bare-earth ZTVs for the proposed ground mounted solar photovoltaic (PV) arrays (**Figures 11-2 and 11-3**) and initial fieldwork. No ZTVs have been produced for the taller equipment set out in **Chapter 3: The Proposed Development**, (e.g. the SKEP Main On-site Substation, Additional On-Site Substations and National Grid Substation and Battery Energy Storage System (BESS)). The ZTVs will be updated once the location of the equipment has been confirmed and reported at the ES stage.
- 11.2.6 Taking the ZTVs, initial fieldwork and professional judgment into account, it is expected that from beyond the study area the Proposed Development would not have the potential to result in significant landscape or visual effects due to the combination of distance and intervening features negating any perception of the Proposed Development. The study area will be reviewed throughout the iterative design process with the intention to agree its geographic extent along with the landscape and visual receptors with Folkestone and Hythe District Council (FHDC), Rother District Council (RDC) and Ashford Borough Council (ABC).

11.3 Legislation, Planning Policy Context and Guidance

- 11.3.1 Legislation, planning policy and guidance relating to landscape and visual matters and pertinent to the Proposed Development comprises:

Legislation

- 11.3.2 Relevant legislation includes:

⁸ Note the term National Landscape is used except for where publications or policies refer to the former title of Area of Outstanding Natural Beauty (AONB).

- The Levelling Up and Regeneration Act, 2023 (Ref 248), which sets out that relevant authorities should “*seek to further*” the purposes of protected landscapes.

National Planning Policy

11.3.3 The following planning policies from relevant National Policy Statements (NPS) have been considered as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5) – paragraphs 4.1.1 to 4.1.4 in respect of general policies and considerations; paragraphs 4.3.1 to 4.3.17 in respect of environmental effects/considerations; paragraphs 4.7.1 to 4.7.15 in respect of criteria for good design for energy infrastructure; paragraphs 4.11.1 to 4.11.13 in respect of network connection; paragraphs 5.1.1 to 5.1.6 in respect of general impacts and paragraphs 5.10.1 to 5.10.38 in respect of landscape and visual matters;
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6) – paragraphs 2.3.1 to 2.3.10 in respect of factors influencing site selection and design; 2.5.1 to 2.5.3 in respect of consideration of good design for energy infrastructure; paragraphs 2.10.10 to 2.10.40 in respect of factors influencing solar photovoltaic site selection and design; paragraphs 2.10.51 to 2.10.56 in respect of site layout design and appearance; paragraphs 2.10.85 to 2.10.95 in respect of landscape, visual and residential amenity impacts; 2.10.123 to 2.10.125 in respect of landscape, visual and residential amenity mitigation and 2.10.149 in respect of landscape, visual and residential amenity impacts; and
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7) – paragraphs 2.2.1 to 2.2.12 in respect of factors influencing site selection and design; paragraphs 2.4.1 to 2.4.4 in respect of consideration of good design for energy infrastructure; paragraph 2.5.1 in respect of environmental and biodiversity net gain; paragraphs 2.9.7 to 2.9.20 in respect of landscape and visual impact; paragraphs 2.10.5 to 2.10.8 in respect of landscape and visual mitigation and paragraphs 2.11.2 to 2.11.6 in respect of landscape and visual decision making matters.

11.3.4 Other relevant national planning and guidance includes:

- The National Planning Policy Framework (NPPF) (Ref 8) sets out the Government’s planning policies for England and how these should be applied. Chapter 2 in respect of sustainable development; chapter 12 in achieving well-designed places; chapter 14 in respect of meeting the challenge of climate change, flooding and coastal change, and chapter 15 in respect of conserving and enhancing the natural environment, including paragraph 189 which sets out that development within the setting of a National Landscape should be sensitively located and designed to avoid or minimise adverse impacts on the designated area;
- It is acknowledged that a draft NPPF has been published for consultation at the time of writing. This is where the government are seeking views on a

revised NPPF and other changes to the planning system. NPPF: proposed reforms and other changes to the planning system, 2025 (Ref 191) – includes chapter 4 in respect of achieving sustainable development; chapter 10 in respect of securing clean energy; chapter 14 in respect of achieving well-designed places and chapters 19 in respect of conserving and enhancing the natural environment;

- Planning Practice Guidance (PPG) Design: process and tools, 2019 (Ref 250) – which provides advice on the key points to take into account on design;
- PPG Light Pollution, 2019 (Ref 251) – which sets out advice on lighting;
- PPG Natural Environment, 2025 (Ref 252) – which sets out the key issues to protect and enhance the natural environment;
- PPG Renewable and Low Carbon Energy, 2023 (Ref 253) – which provides guidance on planning considerations; and
- Department for Environment, Food and Rural Affairs Guidance for relevant authorities on seeking to further the purposes of Protected Landscapes, 2024 (Ref 254) – which sets out how the Protected Landscape duty is intended to operate, with the duty also applies to functions undertaken outside of the designation boundary.

Local Planning Policy

11.3.5 Relevant local planning policy and evidence base documents include:

- Kent Environmental Strategy, 2016 (Ref 255);
- Renewable Energy for Kent: An Action Plan for Delivering Opportunities, 2013 (Ref 256);
- Folkestone and Hythe District Council (FHDC) Core Strategy Review, 2022 (Ref 12) – Policy CSD4: Green Infrastructure of Natural Networks, Open Space and Recreation, and Policy CSD8: New Romney Strategy;
- FHDC Places and Policies Local Plan, 2020 (Ref 13) – Chapter 6: Romney Marsh Character Area; Chapter 7: North Downs Character Area; Chapter 14: Natural Environment, including Policy NE3, which includes for local landscape areas covering the Proposed Development: Protecting the District's Landscapes and Countryside, and Chapter 15: Climate Change, including Policy CC6: Solar Farms. FHDC policy NE3 states “*proposals should protect or enhance the landscape character and functioning of Local Landscape Areas. The Council will not permit development proposals that are inconsistent with this objective, unless the need to secure economic and social wellbeing outweighs the need to protect the area's local landscape importance.*”;
- The Kent Downs AONB Management Plan 2021-2026 (Ref 258);
- The Kent Downs National Landscape Setting Position Statement, 2024 (Ref 259);
- The Kent Downs AONB Renewable Energy Position Statement, 2011 (Ref 260);
- The High Weald AONB Management Plan 2024-2029, 2024 (Ref 261);

- High Weald National Landscape Solar Farms and the High Weald National Landscape, 2025 (Ref 262);
- New Romney Conservation Area Draft Appraisals, 2006 (Ref 263); and
- The St Mary in the Marsh Neighbourhood Plan 2017-2028, 2018 (Ref 264).

Relevant Industry Guidance

11.3.6 Relevant industry guidance is:

- The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA 3), 2013 (Ref 265);
- Landscape Institute Technical Guidance Note (TGN) 02-21: Assessing landscape value outside national designations, 2021 (Ref 266);
- Landscape Institute TGN-2024-01: Notes and Clarifications on aspects of GLVIA 3, 2024 (Ref 267);
- Landscape Institute TGN 06/10: Visual Representation of development proposals, 2019 (Ref 268);
- Landscape Institute TGN 02/2019: Residential Visual Amenity Assessment, 2019 (Ref 269);
- Institute of Lighting Professionals Guidance Note 1: Avoidance of Obtrusive Light, 2021 (Ref 270); and
- Building Research Establishment (BRE) National Solar Centre Biodiversity Guidance for Solar Developments, 2014 (Ref 257).

11.4 Consultation

- 11.4.1 Consultation as part of the Environmental Impact Assessment (EIA) process will be undertaken following submission of this EIA Scoping Report with statutory parties including FHDC, RDC, ABC and Officers at the Kent Downs National Landscape and High Weald National Landscape.

11.5 Baseline Conditions

- 11.5.1 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to landscape and visual matters.

The DCO Site

- 11.5.2 With reference to **Figure 11-1: Landscape and Visual Study Area**, the DCO Site Boundary is proposed to the north and south of the A259.
- 11.5.3 The DCO Site Boundary is situated across low-lying landform between 2 m and 4 m Above Ordnance Datum (AOD). The land use is mostly agricultural, with some land in the south-east part of the DCO Site Boundary used for growing amenity lawn and professional sports turf.
- 11.5.4 To the north of the A259, the fields vary in scale, but there is a consistent pattern of larger scale fields adjacent to the A259 which transition to smaller scale fields in the northern part of the DCO Site Boundary. The fields are

irregular in form, due to several watercourses and numerous ditches across the DCO Site Boundary. These water courses include the New Sewer and Wallingham Sewer, with a small waterbody at the eastern edge of this part of the DCO Site Boundary.

- 11.5.5 To the south of the A259, the fields similarly range in scale and are irregular in form, due to similarly being divided by ditches, watercourses and intermittent hedgerows with occasional trees. These watercourses include the White Kemp Sewer and small-scale reservoir in the southern part of the DCO Site Boundary.
- 11.5.6 Both the northern and southern parts of the DCO Site Boundary have an open character, due to the combination of the land uses, field scale and intermittent vegetation, such that the field boundaries are not always perceived, resulting in the perception of a larger scale landscape.
- 11.5.7 With reference to FHDC on-line planning policy mapping, none of the vegetation across the DCO Site Boundary includes ancient woodland. There is vegetation covered by Tree Preservation Orders (TPO) around the waterbody to the east of Five Vents Lane, within the DCO Site Boundary, to the north of the A259.
- 11.5.8 To the south of the A259, the DCO Site Boundary is crossed by Midley Wall and Swamp Road, with the B2075 forming the eastern boundary to this part of the DCO Site Boundary. The southern part of the DCO Site Boundary, to the south of the A259 is also crossed by the Appledore to Dungeness railway line, a freight line serving the Dungeness Power Station in the south-east part of the study area.
- 11.5.9 Several public rights of way (PRoW) cross the DCO Site Boundary to the north of the A259 (Ref 271). These routes are:
- PRoW (footpath) 0189/HM97/1 and 0189/HM97/2, which form part of the route between the A259 and Ivychurch; and
 - PRoW (footpath) 0189/HM118/2 and 0241/HM120/1, to the north and south of Ashford Road.
- 11.5.10 In addition to the above, Five Vents Lane is part of National Cycle Route (NCR) no.2, (the Sandwich to Rye cycle ride promoted route). There is also public access along Yoakes Lane within the DCO Site Boundary, along the alignment of the drainage ditch between the A259 and the above PRoW.
- 11.5.11 To the south of the A259, the DCO Site Boundary is crossed by:
- PRoW (footpath) 0189/HM103/1 in the western part of the Main Site; and
 - PRoW (footpath) 0189/HM113/2, 0189/HM112/1, 0189/HM112/2, 0189/HM112/3, 0189/HM114/2 and 0189/HM113/1 in the central part of the DCO Site Boundary, between Midley Wall and Swamp Road.
- 11.5.12 In addition to the above, NCR no.2 continues along the Midley Wall to the south of the A259. There is also public access along Kingsmarsh Lane, along the eastern edge of the DCO Site Boundary.

The Study Area

- 11.5.13 As set out previously, the study area extends up to 10 km from the centre of the DCO Site Boundary. This is the geographic area across which the Proposed Development has the potential to result in significant adverse landscape and visual effects during the construction, operational and decommissioning phases. The landscape and visual study area is illustrated on **Figure 11-1: Landscape and Visual Study Area**.
- 11.5.14 Low lying land surrounding the DCO Site Boundary and across most of the study area forms Romney Marsh, an extensive area of predominantly agricultural (grazing) land. Field sizes are mainly medium to large scale, bound by ditches with occasional hedgerows and intermittent tree cover. The main vegetation patterns are mostly localised adjacent to the road networks, including the A259 and settlements. The combination of the land use, generally flat and low-lying landform and localised vegetation results in an open character to Romney Marsh.
- 11.5.15 The settlements within the study area are generally small to medium scale villages, most of which are nucleated in form. In proximity to the DCO Site Boundary, there are employment land uses at Sycamore trading estate and residential land uses at Old Romney adjacent to the southern side of the A259. New Romney and Lydd in the eastern and south-eastern parts of the study area are larger scale settlements, which extend to form a near continuous pattern of development along St Mary's Bay, most of which is associated with leisure and holiday villages.
- 11.5.16 In the northern part of the study area, the landform rises up to 100 m AOD, forming part of the Kent Downs scarp slope. The settlement pattern across this elevated land within the Kent Downs National Landscape is characterised by a series of small-scale villages along the alignment of the B2067, which follows the ridgeline.
- 11.5.17 In the western part of the study area, the landform rises up to 60 m AOD at Stone in Oxney, and land in the High Weald National Landscape. The small-scale settlement pattern is concentrated adjacent to the local road networks and ridgelines.
- 11.5.18 Infrastructure across the study area includes the Ashford to Rye railway line in the western part of the study area, with the freight branch between Appledore and Dungeness. The main road networks are the B2080, A2070 and A259, the latter of which connects Rye with New Romney and St Mary's Bay. Lydd Airport is located in the south-east part of the study area, between Lydd and Lydd-on-Sea. The Royal Military Canal extends across the northern part of the study area, at the base of the scarp slope, between Hythe and Rye.
- 11.5.19 Little Cheyne Court Wind Farm is located across Walland Marsh, to the south-west of the DCO Site Boundary. Sycamore solar farm borders the western edge of the DCO Site Boundary to the south of the A259. As noted above, National Grid overhead pylons extend to the north of the A259 and to the south of the road, connecting to Dungeness. The height of the pylons is noticeable in

contrast to the flat and low-lying fields across Romney Marsh, such that perceptions of tranquillity and remoteness are varied across the study area.

- 11.5.20 There are a high number of PRow within the study area, including parts of the Saxon Shore Way adjacent to the Royal Military Canal, the King Charles III England Coast Path across St Mary's Bay and the Sussex Border Path in proximity to Rye. Many of the settlements are also linked by PRow.

Relevant Designations

- 11.5.21 The Proposed Development is not located within a designated landscape, e.g. National Park or National Landscape. As set out previously, the Kent Downs National Landscape and the High Weald National Landscape cover elevated land in the northern and western parts of the study area respectively.
- 11.5.22 The DCO Site Boundary is not within a Conservation Area. The Old Romney Conservation Area covers land between Five Vents Lane and the A259, including St Clement's Church, adjacent to the DCO Site Boundary. Newchurch Conservation Area covers the eastern part of Newchurch, including St Peters and St Paul's Church, circa 1km east of the DCO Site Boundary.
- 11.5.23 An abandoned medieval church and graveyard (a scheduled monument) is in the southern part of the DCO Site Boundary, in proximity to the Appledore to Dungeness railway line.
- 11.5.24 For further information on Conservation Areas and Listed Buildings in and surrounding the DCO Site Boundary, refer to **Chapter 8: Cultural Heritage**.
- 11.5.25 The DCO Site Boundary is not covered by any ecological designations. There are a number of ecological designations within the study area, including a Ramsar Site, Special Protection Area (SPA), Special Area of Conservation (SAC), and Sites of Special Scientific Interest (SSSI). For further information on ecological designations and habitats refer to **Chapter 9: Ecology and Biodiversity**.

Published Landscape Character Assessments

National Scale

- 11.5.26 The Proposed Development and the majority of the study area are covered by Natural England's National Character Area (NCA) 123: Romney Marshes (NCA 123), 2026 (Ref 272). The published study describes NCA 123 as an "*open landscape of reclaimed, low-lying marshland*". The stated key characteristics of NCA 123 include a "*flat, open and agricultural landscape, with distinctive drainage dykes, marshes and open skies*". There is an ecological value to NCA 123 via several habitats, with cultural heritage value from the Royal Military Canal, old sea walls and medieval settlements and churches, including a number of lost church sites. Relevant Statements of Environmental Opportunity including maintaining and enhancing the distinctive remote, open, low-lying Romney Marshes landscape and enhancing biodiversity through improved connectivity of habitats.

- 11.5.27 Elevated land in the north-east of the study area, beyond the Proposed Development is covered by Natural England's NCA 120: Wealden Greensand, 2026 (Ref 273). The NCA is noted by the published study as an area of extensive woodland, fruit growing, dispersed farmsteads and nucleated villages.
- 11.5.28 Elevated land in the north-west of the study area, beyond the Proposed Development is covered by Natural England's NCA 121: Low Weald, 2026 (Ref 274). The NCA is noted by the published study as an area of broad, low-lying vales which is predominantly agricultural, along with densely wooded areas.
- 11.5.29 Elevated land in the western part of the study area, beyond the Proposed Development, is covered by Natural England's NCA 122: High Weald, 2026 (Ref 275). The NCA is noted by the published study as one of the best surviving medieval landscapes in northern Europe, with most of the NCA covered by the High Weald National Landscape.

Regional Scale

- 11.5.30 With reference to **Appendix 11-A: Extracts of the Landscape Assessment of Kent** the Proposed Development covers the following landscape character areas (LCA) defined by the Landscape Assessment of Kent, 2004 (Ref 276):
- LCA Brookland Farms, covering land to the south of the A259 and including Sycamore Solar Farm. The published study describes the LCA as an area of *"older marshland that was re-inned after the inundations of the 13th century storms, and is characterised by the long, narrow regular fields around the village of Brookland and the sequential road system."* The stated landscape actions are based upon 'conserve and reinforce', and includes retaining existing vegetation and reinforcing hedgerows and ditches;
 - LCA Romney Marsh Settlements, covering land to the north of the A259. The published study describes the LCA as an area of "low lying landform with undulating creek ridges. Field patterns are irregular and have the appearance of being large due to the lack of immediate enclosure." The stated landscape actions are based upon 'conserve' and include for conserving wildlife potential in arable and pastoral fields; and
 - LCA Romney Marsh Mixed Farmlands, covering land between Ivychurch, Newchurch and the boundary with the Kent Downs National Landscape. The published study describes the LCA as an *"area of emergent grazing marsh... The effect of the reduction in visible boundaries in the landscape is the appearance of vast arable fields, despite the actual field sizes being moderate. Crops are predominantly cereals and legumes with a wide seasonal variation in colour. There is a small proportion of pasture which supports sheep."* The stated landscape actions are based upon 'conserve and restore', which includes conserving the open landscape and restoring ecological networks.
- 11.5.31 With reference to **Appendix 11-A**, LCA's within the study area but beyond the Proposed Development are:
- LCA Romney Marsh: Lympe, covering low lying land in the north-east part of the study area, within the Kent Downs National Landscape;

- LCA Hythe Escarpment: Lympe, covering rising and elevated land in the north-east part of the study area, within the Kent Downs National Landscape;
- LCA Aldington Ridge, covering rising and elevated land in the north-east part of the study area, within the Kent Downs National Landscape;
- LCA Aldington Lympe; covering rising and elevated land in the north-east part of the study area, within the Kent Downs National Landscape;
- LCA Old Romney, Shorelines Wooded Farmlands, covering elevated land in the north-west part of the study area;
- LCA Highknock Channel and Dowels, covering low-lying land in the western part of the study area, around Appledore railway station;
- LCA Oxney: Lower Rother Valley, covering rising and elevated land in the western part of the study area and land within the High Weald National Landscape;
- LCA Walland Marsh Farmlands, covering low lying land in the southern part of the study area; and
- LCA Dungeness Shingle, covering Lydd and marshland across the south-east part of the study area.

Kent Downs National Landscape

11.5.32 With reference to **Figure 11-1: Landscape and Visual Study Area** and **Appendix 11-B: Extracts of the Kent Downs Landscape Character Assessment and the High Weald Character**, land in the north-east part of the study area, beyond the Proposed Development and within the Kent Downs National Landscape is covered by the Kent Downs National Landscape Character Assessment, 2020, LCA 5B: Lympe Greensand Escarpment (LCA 5B) (Ref 277).

11.5.33 With reference to **Appendix 11-B: Extracts of the Kent Downs Landscape Character Assessment and the High Weald Character**, LCA 5B is also divided into the local landscape character areas of Romney Marsh, Aldington and Hythe Escarpment. Stated key characteristics include “*Spectacular views across Romney Marsh from the top of the escarpment. The escarpment forms the backdrop to views inland from Romney Marsh.*”

High Weald National Landscape

11.5.34 With reference to **Figure 11-1: Landscape and Visual Study Area**, elevated land in the western part of the study area, beyond the Proposed Development, is within the High Weald National Landscape. With reference to **Appendix 11-B**, the published landscape character assessment (Ref 278) includes this part of the study area within the Lower Rother area. The stated key characteristics include “*long views across the levels*”.

District Scale

11.5.35 With reference to **Appendix 11-C: Extracts of Shepway District Council’s Landscape Character Appraisals and Assessments**, the Shepway District Council High Level Landscape Appraisal, 2017 (Ref 279) identifies Local

Landscape Character Areas (LLCA). Those LLCA covering the Proposed Development are:

- LLCA 21: Romney Marsh Proper Farmlands, covering land to the north of the A259, extending to the boundary with the Kent Downs National Landscape. Stated key characteristics include dispersed nucleated villages within an agricultural landscape, narrow winding roads, long distance views and limited tree cover; and
- LLCA 22: Brookland Farmlands, covering land to the south of the A259, including Sycamore Solar Farm. Stated key characteristics include the flat, open landscape and agricultural land uses, along with greater tree cover than other parts of Romney Marsh. The published study also notes the existing solar farm and high voltage pylons across the LLCA.

11.5.36 With reference to **Appendix 11-C**, the LLCA within the study area, but beyond the Proposed Development, are:

- LLCA 20: Romney Marsh Coast, covering at the eastern edge of the study area;
- LLCA 23: The Dowels Farmlands, covering low lying land in the western part of the study area;
- LLCA 24: Highknock Channel Farmlands, covering low lying land in the western part of the study area;
- LLCA 25: Walland Marsh Farmlands, covering low lying land in the southern part of the study area; and
- LLCA 26: Dungeness, covering low lying land in the south-east part of the study area.

11.5.37 With reference to **Appendix 11-C**, the Shepway District Council Romney Marsh Landscape Character Assessment, 2016 (Ref 280) sets out the historical evolution of Romney Marsh and identifies LLCA. The Proposed Development is located within:

- LLCA 1: Romney Marsh Proper Farmlands, which covers land to the north of the A259. The published study notes the LLCA is “is mainly arable farmland (with pockets of sheep pasture) but until recent years it had been used predominantly for grazing sheep. Fields are usually divided by a network of drainage ditches, although there are some hedgerows alongside roads. The predominance of ditches (which are often not visible from roads and paths) as field boundaries creates an open feel to the landscape. Nevertheless, it feels relatively settled, with evenly-spaced historic villages interspersed with farms. The towers of village churches are distinctive features within the landscape, and there are some trees, particularly around villages. The villages are connected by a network of distinctive narrow lanes.”; and
- LLCA 2: Brookland Farmlands, which covers land to the south of the A259. The published study notes the LLCA is “an area of marsh which was reclaimed from the sea and settled in the early medieval period. This process was undertaken systematically, creating a strongly linear landscape, with parallel lanes and field boundaries, although the pattern is

stronger at the western end of the LCA. The historic pattern of strip-shaped parish boundaries also shows how the reclaimed land was divided between existing parishes located in Romney Marsh Proper. The only village within this LCA is Brookland, although there are scattered farms (mostly along roads) and the ruin of Midley church. This is the most densely-treed LCA, and parallel lines of trees (mostly willow) and hedgerows are a distinctive feature of this LCA, particularly in the western part. Land use is predominantly arable, although there are some small areas of surviving sheep pasture.”.

11.5.38 With reference to **Appendix 11-C**, the remaining LLCA within the published study, beyond the Proposed Development, are:

- LLCA 4: The Dowels Farmland, covering low-lying land in the western part of the study area;
- LLCA 5: Highnock Channel Farmlands, covering low-lying land in the western part of the study area;
- LLCA 6: Dungeness Shingle, covering marshland and low-lying land across the south-east part of the study area;
- LLCA 7: Romney Marsh Coast, covering the coastline in the southern part of the study area; and
- LLCA 8: Camber Coast, covering the coastline in the eastern part of the study area.

Visual Amenity

11.5.39 In order to aid the initial fieldwork, bare earth ZTVs have been generated to illustrate the theoretical visibility of the proposed solar arrays. As set out previously, taller equipment within the Proposed Development, e.g. substations, have not been included in the ZTVs at this stage, as their location within the DCO Site Boundary is still to be confirmed. The ZTVs will be updated to include the taller equipment and final solar array positions.

11.5.40 With reference **Figures 11-2 and 11-3**, the ZTVs are digitally produced plans which shows area of land across the study area within which the proposed solar arrays would be theoretically visible, illustrated via the pink hatching. The ZTVs are termed ‘bare-earth’ because they do not include existing vegetation, nor buildings, across the study area, which would reduce the visibility of the proposed solar arrays. The ‘bare-earth’ ZTVs are therefore ‘unrealistic’ but are required to accord with the guidelines set out in GLVIA 3. The ZTVs are used to inform the fieldwork and do not form part of the final landscape and visual assessment.

11.5.41 **Figure 11-2: ZTV DCO Site Boundary, North – Bare Earth** models the theoretical visibility of the proposed solar arrays in the northern part of the DCO Site Boundary, covering land to the north of A259. **Figure 11-3: ZTV DCO Site Boundary, South – Bare Earth** models the theoretical visibility of the proposed solar arrays in the southern part of the DCO Site Boundary, covering land to the south of the A259. Both ZTVs are based on a generic layout of solar arrays across all of the DCO Site Boundary, prior to the iterative design process. The

combination of the bare-earth modelling and generic layout is therefore a precautionary approach to the ZTVs modelling.

- 11.5.42 With reference to **Figure 11-2: ZTV DCO Site Boundary, North – Bare Earth**, the theoretical visibility of the proposed solar arrays is extensive across the study area, extending northwards to elevated land within the Kent Downs National Landscape, eastwards and southwards to the coast and westwards to elevated land in the High Weald National Landscape. The theoretical visibility is more intermittent across the southern parts of the study area, with no theoretical visibility suggested from the south-east of Lydd and parts of the East Guldeford Levels and Rye.
- 11.5.43 With reference to **Figure 11-3: ZTV DCO Site Boundary, South – Bare Earth**, the extent of theoretical visibility is very similar to that illustrated for the solar panels in the northern part of the DCO Site Boundary, extending to elevated land in the northern part of the study area, eastwards and southwards to the coast and to parts of the High Weald National Landscape in the western part of the study area.
- 11.5.44 From the initial fieldwork undertaken between January 2026 and March 2026, when deciduous vegetation was not in leaf the visibility of the DCO Site Boundary is varied from across the study area, and far less than suggested by the ZTVs, to be focused upon land within 1km of the DCO Site Boundary.
- 11.5.45 From elevated land in the Kent Downs National Landscape, there are far-reaching and open views across Romney Marsh. However, the DCO Site Boundary is less discernible in comparison to the ZTVs, due to the combination of distance and increased softening of views from vegetation adjacent to the A259.
- 11.5.46 From PRoW surrounding the DCO Site Boundary, views are often truncated by roadside vegetation and slight undulations in landform, although there are close range views of the DCO Site Boundary from PRoW which cross the DCO Site Boundary and the road networks bordering the DCO Site Boundary, due to gaps in the roadside vegetation.
- 11.5.47 There is also inter-visibility between the DCO Site Boundary to the south of the A259 and residential properties in Old Romney and farms bordering the DCO Site Boundary. The intervening distances and localised vegetation patterns limit views of the DCO Site Boundary to the south of the A259 from Ivychurch.

Visual Receptors

- 11.5.48 With reference to **Figure 11-2 and Figure 11-3, Table 11-1** sets out the proposed viewpoints ('publicly accessible locations for a photograph') and the representative receptors, e.g. residents, road users or recreational users most likely to have views of the Proposed Development. The viewpoints and visual receptors will be reviewed during the iterative design process and agreed with the Local Planning Authorities. A photograph of the existing view from each of the viewpoints will be included in the ES and annotated in accordance with the Landscape Institute Type 1 Images.

Table 11-1: Proposed Viewpoint Locations

REFERENCE	VIEWPOINT LOCATION	RECEPTOR GROUPS
1	Wheelsgate Lane (north)	Residents at Old Romney, road users, including users of NCR 2
2	PRoW (footpath) 0189/HM102/1,	Recreational users and residents at Old Romney
3	PRoW (footpath) 0189/HM114/3 and Swamp Road	Recreational users and road users
4	Wheelsgate Lane (south)	Residents and road users
5	Coldharbour Lane and PRoW (footpath) 0189/HM104/1	Road users and recreational users
6	Beggarsbush Lane	Residents and road users
7	Midley Wall	Road users, including users of NCR 11 and residents
8	Hawthorn Corner	Road users, including users of NCR 11
9	PRoW (footpath) 0189/HM115/1	Recreational users
10	Midley Wall	Road users including users of NCR 11
11	Midley Wall	Road users and residents
12	Dennes Lane	Road users
13	PRoW (footpath) 0189/HM112/3	Recreational users
14	Swamp Road	Road users
15	Dennes Lane	Road users, including users of NCR 11 and residents
16	Caldecote Lane	Road users and residents
17	B2075 (Romney Road)	Road users
18	B2075 (Romney Road)	Road users and residents
19	PRoW (footpath) 0162/HL2/1	Recreational users
20	A259 at the western edge of New Romney	Residents and road users
21	A259	Road users
22	A258	Residents and road users
23	St Clements Church, Old Romney (Old Romney Conservation Area)	Recreational users, visitors and residents
24	Five Vents Lane	Road users and residents
25	Wallingham Sewer and PRoW (footpath) 0189/HM118/2	Recreational users
26	PRoW (footpath) 0189/HM121/2	Recreational users
27	Ashford Road	Road users
28	PRoW (footpath) 0241/HM120/1	Recreational users and residents
29	PRoW (footpath) 0241/HM123/1	Recreational users and residents
30	PRoW (footpath) 0241/HM123/1	Recreational users and residents

REFERENCE	VIEWPOINT LOCATION	RECEPTOR GROUPS
31	Five Vents Lane	Road users including users of NCR 2
32	Five Vents Lane	Road users and residents
33	Chittenden Lane	Road users and residents
34	PRoW (footpath) 0178/HM77/4	Recreational users
35	St Mary in the Marsh	Residents
36	Ashford Road	Road users and residents
37	PRoW (footpath) 0138/HM77/2	Recreational users
38	PRoW (footpath) 0138/HM95/1	Recreational users and residents
39	PRoW (footpath) 0138/HM97/3	Recreational users
40	PRoW (bridleway) 0138/HM111/1	Recreational users
41	Wenhams Lane	Recreational users and residents
42	A259	Road users
43	PRoW (footpath) 0138/HM108/2	Recreational users
44	Clubb's Lane, Brookland	Road users and residents
45	PRoW (footpath) IDN/22/2, within the High Weald National Landscape	Recreational users
46	PRoW (footpath) 0254/AT103/9, part of the Saxon Shore Way at Stone in Oxney and within the High Weald National Landscape	Recreational users
47	PRoW (footpath) 0008/AT119/2, parts of the Walks in East Kent - Appledore	Recreational users
48	PRoW (footpath) 0213/AE573/2, Ruckinge	Recreational users and visitors to the church
49	PRoW (footpath) 0024/AE534/1	Recreational users
50	PRoW (footpath) 0030/AE506/2 in the Kent Downs National Landscape	Recreational users
51	PRoW (footpath) 0030/AE510/1, in the Kent Downs National Landscape	Recreational users
52	PRoW (footpath) 0178/HM189/1, Newchurch	Recreational users and residents

11.6 Potential Effects and Mitigation

- 11.6.1 This section sets out the potential effects of the Proposed Development on landscape and visual matters.
- 11.6.2 Mitigation measures relevant to landscape and visual matters are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Construction

- 11.6.3 The activities associated with the construction phase which are pertinent to LVIA will include, but will not be limited to, the establishment of construction

compounds, the use of construction vehicles and plant, the upgrading and creation of access tracks, and the installation of solar PV infrastructure including panel mounting structures, solar panels, and associated electrical equipment such as cabling works.

- 11.6.4 The Proposed Development has the potential to result in temporary significant adverse landscape effects due to physical alterations to surface landform, removal of vegetation and the presence of construction machinery and activity of a greater scale and duration than general farming activity, resulting in an unsettled character. The Proposed Development has the potential to result in adverse impacts on perceptions of tranquillity and remoteness for geographic areas covered by the construction activity as well as areas beyond the construction activity.
- 11.6.5 The visible aspects of the construction phase also have the potential to result in significant adverse visual effects in comparison to the composition of existing views being predominantly of a settled rural landscape and localised infrastructure.

Operation and Maintenance

- 11.6.6 With reference to **Chapter 3: The Proposed Development**, in the operational (and maintenance) phase, the Proposed Development would result in a change in landscape character at the DCO Site Boundary due to the introduction of renewable energy equipment and structures.
- 11.6.7 The equipment would mostly include rows of Solar PV Mounting Structures at 4.5 m in height above ground level, with separation distances between 2 m and 8 m. In addition to the form of the solar PV panels, they would also be a dark grey, or black tone, which would contrast with the tonal colours of the fields across the DCO Site Boundary.
- 11.6.8 The larger scale equipment would include the BESS, each at 8 m x 3m and 4.5 m in height, set within a maximum compound area of 8 ha. Several types of substations are proposed, with a maximum height of 9 m. The SKEP Main On-Site Substation is proposed to have a maximum compound area of 4 ha, and with a maximum height up to 13 m. The National Grid Substation would have a maximum height up to 25 m. The utilitarian form of the BESS battery containers and electrical infrastructure form of the substations would contrast with the open and undeveloped character of the DCO Site Boundary.
- 11.6.9 Structures including perimeter fencing around the Solar PV Sites and 5 m tall posts for mounting Closed-Circuit Television (CCTV) cameras would also introduce additional built elements within the predominantly open landscape across the DCO Site Boundary. Security fencing around substation compounds/other electrical infrastructure will be 3.4 m.
- 11.6.10 During the operational and maintenance phase, the maintenance activities that may have an impact on landscape and visual matters will be minimal and limited to routine vegetation management, periodic inspection and maintenance of solar PV infrastructure, and occasional access by maintenance

personnel and vehicles. The type of equipment and frequency for this would not be uncharacteristic in an intensively farmed agricultural landscape.

11.6.11 Notwithstanding that the Proposed Development is reversible and located in proximity to an existing solar farm, from the above, the Proposed Development has the potential to result in significant adverse landscape effects at year 1 of operation due to the change in land use and introduction of solar arrays and associated equipment within an open landscape. These significant adverse landscape effects are likely to the landscape character across the DCO Site Boundary, published landscape character areas covering the DCO Site Boundary and those within its setting. There is also the potential for significant adverse landscape effects at year 15 of operation (an standard industry assessment phase) for the same reasons, although the geographic extent of the adverse landscape effects is likely to be less than at year 1, due to the reduced perception of the Proposed Development.

11.6.12 The Proposed Development has the potential to result in significant adverse visual effects at year 1 of operation due to the change to composition of existing views, due to the visibility of the above equipment, which as noted could range up to 13m in height. By year 15, the establishment of the proposed planting is likely to reduce the potential for significant adverse effects; although close range views of taller equipment and structures from PRow and residents in proximity to the DCO Site Boundary may still retain some significant adverse visual effects.

Decommissioning

11.6.13 The Proposed Development is anticipated to have an operational lifespan of approximately 40 years, during which components would be maintained and replaced as required to ensure continued effective operation. At the end of the operation (and maintenance) phase, the Proposed Development would be decommissioned, involving the removal of above-ground solar PV infrastructure, buildings and fencing, with materials recycled or disposed of in accordance with good practice at that time, and with decommissioning expected to take place over a period of approximately 24 months.

Decommissioning methods, including the treatment of underground cabling, would be informed by prevailing policy and best practice, with works undertaken in phases and the DCO Site Boundary reinstated to its original use.

11.6.14 Similar to the construction phase, the decommissioning phase has the potential to result in temporary significant adverse landscape effects due to the machinery, activity, alterations to landform and vegetation patterns, and generally unsettled character of the landscape in comparison to general farming. Views of the decommissioning activity also have the potential to result in temporary adverse visual effects, given the change in the composition of views. Generally however the impacts will be the same or lower than during construction, due to the mature vegetation planting associated with the Proposed Development better screening views into the DCO Site.

Mitigation

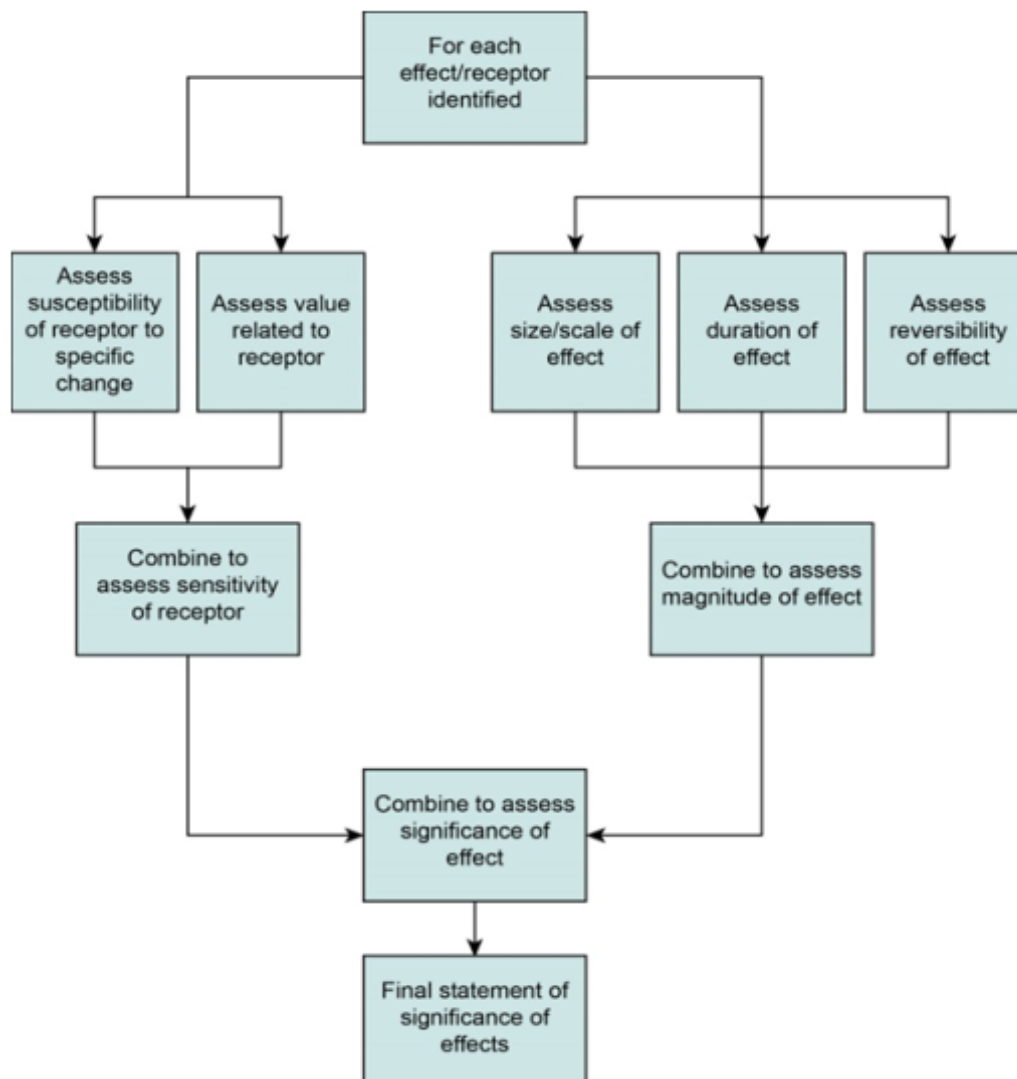
11.6.15 Mitigation measures to avoid or reduce landscape and visual effects are based upon the principles of careful siting of the Proposed Development, retaining existing vegetation wherever practicable and implementing new planting as part of a new Proposed Development site-wide Green and Blue Infrastructure strategy. Mitigation measures integrated into the design of the Proposed Development will consider the following principles:

- Off-setting the Proposed Development from Old Romney and Old Romney Conservation Area to avoid impacts to the immediate setting of the areas and reduce the visibility of the Proposed Development;
- Off-setting the Proposed Development from individual properties and farms in proximity to the DCO Site Boundary to reduce the visibility of the Proposed Development;
- Off-setting the Proposed Development from watercourses and drains within the DCO Site Boundary, so to enable new planting and enhancement measures;
- Off-setting the Proposed Development from the PRoW within the DCO Site Boundary to retain the recreational value and reduce the perceived sense of enclosure from the Proposed Development;
- Off-setting the Proposed Development from the local road networks, including the A259, to reduce the visibility of the Proposed Development when travelling between villages and retain the rural roadside character;
- Retaining and reinforcing existing field boundary vegetation where necessary with new native planting to reduce the visibility of the Proposed Development and provide opportunities for improved functional and ecological habitats and connectivity in accordance with the published landscape guidance; and
- Implementing new planting within the DCO Site Boundary, along with localised earth bunding to reduce the visibility of the Proposed Development from the local road networks and PRoW.

11.7 Assessment Methodology

- 11.7.1 The assessment will be undertaken by Chartered Landscape Architects with extensive experience of DCO solar developments.
- 11.7.2 The assessment of potential effects as a result of the Proposed Development (construction, operation (and maintenance), and decommissioning) on landscape and visual matters will be undertaken using the methodology set out below, which has been devised specifically for the Proposed Development.
- 11.7.3 The landscape and visual assessment will be derived from GLVIA 3 (Ref 265), with the relevant extract of Figure 3.5 from the published study illustrating the assessment process (as shown in **Plate 11-1** below).

Plate 11-1: Extract of GLVIA 3 Figure 3.5 and the landscape and visual assessment process.



11.7.4 In accordance with GLVIA 3, the landscape and visual assessment will include the following key stages:

- A baseline review of published landscape assessments, relevant evidence base documents, National Landscape Management Plans and supporting studies, aerial photography, mapping and fieldwork to identify the landscape and visual baseline and landscape and visual receptors;
- Following the identification of the landscape and visual receptors, these shall be presented to the Local Planning Authorities and the Kent Downs and High Weald National Landscape for agreement, along with agreeing the extent of the landscape and visual study area;
- An assessment of the sensitivity (nature of the receptor) of landscape and visual receptors via an assessment of their value and susceptibility to change shall be undertaken (as set out below);
- An assessment of the magnitude of change (nature of effect) of the Proposed Development (i.e. size, scale, duration and reversibility) during the construction, year 1, year 15 and decommissioning phases shall be undertaken; and

- An assessment of the significance of effect to the landscape and visual receptors for the above phases of the Proposed Development will be determined via professional judgement and the relationship between the sensitivity of the receptors and magnitude of change.

11.7.5 The landscape and visual assessment of the Proposed Development will be undertaken for the:

- Peak construction activity, i.e. assuming all construction activity is occurring across all of the DCO Site Boundary at the same time. The assessment will be undertaken for a winter season (i.e. when deciduous vegetation is not in leaf);
- Year 1 of operation, which will assume the Proposed Development is fully built and operational, with new planting within the DCO Site Boundary being low in height. The assessment will be undertaken for winter;
- Year 15 of operation, which will reflect the year 1 assessment, but assume that the new planting is taller in height and that all planting and vegetation is in leaf; and
- Decommissioning, which will reflect the construction phase assessment and be undertaken for a winter phase.

Assessment of landscape sensitivity

11.7.6 With reference to GLVIA 3, landscape sensitivity is determined via an assessment of landscape value and landscape susceptibility.

Landscape Value

11.7.7 GLVIA 3 defines landscape value as “the relative value that is attached to different landscapes by society.”

11.7.8 Landscape value will be assessed based upon the criteria set out in GLVIA 3 Box 5.1 (GLVIA 3 page 84) and the Landscape Institutes’ Technical Guidance Note (TGN) 02-21: Assessing landscape value outside national designations (TGN 02-21) (Ref 266). The use of both guidelines is considered appropriate given they are compatible, cover the similar value attributes and that the study area covers land both within a National Landscape, its setting and land outside national designations, as demonstrated by **Table 11-2**.

Table 11-2: GLVIA 3 Box 5.1 and TGN 02-21 Landscape Value Criteria

GLBIA 3 BOX 5.1	TGN 02-21 CRITERIA
Landscape quality (condition)	Landscape condition
Scenic quality	Natural heritage
Rarity	Distinctiveness
Representativeness	Distinctiveness
Conservation interests	Cultural heritage/natural heritage/functional
Recreational value	Recreational/functional
Perceptual aspects	Perceptual
Associations	Associations

11.7.9 The assessment criteria for landscape value is set out in **Table 11-3**.

Table 11-3: Landscape Value Criteria

CLASSIFICATION	LANDSCAPE VALUE CRITERIA
Very high	The receptor may be internationally or nationally designated, exhibiting all of the key features or special qualities of the designation, and GLVIA 3 Box 5.1 or TGN 02-21.
High	The receptor is likely to be designated and/or highly representative of the criteria outlined in GLVIA 3 Box 5.1 or TGN 02-21.
Medium	The receptor is unlikely to be designated, although contributes to the landscape character, but could include some areas of degraded or eroded features. The receptor may represent some features of GLVIA 3 Box 5.1 or TGN 02-21.
Low	The receptor is unlikely to be designated with little recognised value, due to either being common in character and/or with limited representation of features of GLVIA 3 Box 5.1 or TGN 02-21.
Very Low	The receptor is unlikely to be designated and may be a detracting feature, damaged or eroded and/or exhibiting none or very few features of GLVIA 3 Box 5.1 or TGN 02-21.

Landscape Susceptibility

11.7.10 GLVIA 3 paragraph 5.40 defines landscape susceptibility as “the ability of a landscape receptors (where it be the overall character or condition of a particular landscape type or area) or an individual element and/or features, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation.”

11.7.11 Landscape Institute TGN-2024-01: Notes and Clarifications on aspects of GLVIA 3 (Ref 267) has clarified that the higher the susceptibility, the more liable it is to be harmed.

11.7.12 **Table 11-4** sets out the criteria for the assessment of landscape susceptibility.

Table 11-4: Landscape Susceptibility Criteria

CLASSIFICATION	LANDSCAPE SUSCEPTIBILITY CRITERIA
Very high	The landscape receptor is likely to have a pattern/texture/simplicity/landform or intactness with no or very limited ability to accommodate change.
High	The landscape receptor is likely to have a pattern/texture/simplicity/landform or intactness with a small ability to accommodate change.
Medium	The landscape receptor is likely to have a pattern/texture/simplicity/landform that is able to accommodate some change.
Low	The landscape receptor is likely to have a pattern/texture/simplicity/landform that it is tolerant of change.

CLASSIFICATION	LANDSCAPE SUSCEPTIBILITY CRITERIA
Very low	The landscape receptor is likely to have a pattern/texture/simplicity/landform that is able to accommodate a high degree of change.

Landscape Sensitivity

11.7.13 The landscape sensitivity will be determined via professional judgement on the combination of landscape value and landscape susceptibility. **Table 11-5** sets out the criteria for landscape sensitivity.

Table 11-5: Landscape Sensitivity

CLASSIFICATION	LANDSCAPE SENSITIVITY CRITERIA
Very high	A designated or non-designated landscape that is highly valued and is likely to be fully representative of the designation, or key characteristics within published studies. The receptor is susceptible to very small changes only.
High	A designated or non-designated landscape with valued features, including the potential of a 'valued landscape', whether through landscape designations or distinctive components and characteristics. The receptor is susceptible to small changes only.
Medium	A designated or non-designated landscape with some value, but of relatively common components and characteristics which is reasonably tolerant of change.
Low	A landscape of limited value, with relatively inconsequential components and characteristics, unlikely to be designated and is potentially tolerant of change.
Very low	A landscape with very low or very limited value, potentially a degraded landscape, such that it is highly tolerant of change.

Visual Sensitivity

11.7.14 Like landscape sensitivity, visual sensitivity is assessed via a combination of an assessment of visual value and visual susceptibility.

Visual Value

11.7.15 GLVIA 3 sets out that visual value should take account of the recognition of the value of a view, e.g. via a planning designation and the indicators of value attached to views, e.g. via guidebooks or references in art.

11.7.16 **Table 11-6** sets out the criteria for visual value.

Table 11-6: Visual Value Criteria

CLASSIFICATION	VISUAL VALUE CRITERIA
Very high	A view which is recognised as 'iconic' and/or a specific visitor attraction or fully representative of the key characteristics/statements of significance or natural beauty of a designated landscape.
High	A recognised high-quality view, likely to be well frequented and/or promoted as a beauty spot/visitor destination; and/or a view with strong cultural associations and/or a view which related to the

CLASSIFICATION	VISUAL VALUE CRITERIA
	experience of other features, e.g. heritage assets and/or the view is likely to be the primary reason for the receptor being present.
Medium	A view which is likely to be valued locally but is unlikely to be widely recognised for its quality or unlikely to be the receptor's primary reason for being present.
Low	An ordinary but not necessarily unattractive view, with no recognised quality which is unlikely to be visited specifically for the view and is typically incidental to the receptor's reason for being present.
Very low	A poor quality or degraded view which is discordant and is unlikely to be the reason for the receptor being present. A view which detracts from the receptors experience of being present.

11.7.17 GLVIA 3 sets out the visual susceptibility is mainly a function of the occupation of the people experiencing the view and the extent to which their attention or interest may be focused on the view. **Table 11-7** sets out the criteria for visual susceptibility.

Table 11-7: Visual Susceptibility Criteria

CLASSIFICATION	VISUAL SUSCEPTIBILITY CRITERIA
Very high	Visitors to iconic viewing locations and/or within a designated landscape.
High	Residents at home or people engaged in outdoor recreation whose attention is focused on the landscape, including along public rights of way or visitors to heritage assets.
Medium	Road, rail or transport users on routes where there is an anticipation of some visual enjoyment of the landscape, but whose attention is not primarily focused on the landscape.
Low	Road, rail or transport users on A roads or motorways where views are not focused on the landscape and/or people engaged in outdoor recreation which does not depend upon an appreciation of the landscape.
Very low	People at their place of work whose attention may be focused on their work and not their surrounds.

Visual Sensitivity

11.7.18 The visual sensitivity will be determined via professional judgement on the combination of visual value and visual susceptibility.

11.7.19 **Table 11-8** sets out the criteria for visual sensitivity.

Table 11-8: Visual Sensitivity

CLASSIFICATION	VISUAL SENSITIVITY CRITERIA
Very high	Activity specifically focused on a designated or iconic view.
High	Activity resulting in a particular interest or appreciation of the view (e.g. residents or people engaged in outdoor recreation whose attention is focused on the landscape) and/or a high value of existing views.

CLASSIFICATION	VISUAL SENSITIVITY CRITERIA
Medium	Activity resulting in a general interest or appreciation of the view (e.g. residents or people engaged in outdoor recreation that does not focus on the landscape) and/or a medium value of existing views.
Low	Activity where interest or appreciation of the view is secondary to the activity (e.g. people at work or motorists travelling through the area) and/or low value of existing views.
Very low	Activity where interest or appreciation of the view is inconsequential (e.g. people at work with limited views or drivers of vehicles in areas of dense vegetation or urban areas) and/or very low value of existing views.

Assessing landscape and visual magnitude

11.7.20 The following section sets out the proposed methodology for defining landscape and visual magnitudes of impact. This includes consideration of the potential glint and glare impacts from the Proposed Development. A Glint and Glare assessment will be included as a separate technical appendix in the ES with a summary presented in the Other Environmental Topics chapter.

Landscape magnitude

11.7.21 As set out previously, the magnitude of landscape effects relates to the scale, extent, duration and reversibility of the Proposed Development. **Table 11-9** sets out the criteria for defining landscape magnitude.

Table 11-9: Criteria for Landscape magnitude of change

CLASSIFICATION	LANDSCAPE MAGNITUDE
High	The total or major loss or alteration of key characteristics or the addition of new features or components that would substantially alter the character of setting of the area. Change may be permanent or temporary.
Medium	The partial loss or alteration of characteristics or the addition of new features or components that would alter the character or setting of the area. Change may be permanent or temporary.
Low	The limited loss or alteration of components or the addition of new features or components that reflect the character of setting of the area. Change may be permanent or temporary.
Very low	Virtually imperceptible loss or addition of new features or components that overall retain the character or setting of the area. Change may be permanent or temporary.
None	No change to the landscape character or setting of an area. Change may be permanent or temporary.

Visual magnitude

11.7.22 Visual magnitude is assessed in relation to the changes to the composition of views or overall visual amenity, combining the degree and extent of the visual change, the exposure to the view and the reversibility or permanence of the change. **Table 11-10** sets out the criteria for visual magnitude.

Table 11-10: Criteria for Visual magnitude

CLASSIFICATION	VISUAL MAGNITUDE
High	Extensive change to the composition of the view (e.g. widespread loss or characteristic features or the widespread addition of new features within the view) and/or high degree of exposure to the view (e.g. close, direct or open views). Change may be permanent or temporary.
Medium	Partial change to the composition of the view (e.g. loss of some characteristic features or the addition of new features within the view) and/or medium degree of exposure to the view (e.g. middle-distance or partially screened views). Change may be permanent or temporary.
Low	Subtle change to the composition of the view (e.g. limited loss of characteristic features or the addition of new features within the view) and/or low degree of exposure to the views (e.g. long-distance, substantially softened or glimpsed). Change may be permanent or temporary.
Very low	Barely perceptible change to the existing view and/or very brief exposure to the view. Change may be permanent or temporary.
None	No change to the composition of the view.

Significance of Effect

11.7.23 The significance of landscape and visual effects will be determined via professional judgement in considering the relationship between the sensitivity of the receptor and the magnitude of change. **Table 11-11** sets out a guide to aid this professional judgement.

Table 11-11: Guide to determining the significance of landscape and visual effects

RECEPTOR SENSITIVITY	MAGNITUDE HIGH	MEDIUM	LOW	VERY LOW	NONE
Very high	Major	Major	Major or Moderate	Moderate or Minor or Negligible	Neutral
High	Major or Moderate	Major or Moderate	Moderate or Minor	Minor or Negligible	Neutral
Medium	Major or Moderate	Moderate or Minor	Minor or Negligible	Negligible	Neutral
Low	Moderate or Minor	Minor	Minor or Negligible	Negligible or Neutral	Neutral
Very low	Minor or Negligible	Negligible	Negligible or Neutral	Negligible or Neutral	Neutral

11.7.24 Where the above table allows for a choice in the significance of effect, e.g. major or moderate, a single effect, i.e. moderate will be presented, along with a reasoned justification in the assessment narrative.

11.7.25 The significance of effects can be beneficial or adverse.

11.7.26 Significance of effects predicted to be major or moderate will be considered 'significant' effects, unless a reasoned justification is provided. Effects of minor, negligible and neutral will be considered 'not significant'.

Relationship to Residential Amenity

- 11.7.27 The visual assessment will assess the potential visual effects to residential receptors, i.e. private views. As set out in the following limitation and assumptions, this assessment will be undertaken from publicly accessible locations, i.e. a PRow or road adjacent to a dwelling.
- 11.7.28 The Landscape Institute's TGN 02/2019 11-28 sets out that the Residential Visual Amenity Threshold is considered as to whether "the effect of the development on Residential Visual Amenity of such nature and/or magnitude that it potentially affects 'living conditions' or Residential Amenity."
- 11.7.29 The guidance is based upon a four-stage approach. Stages one to three accord with the above assessment methodology, whereby visual receptors area identified, along with the magnitude of change and the significance of effect.
- 11.7.30 The fourth step is a more detailed examination of residential properties and their layouts where significant adverse visual effects are identified. Therefore, if at the year 15 of operation assessment, i.e. accounting for the proposed establishment of new planting, significant adverse visual effects remain for residential receptors a Residential Visual Amenity Threshold shall be undertaken, with the methodology stated in the ES.

Character of the Night Sky

- 11.7.31 As any potential lighting during the construction phase would be temporary in duration and the Proposed Development would not be lit, an assessment of lighting in relation to the character of the night sky is scoped out of the landscape and visual assessment. The CCTV lighting is infra-red which is invisible to the human eye. It is likely that lighting sensors for security purposes would be deployed around the electrical infrastructure and potentially at other pieces critical infrastructure. This would be motion detection lighting only to assist maintenance staff visiting the Proposed Development during hours of darkness. No areas are proposed to be continually lit.

11.8 Limitations and Assumptions

- 11.8.1 The limitations of the landscape and visual assessment are:
- Photographs towards the Proposed Development will be taken from publicly accessible locations ('viewpoints'), e.g. PRow, pavements or laybys. Where access is limited, the nearest publicly accessible location will be visited and noted in the assessment. Should private access be required, landowners will be contacted for permission, but if that is not granted, the fieldwork will revert to the closest publicly accessible location.
- 11.8.2 The assumptions of the landscape and visual assessment are:

- Best practice construction measures will be used to avoid or reduce the potential landscape and visual effects during the construction phase, including for protection of retained vegetation;
- PRoW across the DCO Site Boundary will remain accessible where practical during the construction phase or temporary diversions will be put in place;
- At year 1, new tree planting within the DCO Site Boundary will range up to 3 m in height, with hedges other species up to 0.8 m in height;
- Growth rates for new planting will be an increase by 1 m in height every 3 years; and
- The decommissioning phase assessment assumes the proposed planting around the edges of the DCO Site Boundary is retained, whilst any new planting within the DCO Site is removed, so that the DCO Site can be returned to its baseline position. This assumption will be reviewed with the Applicant during preparation of the ES, for example to avoid the unnecessary removal of any woodland planting on decommissioning.

11.8.3 Additional limitations or assumptions occurring during the assessment process will be stated in the ES.

11.9 Summary of Elements Scoped In and Out

11.9.1 A summary of the elements scoped in and out of this chapter is presented in **Table 11-12**.

Table 11-12: Elements scoped in and out of the landscape and visual assessment

ELEMENT	SCOPED IN/SCOPED OUT
Impacts to Site landscape character	Scoped in, due to the physical and perceptual changes resulting from the introduction of a range of equipment across the Site in comparison to the undeveloped character of the fields and the arable land use.
Impacts to local landscape character	Scoped in, due to the change from the arable character in the setting of Old Romney and the local road networks to that of the Proposed Development.
Impacts to published landscape character areas identified in the EIA Scoping Report	Scoped in, due to the potential changes to stated key characteristics of the published landscape character areas, along with changes to character and perception due to the introduction of the Proposed Development in contrast to the generally open and arable character of Romney Marsh.
Impacts to the Kent Downs National Landscape (including its setting)	Scoped in, due to the potential for the Proposed Development to alter the character of setting of the National Landscape and special components of the designation due to the introduction of the Proposed Development in comparison to the existing land uses across the DCO Site Boundary.
Impacts to the High Weald National Landscape (including its setting)	Scoped in, due to the potential for the Proposed Development to alter the character of setting of the National Landscape and special components of the designation due to the introduction of the Proposed Development in comparison to the existing land uses across the DCO Site Boundary.

ELEMENT	SCOPED IN/SCOPED OUT
Impact to people's views identified in the EIA Scoping Report	Scoped in, due to the potential changes from views of undeveloped fields to a range of equipment across the DCO Site Boundary.
Impacts to the character of the night sky	Scoped out, as any lighting required during the construction phase would be temporary in duration and that during the operational phases, there will be no permanent lighting. Therefore, the character of the night sky is considered to remain as existing during the operational phases of the Proposed Development, such the topic can be scoped out.
Impacts to seascape character and marine receptors	Scoped out, as the Proposed Development would not be perceived from the sea and marine receptors due to the generally low height of the proposed equipment and the intervening distance between the DCO Site Boundary and the sea. Therefore, there would be no change to the seascape character, nor impacts to marine receptors.
Impacts to residential amenity	Scoped in, due to the potential for significant adverse visual effects during the operational phases of the Proposed Development for residential receptors near the Site, due to the change from views of fields to the Proposed Development.
Visual impacts to aircraft users of Lydd Airport	Scoped out, due to the intervening distance and that any relevant matters will be addressed by the Glint and Glare assessment.

12. Noise and Vibration

12.1 Introduction

- 12.1.1 This chapter sets out the proposed approach to the assessment of likely significant noise and vibration effects during the construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the noise and vibration chapter of the Environmental Statement (ES).

12.2 Study Area

- 12.2.1 Study areas have been defined to include construction and operational noise and vibration receptors likely to be at risk from possible direct and indirect impacts that might arise from the Proposed Development.
- 12.2.2 For construction noise effects from the Proposed Development, the area for which impacts are expected is considered to be 300 m, based on guidance in British Standard (BS) 5228-1 (Ref 281), which states construction noise predictions are generally reliable up to 300 m. As such, the construction noise study area is set at a distance of 300 m from the DCO Site Boundary. Should a Grid Connection Route be required following disclosure of the proposed National Grid Substation, the 300 m study area will be used.
- 12.2.3 BS 5228-1 does not contain any information on distances that construction vibration should be assessed up to. As such, reference is made to Design Manual for Roads and Bridges (DMRB) LA 111 (Ref 282), which identifies a distance of 100 m as sufficient to encompass vibration sensitive receptors. As such, the construction vibration study area is set at a distance of 100 m from the DCO Site Boundary.
- 12.2.4 The study area for operational Battery Energy Storage System (BESS) and substation noise is set at 1000 m, which is based on the distance that the International Organisation for Standardisation (ISO) 9613-2 (Ref 283) calculation methodology is valid to. The study area for inverter noise is a distance of 500 m from the DCO Site Boundary, which is based on experience of inverter noise from previous solar farm projects.
- 12.2.5 A study area of 50 m either side of construction traffic routes has been defined based on guidance in the DMRB LA111. The study areas for the Proposed Development are illustrated in **Figure 12-1: Noise and Vibration Study Areas and Noise Monitoring Locations**.

12.3 Legislation, Planning Policy Context and Guidance

12.3.1 Legislation, planning policy and guidance relating to noise and vibration and pertinent to the Proposed Development is described below.

Legislation

12.3.2 Relevant legislation includes:

- Control of Pollution Act (CoPA) 1974 (Ref 284) – requires that Best Practicable Means (BPM) (as defined in section 72 of CoPA) are adopted to control construction noise on any given site as far as reasonably practicable; and
- Environmental Protection Act 1990 (Ref 285) – prescribes noise and vibration emitted from premises (including land) so as to be prejudicial to health or a nuisance as a statutory nuisance.

National Planning Policy

12.3.3 The following planning policies from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5) sets out national policy for energy. Reference will be made to Section 5.12 in relation to the assessment of noise and vibration.
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6) identifies in paragraph 2.5.2 that good design should be adopted to mitigate noise. It sets out the potential for impacts relating to noise and vibration generated by construction traffic and transport in paragraphs 2.10.112 – 2.10.118 and operational traffic in paragraphs 2.10.153 to 2.10.154.
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7), taken together with NPS EN-1, provides the primary basis for decisions taken by the Secretary of State (SoS) on applications it receives for the categories of nationally significant electricity networks infrastructure included within it. Reference will be made to Section 2.9 and Paragraphs 2.9.27 to paragraph 2.9.44 where relevant which relates to noise from substation equipment.

12.3.4 The National Planning Policy Framework (NPPF) (Ref 8) contains the government's planning policies relating to noise in Paragraph 174 and 185.

12.3.5 The Noise Policy Statement for England (NPSE) (2010) (Ref 287) sets out the long-term vision of the government's noise policy. The NPSE sets definitions for 'significant adverse effects' and 'adverse effects' using the concepts:

- Lowest Observed Adverse Effect Level (LOAEL) – the level above which, as an average response, adverse effects on health and quality of life can be detected; and

- Significant Observed Adverse Effect Level (SOAEL) – the average response level above which, as an average response, significant adverse effects on health and quality of life occur.

12.3.6 Other relevant national planning and guidance includes:

- Planning Practice Guidance Noise (Ref 288) provides guidelines that are designed to assist with the implementation of the noise requirements set out in the NPSE.

Local Planning Policy

- The Folkestone and Hythe District Council Core Strategy Places and Policies Local Plan (2020) (Ref 13) Policy CC6 Solar Farms aims to protect local amenity of residential areas from noise emissions from solar farms.

Relevant Industry Guidance

12.3.7 Relevant industry guidance includes:

- BS 7445-1:2003 – ‘Description and measurement of environmental noise – Part 1: Guide to quantities and procedures’ (BS 7445) (Ref 289);
- BS 4142:2014+A1:2019 Methods for Rating and Assessing Industrial and Commercial Sound (BS 4142) (Ref 290);
- BS 5228:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites - Part 1 (Noise) (BS 5228-1) & Part 2 (Vibration) (BS 5228-2) (Ref 291);
- The Institute of Environmental Management and Assessment (IEMA) (now The Institute of Sustainability and Environmental Professionals (ISEP)) Guidelines for Environmental Noise Impact Assessment, 2014 (Ref 293);
- Calculation of Road Traffic Noise (CRTN) (Ref 292); and
- DMRB LA 111 Noise and Vibration.

12.4 Consultation

- 12.4.1 Consultation as part of the Environmental Impact Assessment (EIA) process will be undertaken following submission of this EIA Scoping Report with statutory parties including Kent County Council (KCC) and FHDC.

12.5 Baseline Conditions

- 12.5.1 This section describes the baseline environmental characteristics within the DCO Site Boundary and surrounding areas with specific reference to noise and vibration.
- 12.5.2 The existing land uses within the DCO Site Boundary are primarily agricultural. There are individual and clusters of residential properties located adjacent to the DCO Site Boundary.

- 12.5.3 The main source of existing noise contributing to the ambient sound level in the vicinity of the DCO Site Boundary originates from local road traffic, specifically traffic on the A259 Road, Brookland Bypass and Romney Road.
- 12.5.4 Minor sources of noise contributing to the ambient sound include agricultural activity from the nearby farms including Wheelsgate Farm to the east of the DCO Site Boundary, John Paine Farms to the west, Rye Windmill Farm and little Cheyne Court Wind Farm to the south. Additionally, noise from Lydd Model Flying Club to the east and Derek Linch MOT and Service as well as Oasis Car Wash to the north will all contribute to the local ambient sound conditions.
- 12.5.5 Sensitive receptors will be identified using Ordinance Survey Addressbase+ data. Baseline sound monitoring will be undertaken at selected locations to define representative baseline data at noise-sensitive receptors in the study areas. The monitoring procedures will follow guidance from BS 7445 and BS 4142.
- 12.5.6 Unattended monitoring for a minimum period of one-week will be undertaken to define baseline sound conditions at sensitive receptors within the study area.
- 12.5.7 A weather station will also be installed for the duration of the sound surveys so any periods of adverse weather conditions can be identified and omitted from noise data.
- 12.5.8 Prior to undertaking the baseline sound survey, a detailed methodology will be prepared and consulted on with KCC and FHDC. The methodology will also include details on the study area and sensitive receptors for consultation.

12.6 Potential Effects and Mitigation

- 12.6.1 This section sets out the potential noise and vibration effects of the Proposed Development. Mitigation measures relevant to noise and vibration are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Construction and Decommissioning

- 12.6.2 Potential noise and vibration effects during the construction and decommissioning phases are likely to include works activities associated with site preparation, plant installation, the construction of the National Grid Substation, SKEP Main On-site Substation and Additional On-Site Substations, cable laying and construction-related vehicle movements within the DCO Site Boundary and along access routes.
- 12.6.3 Construction traffic movements on public roads have the potential to cause temporary disturbance. It is therefore important that the routing and timing of vehicle movements is carefully managed. However, any increases in road traffic noise levels during works will be temporary, short term, and dependent on the actual number of traffic movements.

- 12.6.4 Road traffic can also cause vibration; however, DMRB LA 111 states: “operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects”. Whilst, this quote relates to the assessment of a highway scheme, it is relevant as it provides information that significant vibration effects would only be generated by traffic movements on a road with an irregular surface. It is assumed that KCC maintain good quality conditions for highways used to access the DCO Site Boundary. Therefore, no significant construction traffic vibration effects are expected, and an assessment of construction traffic vibration has been scoped out.

Operation

- 12.6.5 The potential noise effects during operation of the Proposed Development are likely to include noise from the Main Site (e.g. inverters, transformers, and the motors for the Single Axis Tracker Photovoltaic (PV) Mounting Structure, should this option be taken forward), BESS plant (e.g. cooling units, inverters, transformers), the SKEP Main On-Site Substation, Additional On-Site Substations and National Grid Substation (e.g. transformers), and any associated vehicle movements.
- 12.6.6 Plant items such as solar PV panels, Solar PV Mounting Structures, and cabling (both on-site and via the cable route) will not produce any operational noise emissions.
- 12.6.7 Moving parts in identified plant are restricted to cooling fans and tracker motors, which generate low levels of vibration that would not be perceptible off-site. As such, there will be no associated operational vibration effects and operational vibration is scoped out of any further assessment.
- 12.6.8 Repowering activities would include the replacement of equipment such as Solar Panels and BESS when required. These works may include use of plant that would generate temporary noise and vibration that may be perceptible off-site along with associated traffic on local roads. Construction plant and traffic associated with replacement activities will be no greater than construction-phase.

Mitigation

Construction and Decommissioning

- 12.6.9 Measures to control noise as defined in Annex B of BS 5228-1 and measures to control vibration as defined in Section 8 of BS 5228-2 will be adopted where reasonably practicable.
- 12.6.10 These measures represent Best Practicable Means (BPM) (as defined by section 72 of CoPA 1974) to manage noise and vibration emissions from construction activities. Examples of BPM that may be implemented during construction works are presented below:

- Unnecessary revving of engines will be avoided, and equipment will be switched off when not in use;
- Appropriate routing of construction traffic on public roads and along access tracks;
- Drop heights of materials will be minimised;
- Plant and vehicles will be sequentially started up rather than all together;
- Plant will always be used in accordance with manufacturers' instructions. Care will be taken to site equipment away from noise-sensitive areas. Where possible, loading and unloading will also be carried out away from such areas; and
- Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's specifications.

12.6.11 Embedded measures relevant to the construction phase will be described within an Outline Construction Environmental Management Plan (OCEMP), which will be developed into a detailed CEMP prior to the start of construction and implemented.

Operational and Maintenance

12.6.12 Embedded mitigation measures that will be applied for the operational phase of the Scheme are summarised as follows:

- Design layout to minimise noise at receptors, including locating inverters and transformers, BESS plant, SKEP Main On-site Substation, Additional On-Site Substations and the National Grid Substation in areas away from large concentrations of receptors, such that noise emissions are less impactful; and
- Selection of plant with consideration to noise emission level.

12.7 Assessment Methodology

12.7.1 The assessment of potential noise and vibration effects as a result of the Proposed Development (construction, operation (and maintenance), and decommissioning) will be undertaken using the methodology set out below.

Noise Impact Assessment Methodology

12.7.2 All noise effects are assumed to be local within the defined study area, only affecting nearby sensitive receptors, and are direct in nature; however, defining a likely effect and whether it is significant or not depends on the nature of a noise source. Likely effects have been defined based on guidance set out in national policy, as set out in Section 12.3.

12.7.3 A new source of noise is assessed through the absolute noise level it generates at sensitive receptors. Where an exceedance of the defined SOAEL for each noise source occurs, it is an indication of a likely significant effect. However, where an existing noise source is changed (i.e. construction traffic changing road traffic noise levels), the assessment of the effect level due to the change in

noise refers to guidance within the IEMA Guidelines for environmental noise impact assessment.

- 12.7.4 Government policy for noise is based on community exposure response relationships and noise insulation of a typical dwelling. Consequently, an assessment based on LOAELs and SOAELs cannot be applied to non-residential sensitive receptors (such as places of worship and Public Rights of Way (PRoW)). As such, the approach to the assessment of non-residential receptors differs from that adopted for residential receptors. Non-residential receptors are considered on a case-by-case basis by considering the applicable design criteria for good internal noise levels. The methodology for assessing noise and vibration effects at non-residential receptors will be discussed with the Council Officer outside of Scoping.

Construction and decommissioning noise and vibration

- 12.7.5 Noise and vibration levels associated with construction and decommissioning works will be assessed at chosen sensitive receptors. Annex E of BS 5228-1 provides example methods for the assessment of the significance of construction noise effects. With reference to the NPSE, the LOAEL, and SOAEL thresholds have been set in **Table 12-1** below.

Table 12-1: Thresholds of Potential Effects of Construction and Decommissioning Noise at Residential Buildings

TIME PERIOD	THRESHOLD VALUE ($L_{Aeq,T}$ DB)	
	LOAEL	SOAEL
Day (07:00 – 19:00) Saturday (07:00 – 13:00)	65	75
Evening (19.00 – 23.00) Weekends (13.00 – 23.00 Saturdays and 07.00 – 23.00 Sundays)	55	65
Night (23.00 – 07.00)	45	55

- 12.7.6 **Table 12-2** details Peak Particle Velocity (PPV) levels (a standard measure of vibration effects) and their potential effect on humans based on guidance from BS 5228-2.
- 12.7.7 At receptors where vibrations levels above the SOAEL are predicted, further consideration of whether an effect is significant is undertaken using professional judgement, taking account of the duration and frequency of the effect, as well as the time of day that the effect would be experienced.
- 12.7.8 In addition to human annoyance, building structures may be damaged by high levels of vibration. The levels of vibration that may cause building damage (as set out in Annex B of BS 5228-2) are far in excess of those that may cause annoyance. Consequently, if vibration levels are controlled to those specified by annoyance, then it is highly unlikely that buildings will be damaged by demolition and construction vibration.

Table 12-2: Thresholds of Potential Effects of Construction and Decommissioning Vibration (human response)

EFFECT LEVEL	PPV VIBRATION LEVEL	BS 5228-2 DESCRIPTION OF IMPACT
LOAEL	0.3 mm/s	Vibration might be just perceptible in residential environments.
SOAEL	1.0 mm/s	It is likely that vibration of this level in residential environments will cause complaint, but it can be tolerated if prior warning and explanation has been given to residents.

12.7.9 The temporary changes in road traffic noise levels along the local road network due to construction traffic will be assessed based on guidance from the IEMA Guidelines for environmental noise impact assessment. Assessment criteria are presented in **Table 12-3**.

Table 12-3: Construction Traffic Noise Assessment Criteria

EFFECT LEVEL	MAGNITUDE CRITERIA
Negligible	≥ 0 dB and < 1 dB
Minor	≥ 1 dB and < 3 dB
Moderate	≥ 3 dB and < 5 dB
Major	≥ 5 dB

Operational Noise

12.7.10 The impact of the proposed operational plant such as noise from the SKEP Main On-Site Substation, Additional On-Site Substations and National Grid Substation, inverters, Single Axis Tracker Mounting Structure (if required), and BESS will be assessed following guidance from BS 4142. Reference is also made to the Association of Noise Consultants (ANC) Guide to BS 4142 (Ref 294), BS 8233:2014 Guidance on sound insulation and noise reduction for buildings. (Ref 295) and the World Health Organization (WHO) 'Guidelines for Community Noise' (1999) (Ref 296) when defining minimum values for LOAEL and SOAEL.

12.7.11 The assessment criteria for noise from fixed plant installations are summarised in **Table 12-4**. The assessment will be based on available information on the operating conditions and the levels of noise generated by the plant.

Table 12-4: Operational Noise Assessment Criteria

EFFECT LEVEL	RATING LEVEL (EXTERNAL) AT RECEPTOR, $L_{AR, TR}$	
	DAYTIME (07:00-19:00) AND EVENING (19:00-23:00)	NIGHT-TIME (23:00-07:00)
LOAEL	Less than or equal to the typical background level ($L_{A90,T}$) – minimum of 35 dB $L_{AR,Tr}$	Less than or equal to the typical background level ($L_{A90,T}$) – minimum of 30 dB $L_{AR,Tr}$

EFFECT LEVEL	RATING LEVEL (EXTERNAL) AT RECEPTOR, $L_{AR, TR}$	
	DAYTIME (07:00-19:00) AND EVENING (19:00-23:00)	NIGHT-TIME (23:00-07:00)
SOAEL	Greater than 10 dB above the background noise level – minimum of 45 dB $L_{AR, Tr}$	Greater than 10 dB above the background noise level – minimum of 40 dB $L_{AR, Tr}$

12.8 Limitations and Assumptions

- 12.8.1 Baseline monitoring locations will be selected such that they are representative of nearby properties. In some instances, there may be constraints on access and where equipment can be safely left unattended so an alternative proxy location would be required to provide representative baseline sound data. In this case, all efforts will be made to find a suitable representative location with a similar sound environment to the associated sensitive receptor(s). Consultation will be undertaken with KCC and FHDC will be undertaken outside of Scoping regarding monitoring locations.
- 12.8.2 Any measurement of existing ambient or background sound levels will be subject to a degree of uncertainty. Environmental sound levels vary between days, weeks, and throughout the year due to variations in source levels and conditions, meteorological effects on sound propagation, and other factors. Hence, any measurement survey can only provide a sample of the ambient levels, and a small degree of uncertainty will always remain in the values taken from such a measurement survey. The proposed unattended period of a minimum of seven days is considered appropriate for reducing uncertainties that may occur due to variations in diurnal noise levels.
- 12.8.3 Every effort will be made to ensure that measurements are undertaken in such a way as to provide a representative sample of conditions, such as avoiding periods of adverse weather conditions, and school holiday periods (which are often considered to result in atypical sound levels). Consequently, the level of uncertainty in measurements will be reduced as far as reasonably practicable.
- 12.8.4 Noise and vibration effects during the decommissioning phase of the Proposed Development will be similar to or less than noise and vibration effects during the construction phase. The noise assessment presented for the construction phase will therefore be considered representative, or an overestimate, of the decommissioning phase.
- 12.8.5 Construction works noise levels will be predicted following guidance from BS 5228-1 which provides a realistic estimate of sound propagation from construction plant. The predictions will use representative noise levels, sourced from industry standard guidance documents such as BS 5228-1, for typical items of plant that are used in such developments.
- 12.8.6 Construction phase vibration will be assessed based on historic vibration measurement data from relevant guidance documents including BS 5228-2 and Transport Research Laboratory (TRL) Report 429 (Ref 297).

- 12.8.7 Predictions of operational plant and activities sound pressure levels will be undertaken following guidance from the ISO 9613-2:2024 'Attenuation of sound during propagation outdoors', which are based on an assumption of moderate downwind propagation, and hence could be considered as a worst-case calculation. However, the standard also indicates an estimated accuracy of ± 3 dB(A) in predicted levels.

12.9 Summary of Elements Scoped In and Out

- 12.9.1 A summary of the elements scoped in and out of this chapter is presented in **Table 12-5**.

Table 12-5: Elements scoped in and out of the noise and vibration assessment

ELEMENT	SCOPED IN / SCOPED OUT
Noise and vibration levels associated with construction works	Scoped in: temporary noise and vibration emissions from construction works may adversely impact on sensitive receptors.
Noise and vibration levels associated with decommissioning works	Scoped in: temporary noise and vibration emissions from decommissioning works may adversely impact on sensitive receptors.
Operational noise	Scoped in: permanent noise emissions from Main Site infrastructure may adversely affect nearby sensitive receptors.
Construction traffic noise	Scoped in: temporary noise from construction traffic movements may adversely affect receptors near public roads that are part of construction traffic routes.
Decommissioning traffic noise	Scoped in: temporary noise from decommissioning traffic movements may adversely affect receptors near public roads that are part of decommissioning traffic routes.
Operational traffic noise	Scoped out: operational traffic flows would be minimal and not sufficient to result in a 1 dB increase in noise, which would require a 25% increase in traffic.
Construction traffic vibration	Scoped out: road traffic can cause vibration; however, DMRB LA 111 states: "operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects." It is assumed that the County Council will maintain good quality conditions for highways used to access the DCO Site Boundary. Therefore, an assessment of construction traffic vibration has been scoped out.
Decommissioning traffic vibration	Scoped out: road traffic can cause vibration; however, DMRB LA 111 states: "operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects." It is assumed that the County Council will maintain good quality conditions for highways used to access the DCO Site Boundary. Therefore, an assessment of decommissioning traffic vibration has been scoped out.
Vibration from the operation of the Proposed Development	Scoped out: no plant that would generate perceptible levels of vibration are part of the DCO Site Boundary and, as such, there will be no associated operational vibration effects. It is proposed that

ELEMENT	SCOPED IN / SCOPED OUT
	operational ground-borne vibration is scoped out of any further assessment.

13. Socio-Economics

13.1 Introduction

- 13.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on socio-economics during construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the socio-economics chapter of the Environmental Statement (ES).
- 13.1.2 This chapter is supported by **Figure 13-1: Study Area for Socio-Economic Impacts**.

13.2 Study Area

- 13.2.1 The potential economic and employment impacts of the Proposed Development, both temporary and permanent, will be considered in relation to a key economic area, defined by Local Planning Authority boundaries, typical travel time from the Proposed Development, and relevant demographic and economic data.
- 13.2.2 The study area for socio-economic receptors (residential properties, local businesses, visitor attractions relevant for tourism, farming businesses, community facilities, open space, recreational assets and development land) reflects receptors that could be directly or indirectly affected by the Proposed Development. The study area for direct effects is the area within the Development Consent Order (DCO) Site Boundary, comprising the Main Site and Interconnecting Areas, including the extent of receptors beyond this boundary where they are contiguous. This area is shown in **Figure 13-1: Study Area for Socio-Economic Impacts**. The study area for indirect effects is principally the area within 500 m of the DCO Site Boundary, noting that a 2 km radius is used for community, recreation and tourism receptors. The rationale for assessing potential indirect effects within 500 m and 2 km is based on professional judgement and location of sensitive receptors for impacts arising from the Proposed Development as informed by other assessments for solar projects in England.
- 13.2.3 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.

13.3 Legislation, Planning Policy Context and Guidance

- 13.3.1 Legislation, planning policy and guidance relating to socio-economics and pertinent to the Proposed Development are set out below.

Legislation

- 13.3.2 There is no applicable legislation specific to the assessment of socio-economics.

National Planning Policy

- 13.3.3 The following planning policies from relevant National Policy Statements (NPS) have been considered as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5) with particular reference to Paragraphs 4.1.5 and 4.1.6 in relation to adverse effects and benefits, Paragraph 4.3.1 in relation to requirements for the content of an Environmental Statement, Paragraph 4.3.2 and section 5.13 in relation to socio-economic impacts; and
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6), where applicable includes the additional consideration of socio-economic impacts associated specifically with solar photovoltaic generation schemes and highlights the need to consider effects on public rights of way (PRoW) and agricultural land. For example, Paragraph 2.10.61 asks applicants to set out where there may be socio-economic benefits of retaining site infrastructure after the operational life of a solar farm, such as retaining pathways through the Proposed Development.

- 13.3.4 Other relevant national planning policy and guidance includes:

- The National Planning Policy Framework (NPPF) (Ref 8) with particular reference to Section 6: Building a strong, competitive economy (Paragraphs 85-87), and Section 17 (Facilitating the sustainable use of minerals);
- National Economic Development Policy (Ref 298) with particular reference to the Government's Industrial Strategy White Paper which outlines ambitions to increase productivity and drive growth, one way this is highlighted is through Clean Growth; to lead the world in the development, manufacture and use of low carbon technologies; and
- Planning Practice Guidance (PPG) (Ref 299) with particular reference to guidance on planning and the economy and the potential future needs of the population in terms of economic development, jobs and employment opportunities.

Local Planning Policy

- 13.3.5 Relevant local planning policy includes:

- Kent Minerals and Waste Local Plan 2024-2039 as adopted in March 2025 (Ref 9);
- Kent Minerals Site Plan 2013-2030 (September 2020) (Ref 10). According to maps in this document, the DCO Site area does not include mineral safeguarding areas or mineral consultation areas;

- Folkestone and Hythe Core Strategy Review to 2037 (adopted March 2022) (Ref 12) with particular reference to Policy SS1 (District Spatial Strategy – refers specifically to priorities for the Romney Marsh area); and
- Folkestone and Hythe Places and Policies Local Plan (adopted September 2020) (Ref 13) with particular reference to Policy E6 (Farm Diversification).

Relevant Industry Guidance

- 13.3.6 Relevant industry guidance includes Social Impact Assessment in Environmental Impact Assessment in the UK and Ireland (Ref 301).

13.4 Consultation

- 13.4.1 Information gathered during consultation will be used as appropriate to help inform the scope of the assessment. Specific engagement with the Local Planning Authorities will be undertaken to discuss the scope.

13.5 Baseline Conditions

- 13.5.1 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to socio-economics.
- 13.5.2 The potential impacts arising from the Proposed Development will be assessed relative to the baseline conditions and benchmarked against regional and national standards where appropriate. The key indicators and measures of the study areas will be established for:
- Population and deprivation;
 - An overview of the local economies;
 - The local labour markets; and
 - Land use (excluding agricultural land quality).
- 13.5.3 A high-level summary of baseline conditions has been presented in the following paragraphs, based upon review of the following documents:
- Office for National Statistics (ONS), 2011 Census (Ref 302) and 2021 Census data (Ref 303);
 - Ministry of Housing, Communities and Local Government, (2025); English indices of deprivation (Ref 304);
 - ONS (2025); Business Register and Employment Survey (Ref 305);
 - ONS (2025); Gross Value Added (Balanced Approach) 2023 (Ref 306);
 - ONS (2025); Claimant Count by sex and age (November 2025) (Ref 307);
 - ONS (2025); Annual Population Survey (January 2024 to December 2024) and (July 2024 to June 2025) (Ref 308); and
 - ONS (2022); Population projections – local authority based by single year of age (Ref 309).
- 13.5.4 The Proposed Development is located within the area administered by Folkestone & Hythe District Council (FHDC). This section will therefore

establish the baseline conditions relative to this area in comparison to the wider South East region, and England and Wales.

Population and Deprivation

- 13.5.5 Based on Census data, the usual resident population of Folkestone & Hythe has grown from 107,969 in 2011 to 109,758 in 2021, representing an increase of 1.7%. The increase in Folkestone & Hythe is notably less than that exhibited in the South East (7.5%) and England and Wales as a whole (6.3%).
- 13.5.6 In terms of deprivation, Folkestone & Hythe is ranked 66th out of England's 296 local authority areas, where 1st is most deprived. Of all Lower layer Super Output Areas (LSOAs) in Folkestone & Hythe, 22.4% are ranked amongst the 20% most deprived LSOAs nationally, while 9.0% of LSOAs in Folkestone & Hythe are ranked amongst the 30% least deprived.

Local Economy and Labour Market

- 13.5.7 Gross Value Added (GVA) per head in 2023 is lower in Folkestone & Hythe (£25,244, per head of population at current basic prices) than in Kent (£28,974). GVA per head is also lower than the South East region (£37,385) and across England as a whole (£36,632).
- 13.5.8 In 2023, the GVA of the construction industry in England was approximately £133.2 billion with GVA per head being approximately £2,309. The GVA of the construction industry in Kent in 2023 was approximately £5.7 billion with GVA per head being 29.0% higher at approximately £2,978.
- 13.5.9 In 2024, the Annual Population Survey showed that 39.5% of usual residents aged 16 to 64 in Folkestone & Hythe hold degree-level qualifications (Regulated Qualifications Framework (RQF) Level 4 or above). Folkestone & Hythe has a lower rate than in the South East region (48.2%), and across England and Wales (46.6%). In Folkestone & Hythe, 12.2% of the population hold no qualifications, compared with 5.5% in the South East, and 6.7% across England and Wales.
- 13.5.10 The Annual Population Survey recorded that, between July 2024 to June 2025, the number of people of employment age (16- to 64-year-olds) was 63,700 in Folkestone & Hythe. The economic activity rate (defined as the proportion of the population aged 16 to 64 who are economically active) was 81.1%% in Folkestone & Hythe, higher than the rates in Kent (71.1%), the South East (81.0%) and England as a whole (78.9%).
- 13.5.11 The Annual Population Survey recorded the unemployment rate for working-age residents (16- to 64-year-olds) as 6.4% in Folkestone & Hythe, higher than the average rates across Kent (4.2%), the South East (3.5%) and England and Wales (4.2%). The claimant count (as a proportion of residents aged 16 to 64 years) recorded in November 2025 was 3.9% in Folkestone & Hythe, also higher than the rates across Kent (3.4%) and the South East (3.1%), however this is slightly lower than the rate across England and Wales as a whole (4.0%).

Employment

- 13.5.12 In 2024, the Business Register Employment Survey showed that the broad industrial groups that employ the most people in Folkestone & Hythe are the Health sector (13.2%) followed by the Accommodation & Food services broad industrial group (11.8%). The Health sector in Folkestone & Hythe represents a larger proportion of employment than in Kent (13.8%), the South East (13.6%) or England (13.8%).
- 13.5.13 The mining, quarrying and utilities broad industrial group (which includes employment from the generation of energy) represents 2.6% of employment by number of jobs in Folkestone & Hythe which is higher than in Kent (1.4%), the South East (1.3%) and across England (1.1%).
- 13.5.14 Employment in the construction industry is 5.9% in Folkestone & Hythe, lower than the average in Kent (7.8%), but higher than the regional (5.4%) and national averages (4.9%).

Land use Receptors including farming businesses

- 13.5.15 The DCO Site Boundary is mostly used for agricultural purposes, being characterised by large scale regular-shaped fields across several agricultural landholdings. Businesses farming this land total five businesses all engaged in arable farming.
- 13.5.16 In respect of recreational routes, there is a network of PRoW which are found in and around the DCO Site Boundary area and provide pedestrian connectivity between adjacent settlements. There are also several PRoW which could be impacted by the Interconnecting Cables. More information on PRoWs is provided in **Chapter 15: Transport and Access**.

Residential Properties

- 13.5.17 No residential receptors are located within the DCO Site Boundary.
- 13.5.18 Nearby residential receptors include (but are not limited to) isolated farms and rural properties as well as the village of Old Romney.

Community Facilities

- 13.5.19 There are no community facilities within the DCO Site Boundary.
- 13.5.20 The closest schools to the DCO Site Boundary are Brenzett Church of England Primary School and St Nicholas Church of England Primary Academy in New Romney.
- 13.5.21 The closest primary healthcare facility to the DCO Site Boundary is Church Lane Surgery in New Romney.

Business Premises

- 13.5.22 Other than farm businesses, there are no business premises within the DCO Site Boundary.
- 13.5.23 The business premises located within the study area include business premises located in and around Old Romney comprising of a vehicle repair

shop, tyre shop, car wash, a training centre, a health consultancy, a public house, a farm, a printing shop, a landscape design firm, and a bakery.

Development Land

13.5.24 There are no development land allocations within the DCO Site Boundary. This includes mineral safeguarding areas, mineral consultation areas, waste safeguarding areas or transport safeguarding areas.

13.5.25 The presence and status of any planning permissions within or adjacent to the DCO Site Boundary will be determined during preparation of the ES.

Visitor Accommodation

13.5.26 There is no visitor accommodation located within the DCO Site Boundary. There are a number of accommodation facilities nearby including:

- The Manor House, Old Romney;
- Jessamine Farm Caravan and Campsite, Old Romney;
- Lodge in Appledore near Camber sands Beach;
- Romney Meadows Caravan and Camping park;
- The Ship Hotel, New Romney;
- Broadacre B&B, New Romney; and
- The Star Inn, St. Mary in the Marsh.

Tourism

13.5.27 As noted in the Folkestone & Hythe Local Plan, tourism activities in the local area are centred around beaches and water-related sports. There are no tourism/visitor attractions within the DCO Site Boundary. Notable visitor attractions in the study area include Romney Marsh Wartime Collection Museum, located within 2 km of the Main Site. Littlestone Beach is the closest beach and is located outside the study area approximately 3 km from the Main Site.

Future Baseline

13.5.28 The population projections for local authorities based by single year of age forecast that the usual resident population of Folkestone and Hythe will grow from 110,356 in 2022 to 115,724 in 2030, representing an increase of 4.9%. The projected increase exhibited in Folkestone & Hythe is lower than that projected in Kent (6.3%), the South East (5.4%) and England as a whole (5.4%).

13.5.29 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). Therefore, for the purposes of this assessment, the future baseline with respect to local land uses (including residential properties, local businesses, farming businesses, open space, community facilities, visitor attractions, and development land) is expected to be in line with the existing baseline conditions set out above.

13.6 Potential Effects and Mitigation

- 13.6.1 This section sets out the potential effects of the Proposed Development on socio-economics. Mitigation measures relevant to socio-economics are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.
- 13.6.2 The Proposed Development may generate a range of socio-economic effects, some of which would be temporary, whilst others would be permanent. Where appropriate, evaluation of job creation associated with the Proposed Development will include information related to the sustainability of the jobs created including the extent to which they will help develop the skills needed for the UK's transition to Net Zero. For the purposes of the ES, due consideration will be given to the effects for each phase of the Proposed Development as set out below.

Construction and Decommissioning

- 13.6.3 The potential socio-economic effects under consideration during the construction phase are as follows:
- Temporary employment during the construction and decommissioning phases;
 - Gross Value Added during the construction and decommissioning phases;
 - Any indirect impacts for the region hosting the Proposed Development, in particular in relation to the use of local support services and supply chains, and construction of low-carbon industries at the local, regional and national level;
 - Effects on the tourism industry in the local area, considering the effect on visitor attractions;
 - Potential temporary and/or permanent adverse land take impacts on residential properties, local businesses, farming businesses, community facilities, open space, PRow or recreational routes, or development land; and
 - Potential temporary and/or permanent adverse changes to accessibility of residential properties, local businesses, farming businesses, visitor attractions, community facilities, open space, PRow or recreational routes, or development land.

Operation

- 13.6.4 The potential socio-economic effects under consideration during the operational phase are as follows:
- Creation of long-term employment opportunities once the Proposed Development is operational including consideration of any existing employment uses on-site;
 - Any indirect impacts for the region hosting the Proposed Development, in particular in relation to the use of local support services and supply chains,

and construction of low-carbon industries at the local, regional and national level;

- Effects on the tourism industry in the local area, considering the effect on visitor attractions;
- Potential temporary and/or permanent adverse land take impacts on residential properties, local businesses, farming businesses, community facilities, open space, PRow or recreational routes, or development land; and
- Potential temporary and/or permanent adverse changes to accessibility of residential properties, local businesses, farming businesses, visitor attractions, community facilities, open space, PRow or recreational routes, or development land.

Mitigation

- 13.6.5 Embedded mitigation measures will be included in the design where practicable to help avoid, prevent or reduce effects on socio-economic resources and receptors. Of relevance to amenity effects on private assets, further details of specific measures will be set out in relevant chapters of the ES, including the following of relevance to amenity effects: **Chapter 11: Landscape and Visual Amenity, Chapter 12: Noise and Vibration, Chapter 14: Agriculture and Soils, Chapter 15: Transport and Access, Chapter 17: Other Environmental Topics** (Section 17.1 Air Quality and 17.5 Health).
- 13.6.6 Dust emissions, transport-related noise, and noise emissions relating to design and selection of plant, and visual intrusion would be managed through the implementation of an Outline Construction Environmental Management Plan (OCEMP), Outline Operation Environmental Management Plan (OOEMP) and an Outline Decommissioning Environmental Management Plan (ODEMP).
- 13.6.7 To manage the impacts of construction traffic on the highway network, a detailed Construction Traffic Management Plan (CTMP) will be in place (in accordance with the Outline CTMP which will be submitted as part of the DCO Application). It will set out management measures for traffic routing, timing and access to the Proposed Development. It is expected that any temporary diversions of PRowS during the construction phase put in place will be monitored to ensure that they are suitable and well-maintained for use.
- 13.6.8 An Outline PRow Management Plan (OPRowMP) is proposed, setting out measures for minimising impacts on the PRow network (including existing and Claimed PRow) during construction). All diversions would be sign-posted accordingly and advertised in advance.

13.7 Assessment Methodology

- 13.7.1 The assessment of potential effects as a result of the Proposed Development (construction, operation (and maintenance), and decommissioning) on socio-economics will be undertaken using the methodology set out below.

Baseline

- 13.7.2 Relevant policy will be reviewed at the local, regional and national levels to identify the key issues of relevance to the Proposed Development. This will include Local Plans, any relevant Supplementary Planning Guidance, NPS and NPPF measures.
- 13.7.3 A baseline assessment will be undertaken using a range of sources to provide a description of the socio-economic conditions within the local area and at local authority level, including employment and the economy. This will be done using established statistical sources as presented in Section 13.5 above. Relevant land use receptors will be identified in relation to all potential impacts.

Assessment of Effects (Including Significance)

- 13.7.4 An assessment of effects will be undertaken to consider the impact of the Proposed Development on the baseline socio-economic conditions. The methodology will entail:
- Assessment of the likely scale, permanence and significance of effects associated with socio-economic receptors; and
 - An assessment of the potential cumulative effects with other schemes within the surrounding area.
- 13.7.5 The assessment of potential socio-economic effects will use policy thresholds and expert judgment to assess the scale and nature of the effects of the Proposed Development against baseline conditions. For socio-economics, there is no accepted definition of what constitutes a significant (or not significant) socio-economic effect. It is however recognised that effects are categorised based on the relationship between the scale (or magnitude) of effect and the sensitivity (or value) of the affected resource or receptor.
- 13.7.6 As such, the socio-economic effects will be assessed based on:
- Consideration of sensitivity to effects: the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and, in particular, their ability to respond to change based on recent rates of change and turnover (if appropriate);
 - Magnitude of change: this entails consideration of the size of the impact on people or business within the context of the area in which the impacts would be experienced; and
 - Scope for adjustment or mitigation: the socio-economic study is concerned in part with economies. These adjust themselves continually to changes in supply and demand, and the scope for the changes brought about by the Proposed Development to be accommodated by market adjustment will therefore be a criterion in assessing significance.
- 13.7.7 As part of the Socio-economics chapter of the ES, the likely effects on land-use that could result from the construction and operation (and maintenance) of the Proposed Development will be considered.

13.7.8 The assessment of effects on recreational facilities, including PRow and community facilities will consider direct impacts arising from any closures and loss of routes and/or diversions. Effects on development land will consider direct (land-take) and indirect (access) impacts on the delivery of any development proposals or allocations both within and adjacent to the DCO Site Boundary.

13.7.9 The assessment aims to be objective and quantifies effects as far as possible. However, some effects can only be evaluated on a qualitative basis. Effects are defined as follows:

- Beneficial classifications of effect indicate an advantageous or beneficial effect on an area, which may be minor, moderate, or major in effect;
- Negligible classifications of effect indicative imperceptible effects on an area;
- Adverse classifications of effect indicate a disadvantageous or adverse effect on an area, which may be minor, moderate or major in effect; and
- No effect classifications indicate that there are no effects on an area.

13.7.10 Based on consideration of the above, where an effect is assessed as being beneficial or adverse, the scale of the effect has been assigned using the following criteria:

- Minor: a small number of receptors are beneficially or adversely affected. The effect will make a small measurable positive or negative difference on receptors at the relevant area(s) of effect;
- Moderate: a noticeable number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect; and
- Major: all or a large number of receptors are beneficially or adversely affected. The effect will make a measurable positive or negative difference on receptors at the relevant area(s) of effect.

13.7.11 Socio-economic effects reflect the relationship between the sensitivity of the affected receptor and the magnitude of the change, as set out in **Table 13-1**.

Table 13-1: Impact Assessment and Effect Significance

MAGNITUDE OF CHANGE	SENSITIVITY OF RECEPTOR			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

13.7.12 Those effects which are found to be moderate or major are considered to be 'significant' and those which are minor or negligible are 'not significant'.

13.7.13 Duration of effect is also considered, with more weight given to reversible long-term or permanent changes than to temporary ones. Temporary effects are

considered to be those associated with the construction works. Long-term reversible effects are generally those associated with the completed and operational development. For the purposes of this assessment, short term effects are considered to be of one year or less, medium term effects of one to four years, and long-term effects of five or more years.

13.7.14 Employment and GVA effects will consider the temporary and permanent impact on a principal economic area defined based on consideration of local authority area boundaries and a typical travel time from the DCO Site. The Ministry of Housing, Communities and Local Government (MHCLG) Appraisal Guide will be applied to assess direct, indirect and induced impacts (Ref 310).

13.7.15 The assessment of effects on recreational facilities, including PRoW, and community facilities will consider direct impacts arising from any closures and loss of and/or diversions. Effects on development land will consider direct (land-take) and indirect (access) impacts on any of the delivery of development proposals or allocations both within and adjacent to the DCO Site.

13.8 Limitations and Assumptions

13.8.1 Information on current land use from landowners within the DCO Site Boundary will be required to determine existing employment generated within the existing DCO Site Boundary. In the absence of this information, good practice guidance and professional judgment will be applied.

13.9 Summary of Elements Scoped In and Out

13.9.1 A summary of the elements scoped in and out of this chapter is presented in **Table 13-2**.

Table 13-2: Elements scoped in and out of the socio-economics assessment

ELEMENT	SCOPED IN/SCOPED OUT
Employment, economic growth and training (construction, operation and decommissioning)	Scoped in: There is potential for the creation of jobs as well as training and apprenticeship opportunities, including for local residents.
Recreation, open space (including PRoW), community facilities and local services (construction, operation and decommissioning)	Scoped in: There may be effects on the use of and the accessibility of recreational routes (including PRoW), open space, recreational activities, community facilities, and local services both within and beyond the DCO Site Boundary.
Private assets (construction, operation and decommissioning)	Scoped in: There is potential for the accessibility and amenity of receptors within and beyond the DCO Site Boundary, including businesses, community facilities and residential properties to be impacted.
Development land	Scoped out – there are no mineral safeguarding areas, mineral consultation areas, waste safeguarding areas, or transport

ELEMENT	SCOPED IN/SCOPED OUT
	safeguarding areas within or adjacent to the DCO Site Boundary and as such these will not experience significant effects arising from the Proposed Development.
Community identity, structure and way of life (construction, operation and decommissioning)	Scoped in: The influx of workers for temporary construction activities could impact upon availability of rooms within the visitor accommodation sector locally, both in terms of supply during busier months and increasing occupancy levels during quieter months. There is also the potential for impact on community identity, structure and way of life through the alteration of the demand for services and facilities in settlements nearest to construction work, and effects on social cohesion.
Tourism (construction, operation, and decommissioning)	Scoped in: There are some visitor attractions within 2 km of the DCO Site Boundary, and as such the tourism economy and its receptors have the potential to experience significant effects arising from the Proposed Development.
Farming businesses	Scoped in: These receptors will be using the renting of their land on the Main Site to support diversification of their businesses. Those businesses farming in the Interconnecting Cable Corridors will experience temporary loss of use of land when the works to lay cables are ongoing with business use being unchanged from baseline after construction. These receptors are therefore likely to experience significant effects arising from the Proposed Development.

14. Agriculture and Soils

14.1 Introduction

- 14.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on Agriculture and Soils during the construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the Agriculture and Soils chapter of the Environmental Statement (ES).
- 14.1.2 This chapter is supported by the following figures:
- **Figure 14-1:** Predictive Agricultural Land Classification (ALC); and
 - **Figure 14-2:** Soil Associations.
- 14.1.3 This chapter is supported by **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

14.2 Study Area

- 14.2.1 The study area for Agriculture and Soils is the Development Consent Order (DCO) Site Boundary, including the Main Site and the Interconnecting Areas. No buffer is applied when describing the study area as the impacts to soils and agriculture only occur on the land that is directly impacted by the Proposed Development.
- 14.2.2 It is noted that to provide additional context to the discussion of agricultural land within the ES, the impacts are based on scale of loss of Best and Most Versatile (BMV) agricultural land will also be considered in the wider (Regional) context of Folkestone & Hythe District of Kent County Council. Furthermore, the assessment of cumulative effects will be made in the context of other solar NSIPs in the county.

14.3 Legislation, Planning Policy Context and Guidance

- 14.3.1 The assessment will be undertaken in accordance with, and with reference to, the following legislation, planning policy and guidance, further details of which will be provided in the ES.

Legislation

- 14.3.2 The Environment Act 2021 (Ref 21) establishes a statutory framework for environmental protection and improvement, including soil health, requiring the Secretary of State to set legally binding targets and prepare Environmental Improvement Plans aimed at conserving and enhancing natural resources, including soils.

National Planning Policy

14.3.3 The following planning policies from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation. This includes:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5) including paragraphs 4.6.13, 4.7.2, 5.11.12-5.11.15 in the Land Use, Including Open Space, Green Infrastructure, and Green Belt section and 5.11.23 under mitigation;
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6) Section 2.10 including paragraphs 2.10.21-2.10.26 and paragraph 2.10.73;
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7) paragraph 2.9.26.; and
- The National Planning Policy Framework (NPPF) (Ref 8). Section 15 on Conserving and enhancing the natural environment.

Local Planning Policy

14.3.4 Relevant local planning policy includes:

- Folkestone and Hythe District Council Core Strategy Review 2022 (Ref 12) Policy CSD4;
- Folkestone and Hythe District Council Places and Policies Local Plan 2020 (Ref 13), Policy CC6 Solar Farms;
- Kent County Council Minerals and Waste Plan 2024-2039 (Ref 9), Policy DM-1; and
- St Mary in the Marsh Neighbourhood Plan 2019 (Ref 333).

Relevant Industry Guidance

14.3.5 Relevant industry guidance includes:

- The Land Use Framework for England (Ref 316);
- The Guidelines for grading the quality of agricultural land JP069 DEFRA (2025) (Ref 318);
- A Green Future: Our 25 Year Plan to improve the Environment, Chapter 1, Section 3 (Ref 14); and
- The Clean Power 2030 Action Plan (Ref 335);
- Natural England's Guide to Assessing Development Proposals on Agricultural Land 2021 (Ref 330);
- The DEFRA Construction Code (2009) (Ref 313) which provides advice on the use and protection of soil in construction projects, including the movement and management of soil resources;
- The British Society of Soil Science (BSSS) Guidance Document 3: Working with Soil - Guidance Note on Benefitting from Soil Management in Development and Construction (2021) (Ref 334);

- The Institute of Environmental Management and Assessment (IEMA) (now ISEP) guidance document ‘A New Perspective on Land and Soil in Environment Impact Assessment’ (Ref 325);
- The Institute of Quarrying (IoQ) Good Practice Guide for Handling Soils in Mineral Workings (Ref 324);
- The ISEP guidance for Solar PV on Agricultural Land (2025) (Ref 326); and
- Planning Policy Guidance (‘PPG’) for the Natural Environment (Ref 208).

14.4 Consultation

- 14.4.1 No consultation has been undertaken to date specifically to inform the assessment of Agriculture and Soils; however, the information gathered during consultation will be used as appropriate to inform the scope of the assessment.
- 14.4.2 As the Main Site exceeds 20 ha of Best and Most Versatile (BMV) land, Natural England, as statutory consultee, will be consulted on the soil survey results and Predictive ALC mapping.

14.5 Baseline Conditions

- 14.5.1 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to Agriculture and Soils.
- 14.5.2 The following sources of published information will be used to establish the baseline environment for soils and agricultural land within the ES:
- Cranfield University (2015) Research to develop the evidence base on soil erosion and water use in agriculture: Final Technical Report (Ref 311);
 - Cranfield University (2026) LandIS - Soilscales viewer and NATMAP (Ref 312);
 - Met Office (1989) Climatological Data for Agricultural Land Classification (ALC) (Ref 327);
 - Predictive ACL Map 1:250,000 for England (2025) that includes the subdivision grade 3 land according to current ALC guidelines (Ref 317); and
 - The Soil Survey of England and Wales: South East England (1984) (Ref 331).

Agricultural Land

- 14.5.3 The ALC is the standard method for classifying the quality of agricultural land in England and Wales. Land is assessed according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage. These factors form the basis for classifying agricultural land into one of five grades (with Grade 3 land divided into Subgrades 3a and 3b), ranked from excellent (Grade 1) to very poor (Grade 5).
- 14.5.4 Predictive Agriculture Land Classification Map is a strategic scale (1:250,000 user scale) agricultural land classification map for England that includes the subdivision grade 3 land according to current ALC guidelines (Ref 318) and

provides an indication of land quality, including the extent and distribution of BMV agricultural land within the DCO Site Boundary.

- 14.5.5 As shown on **Figure 14-1: Predictive Agricultural Land Classification** and within **Table 14-1**, Predictive ALC data (2025) indicates predominantly BMV land within the DCO Site Boundary, with more than half potentially Grade 1 land.

Table 14-1: Area of Agricultural Land by Predictive ALC Grade within the DCO Site Boundary

ALC	AREA (HA)	AREA (%)
Grade 1	498.32	57.82
Grade 2	3.58	0.42
Grade 3a	116.730	13.54
Grade 3b	235.49	27.32
Grade 4	7.770	0.90
Grade 5	0	0
Non-agricultural	0	0
Grand Total	861.89	100

Soils

- 14.5.6 The published soils data for the study area is taken from Soil Survey of England and Wales (Ref 312) 1:250,000 mapping NATMAP. The soils data, represented by soil associations, is presented in **Figure 14-2: Soil Associations** within the DCO Site Boundary.
- 14.5.7 All the soils within the DCO Site Boundary are derived from marine alluvium and share similarities. As detailed in **Table 14-2**, the Majority soil association is Romney, which is flat land with groundwater controlled by ditches and pumps. Wallasea 2 and Newchurch 2 make up the remainder of the DCO Site Boundary and are similarly flat land with groundwater controlled by ditches and pumps. The principal difference between these soil types is textural because Romney is deep and silty, whilst Wallasea 2 and Newchurch 2 are deep clay and seasonally wet.
- 14.5.8 The soils within the study area can be further characterised by Soilscapes. Within the DCO Site Boundary soilscape 21 predominates. It is a 'loamy and clayey soils of coastal flats with naturally high groundwater'. These soils are lime-rich to moderate fertility and land are suitable for arable cropping and are highly productive. There are some areas of heavier soils which favour grassland. Most of these soils are drained. The water supply is susceptible to contamination from nutrients, herbicides, and pollutants applied to the soil because most fields have shallow groundwater and marginal ditches.

Table 14-2: Soil associations within the DCO Site Boundary

SOIL ASSOCIATION	DESCRIPTION	AREA (HA)	AREA (%)
Newchurch 2	Deep stoneless mainly calcareous clayey soils.	4.47	0.52

SOIL ASSOCIATION	DESCRIPTION	AREA (HA)	AREA (%)
Romney	Deep stoneless permeable calcareous coarse ad fine silty soils.	68.49	91.53
Wallasea 2	Deep stoneless clayey soils. Calcareous in places.	788.94	7.95
Grand Total		861.89	100

14.6 Potential Effects and Mitigation

14.6.1 This section sets out the potential effects of the Proposed Development on Agriculture and Soils. The Agriculture and Soils assessment will consider the construction, operation (and maintenance), and decommissioning phases of the Proposed Development. Details of each of these phases are set out in **Chapter 3: The Proposed Development** of this EIA Scoping Report. The Proposed Development may generate a range of effects, some of which may be temporary, whilst others would be permanent.

14.6.2 The assessment will consider the following receptors within the study area:

- Agricultural land and land use including the loss of BMV land; and
- Quality of soil resources in terms of potential for disturbance/damage or improvement through changes in land management.

Construction and Decommissioning

14.6.3 The disturbance of soil resources may occur for the trafficking by vehicles or through soil removal, handling, storage, and subsequent reinstatement.

14.6.4 Good practice soil resource management will be delivered through a Soil Management Plan (SMP), which will be a key document for maintaining soil resource quantity and quality. An Outline SMP (OSMP) will be submitted with the DCO Application.

14.6.5 The loss of soil resource may result in the impairment of the remaining soils' function, quality and resilience. This also comprises such changes as reduction of topsoil depth.

14.6.6 There is potential for BMV land to be present within the DCO Site (Predictive ALC Grade 1, 2, and 3a) and therefore potential for short and long-term temporary and permanent loss of BMV agricultural land to occur, depending upon land use.

14.6.7 For both the construction phase and decommissioning phase (to a lesser degree), activities that will cause soil disturbance to and potentially impact upon soil resources include the following:

- Stripping and stockpiling of topsoil and subsoil, storage and reinstatement;
- Ground excavation;

- Trenchless crossing techniques such as Horizontal Direction Drilling (HDD);
 - Stockpiling materials;
 - Levelling ground;
 - Cable trenching;
 - Haul road construction; and
 - Vehicle movements onsite.
- 14.6.8 This disturbance may result in the impairment of soil function, quality and resilience. This effect comprises such changes as:
- Compaction and smearing (damage to soil structure);
 - Mixing of distinct soil horizons (e.g. topsoil with subsoil) reducing their potential reuse;
 - Mixing of distinctive soil types;
 - Damage or removal of vegetation layer and loss of ecosystem services; and
 - Changes in the soil fertility.
- 14.6.9 The BESS Compound, Control Building, SKEP Main On-Site Substation, National Grid Substation and Power Conversion Units (PCU) will require soil excavation to establish foundations within the construction phase. The Solar PV Mounting Structures are piled and do not require prior soil removal.
- 14.6.10 It is anticipated that all soil resources will be retained onsite and not exported for reuse elsewhere. Poor practice in handling and storage of soil resources during construction may also render them unsuitable for reuse in site restoration and represents a diminution of soil quality. Examples include the mixing of topsoil and subsoil, or the mixing of soils of differing soil types.
- 14.6.11 The topsoils and subsoils would be stripped and stored separately with storage locations to be identified in the OSMP. For Interconnecting Areas soils would be stored temporarily adjacent to the cable trench and the soil profile would be reinstated upon completion (with all soil management and handling in line with DEFRA's Construction code of Practice (Ref 313) allowing the original agricultural land use to resume and land quality (ALC grade) to be maintained.
- 14.6.12 Permanent loss of agricultural land within the Proposed Development will result from the National Grid Substation, whilst other infrastructure is temporary. Further permanent land use change will occur in areas of ecological enhancement where trees and hedgerows are planted for habitat creation. These are expected to remain after the Main Site has been decommissioned.
- 14.6.13 It is expected that the above ground infrastructure (PV panels, mounting poles, inverters, transformers, switchgear, BESS, buildings, and fencing) will all be removed during decommissioning, with the piles totally removed and concrete pads cut at a practical level below the ground level to allow for arable farming following reinstatement. Buried cables may be left in situ, depending on the good industry practice at the time, but are sufficient depth not to interfere with arable farming and would therefore not have a permanent effect on agricultural land.

Operation and Maintenance

14.6.14 Agricultural and soil impacts during the operation (and maintenance) phase will be less than those of the construction phase of the Proposed Development:

- Occasional movements of maintenance vehicles may lead to localised compaction, especially during wet conditions, resulting in temporary loss of soil structure and reduced drainage capacity;
- Permanent land take from the BESS Compound, Control Building, SKEP Main On-Site Substation, Additional On-Site Substations, National Grid Substation and Power Conversion Units would result in the loss of these small areas of agricultural land if on Grade 1 and 2, as well as the localised sealing of soil resources; and
- Periodic maintenance such as panel repair, inverter replacement, vegetation control or cable inspections may cause small-scale disturbance of soils, localised trafficking and temporary removal of vegetation.

14.6.15 The land underneath and around the Solar PV Mounting Structures would be sown to establish permanent vegetation cover with the planting mixture established during the EIA. The Applicant will explore how this vegetation is managed through during the operational phase of the Proposed Development, including sheep grazing and mechanised management.

14.6.16 The effects of the Proposed Development, throughout operation would create temporary land-use change from agricultural to non-agricultural where the BESS Compound, Control Building, SKEP Main On-Site Substation, Additional On-Site Substation and Power Conversion Units are located until decommissioning. A permanent change in land use would occur in the area occupied by the National Grid Substation.

Mitigation Measures

14.6.17 The short-term temporary loss of agricultural land during construction of the Proposed Development and any maintenance works during operation (and maintenance) cannot be avoided, however through ongoing consultation with landowners' measures will be taken to minimise impacts to the surrounding land and farming operations.

14.6.18 The permanent loss of agricultural land due to the Proposed Development will likely be limited to the areas of ecological enhancement and/or habitat creation and the National Grid Substation within the DCO Site. Planting areas of trees and hedgerows are expected to remain after the Proposed Development has been decommissioned. The loss of this land from agriculture cannot be mitigated but there are other environmental benefits from the change of land use. Where practicable and depending upon the habitats to be created, these will be located on non-BMV land.

14.6.19 The installation of cabling within the Interconnecting Areas would be below the depth of agricultural cultivation, with restored backfilled soils (see **Chapter 3: The Proposed Development**). This is sufficient to allow ploughing and arable farming after reinstatement.

- 14.6.20 The potential for continued agricultural use within the Proposed Development during operation (and maintenance) by using the land as permanent pasture for sheep grazing will be explored by the Applicant. If established, the loss of agricultural land would be avoided. The density of grazing and its seasonality would be managed to avoid negative effects to soil resources.
- 14.6.21 Where possible, mitigation measures to avoid or reduce soil damage and loss will be incorporated into the design of the Proposed Development (embedded mitigation) such that they inform the layout of the Main Site and/or how it shall be constructed. Through iterative assessment, potential impacts will be predicted and opportunities to mitigate them identified with the aim of preventing or reducing impacts as much as possible. This approach provides the opportunity to prevent or reduce potential adverse impacts from the outset.
- 14.6.22 Industry standard guidance/current best working practice set out in Construction Code (Ref 313) and the Good Practice Guide for Handling Soils (Ref 324) will be followed in relation to soil workings throughout the construction, operational and decommissioning phases of the Proposed Development.
- 14.6.23 To minimise risk of soil erosion within the DCO Site, existing grass cover would be maintained, and new permanent grassland mix cover created (grassland mix dependent upon any habitat creation requirements). This cover would be maintained for the lifetime of the Proposed Development and would protect the soil surface from the effects of surface run-off. Any areas where vegetation cover was damaged and/or bare soil surface was visible, would be re-seeded. Additionally individual angled solar panels would be installed with rain gaps to allow water to disperse more evenly.
- 14.6.24 The removal of areas of the Main Site from arable rotation for at least 40 years has the potential to deliver environmental benefits, the most important being increase in soil resource and land quality. This would occur through an increase soil organic matter (SOM) content due to the lack of regular disturbance by cultivation and potential inputs from the presence of livestock (sheep manure). Increase in SOM content equals carbon sequestration (SOM contains 58 % carbon), which would contribute to removing carbon dioxide from the atmosphere and mitigation of climate change. Increase in SOM content would also result in positive effects on other soil properties, such as water infiltration rates and water holding capacity (which contributes to flood alleviation), nutrient content, microbial diversity and activity. Increased SOM would also increase the soil buffering capacity, reducing the frequency of liming. It is also likely that the subsoil structure would be improved owing to deep root systems of the permanent grassland vegetation and increased earthworm activity (promoted by lack of disturbance and ample plant food source) stimulating the aggregation of soil particles.
- 14.6.25 Any potential impacts would be mitigated through industry standard measures which will be outlined in the ES and included in the OSMP and Outline Construction Environmental Management Plan (OCEMP), to be submitted with the DCO Application.

14.7 Assessment Methodology

- 14.7.1 This section describes the methodology proposed for the assessment of effects on Soils and Agriculture, including the criteria for the determination of the importance of the receptor and the magnitude of change from baseline conditions.
- 14.7.2 The impacts on soils and agricultural land would be assessed for the construction and operation (and maintenance) phases of the Proposed Development. The sensitivity of the DCO Site is determined by the ALC grade, with ALC grades 1 and 2 recognised as very high sensitivity. The ISEP guidelines provide threshold areas for the permanent sealing of land or land quality downgrading. Long-term temporary development, such as that of the Proposed Development, presents a low impact magnitude, following the ISEP guidance (Ref 325).
- 14.7.3 Long-term temporary land-use changes affecting Grade 1 and 2 land will be assessed as permanent loss due to the extended period required to reinstate very high-sensitivity soils. Grade 3a land and below, reinstatement is anticipated, and effects will not be considered permanent.
- 14.7.4 The assessment will be undertaken in consideration of ISEP's guidance document 'A New Perspective on Land and Soil in Environmental Impact Assessment' (Ref 325). With particular reference to Section 9: Assessing Impacts on Land and Soil.

ALC soil survey

- 14.7.5 An ALC soil survey will be undertaken for the land within the Main Site, to determine the ALC quality of the land. The survey will be designed using an appropriate sampling density, taking into account site-specific conditions, variability, and the scale of assessment, in line with standard practice for detailed ALC surveys.
- 14.7.6 Land take for the BESS Compound, Control Building, SKEP Main On-Site Substation, National Grid Substation and Power Conversion Units, may, dependent on survey results, be assessed as if these represent permanent downgrading of agricultural land quality because reinstatement to the same ALC grade is not guaranteed following the localised sealing of soil resources if on Grades 1 and 2. Nonetheless, the proposal is for reinstatement with the only truly permanent loss of agricultural land required for the establishment of trees, hedgerows and the National Grid Substation.
- 14.7.7 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will follow the methodology proposed for the Interconnecting Areas. For the Interconnecting Cable Areas and the Grid Connection Route (if required) assessment will be based on predictive ALC data. The Outline Soil Management Plan (OSMP) will commit to post-consent soil surveys to determine the ALC grade for reinstatement in these areas and to inform soil handling in the detailed SMP.

- 14.7.8 A soil survey will not be undertaken within the Interconnecting Areas because the impact is temporary and the soil will be reinstated to its current condition, on top of any cabling ensuring arable farming after installation of the cables. The land will therefore be available for arable farming shortly after its reinstatement, meaning there is no effect after construction. The predictive ALC data will inform the EIA, but sampling will be committed to in the OSMF during detailed design, once the cable trench locations are designed, to inform soil handling techniques in the detailed SMP.
- 14.7.9 The assessment of ALC and soil resources along the Grid Connection Route will still be assessed by using the desktop data from sources referenced in Baseline Conditions section.

Sensitivity Criteria

Agricultural Land Classification

- 14.7.10 ISEP guidance provides guidance on receptor sensitivity for both soil resource and soil functions, with agricultural land quality being included referred to as the soil function of 'biomass production' (the growing of food, fibre and fuel).
- 14.7.11 **Table 14-3** below summarises the ISEP suggested sensitivity of receptor for agricultural land.
- 14.7.12 The ISEP guidance on assessing land and soil in EIA clarifies that the guidance on assessing magnitude (**Table 14-4**) of impact applies to 'hard development' which includes permanent sealing or sterilisation of agricultural land. For instance, the change of agricultural land to trees or woodland does not fall under these definitions and is therefore not subject to this assessment criteria. This aligns with current Government initiatives to encourage farmers to convert arable land to woodland in England and Wales.

Table 14-3: Sensitivity Criteria for Agricultural Land

SENSITIVITY/VALUE	VALUE CRITERIA
Very high	ALC Grade 1 & 2
High	ALC Subgrade 3a
Medium	ALC Subgrade 3b
Low	ALC Grade 4 & 5
Negligible	As for low sensitivity but with only indirect, tenuous and unproven links between sources of impact and soil functions.

Table 14-4: Magnitude of Change: Agricultural Land Resource

MAGNITUDE OF CHANGE	IEMA CRITERIA
Major	Permanent Loss of over 20 ha
Moderate	Permanent Loss of 5 to 20 ha
Minor	Permanent Loss of less than 5 ha
No Change/Negligible	No Discernible Loss of Agricultural Land

Soil Resources

- 14.7.13 The ISEP guidance provides suggested sensitivity and magnitude criteria for a range of other soil functions such as ecological habitat and archaeology, which are covered within **Chapter 9: Ecology and Biodiversity** and **Chapter 8: Cultural Heritage**. Development of agricultural land can impact the soil resource beyond loss of the agricultural resource.
- 14.7.14 Assessing the sensitivity of soil resources to damage (i.e. resistance and resilience of the soil environment, not the importance of the land for agricultural use) is recognised as being complex as soil resources provide a range of functions (ecosystem services), such as supporting plant growth (including food and other crops), water filtration and regulation (role in flood control), nutrient transformation (e.g. role in the nitrogen cycle), carbon storage and sequestration, and supporting biodiversity. The sensitivity criteria for soil resources are therefore based on the susceptibility to damage, both temporarily and permanently when handled.
- 14.7.15 It is recognised within the ISEP guidance that some soils are more sensitive to damage when handled than others. For example, soils with a high sand fraction are considered to be of low sensitivity as the permeable nature of the lighter soils means that natural structural recovery and drainage potential is more easily maintained. The field capacity days (FCDs) are also taken into consideration. Field capacity (FC) is the amount of water a soil holds after gravity has drained the excess water from large pores and represents the upper limit of plant-available water.
- 14.7.16 The soil resources sensitivity and magnitude criteria given in **Table 14-5** and **Table 14-6** below relate to soil disturbances from development such as the stripping, storage and respreading of soil, and structural degradation from the passage of plant. These are the activities that present the greatest risk of soil degradation in the construction, operation (and maintenance), and decommissioning of a solar farm.
- 14.7.17 Magnitude of change criteria used to inform the assessment of effects to agricultural land and to soil resources adopt the same criteria and are presented in **Table 14-5** and **Table 14-6**. These are taken from Table 3 of the ISEP guidance. These consider the magnitude (or scale) of change from current baseline conditions.

Table 14-5: Sensitivity of Soil resources

SENSITIVE/VALUE OF RECEPTOR	EXAMPLE CRITERIA
Very High	Disturbing heavy textured soil in plastic condition Disturbing deep peat (>1 m), carbon-rich or priority peatland
High	Disturbing medium textured soil in plastic condition Disturbing shallow peat/organo-mineral peat soils
Medium	Disturbing heavy to medium textured soil in friable condition Disturbing heavily degraded peat or peat-derived soils

SENSITIVE/VALUE OF RECEPTOR	EXAMPLE CRITERIA
Low	Disturbing light textured soil in friable condition Disturbing residual or remnant peat soils extensively oxidised and mineralised and no longer no longer functioning as a carbon store or hydrological unit.

Table 14-6: Magnitude of Change Criteria: Soil Resources

MAGNITUDE OF CHANGE	EXAMPLE CRITERIA
Major	Disposal of topsoil or loss of productive functional capacity e.g. land contamination (Adverse). or Permanent improvement in productive functional capacity > 20ha (Beneficial)
Moderate	Loss of topsoil for agricultural production but retained for beneficial reuse, or degradation of productive capacity e.g. puddled topsoil (Adverse) or Permanent improvement in productive functional capacity 5 to 20ha (Beneficial)
Minor	Loss of subsoil for agricultural production but retained for beneficial reuse (Adverse) or Permanent improvement in productive functional capacity < 5ha (Beneficial)
No Change/Negligible	Marginal loss of soil material e.g. light erosion from construction easement (Adverse).
Major	Disposal of topsoil or loss of productive functional capacity e.g. land contamination (Adverse) or Permanent improvement in productive functional capacity > 20ha (Beneficial)

Crop selection and agricultural production systems

14.7.18 Crop selection and food production is not included within the Scope of assessment. DEFRA UK Food Security Report 2024 (Ref 314) discusses food security and identifies that: It is plausible that with continued growth in output and conducive market conditions, that food production levels could be maintained or moderately increased alongside the land use change required to meet our Net Zero and Environment Act 2021 targets and commitments.

14.7.19 In 2024, 3,683 ha in England was used for solar PV. This was 0.04% of England's total utilised agricultural area. Solar Energy UK (Ref 326) identifies that solar farms currently occupy less than 0.1% of the UK's land. Extrapolating to assume 90 GW of solar by 2050 would require 60 GW more ground mounted solar (Solar Energy UK estimates). Under this scenario, 1% of the 9 million hectares total utilised agricultural area would be used for solar in 2050.

14.7.20 Farming output fluctuates annually due to the weather and introduction of crop varietal productivity improvements. These annual fluctuations are greater than 1% per year. It follows that, food production levels can be maintained or increased alongside land use change, therefore, there are no likely significant effects on food production requiring further consideration in the EIA.

14.8 Limitations and Assumptions

- 14.8.1 It is not currently confirmed how the land will be managed under and around the solar PV panels. This is currently being explored by the Applicant through landowner discussions.
- 14.8.2 The predictive mapping of ALC grades indicates that most land within the DCO Site is BMV with present of Grade 1 and Grade 2 land but this requires survey confirmation. Section 14.7: ALC Survey details the approach to be adopted to derive field survey data.
- 14.8.3 It is assumed that all soil resources will be retained onsite and not exported for reuse elsewhere. The construction and operation (and maintenance) of the Solar Mounting Structures will not lead to the long-term degradation or loss of soils. Improvement to soil structure and carbon sequestration to soils, over the operational life of the Proposed Development, is anticipated.

14.9 Summary of Elements Scoped In and Out

- 14.9.1 A summary of the elements scoped in and out of this chapter is presented in **Table 14-7**.

Table 14-7: Elements scoped in and out of the Agriculture and Soils assessment

ELEMENT	SCOPED IN/SCOPED OUT
BMV agricultural land within the DCO Site Boundary (construction and decommissioning)	Scoped in – there is potential for land take from agricultural land which may comprise BMV within the DCO Site Boundary.
BMV agricultural land within the DCO Site Boundary (operation and maintenance)	Scoped out – there is no further development of the land during operation.
Soil resources within the DCO Site Boundary (construction, and decommissioning)	Scoped in – there is potential to impact soil resources in terms of disturbance and damage.
Soil resources within the DCO Site Boundary (operation and maintenance)	Scoped out – resting the soil from cultivation and agricultural production will result in benefits to the soil resources, which are unlikely to yield a significant effect.
Crop selection and agricultural production	Scoped out – the topic is considered by UK Government at the national scale and land use change is not considered a likely significant effect. DEFRA maintains that food production levels can be maintained or moderately increased alongside the land use change required to meet our Net Zero and Environment Act 2021 targets and commitments

15. Transport and Access

15.1 Introduction

- 15.1.1 This chapter outlines the proposed approach to assessing the likely significant effects on Transport and Access during the construction, operation (and maintenance), and decommissioning phases.
- 15.1.2 This chapter is supported by the following figures:
- **Figure 15-1:** Transport and Access Study Area;
 - **Figure 15-2:** Existing Walking and Cycling Network;
 - **Figure 15-3:** Bus Stops and Routes;
 - **Figure 15-4:** Railway Stations; and
 - **Figure 15-5:** Traffic Survey Locations.
- 15.1.3 This chapter is supported by **Appendix 1-B: Environmental Mitigation and Commitments Register**.

15.2 Study Area

- 15.2.1 The Proposed Development encompasses a large area of predominantly agricultural land located near the village of Old Romney in the Folkestone and Hythe district of Kent.
- 15.2.2 The study area includes the extents of the transport, highway and Public Rights of Way (PRoW) networks in the vicinity of the Proposed Development as shown in **Figure 15-1: Transport and Access Study Area** and **Figure 15-2: Existing Walking and Cycling Network**. The study area has been defined using professional judgement and experience of other consented Solar Farm Development Consent Orders (DCOs) and will include receptors which may be directly or indirectly impacted by the Proposed Development.
- 15.2.3 The extent of the study area will be agreed with Kent County Council (KCC) as the Local Highway Authority (LHA) for the Local Road Network (LRN), National Highways (NH), which is responsible for the Strategic Road Network (SRN), and Network Rail which is responsible for the national rail network.
- 15.2.4 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.

15.3 Legislation, Planning Policy Context and Guidance

- 15.3.1 The following section sets out legislation, planning policy and guidance related to Transport and Access which is pertinent to the Proposed Development.

Legislation

15.3.2 There is no transport specific legislation relevant to the Proposed Development.

National Planning Policy

15.3.3 The following relevant National Policy Statements (NPS) have been used to formulate the assessment methodology, receptor selection/sensitivity, potential significant environmental effects and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5);
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6); and
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7).

15.3.4 Other relevant national planning and guidance includes the National Planning Policy Framework (NPPF) (Ref 8).

Local Planning Policy

15.3.5 Relevant local planning policy includes:

- Local Transport Plan 5: Striking the Balance, (2024 - 2037) (Ref 336);
- Freight Action Plan Kent (2017) (Ref 337);
- Kent Minerals and Waste Local Plan 2013-2030 as amended by Early Partial Review - Adopted September 2020 (Ref 10);
- Kent County Council's Rights of Way Improvement Plan 2018- 2028 (Ref 338);
- Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022 (Ref 12); and
- Folkestone and Hythe District Council Core Strategy Places and Policies Local Plan (2020) (Ref 13).

Relevant Industry Guidance

15.3.6 Relevant industry guidance includes:

- National Planning Practice Guidance 'Travel Plans, Transport Assessments and Statements' (2014) (Ref 339);
- Institute of Sustainability and Environmental Professionals (ISEP) Guidelines for the Environmental Assessment of Traffic and Movement (2023) (Ref 340); and
- Construction Logistics and Community Safety (CLOCS), Version 5, November 2024 (Ref 341).

15.4 Consultation

15.4.1 Consultation as part of the Environmental Impact Assessment (EIA) process will be undertaken following submission of this EIA Scoping Report with statutory parties, including KCC, NH and Network Rail. Agreement will be sought on the following topics:

- The extent of the study area and potential impact on the LRN and SRN, as well as consideration of the potential to use rail for transport of construction materials
- Transport Assessment Note (TAN):
 - This will be provided instead of a full Transport Assessment and would either be a standalone document or included as an appendix to the Environmental Statement (ES) Transport and Access chapter to minimise duplication across multiple reports.
- Outline Construction Traffic Management Plan (OCTMP):
 - This is proposed as a standalone report which will form an appendix to the ES Transport and Access chapter. This document will identify key mitigations and management measures to be implemented during the construction phase of the Proposed Development.
- Travel Plan (TP):
 - At this stage, it is not proposed to produce a standalone TP as part of the DCO submission, since the construction phase is expected to last a maximum of approximately 24-36 months, and there would not be enough trips to the site during the operation (and maintenance) phase to justify the requirement of a TP. Aspects of a TP related to mitigation measures for construction staff movements during the peak of the construction phase will be included in the OCTMP.
- Outline PRow Management Plan (OPRowMP):
 - This is proposed to be incorporated within the DCO submission to set out the details on how PRow would be managed during the construction, operational (and maintenance) and decommissioning phases (as per NPS EN-3, paragraph 2.10.37).

15.5 Baseline Conditions

- 15.5.1 Baseline conditions for the land within the study area will be described in detail in the ES, however for the purposes of this EIA Scoping Report, they have been summarised in the following sections.
- 15.5.2 The Transport and Access study area will include the anticipated construction routes serving the Proposed Development. It has been assumed that transport of construction materials to the Proposed Development by water is not feasible, since although the Proposed Development is located relatively close to Dover for material import, there is a lack of appropriate local infrastructure (i.e. navigable inland waterways) to transfer materials from Dover by water.

Existing Local Highway Network

- 15.5.3 The DCO Site Boundary lies adjacent to, and straddles the A259, which ultimately connects Folkestone to the east with Hastings and Eastbourne to the west. The A259 intersects with the A2070, which can be used to travel to Ashford to the north and ultimately to connect with the M20, approximately 3 km to the northwest of the Main Site. The M20 lies approximately 15 km directly

north of the Main Site and is a key strategic link in the area which connects to the M25 to the west and to the Channel Tunnel and Dover to the east.

- 15.5.4 In addition, the DCO Site also encompasses a network of local rural roads, including Five Vents Lane, Swamp Road and Beggarsbush Lane.
- 15.5.5 It is acknowledged that due to the rural nature of the area within the vicinity of the DCO Site, some of the local roads may be subject to restrictions (such as weight restrictions of below 7.5 tonnes or width restrictions). These factors will be considered when reviewing potential routes to minimise the impact of the Proposed Development on local roads.
- 15.5.6 At present, details related to the sourcing and origin of the relevant materials for the DCO Site (such as Solar Photovoltaic (PV) Panels) have not yet been confirmed. However, it is considered likely that these would be transported from one of the local ports. As part of the ES, an access feasibility assessment will be undertaken to determine the potential access route(s) for delivering these components to the Proposed Development via the SRN and LRN.
- 15.5.7 Traffic surveys, consisting of Automatic Traffic Counts (ATCs) and Manual Classified Counts (MCCs) will be commissioned. These will determine the levels of existing baseline traffic on local roads which may be used as access routes to the DCO Site by construction vehicles.

Existing Walking Facilities

- 15.5.8 There is limited footway provision in the surrounding area owing to the rural location of the DCO Site.
- 15.5.9 PRoW within, or close to the DCO Site, are presented in **Figure 15-2: Existing Walking and Cycling Network** and are listed in **Table 15-1**.

Table 15-1: PRoW within or close to the DCO Site Boundary

PROW	LENGTH (M)	PROW TYPE	END POINTS	
HM5/2	292	Public Footpath	Unnamed Road (near Lydd Model Flying Club)	PRoW HM5/1 PRoW HM115/1
HM97/1	360	Public Footpath	A259	PRoW HM97/2
HM97/2	1463	Public Footpath	PRoW HM97/1	PRoW HM/97/3
HM97/3	923	Public Footpath	PRoW HM97/2	Ashford Road
HM99/1	187	Public Footpath	PRoW HM101/1	Running Water Lane (Gravel Track)
HM100/1	129	Public Footpath	A259	PRoW HM101/1 PRoW HM101/2
HM101/1	62	Public Footpath	PRoW HM99/1	PRoW HM100/1 PRoW HM101/2
HM101/2	48	Public Footpath	A259	PRoW HM100/1 PRoW HM101/1
HM102/1	284	Public Footpath	A259	Swamp Road
HM103/1	1193	Public Footpath	Swamp Road	Millbank Lane

PROW	LENGTH (M)	PROW TYPE	END POINTS	
HM104/1	178	Public Footpath	Millbank Lane	Beggarsbush Lane
HM112/1	564	Public Footpath	Swamp Road	PRoW HM112/2 PRoW HM114/2 PRoW HM114/3
HM112/2	468	Public Footpath	PRoW HM112/1 PRoW HM114/2 PRoW HM114/3	PRoW HM112/3 PRoW HM113/1
HM112/3	953	Public Footpath	PRoW HM112/2 PRoW HM113/1	PRoW HL10/1
HM113/1	671	Public Footpath	PRoW HM114/1 PRoW HM114/2 PRoW HM113/2	PRoW HM112/2 PRoW HM112/3
HM113/2	445	Public Footpath	Wheelsgate Lane	PRoW HM113/1 PRoW HM114/1 PRoW HM114/2
HM114/1	356	Public Footpath	Wheelsgate Lane	PRoW HM113/1 PRoW HM113/2 PRoW HM114/2
HM114/2	293	Public Footpath	PRoW HM113/1 PRoW HM113/2 PRoW HM114/1	PRoW HM112/1 PRoW HM112/2 PRoW HM114/3
HM114/3	298	Public Footpath	PRoW HM112/1 PRoW HM112/2 PRoW HM114/2	Swamp Road
HM117/1	1195	Public Bridleway	Midley Wall	PRoW HM115/1 PRoW HM117/2
HM118/1	584	Public Footpath	Running Water Lane (Gravel Track)	PRoW HM118A/1 PRoW HM118A/2
HM118/2	209	Public Footpath	PRoW HM118/3	Running Water Lane (Gravel Track)
HM118/3	251	Public Footpath	PRoW HM118/2	Unnamed Road
HM118A/1	145	Public Footpath	Running Water Lane (Gravel Track)	PRoW HM118A/2
HM118A/2	407	Public Footpath	PRoW HM118A/2	A259
HM119/1	477	Public Footpath	A59	PRoW HR3/1
HM120/1	274	Public Footpath	Unnamed Road north of A259	Unnamed Road north of A259
HM121/1	136	Public Footpath	Unnamed Road	PRoW HM121/2
HM121/2	497	Public Footpath	PRoW HM121/1	PRoW HM121/3
HM123/1	1863	Public Footpath	Unnamed Road north of A259	Unnamed Road near St. Mary in the Marsh

Existing Cycling Facilities

15.5.10 There are no dedicated/marked on- or off-road cycling facilities within the immediate vicinity of the DCO Site. However, local rural roads may be attractive to some cyclists, particularly those which are relatively lightly trafficked.

15.5.11 In addition, there are two National Cycle Network (NCN) routes in the vicinity of the DCO Site:

- NCN Route 2
 - This route connects Hythe to the northeast with Lydd to the south. It passes through the northern part of the Main Site along the unnamed road southwest of St Mary in the Marsh before turning south along Five Vents Lane, crossing over the A259 near the Oasis Café bus stops and continuing south along Swamp Road and Wheelsgate Lane through the southern part of the Main Site.
- NCN Route 11
 - This route branches off from NCN Route 2 at the junction between Wheelsgate Lane and an unnamed road to head northwest, passing along the southern boundary of the Main Site.

15.5.12 The DCO Site may be relatively accessible via bicycle from some of the smaller nearby villages and towns, including Lydd, New Romney and Brookland.

Existing Equestrian Facilities

15.5.13 There are no formal equestrian facilities (e.g. bridleways) within the DCO Site. However, there are a number of bridleways in relatively close proximity to the DCO Site Boundary, including PRoW HM111/1 which runs between the A259 and the village of Ivychurch to the west of the DCO Site Boundary and PRoW HM117/1 which connects to Midley Wall to the south of the DCO Site Boundary.

15.5.14 In addition, many of the local roads surrounding the DCO Site Boundary may appeal to equestrian use, especially those which are relatively lightly trafficked.

Existing Public Transport Facilities

Bus

15.5.15 Local bus routes and stops are shown in **Figure 15-3: Bus Stops and Routes**. The closest bus stops to the DCO Site are the Oasis Café westbound and eastbound bus stops, which are located on the A259 in Old Romney between the northern and southern parts of the DCO Site. These bus stops are served by the routes shown in **Table 15-2**.

Table 15-2: Oasis Cafe Bus Stop Services

ROUTE NO.	ROUTE DESCRIPTION	APPROXIMATE WEEKDAY FREQUENCY	FIRST WEEKDAY SERVICE		LAST WEEKDAY SERVICE	
			WB	EB	WB	EB
511	Ashford Park Street – Lydd Airport Turning	One per hour	06:59	09:50	18:46	18:01
511A	Ashford Park Street - Old Romney Oasis Cafe	One per day	07:10	N/A (terminates at stop)	07:10	N/A (terminates at stop)
511B	Ashford Park Street - New Romney The Ship	Two per day (one per day eastbound)	09:59	14:41	17:20	14:41

ROUTE NO.	ROUTE DESCRIPTION	APPROXIMATE WEEKDAY FREQUENCY	FIRST WEEKDAY SERVICE		LAST WEEKDAY SERVICE	
			WB	EB	WB	EB
553	Brookland – Rye	One per day	16:37	07:48	16:37	07:48

15.5.16 The Hammond's Corner Bus Stops are located adjacent to the easternmost extent of the DCO Site. The services which use these bus stops are shown in **Table 15-3**.

Table 15-3: Hammond's Corner Bus Stop Services

ROUTE NO.	ROUTE DESCRIPTION	APPROXIMATE WEEKDAY FREQUENCY	FIRST WEEKDAY SERVICE		LAST WEEKDAY SERVICE	
			NB	SB	NB	SB
100	Conquest Hospital - Rye - Lydd - New Romney	One per hour	08:24	08:47	19:33	19:51
102	Marine Parade - Lydd Camp	One per hour	06:29	07:49	21:31	19:59
511	Ashford Park Street – Lydd Airport Turning	One per hour (two per day Westbound)	06:56	09:52	07:15	18:03

Rail

15.5.17 The nearest public railway station to the DCO Site Boundary is Ham Street, located approximately 9 km to the northwest. There is also a railway station located in New Romney approximately 4.5 km to the east of the DCO Site Boundary, however this is only served by trains on the Romney, Hythe and Dymchurch Railway (RH&DR), which is a tourist/heritage railway facility.

15.5.18 A single-track line between Appledore and Dungeness passes through the DCO Site. The feasibility of utilising this to transport construction materials associated with the Proposed Development will be considered in the ES.

Future Baseline Conditions

15.5.19 Since there are no known highway schemes in the local area which may alter the local network, it has been assumed that the highway network will remain consistent between the current and future baseline scenarios.

15.5.20 The traffic flows on the surrounding highway network are expected to increase as a result of housing and employment growth. Therefore, projected background traffic growth will be applied to the traffic flows derived from the baseline traffic surveys to represent conditions during the future baseline (construction peak assessment year).

15.6 Potential Effects and Mitigation

15.6.1 This section sets out the potential effects of the Proposed Development on transport and access.

- 15.6.2 The greatest transport impacts of the Proposed Development are likely to occur during the construction phase. This will therefore form the focus of the assessment presented in the ES.
- 15.6.3 The main considerations and potential effects as a result of the Proposed Development during these phases will be:
- Increase in Heavy Goods Vehicle (HGV) movements;
 - Abnormal Indivisible Loads (AILs);
 - Travel to and from the Proposed Development by construction workers;
 - Increase in delay to vehicles, pedestrians, cyclists, and equestrians due to increase in construction traffic movements; and
 - Change in route connections and amenity for pedestrians, cyclists, and equestrians due to construction of the Proposed Development.
- 15.6.4 Whilst some construction workers residing within larger settlements nearby (such as Hythe and Ashford) may travel by public transport (the distance is considered too far to walk), these modes are not expected to constitute a significant proportion of trips to the DCO Site.
- 15.6.5 Similarly, workers living in nearby villages (such as New Romney or Lydd) who may choose to cycle or take the bus to the DCO Site are also not expected to constitute a significant proportion of trips to the DCO Site.

Vehicle Access

- 15.6.6 The development proposals will seek to obtain access to both the northern and southern parts of the DCO site from the A259. The proposals will seek to use haul routes within the site to access land parcels not directly adjacent to the A259 as far as possible in order to minimise routing any construction traffic through local villages and avoid narrow roads unsuitable for use by construction vehicles.
- 15.6.7 The exact locations of the site accesses will be agreed with KCC and any potential subsequent changes will be updated in the access strategy.
- 15.6.8 At this stage, it is expected that the access points to the DCO Site will be used during the construction, operation (and maintenance), and decommissioning phases of the Proposed Development, although this will be confirmed in the ES.
- 15.6.9 Mitigation measures relevant to transport and access will be outlined in the ES.
- 15.6.10 Mitigation measures relevant to this topic at this stage are also included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Construction and Decommissioning

- 15.6.11 The construction period is expected to last between 24 and 36 months. Therefore, the trip generation in the ES will be based on a 24-month programme in order to generate the highest monthly (and therefore daily) construction vehicle trips for the purposes of assessment.

15.6.12 It is currently anticipated that during the peak construction period (currently assumed to be 2031), there will be a maximum of 400 construction staff on the DCO Site per day and a maximum of 64 HGVs (128 movements) per day to/from the DCO Site.

15.6.13 The proposed number of construction vehicle movements and construction staff during the peak of the construction phase will be reviewed and confirmed within the ES.

15.6.14 Potential mitigation measures which could be implemented during the construction and decommissioning phases, include:

- Restriction of HGV movements to certain routes, days of the week and times of the day;
 - Restricting working hours to avoid staff travel coinciding with the network peak hours;
 - Upgrading of routes to accommodate additional and/or larger vehicles;
 - Positioning of suitably qualified marshal and/or other temporary traffic management at the DCO Site access points;
 - Providing road signs and/or markings to increase awareness of the access points;
 - Undertaking vegetation clearance at access points to improve visibility;
 - Encouraging local construction staff to car share through car share initiatives and limited parking at compounds;
 - Implementing a shuttlebus service to transfer non-local staff to/from local worker accommodation;
 - Implementing a Delivery Management System to control the bookings of HGV deliveries; and
 - Maintaining access to PRow during the construction phase or otherwise providing temporary diversion routes if required.
- Potential impacts during the construction phase are typically considered as medium-term, as defined in **Chapter 6: Environmental Impact Assessment Methodology**.

15.6.15 The ES will consider the impact of any other committed developments and/or highways improvement schemes in the vicinity which may have a cumulative impact during the construction phase of the Proposed Development.

Operation

15.6.16 During the operation (and maintenance) phase, the Main Site will be manned by a nominal number of staff across the Proposed Development (at this stage, assumed to be up to 3 permanent staff per day), predominantly undertaking day-to-day maintenance tasks and repairs. Staff vehicles and those used for maintenance will primarily be four wheeled drive vehicles and vans, with HGVs rarely accessing the Main Site during this phase (and if so in low numbers, for example occasional HGV maintenance delivery).

15.6.17 Due to the low level of trips likely to be generated within this phase, and specifically within the network peak hours of this phase, it is proposed to scope

out operational (and maintenance) phase transport effects from the assessment. Further details of the operational phase (and maintenance) transport arrangements will be set out in the ES to support this approach.

15.7 Assessment Methodology

15.7.1 The assessment of potential effects as a result of the Proposed Development (construction, operation (and maintenance) and decommissioning phases) on transport and access will be undertaken using the methodology set out below.

Source of Baseline Information, Scenarios and Consultation

15.7.2 The following sources will be used to inform the assessment methodology:

- Local travel and network information from rail and bus operators;
- Personal Injury Collision (PIC - Crash and Collision) data provided by KCC;
- Ordnance Survey (OS) Base Mapping;
- Highway boundary information from KCC;
- Mode share data from the 2011 Census (or 2021 data if available and considered appropriate given the context of COVID-19);
- Industry information from the 2021 Census to identify the number of existing residents who work in the construction industry and live within a defined catchment area of the DCO Site, to inform the construction worker trip distribution;
- Traffic count and speed survey data where required (see further below);
- Traffic growth factors by applying National Transport Model (NTM) adjustments to National Road Traffic Forecast (NRTF) growth factors within the Trip Ends Model Program (TEMPro), utilising the latest National Trip Ends Model (NTEM) dataset;
- Route planning software, such as Google Maps, to inform routing to the Proposed Development (in combination with the above); and
- Site visits and professional judgement to determine any likely requirements for potential mitigation on the road network, including road widening and passing place provision.

15.7.3 ATCs and MCCs will be undertaken to determine the baseline traffic conditions of the surrounding highway network. The proposed survey locations will be presented to KCC for approval before they are commissioned.

15.7.4 In addition, peak hour traffic flows will be identified from historic data held by KCC, traffic survey company databases or Department for Transport (DfT) count sites if available.

15.7.5 To determine the impact of the Proposed Development, the following scenarios will be considered to inform the assessment of the peak construction phase;

- Baseline (2026) - AM, PM and Daily traffic flows; and
- Peak Construction Year (2031) With and Without Development - AM, PM and Daily traffic flows.

- 15.7.6 For the purposes of the EIA, the decommissioning assessment year is considered to be around 2073 (40 years from the connection date). This year will not be assessed in the ES in terms of the highway impacts assessment or any junction assessments as it is considered too far into the future to be able to accurately forecast traffic flows or road layout/ network or junction forms. Therefore, it is proposed to adopt the assessment of the construction phase to determine the anticipated worst-case impact of the Proposed Development during its decommissioning phase.

Impact Assessment Methodology

- 15.7.7 In accordance with 2023 ISEP Guidance for assessing the environmental impacts of traffic and movements, the following criteria will be considered:

- Severance (of communities);
- Pedestrian Delay (incorporating delay to all non-motorised users);
- Non-Motorised User Amenity;
- Fear and Intimidation (on and by road users);
- Driver Delay (for vehicle drivers and passengers);
- Road Safety (for vehicle users and pedestrians); and
- Hazardous/Large Loads.

- 15.7.8 The following impacts will also be considered:

- PRow diversions and closures; and
- Impacts on groups and locations which may be sensitive to changes in traffic conditions, as outlined in the 2023 ISEP Guidance as 'Affected Parties'.

- 15.7.9 The assessment of these impacts will consider:

- Magnitude of change to the baseline;
- Sensitivity of the affected receptor; and
- The scale, nature and significance of the effect.

- 15.7.10 In addition, the anticipated effects will be classified as short-term, medium-term or long-term, as well as permanent or temporary.

Screening

- 15.7.11 The 2023 ISEP guidelines set out two rules to screen potential road links into the impact assessment;

- Rule 1: include highway links where traffic flows will increase by 30% or more (or the number of HGVs will increase by 30% or more); and
- Rule 2: include any other specifically sensitive areas (e.g. accident black spots, conservation areas, hospitals, links with high pedestrian flows etc.) where traffic flows will increase by 10% or more.

- 15.7.12 Based on this, links and junctions will not be assessed where there is expected to be a <30% increase in traffic flows as a result of the Proposed Development, unless any specifically sensitive receptors are identified.

15.7.13 Additionally, a negligible magnitude of change will be assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Proposed Development, irrespective of the proportional increase in traffic flows.

Sensitivity

15.7.14 The general criteria for defining the importance or sensitivity of receptors relating to the assessment of Severance, Pedestrian Delay, Non-Motorised User Amenity, and Fear and Intimidation are set out in **Table 15-4** below.

Table 15-4: Sensitivity/Value Criteria for Severance, Pedestrian Delay, Non-Motorised User Amenity, and Fear and Intimidation

SENSITIVITY/VALUE	SENSITIVITY/VALUE CRITERIA
High	Road Links and Junctions: More than two sensitive uses present (e.g. schools, play areas, care/retirement homes, hospitals, places of worship, historic building) and/or a primarily residential street with properties on both sides of the carriageway. Walk/Cycle Links including PRow: Heavily trafficked highway with on-road pedestrian/cycle route
Medium	Road Links and Junctions: Two sensitive uses present (e.g. schools, play areas, care/retirement homes, hospitals, places of worship, historic building) and/or a large number of residential properties present Walk/Cycle Links including PRow: Lightly trafficked highway with on-road pedestrian/cycle route
Low	Road Links and Junctions (no more than one of the following): • One sensitive use present (e.g. schools, play areas, care/retirement homes, hospitals, places of worship, historic building) • Many residential properties with direct frontage to highway link being used as construction route • Pedestrians using footways, PRow and/or crossings on highway link • Cyclists using on-road designated cycle routes along highway link Walk/Cycle Links including PRow: Heavily trafficked highway with off-road pedestrian/cycle route
Very Low	Road Links and Junctions: No sensitive users or receptors along link, or no more than one of the following: • Few residential properties with direct frontage to the highway link being used as a construction route • Workplaces with direct frontage to highway link being used as construction route • Cyclists using off-road designated cycle routes along highway link Walk/Cycle Links including PRow: Pedestrian/cycle route not running alongside highway, or lightly trafficked highway with off-road pedestrian/cycle route

15.7.15 The general criteria for defining the importance or sensitivity of receptors for the assessment of Driver Delay are set out in **Table 15-5** below.

Table 15-5: Sensitivity/Value Criteria for Driver Delay

SENSITIVITY/VALUE	SENSITIVITY/VALUE CRITERIA
High	Road Links: Not applicable (captured by assessment of road junctions where applicable). Road Junctions: High queuing (10+ vehicles) on 3+ arms of the junction during the weekday peak hours. For example, a busy roundabout or signalised junction within a built-up area.
Medium	Road Links: High queuing (10+ vehicles) on this link, on the approach to junction(s) within the study area. Road Junctions: High queuing (10+ vehicles) on 1-2 arms of the junction OR moderate queuing (5-9 vehicles) on 3+ arms of the junction during the weekday peak hours. For example, a busy roundabout or signalised junction outside of a built-up area.
Low	Road Links: Moderate queuing (5-9 vehicles) on this link, on the approach to junction(s) within the study area. Road Junctions: Moderate queuing (5-9 vehicles) on 1-2 arms of the junction OR low queuing (3-4 vehicles) on 3+ arms of the junction. For example, a roundabout or signalised junction outside of a built-up area or a busy priority junction within a built-up area.
Very Low	Road Links: Low queuing (3-4 vehicles) on this link, on the approach to junction(s) within the study area. Road Junctions: Low queuing (3-4 vehicles) on 1-2 arms of the junction. For example, a priority junction outside of a built-up area.

15.7.16 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of Road Safety and Hazardous/ Large Loads are set out in **Table 15-6** below.

Table 15-6: Sensitivity/Value Criteria for Road Safety and Hazardous/ Large Loads

SENSITIVITY/VALUE	ROAD SAFETY CRITERIA	HAZARDOUS/LARGE LOADS CRITERIA
High	Road Links and Road Junctions: 10+ collisions in five years, or more than three serious and/ or one fatal collision in five years	Road Links and Road Junctions: 5+ serious/ fatal collisions (or more than one fatal collision) involving a goods vehicle (>3.5 tonnes) in five years
Medium	Road Links and Road Junctions: 5-9 collisions (with up to three serious collisions and/ or one fatal collision) in five years	Road Links and Road Junctions: 3-4 serious/ fatal collisions (with up to one fatal collision) involving a goods vehicle (>3.5 tonnes) in five years
Low	Road Links and Road Junctions: 3-4 collisions in five years (with up to one serious collision and no fatal collisions) in five years	Road Links and Road Junctions: 1-2 serious collisions (with no fatal collisions) involving a goods vehicle (>3.5 tonnes) in five years
Very Low	Road Links and Road Junctions: Fewer than three collisions (with no serious or fatal collisions) in five years	Road Links and Road Junctions: No serious or fatal collisions involving a goods vehicle (>3.5 tonnes) in five years

15.7.17 The collision rate for road links will be calculated and compared with national road safety statistics provided within Road Casualties for Great Britain (Ref 342). Receptors which record collision rates much higher than the national average will be manually reviewed to determine whether their sensitivity requires adjustment.

Magnitude

- 15.7.18 As identified within the 2023 ISEP guidelines, the magnitude of impact represents the level of change from the baseline conditions. Many of the criteria do not provide specific thresholds by which such impacts can be assessed, and in these cases will be measured qualitatively.
- 15.7.19 **Severance** is defined in the ISEP guidelines as the "perceived division that can occur within a community when it becomes separated by major traffic infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure". Severance can also be caused by a full closure of a highway, leading to a requirement for road users to take alternative routes to their destinations. The guidelines state that changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. However, caution should be observed when applying these thresholds to very low baseline flows which are unlikely to experience severance impacts even with high percentage changes.
- 15.7.20 **Pedestrian Delay** (incorporating delay to all non-motorised users) concerns the impacts of changes in volume, composition or speed of traffic on the ability of pedestrians to cross roads. The assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads.
- 15.7.21 **Non-Motorised User Amenity** is broadly defined as "the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic". The guidance suggests that a tentative threshold for judging the significance of changes in non-motorised user amenity would be where the traffic flow (or HGV component) is halved or doubled.
- 15.7.22 **Fear and Intimidation** occurs through a combination of traffic flow, speed, proportion of HGVs and the proximity of traffic to people. These indicators are often heightened by a perceived lack of protection or buffers from the highway or through narrow or non-existent footways. The assessment considers each road on a case-by-case basis, however there are thresholds provided in the 2023 ISEP guidelines which are further summarised in **Table 15-8**.
- 15.7.23 **Driver Delay** relates to incremental increases in traffic. However, traffic delays are only likely to be significant when traffic is already at, or close to, the capacity of the system. As a further consideration, where any temporary road closures or traffic management is likely to be in place to enable the construction of the Proposed Development, any additional potential delay caused by these resultant diversion routes will be reported.
- 15.7.24 **Road Safety** considers PIC data obtained for the most recent five-year period available at junctions and links along the proposed construction traffic routes. This has been used to assess whether the additional traffic during construction

of the Proposed Development would be likely to have a detrimental effect on road safety.

- 15.7.25 For **Hazardous/Large Loads**, the guidance states that where the number of movements is considered to be significant, risk analysis should be carried out to illustrate the potential for accidents. Appropriate routes for abnormal load movements should be considered, with mitigation strategies to secure safe passage. As part of the Proposed Development, there will be the requirement for abnormal loads which are categorised as Large Loads.
- 15.7.26 In view of the above, the impacts of Hazardous/Large Loads will be considered, in the form of a qualitative risk assessment to establish the likelihood and extent of such effects. The OCTMP, which will be prepared at ES stage, will include details of measures that will be employed to support the safe transport of components to and from the Proposed Development.
- 15.7.27 **PRoW Diversions and Closures** will be considered on the basis of the type of impact i.e. whether a temporary PRoW closure or diversion is proposed, as well as any increases in pedestrian journey length following a closure/diversion and how long any potential disruption to an existing route would occur for. The assessment will consider indicative thresholds derived based on professional experience.
- 15.7.28 **Table 15-7** and **Table 15-8** summarise the criteria that will be considered to assess the magnitude of effect, along with the thresholds that will be used to determine whether effects are considered high, medium, low or very low. In accordance with ISEP guidance, a very low magnitude of change has been assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Proposed Development, irrespective of the proportional increase in traffic flows.

Table 15-7: Magnitude Criteria for Transport and Access (All Assessment Criteria)

IMPACT	VERY LOW	LOW	MEDIUM	HIGH
Severance	Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).	Increase in total traffic flows of 30-59% (or increase in HGV flows of 10-39%).	Increase in total traffic flows of 60-89% (or increase in HGV flows of 40-89%).	Increase in total traffic flows or HGV flows of 90% and above.
Pedestrian Delay	The severity of the impact will be determined based on the thresholds identified above for severance.			
Non-Motorised User Amenity	Increase in total traffic flows of below 50%.	Increase in total traffic flows of 50-69%.	Increase in total traffic flows of 70-99%.	Increase in total traffic flows of 100% or above.
Fear and Intimidation	No change in degree of hazard level for daily traffic flows, HGV flows and vehicle speeds (see Table 15-8 below).	One step change in degree of hazard level (see Table 15-8), but with >400 daily vehicle increase or >500 daily HGV increase.	Two step changes in degree of hazard level based on the degree of hazard scores for daily traffic flows, HGV flows and vehicle speeds (see Table 15-8 below).	One step change in degree of hazard level (see Table 15-8 below), but with <400 daily vehicle increase or <500 daily HGV increase.
Driver Delay	Increase in total traffic flows of below 30%.	Increase in total traffic flows of 30-59%.	Increase in total traffic flows of 60-89%.	Increase in total traffic flows of 90% and above.
Road Safety	Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).	All links estimated to experience increases in total traffic flows of at least 30% or increases in HGV flows of at least 10% are analysed further on a case-by-case basis.		
Hazardous/Large Loads	Based on the probability of a personal injury accident, categorised as fatal or serious, involving a hazardous/large load, occurring.			

15.7.29 Additional magnitude criteria for Fear and Intimidation based on those outlined in the 2023 ISEP guidelines are provided in **Table 15-8** below.

Table 15-8: Additional Magnitude Criteria for Fear and Intimidation

CRITERIA	DEGREE OF HAZARD			
	SMALL	MODERATE	GREAT	EXTREME
A) Average Hourly Traffic Flow	<600 (0)	600-1,200 (10)	1,200-1,800 (20)	>1,800 (30)
B) Daily HGV Flow	<1,000 (0)	1,000-2,000 (10)	2,000-3,000 (20)	>3,000 (30)
C) Average Speed	<20mph (0)	20-30mph (10)	30-40mph (20)	>40mph (30)
Total Score (A+B+C)	0-20	21-40	41-70	71+

Significance of Effects

15.7.30 **Table 15-9** shows the matrix used to determine the significance of effect for the impact assessment. Effects predicted to be 'major' or 'moderate' are considered significant whilst effects predicted to be 'minor' or 'negligible' are considered not significant.

Table 15-9: Significance of Effects Matrix (Transport and Access)

SENSITIVITY OR VALUE OF RESOURCE/ RECEPTOR	MAGNITUDE OF CHANGE			
	HIGH	MEDIUM	LOW	VERY LOW
HIGH	Major	Major	Moderate	Minor
MEDIUM	Major	Moderate	Minor	Negligible
LOW	Moderate	Minor	Negligible	Negligible
VERY LOW	Minor	Negligible	Negligible	Negligible

15.7.31 Duration is considered when assessing the overall significance of residual effects, noting that the ISEP Guidelines state in paragraph 1.27 that: “*The EIA Regulations also require consideration of whether the anticipated effect is short-term, medium-term or long-term and whether it is permanent or temporary.*”

15.7.32 All the transport and access effects associated with the construction phase of the Proposed Development would be temporary effects.

15.8 Limitations and Assumptions

15.8.1 The proposed study area shown in **Figure 15-1: Transport and Access Study Area** has not yet been agreed with KCC but is based on an initial assessment of the local highway network and where the construction phase impacts are most likely to occur. Any changes to the study area agreed with KCC and NH will be assessed as part of the ES.

15.9 Summary of Elements Scoped In and Out

15.9.1 A summary of the elements scoped in and out of this chapter is presented in **Table 15-10**.

Table 15-10: Elements scoped in and out of the Transport and Access assessment

ELEMENT	SCOPED IN/SCOPED OUT	REASONING
Impact of the Construction phase of the Proposed Development	Scoped In	The temporary increase in traffic could have potentially significant impacts.
Severance (Construction phase)	Scoped In	The temporary increase in traffic could generate potentially significant impacts on severance.
Driver Delay (Construction phase)	Scoped In	The temporary increase in traffic could generate potentially significant impacts on driver delay.
Pedestrian Delay (Construction phase)	Scoped In	The temporary increase in traffic could generate potentially significant impacts on pedestrian delay.
Non-motorised users amenity (Construction phase)	Scoped In	The temporary increase in traffic could generate potentially significant impacts on pedestrian and cyclist amenities.
Fear and Intimidation (Construction phase)	Scoped In	The temporary increase in traffic could generate potentially significant impacts on fear and intimidation.
Road Safety (Construction phase)	Scoped In	The temporary increase in traffic could generate potentially significant impacts on road safety.
Hazardous/Large Loads (during the Construction, Operation (and maintenance) and Decommissioning Phase)	Scoped In	Whilst it is not expected that there will be any hazardous loads associated with the Proposed Development, Large Loads in the form of AILs will be expected. An assessment of the AIL routing to/from the DCO Site will be undertaken to review the suitability of the network in the vicinity of the Proposed Development.
Impact of the Decommissioning phase of the Proposed Development	Scoped In	Future traffic flows are uncertain, and the impacts of the decommissioning phase are expected to be no greater than those during the construction phase. It can therefore be confidently concluded that the magnitude of effects will be the same or less than those already determined for the construction phase. The conclusions of effects will be presented in the ES and will state that the significance of effect will be the same or less than the construction phase, however a separate assessment for decommissioning will not be undertaken.
Impact of the Operation (and maintenance) phase of the Proposed Development	Scoped Out	The trips associated with the Operation (and maintenance) phase of the Proposed Development are expected to be nominal and therefore not result in significant impact.

16. Materials and Waste

16.1 Introduction

- 16.1.1 This chapter sets out the proposed approach to the assessment of likely significant effects on materials and waste during construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the materials and waste chapter of the Environmental Statement (ES).
- 16.1.2 This chapter follows the methodology and checklist for action set out in the Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment (IEMA)) Guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach (referred to from herein as the 'ISEP Guidance') (Ref 343).
- 16.1.3 For this EIA Scoping Report, materials and waste comprise:
- The consumption of materials (key construction materials only); and
 - The generation and management of waste.
- 16.1.4 Materials are defined in the ISEP Guidance as *“physical resources that are used across the lifecycle of a development. Examples include key construction materials such as concrete, aggregate, asphalt and steel.”*
- 16.1.5 Other material assets considered include built assets such as landfill void capacity, allocated sites (term used in the ISEP Guidance, hereafter referred to as safeguarded mineral sites (e.g., quarries, wharves, depots, mineral plant), and safeguarded waste sites).
- 16.1.6 Impacts on Mineral Safeguarding Areas (MSAs) are not assessed in a materials and waste assessment in accordance with the ISEP Guidance (Ref 343). MSAs are defined *“as an area designated by minerals planning authorities which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development”* (Ref 8). **Chapter 13: Socio-economics and Land Use** scopes out socio-economic impacts to MSAs.
- 16.1.7 Waste is defined as per the European Waste Framework Directive (Ref 344) as *“any substance or object which the holder discards or intends or is required to discard”*.
- 16.1.8 This chapter does not have any supporting technical figures or appendices.

16.2 Study Area

- 16.2.1 There are two study areas for the assessment of impacts related to materials and waste defined in line with the ISEP Guidance (Ref 343): a Proposed Development study area and an expansive study area.

Proposed Development Study Area

- 16.2.2 The Proposed Development study area for construction, operation (and maintenance), and decommissioning waste generation and use of construction materials (key construction materials only, i.e. aggregates, asphalt, concrete and steel) comprises the DCO Site Boundary (**Figure 1-1: Proposed Development Location Plan**). This comprises the Main Site and the Interconnecting Areas. This study area is deemed to include the footprint of the works, together with any temporary land required during construction. This will include temporary offices, compounds and storage areas, as well as temporary roadways to facilitate access to all land within the Proposed Development.
- 16.2.3 In the event that an export grid connection route which extends outside of the DCO Site boundary is required, this will be included within the Study Area and assessed following the same methodology as outlined in this chapter.
- 16.2.4 The Proposed Development study area for the impacts on safeguarded mineral and waste sites is defined by the DCO Site Boundary. Impacts on allocated (also known as safeguarded) waste sites are not included in the ISEP Guidance; however, they are included in this assessment for completeness.
- 16.2.5 The Proposed Development is located within the administrative area of Folkestone & Hythe District Council (FHDC). The Minerals Planning Authority (MPA) and Waste Planning Authority (WPA) is Kent County Council (KCC).

16.3 Expansive Study Area

- 16.3.1 The expansive study area for non-hazardous and inert waste management is defined based on professional judgement and informed by consideration of the proximity principle (managing waste as close as possible to where waste has been generated) and value for money.
- 16.3.2 The expansive study area for non-hazardous and inert waste management is the South East of England (as defined by the Environment Agency (EA)). This is the region in which the Proposed Development is located. The expansive study area includes the following sub-regions as outlined in the Environment Agency's 2024 Waste Summary Tables for England – Version 1 (Ref 345):
- Berkshire;
 - Buckinghamshire;
 - East Sussex;
 - Hampshire;
 - Isle of Wight;
 - Kent;

- Oxfordshire;
- Surrey; and
- West Sussex.

16.3.3 The expansive study area for hazardous waste management (landfill capacity) is England. This is defined based on professional judgement and informed by consideration of the proximity principle and value for money, outlined in ‘Principle 2 – Infrastructure Provision in the Strategy for Hazardous Waste Management in England’ (Ref 346):

“We look to the market for the development of hazardous waste infrastructure, which implements the hierarchy for the management of hazardous waste and meets the needs of the UK to ensure that the country as a whole is self-sufficient in hazardous waste disposal, facilities are put in place for hazardous waste recovery in England, and the proximity principle is met.”

16.3.4 Planning for hazardous waste management is also undertaken at an England level.

16.3.5 The expansive study area for availability of key construction materials is as follows:

- Aggregates - the region for crushed rock is ‘South’ which includes East of England, London, South East and South West and the region for sand and gravel is ‘London and South East’;
- Asphalt and concrete - South East region; and
- Steel - United Kingdom (UK).

16.4 Legislation, Planning Policy Context and Guidance

16.4.1 Legislation, planning policy and guidance relating to materials and waste and pertinent to the Proposed Development is set out below.

Legislation

16.4.2 Relevant legislation includes:

- European Waste Framework Directive (2008/98/EC) (Ref 344);
- The Environmental Protection Act 1990 (Ref 347);
- The Hazardous Waste (England and Wales) Regulations 2005 (as amended) (Ref 348);
- The Waste (England and Wales) Regulations 2011 (as amended) (Ref 349);
- The Environmental Permitting (England and Wales) Regulations 2016, as amended 2018 (Ref 183);
- The Environment Act 2021 (Ref 21); and
- The Waste (Miscellaneous Amendments) (EU Exit) Regulations 2019 (Ref 350).

National Planning Policy

16.4.3 The following national policies and guidance are relevant to the Proposed Development:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5). Requirements for resource and waste management are outlined in section 5.15 of NPS EN-1.
- National Planning Policy Framework (NPPF) (Ref 8);
- National Planning Policy for Waste (2014) (Ref 351);
- The Waste Management Plan for England (2021) (Ref 352);
- A Green Future: Our 25 Year Plan to Improve the Environment (2018) (Ref 14);
- Our Waste, Our Resources, A Strategy for England (Resources and Waste Strategy for England) (2018) (Ref 353);
- The Waste Prevention Programme for England: Maximising Resources, Minimising Waste (2023) (Ref 354); and
- The Environmental Improvement Plan (2023) (Ref 315).

Local Planning Policy

16.4.4 Relevant local planning policy includes:

- Kent Minerals and Waste Local Plan 2013-2030 - Minerals Sites Plan - Adopted September 2020 (Ref 10);
- Kent Minerals and Waste Local Plan (KMWLP) 2024-2039 adopted 2025 (Ref 9);
- Folkestone and Hythe Core Strategy Review - adopted March 2022 (Ref 12); and
- Folkestone and Hythe Places and Policies Local Plan 2020 (Ref 13)

Relevant Industry Guidance

16.4.5 Relevant industry guidance includes:

- ISEP Guidance (Ref 343);
- Planning Practice Guidance (PPG) for Minerals (2014) (Ref 355) and Waste (2015) (Ref 356);
- Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice (DoWCoP), v2 (2011) (Ref 357);
- Waste and Resources Action Programme (WRAP) Designing Out Waste: A Design Team Guide for Civil Engineering (Ref 358);
- Department for Environment, Food & Rural Affairs (DEFRA) and Environment Agency (2016). Waste Duty of Care Code of Practice (Ref 359); and
- DEFRA (2011). Guidance on Applying the Waste Hierarchy. Guidance on Applying the Waste Hierarchy (Ref 360).

16.5 Consultation

- 16.5.1 No materials and waste specific consultation has been undertaken to date. Following receipt of the Scoping Opinion, a meeting will take place with the relevant officers at KCC if there are matters requiring discussion.

16.6 Baseline Conditions

- 16.6.1 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to materials and waste.

Availability of Key Construction Materials

- 16.6.2 At the time of writing, the exact quantities of key construction materials (aggregate, asphalt, concrete, and steel) required for the Proposed Development are unknown as the design is in development.
- 16.6.3 UK (for steel) and regional data (for aggregate, asphalt, and concrete) have been used to establish a quantitative baseline of the availability for key construction materials.
- 16.6.4 **Table 16-1** summarises UK requirement in 2024 for steel and regional sales in 2024 for aggregates, asphalt and concrete (the most recent years for which data are available). The region for crushed rock is 'South' and the region for sand and gravel is 'London and South East' as outlined in **Table 16-1**. Baseline data for the South East only is no longer available.
- 16.6.5 It is anticipated that the majority of key construction materials would be sourced locally or regionally (e.g. concrete, aggregate, and asphalt), considering the proximity principle and value for money. Other materials such as steel would be sourced at a national or international level.

Table 16-1: Availability of Key Construction Materials

MATERIALS	UK AVAILABILITY (MILLION TONNES, YEAR)	REGIONAL AVAILABILITY (MILLION TONNES, YEAR)	BASELINE DATA YEAR	DATA DESCRIPTION
Steel	16	Not applicable. Steel will be assessed at the national level.	2024	UK's Steel Requirement 2014-2024. UK Steel Statistics 2025 (Ref 361)
Crushed rock	Not applicable. These materials will be assessed at the regional level.	26.3 (South, includes the East of England, London, South East and South West)	2024	Minerals and mineral product sales in Great Britain. Profile of the UK Mineral Products Industry – 2025 Edition. (Ref 362)
Sand and gravel		14.9 (London and South East)	2024	
Asphalt		1.9 (South East)	2024	

MATERIALS	UK AVAILABILITY (MILLION TONNES, YEAR)	REGIONAL AVAILABILITY (MILLION TONNES, YEAR)	BASELINE DATA YEAR	DATA DESCRIPTION
Ready-mixed concrete (million tonnes converted from m ³ using a density of 2.4 t/m ³)		7.68 (South East)	2024	

16.6.6 Potential recycled contents for the main construction materials are outlined in **Table 16-2**. These “good practice” rates are derived from the Waste Resources Action Plan’s (WRAP) Designing Out Waste Tool for Civil Engineering (Ref 358).

Table 16-2: Potential Recycled Content

MATERIAL TYPE	POTENTIAL RECYCLED CONTENT (% BY WEIGHT)
Concrete	16
Asphalt	25
Aggregates	50
Steel reinforcement	100
Structural steel	60

Safeguarded Mineral and Waste Sites

16.6.7 There are no safeguarded mineral or waste sites within the DCO Site Boundary as shown in Appendix 1 (Site Allocations) of the Kent Minerals and Waste Local Plan 2013-30 Minerals Site Plan (Ref 10;Ref 9) and Figure 13: Minerals Key Diagram – Sustainable Minerals Supply (showing safeguarded wharves and rail depots and secondary recycled aggregate facilities), Figure 14: Minerals Key Diagram – Land Won Supply and Figure 16A and Figure 16B Waste Key Diagrams of the Kent Minerals and Waste Local Plan 2024-2039 (Ref 9).

Landfill Capacity

16.6.8 Baseline information consists of current landfill capacity in the South East for non-hazardous and inert waste and England for hazardous waste, as outlined in the EA’s 2024 Waste Summary Tables for England – Version 1 (Ref 345) and presented in **Table 16-3**.

16.6.9 Hazardous restricted sites are not included since that capacity may not be available to the Proposed Development. Restricted landfills only accept waste from a restricted set of sources and producers, commonly the site operator e.g. a manufacturing site.

Table 16-3: Landfill Capacity in the South East region (2024)

LANDFILL TYPE	SOUTH EAST LANDFILL CAPACITY (000S M ³)	ENGLAND LANDFILL CAPACITY (000S M ³)
Hazardous merchant	Not applicable. Hazardous waste assessed at the England level	9,167

LANDFILL TYPE	SOUTH EAST LANDFILL CAPACITY (000S M ³)	ENGLAND LANDFILL CAPACITY (000S M ³)
Non-hazardous with Stable Non-reactive Hazardous Waste (SNRHW) cell	9,001	Not applicable. Non-hazardous and inert waste assessed at the regional level
Non-hazardous	15,646	
Inert	16,695	
Total	41,342	

Waste Management Infrastructure

16.6.10 The ISEP Guidance (page 14) (Ref 343) “does not consider waste processing and recovery facilities as sensitive receptors, rather: they are part of a system that has the potential to reduce the magnitude of adverse impacts associated with waste generation and disposal. Waste processing and recovery facilities are, hence, different to landfills, in that the latter are finite resources.” Therefore, a full list of waste management infrastructure is not included in the baseline.

Historic and Authorised Landfills

16.6.11 There are no authorised landfills recorded within the DCO Site Boundary, as outlined in the EA’s Permitted Waste Sites – Authorised Landfill Site Boundaries (Ref 363).

16.6.12 There are no historic landfills located within the DCO Site Boundary, as outlined in the EA’s Permitted Waste Sites – Historic Landfill Site Boundaries (Ref 364).

Permitted Waste Sites, Waste Site Applications, and Waste Exemptions

16.6.13 There are no Permitted Waste Sites recorded within the DCO Site Boundary, as outlined in the EA’s Permitted Waste Sites – permitted waste sites boundaries (Ref 365).

16.6.14 There are no Waste Site Applications recorded within the DCO Site Boundary, as outlined in the EA’s Permitted Waste Sites – waste site applications boundaries (Ref 365).

16.6.15 There are four waste exemptions sites within the Main Site and one in the Interconnecting Area (Ref 366). The waste exemption sites are associated with built assets, or waste use/storage on fields, and are therefore unlikely to be impacted by the Proposed Development.

Targets

16.6.16 The national target for recovery of construction and demolition waste is 70% by weight, as set out in the European Waste Framework Directive (Ref 344) and the Waste Management Plan for England (Ref 352). The target specifically excludes naturally occurring materials with European Waste Catalogue (EWC) Code 17 05 04 (17 05 04 soil and stones other than those mentioned in 17 05 03* (soils

and stone containing dangerous substances)). Recovery is deemed to include reuse, recycling and other recovery e.g. energy recovery.

16.6.17 A good practice landfill diversion target of 90% has been achieved and exceeded by major UK developments as outlined in the ISEP Guidance (Ref 343). In 2022, England generated 63 million tonnes of non-hazardous C&D waste, of which 59.4 million tonnes was recovered. This represents a recovery rate of 94.3% (Ref 367).

16.6.18 Standard, good and best practice recovery rates by material are provided by WRAP (Ref 368). Recovery rates for key construction wastes relevant to the Proposed Development are provided in **Table 16-4**.

Table 16-4: Standard, Good and Best Practice Recovery Rates by Material

MATERIAL	STANDARD PRACTICE RECOVERY (%)	GOOD PRACTICE RECOVERY (%)	BEST PRACTICE RECOVERY (%)
Metals	95	100	100
Packaging	60	85	95
Concrete	75	95	100
Inert	75	95	100
Plastics	60	80	95
Miscellaneous	12	50	75
Electrical equipment	Limited information	70	95
Cement	Limited information	70	95
Liquids and oils	100	100	100
Hazardous	50	Limited information, cannot be 100% since some hazardous waste e.g. asbestos must be landfilled.	

Future Baseline

16.6.19 There is no publicly available information on any potential changes to national or regional material availability by the anticipated time of the construction of the Proposed Development. Construction material demand, such as ready mixed concrete, is closely aligned to both the quantity of construction taking place and the general economy. It is deemed inappropriate to forecast future material availability as the demand is unlikely to be linear and it is not possible to set a future baseline for materials. As such, future material availability is assumed to remain the same as the current baseline as outlined in **Table 16-1**.

16.6.20 There is no publicly available information regarding any potential changes to landfill capacity by the anticipated time of the Proposed Development's construction, operation and maintenance, and decommissioning.

16.6.21 Due to the cyclic nature of inert and hazardous landfill capacity (e.g. landfill capacity decreasing, and then new sites or landfill cells being opened with landfill capacity increasing), it is not realistic to forecast future landfill capacity. Therefore, inert and hazardous landfill capacity is assumed to remain the same as the current baseline as outlined in **Table 16-3**.

16.6.22 For non-hazardous waste, using the current rate of decline of landfill capacity and forecasting into the future would lead to the inevitable conclusion that there would be no void space remaining. However, this is not a credible scenario as if there is still a need for landfill, then the WPA will need to consent new landfill capacity to replace that which has been used up. Therefore, non-hazardous and hazardous landfill capacity is assumed to remain the same as the current baseline, as outlined in **Table 16-3**.

16.7 Potential Effects and Mitigation

16.7.1 This section sets out the potential effects of the Proposed Development on materials and waste.

16.7.2 Mitigation measures being incorporated in the design and construction of the Proposed Development are set out below. Prior to the implementation of the mitigation, the Proposed Development has the potential to affect Materials and Waste, during construction, operation and maintenance, and decommissioning, in the following ways:

- Changes in availability of materials; and
- Changes in available landfill void capacity.

16.7.3 Embedded mitigation measures relevant to materials and waste are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Construction

16.7.4 The construction of the Proposed Development will be subject to measures and procedures defined within a Construction Environmental Management Plan (CEMP) and Site Waste Management Plan (SWMP). The CEMP and SWMP will be secured by a Requirement in the Development Consent Order (DCO) and will include the implementation of good industry practice and control measures for environmental impacts arising during construction, including the approach for material and waste management on-site. These measures will be set out in the Outline CEMP (OCEMP) and Outline SWMP (OSWMP) submitted with the DCO Application. The construction contractor will use the OCEMP to produce the detailed CEMP and SWMP respectively, prior to construction works commencing on-site. Any excavated material reuse would be via a Materials Management Plan in accordance with the CL:AIRE DoW CoP, Waste Framework Direction exclusion, exemption or environmental permit.

Operation and Maintenance

16.7.5 The operation (and maintenance) of the Proposed Development will be subject to measures and procedures defined within an Operational Environmental Management Plan (OEMP) secured by a Requirement in the DCO. An Outline OEMP (OOEMP) will be submitted as part of the DCO Application which will include the approach for material and waste management on-site. The

applicant will use the OOEMP to produce a detailed OEMP prior to commencement of operation.

Decommissioning

- 16.7.6 The decommissioning of the Proposed Development will be subject to measures and procedures defined within a Decommissioning Environmental Management Plan (DEMP) secured by a Requirement in the DCO. An Outline DEMP (ODEMP) will be submitted as part of the DCO Application which will include the approach for material and waste management on-site. The decommissioning contractor will use the ODEMP to produce the detailed DEMP prior to decommissioning works on-site. The Applicant is committed to maximise recycling and reuse of the Proposed Development components e.g. solar panels at the end of their life.

Mitigation

- 16.7.7 The following embedded measures have been and will be incorporated into the Proposed Development design, with detailed measures to be submitted with the DCO Application.

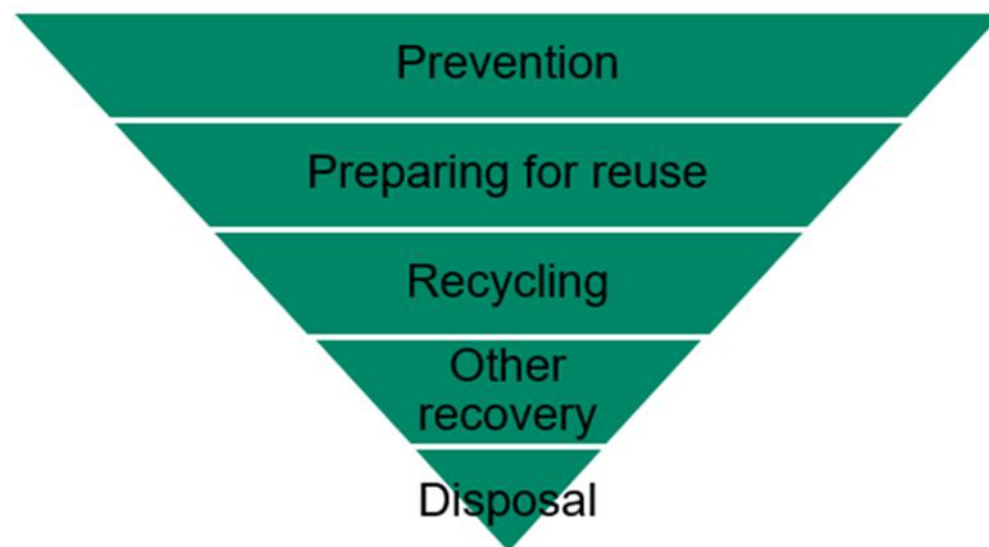


Plate 16-1 The Waste Hierarchy, from DEFRA's Guidance on Applying the Waste Hierarchy, recreated by AECOM

- 16.7.8 The Proposed Development will aim to prioritise waste prevention, followed by preparing for reuse, recycling and recovery and lastly disposal to landfill as per the waste hierarchy, illustrated in **Plate 16-1**.
- 16.7.9 All management of waste will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them.

16.8 Assessment Methodology

16.8.1 The assessment of potential effects as a result of the Proposed Development (construction, operation and maintenance, and decommissioning) on materials and waste will be undertaken using the methodology set out below.

16.8.2 The ISEP Guidance offers two methods for the assessment of waste. Method W1 – void capacity - has been selected as this is a more detailed methodology and is appropriate for larger and more complex projects (Ref 343).

16.8.3 The sensitive receptors for the assessment of the construction, operation and maintenance, and decommissioning phase materials and waste impacts are:

- Materials, national and regional availability of key construction materials – as outlined in the ISEP Guidance (Ref 343):

“Materials are, in their own right, sensitive receptors. Consuming materials impacts upon their immediate and (in the case of primary material) long-term availability; this results in the depletion of natural resources and adversely impacts the environment”; and

- Landfill void capacity in the Expansive Study Area of the South East region (non-hazardous and inert landfill void capacity) – as defined in the ISEP Guidance (Ref 343):

“Landfill is a finite resource, and hence – through the ongoing disposal of waste – there is a continued need to expand existing and develop new facilities, this requires the depletion of natural and other resources which, in turn, adversely impacts the environment.”

16.8.4 The sensitivity of materials relates to the availability and type of construction materials to be consumed by the Proposed Development. The ISEP Guidance (Ref 343) criteria has been used to determine the sensitivity of materials.

16.8.5 Material receptor sensitivity is determined as “low”. On balance, the key construction materials required for the construction of the Proposed Development are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. Key materials required for construction and operation are likely to be available comprising a high proportion of sustainable features and benefits (e.g. recycled content).

16.8.6 Potential recycled content for the main construction materials is outlined in **Table 16-2**.

16.8.7 The sensitivity of waste relates to availability of landfill capacity in the absence of the Proposed Development. This is outlined in the ISEP Guidance (Ref 343): *“landfill capacity is recognised as an unsustainable and increasingly scarce option for managing waste.”* The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.

16.8.8 The criteria described within **Table 16-6** and **Table 16-** have been used to determine the sensitivity of landfill capacity.

- 16.8.9 As stated in the ISEP Guidance “due to uncertainties relating to future technologies and infrastructure, this first edition of the guidance does not incorporate a proposed methodology to assess impacts and effects during decommissioning or end of first life”. However, the criteria in the ISEP Guidance are applied to decommissioning for the Proposed Development (Ref 343).
- 16.8.10 The waste receptor sensitivity is determined as “*very high*”. A scenario in which no landfill void space is available is deemed to be unrealistic as outlined in the Future Baseline section above, however, since there is no publicly available information on any potential changes to landfill capacity by the time of the construction and operation of the Proposed Development, a worst-case scenario is considered (e.g. landfill capacity is assumed to remain the same but a very considerable reduction in capacity cannot be excluded).
- 16.8.11 The assessment of materials and waste considers the following:
- Waste producers have a legal duty of care to manage their waste in accordance with regulations and to ensure that any waste leaving the site where it is generated is transferred to a suitably licensed facility for further treatment or disposal;
 - Facilities transferring, treating or disposing of waste must be either licensed or apply for an exemption from a license, and impacts arising from the operation of waste management facilities are considered as part of the planning and permitting process for these facilities themselves;
 - As part of their planning function, WPAs are required to ensure that sufficient land is available to accommodate facilities for the treatment of all waste arising in the area, either within the WPA’s area, or through export to suitable facilities in other areas; and
 - MPAs are similarly required to ensure an adequate supply of minerals, sufficient to meet the needs of national and regional supply policies, and local development needs.

Methodology for Determining Construction, Operational, and Decommissioning Effects

Materials

- 16.8.12 Effects upon materials during construction, operation (and maintenance), and decommissioning of the Proposed Development are assessed by:
- Establishing the baseline for national and regional availability of key construction materials by weight;
 - Assessing the sensitivity of materials as related to the availability and types of materials to be consumed by the Proposed Development in construction, operation (and maintenance), and decommissioning;
 - Establishing the quantities of key construction materials required for the construction of the Proposed Development; and
 - Comparing the total quantities of key construction materials with the most recent national and regional availability (utilising a percentage approach).

Waste

16.8.13 Effects upon waste during construction, operation (and maintenance), and decommissioning of the Proposed Development is assessed by:

- Establishing the baseline landfill void capacity in the expansive study areas;
- Assessing the sensitivity of landfill void capacity;
- Establishing the quantities of construction, operation (and maintenance), and decommissioning waste to be generated during the construction, operation (and maintenance), and decommissioning of the Proposed Development; and
- Comparing the total waste arising from the construction, operation (and maintenance), and decommissioning of the Proposed Development against the landfill void capacity (using a percentage approach).

Assessment Criteria

Sensitivity

16.8.14 The sensitivity of materials relates to the availability and type of construction material to be consumed by the Proposed Development. The ISEP Guidance criteria (Ref 343) described within **Table 16-5** is used to determine the sensitivity of materials.

Table 16-5: Material Receptor Sensitivity

SENSITIVITY	CRITERIA FOR MATERIALS RECEPTOR SENSITIVITY
Negligible	On balance, the key materials required for the construction of the Proposed Development are forecast (through trend analysis and other information) to be free from known issues regarding supply and stock. And/or are available comprising a very high proportion of sustainable features and benefits compared to industry-standard materials*
Low	On balance, the key materials required for the construction of the Proposed Development are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. And/or are available comprising a high proportion of sustainable features and benefits compared to industry-standard materials.
Medium	On balance, the key materials required for the construction of the Proposed Development are forecast (through trend analysis and other information) to suffer from some potential issues regarding supply and stock. And/or are available comprising some sustainable features and benefits compared to industry-standard materials.
High	On balance, the key materials required for the construction of the Proposed Development are forecast (through trend analysis and other information) to suffer from known issues regarding supply and stock. And/or Comprise little or no sustainable features and benefits compared to industry-standard materials.

SENSITIVITY	CRITERIA FOR MATERIALS RECEPTOR SENSITIVITY
Very High	On balance, the key materials required for the construction of the Proposed Development are forecast are known to be insufficient in terms of production, supply and/or stock. And/or Comprise no sustainable features and benefits compared to industry-standard materials.

** Subject to supporting evidence, sustainable features and benefits could include, for example, materials or products that: comprise reused, secondary or recycled content (including excavated and other arisings); support the drive to a circular economy; or in some other way reduce lifetime environmental impacts.*

16.8.15 The sensitivity of waste relates to availability of landfill capacity in the absence of the Proposed Development. As outlined in the ISEP Guidance “*landfill capacity is recognised as an unsustainable and increasingly scarce option for managing waste*” (Ref 343). The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.

16.8.16 The criteria described within **Table 16-6** is used to determine the sensitivity of non-hazardous and inert landfill capacity, while **Table 16-** outlines the criteria for hazardous landfill capacity.

Table 16-6: Non-hazardous and Inert Landfill Capacity Sensitivity

SENSITIVITY	CRITERIA FOR INERT AND NON-HAZARDOUS LANDFILL CAPACITY SENSITIVITY
Negligible	Across construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional inert and non-hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.
Low	Across construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional inert and non-hazardous landfill capacity is expected to reduce minimally by <1%.
Medium	Across construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional inert and non-hazardous landfill capacity is expected to reduce noticeably by 1-5%.
High	Across construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional inert and non-hazardous landfill capacity is expected to reduce considerably by 6-10%.
Very High	Across construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional inert and non-hazardous landfill capacity: • is expected to reduce very considerably (by >10%); • is expected to end during construction or operation; • is already known to be unavailable; or • would require new capacity or infrastructure to be put in place to meet forecast demand.

Table 16-7: Hazardous Landfill Capacity Sensitivity

SENSITIVITY	CRITERIA FOR HAZARDOUS LANDFILL CAPACITY SENSITIVITY
Negligible	Across the construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or

SENSITIVITY	CRITERIA FOR HAZARDOUS LANDFILL CAPACITY SENSITIVITY
	where justified, national) hazardous landfill capacity is expected to remain unchanged, or is expected to increase through a committed change in capacity.
Low	Across the construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to reduce minimally by <0.1%.
Medium	Across the construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to reduce noticeably by 0.1-0.5%.
High	Across the construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity is expected to reduce considerably by 0.5-1%.
Very High	Across the construction and/or operation (and maintenance) phases, the baseline/future baseline (i.e. without the Proposed Development) of regional (or where justified, national) hazardous landfill capacity: • is expected to reduce very considerably (by >1%); • is expected to end during construction or operation; • is already known to be unavailable; or • would require new capacity or infrastructure to be put in place to meet forecast demand.

Magnitude

16.8.17 The magnitude of change describes the degree of variation from the baseline conditions as result of the Proposed Development. The methodology for assessing the magnitude of change on materials comprises a percentage-based approach that determines the influence of construction materials use on the baseline national demand from the construction of the Proposed Development. The criteria used to assess the magnitude of change for materials are provided within **Table 16-8**.

Table 16-8: Materials Magnitude of Change

MAGNITUDE OF CHANGE	CRITERIA FOR MATERIALS MAGNITUDE OF CHANGE
No change	Consumption of no materials is required.
Negligible	Consumption of no individual material type is equal to or greater than 1% by volume of the baseline availability.
Minor	Consumption of one or more materials is between 1-5% by volume of the baseline availability.
Moderate	Consumption of one or more materials is between 6-10% by volume of the baseline availability.
Major	Consumption of one or more materials is >10% by volume of the baseline availability.

16.8.1 The methodology for assessing the magnitude of change for waste comprises a percentage-based approach that determines the influence of waste generation from the construction, operation (and maintenance), and decommissioning of the Proposed Development on the baseline landfill capacity. The criteria used to assess the magnitude of change for waste are provided within **Table 16-9** and **Table 16-10**.

Table 16-9: Inert and Non-hazardous Waste Magnitude of Change

MAGNITUDE OF CHANGE	CRITERIA FOR INERT AND NON-HAZARDOUS WASTE MAGNITUDE OF CHANGE
No change	Zero waste generation and disposal from the development.
Negligible	Waste generated by the development will reduce expansive study area landfill capacity baseline by <1%
Minor	Waste generated by the development will reduce expansive study area landfill capacity baseline by 1-5%
Moderate	Waste generated by the development will reduce expansive study area landfill capacity baseline by 6-10%.
Major	Waste generated by the development will reduce expansive study area landfill capacity baseline by >10%.

Table 16-10: Hazardous Waste Management Magnitude of Change

MAGNITUDE OF CHANGE	CRITERIA FOR HAZARDOUS WASTE MAGNITUDE OF CHANGE
No change	Zero waste generation and disposal from the development.
Negligible	Waste generated by the development will reduce expansive study area landfill capacity baseline by <0.1%
Minor	Waste generated by the development will reduce expansive study area landfill capacity baseline by <0.1-0.5%
Moderate	Waste generated by the development will reduce expansive study area landfill capacity baseline by <0.5-1%.
Major	Waste generated by the development will reduce expansive study area landfill capacity baseline by >1%.

Significance

16.8.2 **Table 16-11** describes the effect thresholds used in determining the effects and **Table 16-12** shows the significance of the effect.

Table 16-11: Effect Thresholds

		MAGNITUDE OF CHANGE				
		NO CHANGE	NEGLIGIBLE	MINOR	MODERATE	MAJOR
SENSITIVITY OF RECEPTOR	VERY HIGH	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	HIGH	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	MEDIUM	Neutral	Neutral or Slight	Slight	Moderate	Moderate or Large
	LOW	Neutral	Neutral or Slight	Neutral or Slight	Slight	Slight or Moderate
	NEGLIGIBLE	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

16.8.3 Professional judgement will be used to assign a single, specific effect threshold and therefore the magnitude of change will be justified as 'neutral', 'slight' or 'moderate' based on circumstances for each effect.

16.8.4 The evaluation of the significance of an effect is important, it is the effect significance that determines the resources that should be deployed in avoiding or mitigating a significant adverse effect, or conversely the actual value of a beneficial effect. **Table 16-12** shows the significance of effect is calculated based on the magnitude of change outcome for both materials and waste.

Table 16-12: Significance of Effect

MAGNITUDE OF CHANGE	MATERIALS	WASTE
Neutral	Not significant	Not significant
Slight		
Moderate	Significant	Significant
Large		
Very Large		

16.9 Limitations and Assumptions

16.9.1 The material and waste scoping has been undertaken based on information available at the time of writing. Any assumptions made for scoping and the limitations this presents are reported including:

- It is not possible to reliably forecast the future availability of construction materials; therefore, UK and regional data has been used to establish a quantitative baseline of the consumption of key construction materials which is used as a proxy for availability;
- Historic and authorised landfills are considered in the assessment since excavations within these sites can generate waste that may require off-site management; and
- It is not possible to reliably forecast any potential changes to landfill void capacity by the time of the Proposed Development construction and operation. Therefore, landfill void capacity is assumed to remain the same as the current baseline as outlined in **Table 16-3**.

16.10 Summary of Elements Scoped In and Out

16.10.1 The following is scoped out of the assessment:

- Waste arising and material use from extraction, processing and manufacture of construction components and products has been scoped out of this assessment. This assumes that these products and materials are being produced in manufacturing facilities including quarries with their own waste management plans, planning and permitting permissions, facilities, and supply chains, which are potentially in different regions of England, the UK or the world, and therefore outside of the geographical scope of this assessment;
- Environmental impacts associated with the management of waste from the Proposed Development e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-

site transport of materials and waste are addressed separately in other relevant chapters;

- Environmental impacts associated with the operation of offsite waste management facilities used by the Proposed Development in construction, operation and maintenance, and decommissioning. These environmental impacts are considered as part of the planning and permitting process for these facilities themselves; and
- Direct impacts on safeguarded mineral and waste sites. There are no safeguarded mineral or waste sites within the DCO Site Boundary.

16.10.2 Due to the limitation on information available at this stage, and the uncertainty about the nature of mitigation(s) and the method by which mitigation(s) would be secured, waste generation and material use during the construction, operation (and maintenance), and decommissioning (changes in available landfill void capacity and changes in availability of materials) of the Proposed Development is scoped into the assessment.

16.10.3 A summary of the elements scoped in and out of this chapter is presented in **Table 16-13**.

Table 16-13: Elements Scoped In and Out of the Materials and Waste Assessment

ELEMENT		SCOPED IN / SCOPED OUT
Construction, operation and maintenance, and decommissioning	Changes in available landfill void capacity	Scoped in - Due to the limitation on design information available at this stage, and the uncertainty about the nature of mitigation(s) and the method by which mitigation(s) would be secured, waste generation during the construction, operation (and maintenance), and decommissioning (changes in available landfill void capacity) of the Proposed Development is scoped into the assessment.
	Changes in availability of materials	Scoped in - Due to the limitation on design information available at this stage, and the uncertainty about the nature of mitigation(s) and the method by which mitigation(s) would be secured, material use during the construction, operation (and maintenance), and decommissioning (changes in availability of materials) of the Proposed Development is scoped into the assessment.
	Waste arising from extraction, processing, and manufacture of construction components and products.	Scoped out - Such matters cannot be accurately predicted and assessed in the ES as they relate to procurement decisions that cannot be assured.
	Environmental impacts associated with the management of waste from the Proposed Development e.g., on water resources, air quality, noise, or traffic resulting from the generation, handling,	Scoped out - Environmental impacts associated with the management of waste from the Proposed Development e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are addressed separately in other relevant sections.

ELEMENT		SCOPED IN / SCOPED OUT
	on-site temporary storage or off-site transport of materials and waste.	
	Environmental impacts associated with the operation of offsite waste management facilities used by the Proposed Development in construction, operation and maintenance, and decommissioning.	Scoped out - Environmental impacts are considered as part of the planning and permitting process for these facilities themselves.
	Changes to safeguarded mineral and waste sites	Scoped out - There are no safeguarded mineral waste sites within the DCO Site Boundary as presented on the Kent Minerals and Waste Local Plan.

17. Other Environmental Topics

17.1 Air Quality

Introduction

- 17.1.1 This section sets out the proposed approach to the assessment of likely significant effects on air quality during the construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the air quality section of the ES.
- 17.1.2 This section is supported by **Figure 17-1: Air Quality Study Area for South Kent Energy Park** with sensitive receptors and air quality monitoring locations.

Study Area

- 17.1.3 The Proposed Development is located to the north and south of the A259 which extends through Old Romney. The study area includes sensitive receptors that are located 250 m from the DCO Site Boundary and within 50 m of the work site access road(s) used by construction vehicles up to 500 m from the work site entrance(s) in line with Institute of Air Quality Management Guidance (Ref 384).

Legislation, Planning Policy Context and Guidance

- 17.1.4 Legislation, planning policy and guidance relating to air quality and pertinent to the Proposed Development is set out below.

Legislation

- 17.1.5 Relevant legislation includes:
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 369);
 - The Environmental Protection Act 1990 (Ref 370);
 - National Air Quality Legislation originating from the European Union (EU) (Ref 371);
 - The Air Quality (England) Regulations 2000 (Ref 373), as amended by the Air Quality (England) (Amendment) Regulations 2002 (Ref 374);
 - The Environment Act 1995 (Ref 375);
 - The Environment Act 2021 (Ref 21); and
 - The Environmental Targets (Fine Particulate Matter) (England) Regulations (2023) (Ref 376).

National Planning Policy

- 17.1.6 The following planning policies from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment

methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5); and
- National Planning Policy Framework (NPPF) (Ref 8).

Local Planning Policy

17.1.7 Relevant local planning policy includes:

- Folkestone and Hythe Core Strategy Review to 2037 – adopted March 2022 (Ref 12).
- Folkestone and Hythe Places and Policies Local Plan (2020) (Ref 13)– Policy CC6-2.

Relevant Industry Guidance

17.1.8 Relevant industry guidance includes:

- National Planning Practice Guidance (NPPG) for Air Quality (Ref 380) and Renewable and Low Carbon Energy (Ref 381);
- Land-Use Planning and Development Control: Planning for Air Quality (Institute of Air Quality Management) (2017) (Ref 382);
- Institute of Air Quality Management (2024) Guidance on assessment of dust from demolition and construction (Ref 384); and
- Department of Food and Rural Affairs: Local Air Quality Management Technical Guidance 2025 (LAQM TG22) (Ref 385).

Consultation

17.1.9 Consultation as part of the EIA process will be undertaken following submission of this EIA Scoping Report with statutory parties including Folkestone and Hythe District Council (FHDC).

Baseline Conditions

17.1.10 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to local air quality and public amenity.

17.1.11 FHDC undertakes ongoing air quality monitoring as part of its Local Air Quality Management obligations. FHDC's Annual Status Report (ASR) (Ref 379) confirms that the air quality within its administrative area is not at risk of exceeding the national objective values for all pollutants monitored.

17.1.12 FHDC has a diffusion tube monitoring location to the southeast of the Proposed Development (DT 10) which records concentrations of nitrogen dioxide (NO₂). Annual mean concentrations of 11.8 micrograms per cubic metre of air (µg/m³) were recorded at this site in 2024 (Ref 379), well below the Air Quality Objective value of 40 µg/m³.

17.1.13 Department for Environment, Food and Rural Affairs (DEFRA) predicted background concentrations uses a 1 km x 1 km grid for projections of the annual mean background pollutant concentration. For this assessment,

background data for the study area used DEFRA's 2021 based data set for the baseline year of 2025 (Ref 386). Although local monitoring data is available, there is no data at each receptor location with the study area to inform the background concentrations.

17.1.14 A summary of each grid point associated with a receptor calculated from using the DEFRA background concentrations is presented in **Table 17-1**, showing the annual mean, maximum and minimum concentrations over the entire study area for each pollutant assessed. The predicted concentrations from DEFRA are well below the Air Quality Objective (AQO) values, indicative of a good standard of air quality throughout the study area.

Table 17-1: Background concentrations across the Study Area at each grid point during the baseline year of 2025.

OS X (M)	OS Y (M)	BACKGROUND CONCENTRATION ($\mu\text{G}/\text{M}^3$)		
		NO ₂	PM ₁₀	PM _{2.5}
601500	123500	6.01	10.58	5.27
603500	123500	6.06	10.58	5.28
605500	124500	6.41	10.72	5.38
604500	124500	6.25	10.92	5.34
603500	124500	6.10	10.82	5.32
603500	125500	6.24	9.87	5.24
603500	124500	6.10	10.82	5.32
603500	125500	6.24	9.87	5.24
602500	125500	6.24	10.56	5.29
602500	124500	6.06	10.41	5.26
603500	125500	6.24	9.87	5.24
603500	126500	6.12	10.94	5.33
604500	126500	6.12	10.12	5.24
605500	125500	6.16	9.95	5.26
604500	125500	6.10	10.10	5.24
603500	129500	6.19	11.12	5.37
604500	129500	6.18	10.57	5.31
605500	129500	6.16	10.89	5.35
604500	130500	6.19	10.44	5.30
604500	130500	6.19	10.44	5.30
604500	131500	6.21	10.89	5.35
604500	131500	6.21	10.89	5.35
604500	131500	6.21	10.89	5.35
Maximum		6.41	11.12	5.38
Minimum		6.06	9.87	5.24
Average		6.19	10.53	5.30
Air Quality Objective		40	40	10

Potential Effects and Mitigation

17.1.15 This section sets out the potential effects of the Proposed Development on air quality.

Construction and Decommissioning

- Impacts from dust arising during the construction and decommissioning phases of the Proposed Development;
- Impacts from vehicle emissions during the construction and decommissioning phases of the Proposed Development; and
- Impacts from plant emissions during the construction and decommissioning phases of the Proposed Development.

Operation

- Impacts from vehicle emissions during the operation (and maintenance) of the Proposed Development.

17.1.16 Following construction, the Proposed Development is expected to result in minimal alteration to the baseline situation in respect of air quality.

Mitigation

17.1.17 To reduce the potential effects of dust emissions during the construction phase of the Proposed Development, the IAQM guidance sets out several mitigation measures for reducing dust impacts. The level of mitigation is dependent on the site activity and its associated risk rating as set out in the IAQM guidance (Ref 382).

17.1.18 Following construction, the Proposed Development is expected to result in no change to the baseline situation in respect of air quality.

17.1.19 Mitigation measures relevant to this topic at this stage are also included in the **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Assessment Methodology

17.1.20 The assessment of potential effects as a result of the Proposed Development (construction, operation (and maintenance) and decommissioning) on air quality, will be undertaken using the methodology set out below.

Dust Impact Assessment

17.1.21 The movement and handling of soils and spoil during the Proposed Development's construction activities is anticipated to lead to the generation of some short-term airborne dust. The occurrence and significance of dust generated is difficult to estimate and depends heavily upon the nature of the activity being carried out and the meteorological and ground conditions at the time and location of the work.

- 17.1.22 The emphasis of regulation and control of construction dust through the adoption of good practice when working on-site to mitigate any potential impacts. It is intended that significant adverse environmental effects are avoided at the design stage and through embedded mitigation where possible, including the use of good working practices to control dust emissions at source.
- 17.1.23 The IAQM Guidance provides guidance for good practice and a framework of approaches for qualitative assessment of risk of dust emissions from construction and demolition activities. The guidance considers the risk of dust emissions from unmitigated activities to cause human health impacts (associated with PM₁₀), dust soiling impacts, and ecological impacts (such as physical smothering, and chemical impacts for example from deposition of alkaline materials). The appraisal of risk is based on the scale and nature of activities and on the sensitivity of receptors, and the outcome of the appraisal is used to determine the level of good practice mitigation required for adequate control of dust.
- 17.1.24 The construction dust assessment method comprises four steps:
- Establish the sensitivity of the area through determination of the sensitivity of receptors and their distance from construction activities;
 - The dust risk assessment step is used to determine the level of good practice control measures required for adequately manage emissions of dust;
 - The likely magnitude of the change caused by emissions from construction activities, on air quality, vegetation and ecosystems, is determined and the need for additional site-specific mitigation measures considered with embedded management measures in use; and
 - The significance of residual effects is described.
- 17.1.25 The magnitude of likely change is described for the Proposed Development using standard IAQM terminology for a scenario that includes good practice control measures. If necessary, additional site-specific mitigation measures will be used if industry standard good practice control is not adequate to protect specific receptors.
- 17.1.26 For a development of this scale and requiring the low intensity works required for a solar power scheme with appropriate embedded control measures to further reduce the risk of off-site dust impacts, it can be concluded with confidence that significant effects on sensitive receptors would not occur. It is proposed to scope out the assessment of dust impacts.
- 17.1.27 Appropriate dust control measures will be recommended based on advice prescribed in IAQM (2024) (Ref 384) guidance and incorporated into the Outline Construction Environmental Management Plan (OCEMP) and Outline Decommissioning Environmental Management Plan (ODEMP).

Traffic Emissions Impact Assessment

- 17.1.28 During the construction and decommissioning phases of the Proposed Development, it is likely that there will be an increase to the number of vehicles

on the roads commuting to site. The anticipated number of vehicles during these phases will be considered in the context of the guidance published by IAQM (Ref 382). The latter sets out the criteria to establish the need for an air quality assessment for the construction phase of a development as being 'Large, long-term construction sites that would generate large Heavy Duty Vehicles (HDV) flows (>200 movements per day) over a period of a year or more'.

17.1.29 In **Chapter 15: Transport and Access**, the daily number of HDV movements is a maximum of 64 HDVs (128 movements) per day to/ from the DCO Site. The average daily total flow will be less than 64 HDVs on any individual road links, which is less than the screening criteria of 200 movements per day. It can be concluded that construction traffic flows of this scale would not be capable of causing a significant effect at any sensitive receptor without the need for further assessment.

17.1.30 The number of construction workers arriving within the study area over the 24 – 36 month construction period, as a worst-case scenario, is estimated to be up to 400 construction staff per day (**Chapter 15: Transport and Access**). This number encompasses all plots across the study area and when combined with the HDV movements, the 2-way Annual Average Daily Total traffic flows (AADT) on any individual road link would be less than the total of the construction staff movements and the HDV movements. The threshold for requiring an assessment in this case is vehicles exceeding 500 2-way AADT if not within or adjacent to an Air Quality Management Area (AQMA). Based on the AADT threshold and the number of construction staff attending site via different road links across the study area, it is unlikely that the total number of vehicles will breach the threshold of 500 2-way AADT screening criteria on any individual road link. The effect of construction phase road traffic emissions can be scoped out.

17.1.31 Construction workers commuting to the DCO Site Boundary are likely to access the works locations from the A259 towards Old Romney. It is likely that there will be other access points for accessing the works locations, however, a higher proportion of construction workers are likely to commute down this road to gain access to land parcels to the north and south of the A259. Receptors adjacent to and within 200 m of the road are likely to experience the largest effects than those that are further away. Although a high proportion of construction workers are likely to use the A259 for accessing both land parcels, the number of construction workers predicted to be on site per day is below the IAQM criteria for triggering an assessment.

17.1.32 At this stage, it is unlikely that there will be any significant impact on air quality due to the scale of the likely change from baseline AADT traffic flow rates, and therefore the need for a traffic assessment can be scoped out.

Non-Road Mobile Machinery (NRMM) Emissions Impact Assessment

17.1.33 Construction and decommissioning related plant emissions are anticipated to represent a small source of exhaust emissions relative to ambient local conditions in the vicinity of the study area based on the scale of work that

would occur and the number of plant vehicles that would be required. However, suitable control measures for plant and motorised equipment will be recommended based on advice prescribed in IAQM guidance and incorporated into the Outline CEMP and Outline DEMP. These control measures have an established track record of successfully minimising off site impacts from NRMM for urban and rural construction sites. It is considered that for the type of low intensity works associated with a solar scheme that NRMM will not be capable of causing off-site impacts with good practice control measures implemented.

- 17.1.34 It is unlikely that the number of NRMM vehicles will significantly affect air quality during these phases of development if good practice industry control measures are applied.

Limitations and Assumptions

- 17.1.35 The main access road for accessing the DCO Site Boundary is from the A259 from Ashford. It is assumed that all construction vehicles will travel to the Proposed Development from this direction and the associated impacts to air quality will arise from vehicles using this route to the study area.

Summary of Elements Scoped In and Out

- 17.1.36 A summary of the elements scoped in and out of this chapter is presented in **Table 17-2** below.

Table 17-2: Elements scoped in and out of the Air Quality assessment

ELEMENT	SCOPED IN/SCOPED OUT
Dust Emissions	Scoped out: The impacts of dust emissions during the construction, operational (and maintenance) and decommissioning phases of the development, with appropriate embedded control measures
Traffic Emissions	Scoped out: Based on the worst-case scenario of up to 400 construction staff attended site each day and a maximum of 64 HDVs per day, it is unlikely that the 500 AADT threshold will be exceeded on individual road links. Receptors within 200 m of the access roads are likely to experience the largest effects, however, these effects are predicted to be not significant. Further screening at ES phase can be performed when more data is available.
NRMM Emissions	Scoped out: NRMM exhaust emissions for this assessment have been scoped out. It is unlikely that the NRMM exhaust emissions will have any adverse effects on air quality when the safeguards are put in place to mitigate exhaust emissions to air.

17.2 Electromagnetic Fields (EMF)

Introduction

- 17.2.1 This section sets out the proposed approach to the assessment of likely significant effects in relation to magnetic fields during the construction, operation (and maintenance), and decommissioning phases of the Proposed Development, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the magnetic field section of the Environmental Statement (ES).
- 17.2.2 Electric fields are the result of voltages applied to electrical conductors and equipment. Fences, shrubs and buildings easily block electric fields. Electromagnetic fields (EMFs) are produced by the flow of electric current; however, unlike electric fields, most materials do not readily block magnetic fields. The intensity of both electric and magnetic fields diminishes with increasing distance from the source.
- 17.2.3 Human exposure to magnetic fields can cause health problems, if they are persistent or of high strength.

Study Area

- 17.2.4 The study area comprises the Development Consent Order (DCO) Site Boundary (see **Figure 1-1: Proposed Development Location Plan**) due to the potential for magnetic fields around any components associated with the Proposed Development.
- 17.2.5 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.

Potential Effects and Mitigation

- 17.2.6 This section sets out the potential effects of the Proposed Development on magnetic fields. The Proposed Development would include underground cabling with an operating voltage of 33 kilovolt (kV), 132 kV and 400 kV. No overhead electricity cables would be used or constructed as part of the Proposed Development, with the exception of relatively short lengths of cabling connecting components, such as the solar panels to the inverters, and potential down connection from the overhead line to the National Grid Substation.
- 17.2.7 Underground cables almost entirely eliminate electric fields as it is screened out by the sheath around the cable and surrounding soil, but they still produce magnetic fields. Therefore, there is a need to consider the effects associated with magnetic fields as a result of the Scheme.
- 17.2.8 National Policy Statement (NPS) EN-1 paragraph 5.5.59 (Ref 5) states 'In order to avoid unacceptable adverse impacts of electromagnetic and electrical noise interference from energy development, and/or its supporting infrastructure, and

associated infrastructure on defence technical assets and operations, the Secretary of State will take account of statutory technical safeguarding zones defined in accordance with Planning Circular 01/03, or any successor when considering DCO applications'. The Proposed Development is not within any safeguarding zone of any safeguarded civil aerodrome as listed on Annex 3 of the planning circular 'Officially safeguarded civil aerodromes' (Ref 387).

- 17.2.9 The Control of Electromagnetic Fields at Work Regulations (Ref 388) sets out the duties of employers in relation to controlling the risks of magnetic fields to employees. This includes a requirement to assess employees' potential exposure to magnetic fields with reference to action levels and exposure limit values. The threshold for workers is greater (five times higher) than for members of the public. Therefore, as effects of magnetic fields on workers for the Proposed Development would be controlled and mitigated to acceptable levels for members of the public through the legislative framework, impacts on workers are not considered within the assessment.
- 17.2.10 As the design develops, consideration will be given to the potential for EMF to impact on sensitive receptors. This will include undertaking calculations to determine whether EMF will be experienced by sensitive receptors and to what intensity. If it is likely to be a nuisance or hazard, mitigation will be proposed.
- 17.2.11 A full list of mitigation measures relevant to this topic at this stage are also included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this document.

Assessment Methodology

- 17.2.12 The recent advice published by PINS 'Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development' (Ref 389) states the following: *"Where proposed cables are over 132 kV, 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 132 kV and a risk assessment to any human and ecological sensitive receptors within the Zol."*
- 17.2.13 The scope of the technical appendix which will be appended to the ES is identified below. As electricity will only flow through the cabling and infrastructure during the operational phase, this assessment will only consider operational phase effects.
- 17.2.14 An assessment will be undertaken which will take account of relevant legislation, policy and guidance, including (but not limited to) the International Commission of Non-Ionizing Radiation Protection (ICNIRP) reference levels (Ref 390) and National Grid guidance (Ref 391). The Energy Networks Association publication 'Electric and Magnetic Fields' (Ref 392) states that the Government sets guidelines for exposure to magnetic fields in the UK on advice from the Health Protection Agency (HPA). In March 2004 the UK adopted the 1998 guidelines published by the ICNIRP and this policy was reaffirmed by a Written Ministerial Statement in October 2009. These guidelines also form the basis of a European Union Recommendation on public exposure and a Directive on

occupational exposure. The ICNIRP ‘reference levels’ for the public are: 100 microteslas for magnetic fields. It goes on to say *“These are the levels above which more investigation is needed if this level of exposure is likely to occur; the permitted levels of exposure are somewhat higher, 360 microteslas and 9000 volts per metre. They apply where the time of exposure is significant. These guidelines are designed to ensure that electromagnetic fields do not interfere with nerves, but were set after examining all the evidence, including the evidence on cancer. The occupational limits are five times higher”*.

17.2.15 As a worst case the lower ‘reference level’ of 100 microteslas is proposed to be used in the assessment as the threshold at which potentially significant effects could occur.

17.2.16 No significant effects are expected to be identified from magnetic fields as a result of the Proposed Development. The logic for this is outlined below:

- Cable sheathing and surrounding soil almost completely filters out electric fields from buried cabling. Electric fields can therefore be scoped out of the assessment as clearly not significant;
- Department for Energy Security and Net Zero (DESNZ) (formerly Department of Energy and Climate Change (DECC)) guidance (Ref 393) states that underground cables at voltages up to and including 132 kV are considered not capable of exceeding the ICNIRP exposure guidelines for magnetic fields and that compliance with exposure guidelines for such equipment can be assumed unless evidence is brought to the contrary in specific cases. However, there is potential for exceedances of 132 kV where infrastructure overlaps. Cumulative effects with other existing or proposed electricity infrastructure will be considered as part of the assessment and potential effects identified;
- The electricity export connection options to the proposed National Grid Substation are described in Section 3 of this EIA Scoping Report. Depending on the option selected, 400 kV underground cables may be required for the interconnecting cables between the SKEP Main On-site Substation, Additional On-Site Substation and the National Grid Substation. A typical burial depth recommended by National Grid for underground cables is 1.2 m depth (which allows for 0.9 m soil on top of the cabling). The Proposed Development will comply with this minimum industry standard for the 400 kV cables;
- The National Grid document ‘Undergrounding high voltage electricity transmission lines’ (Ref 391) states that for a 400 kV cable buried with 0.9 m soil above it, the typical magnetic field is 24 microteslas when on top of the cable, and 3 microteslas at 5 m from the centreline, with the maximum level known by National Grid being on top of the cable at 0.9 m depth and 13 microteslas at 5 m. The maximum magnetic field known by National Grid at full load is 96 microteslas on top of the cable, 13 microteslas at 5 m from the centreline, and 3.6 microteslas at 10 m, whilst the full load is occasional, it still complies with the ICNIRP threshold of 100 microteslas when directly on top of the buried cabling;

- NGET research shows that the maximum impact is less than 10 microteslas for directly above 132 kV buried cables for a flat formation (lower for a trefoil formation);
- Taking into account this guidance and the UK limits set for safety of members of the public, the maximum reported magnetic for High Voltage (HV) cables buried at a minimum depth of 1.2 m (with 0.9 m soil above) would comply with the ICNIRP limits even if the cabling were directly under a human receptor; and
- Therefore, no significant impacts are expected to arise from magnetic fields as a result of the Proposed Development.

17.2.17 The buried 400 kV cabling will be located at least 10 m from permanent receptors due to the need for construction vehicles to manoeuvre both sides of the trench within the working width. Therefore, no significant effects to receptors are predicted to occur. The estimated maximum magnetic field at this distance will be 2-3 microteslas and within the acceptable exposure limits.

17.2.18 A separate high-level magnetic interference assessment will be prepared and the findings and recommendations for magnetic fields will be confirmed and presented in the Other Environmental Topics of the ES.

17.3 Glint and Glare

Introduction

- 17.3.1 This section sets out the proposed approach to the assessment of likely significant effects on glint and glare, during construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward and set out within the glint and glare section of the Environmental Statement (ES).
- 17.3.2 Glint and glare is the effect of reflected sunlight causing harm or discomfort to a sensitive receptor. A glint can be defined as the momentary receipt of a bright light and a glare can be defined as the receipt of a bright light over an extended or continuous period of time.
- 17.3.3 Solar panels are designed to absorb as much light as possible and to not reflect it. However, glint can be produced as a reflection of the sun from the surface of a solar PV panel. This can also be described as a momentary flash.
- 17.3.4 Glare is significantly less intense in comparison to glint and can be described as a continuous source of bright light, relative to diffused lighting. This is not a direct reflection of the sun, but a reflection of the sky around the sun.

Study Area

- 17.3.5 As glint and glare impacts disperse further and become less significant at greater distances, a 1 km study area will be used initially for ground-based receptors. Should there be any significant effects identified at the edge of the 1 km study area, then the study area will be increased, and any significant effects will be assessed.
- 17.3.6 Study areas to identify aviation assets vary depending on the safeguarding criteria of that asset. All aerodromes within 30 km will be identified, however generally the detailed assessments are only required within 20 km for large international aerodromes, within 10 km for military aerodromes, and within 5 km for small aerodromes.

Legislation, Planning Policy Context and Guidance

- 17.3.7 Glint and glare assessments are sometimes required to accompany consent applications for solar developments, with the following guidelines set out in paragraphs 2.10.94 to 2.10.98 in National Policy Statement (NPS) EN-3 (Ref 6) on how to determine the requirement and scope:

“Applicants should map receptor to qualitatively identify potential glint and glare issues and determine if a glint and glare assessment is necessary as part of the application.

When a quantitative glint and glare assessment is necessary, applicants are expected to consider the geometric possibility of glint and glare affecting the

nearby receptors and provide an assessment of potential impact and impairment based on the angle and duration of incidence and the intensity of the reflection.

The extent of reflectivity analysis required to assess potential impacts will depend on the specific project site and design. This may need to account for ‘tracking’ panels if they are proposed as these may cause differential diurnal and/or seasonal impacts.

When a glint and glare assessment is undertaken, the potential for solar PV panels, frames and supports to have a combined reflective quality may need to be assessed, although the glint and glare of the frames and supports is likely to be significantly less than the panels.”

- 17.3.8 Relevant mitigation measures are also outlined in paragraphs 2.10.126 to 2.10.128 within NPS EN-3 (Ref 6):

“Applicants should consider using, and in some cases the Secretary of State may require, solar panels to comprise of (or be covered with) anti-glare/anti-reflective coating with a specified angle of maximum reflection attenuation for the lifetime of the permission.

Applicants may consider using screening between potentially affected receptors and the reflecting panels to mitigate the effects.

Applicants may consider adjusting the azimuth alignment of or changing the elevation tilt angle of a solar panel, within the economically viable range, to alter the angle of incidence. In practice this is unlikely to remove the potential impact altogether but in marginal cases may contribute to a mitigation strategy.”

- 17.3.9 The receptors and weight of impact that influences the Secretary of State (SoS) decision making for glint and glare is outlined in paragraphs 2.10.150 to 2.10.151:

“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.”

- 17.3.10 As described in **Chapter 11: Landscape and Visual Amenity** of this EIA Scoping Report, consideration of how glint and/or glare might contribute to landscape or visual effects will be included in the Landscape and Visual Amenity chapter of the ES. A Glint and Glare Assessment will be included in a

separate technical appendix in the ES with a summary presented in the Other Environmental Topics chapter.

Consultation

17.3.11 Consultation as part of the EIA process will be undertaken following submission of this EIA Scoping Report with statutory parties including, but not limited to:

- Kent County Council;
- Folkstone and Hythe District Council;
- Network Rail;
- Ministry of Defence;
- Civil Aviation Authority;
- Local aerodromes; and
- National Highways.

Baseline Conditions

17.3.12 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to glint and glare.

17.3.13 Potential receptors identified for the glint and glare assessment are listed below and fall in line with those outlined within the NPS EN-3 (Ref 6).

- Residential homes within 1 km of the Main Site;
- Roads within 1 km of the Main Site (A259, B2080, Straight Lane, Five Vents Lane, Old School House Lane, Swamp Road, Milbank Lane, Beggarsbush Lane, Romney Road and A2070);
- Lydd Airport (approximately 4 km south east), Harrington Court Airstrip airfield (approximately 9.2 km north), and Hamilton Farm Airfield (approximately 11.1 km north);
- Railway users of the South Eastern Main Line (approximately 1.5 km south west of the Proposed Development) and the Romney Hythe and Dymchurch Railway (RH & DR) (approximately 4.2 km east of the Proposed Development); and
- Users of the local PRoW (see **Figure 15-2: Existing Walking and Cycling Network**).

17.3.14 It is anticipated that Lydd Airport will require a detailed assessment for glint and glare effects.

Potential Effects and Mitigation

Construction and Decommissioning

17.3.15 Construction and decommissioning activities would be undertaken in accordance with a Construction Environmental Management Plan (CEMP) and a Decommissioning Environmental Management Plan (DEMP) respectively. An Outline CEMP (OCEMP) and Outline DEMP (ODEMP) will be prepared as part of the ES and will include information on how reflective surfaces are to be treated during the construction and decommissioning phases with a view toward their

final placement across the Main Site. These would be developed into a detailed CEMP and a detailed DEMP prior to Proposed Development construction and decommissioning respectively.

- 17.3.16 It is expected that avoidance of the effects of glint and glare would be considered as part of the construction and decommissioning planning. Further, the scale of the Main Site is such that the full area would not be occupied for the duration of construction and decommissioning activities and the movement of reflective surfaces would be temporarily localised to smaller areas on a rolling basis until the works are complete. There is no value in modelling construction effects due to the potential effect being the same or less than the potential effect of Year 1 of operation. This is when all panels will be installed, and planting has not yet matured. Similarly, potential decommissioning effects would be less than operation due to the number of panels gradually reducing, and planting being fully matured. Based on the nature of the activities, the distances to receptors and the implementation of the detailed CEMP and detailed DEMP, construction and decommissioning glint and glare effects are proposed to be scoped out of the assessment.

Operation (and Maintenance)

- 17.3.17 Operational effects are considered to be consistent and would last for the duration of the Proposed Development's operation. The interaction of solar PV panels with sensitive locations, for example vehicular junctions or pedestrian crossings on roads, or viewpoints along rail lines or roads, is primarily influenced by their siting, as solar PV panels require orientation towards the sun path, and the choice of materials, where more reflective or specular surfaces create a higher chance of creating distraction through the discomfort or disability glare. Mitigation measures applicable to the Proposed Development's operation will be included in an Outline Operational Environmental Mitigation Plan (OOEMP) prepared as part of the DCO Application. The OOEMP will form the basis of the detailed OEMP which is expected to be secured as a Requirement of the DCO.
- 17.3.18 The setback mounting of the solar PV panels within the Main Site from its boundaries combined with the distance to potential receptors and angling of the panels from the horizontal could help to limit how and where potential occurrences of glare could be created by the Proposed Development.
- 17.3.19 Furthermore, the dark colour, anti-reflective coating or finish on the panel glass and matt material finish of the solar PV panels is designed to absorb light and minimise potential occurrences of reflected light, reducing the likelihood that glare conditions could be created from the panels themselves.
- 17.3.20 Based on the expected design, screening and distance to sensitive receptors, significant glint and glare effects are not considered likely. Nevertheless, as the design develops, consideration will be given to the potential for solar reflections to impact on sensitive receptors. This will include undertaking calculations to determine whether the solar PV panels will be visible from sensitive locations and if a solar reflection could occur, and whether it is likely to be a significant nuisance or hazard. The calculations will be made using

specialised software. If glint and glare is likely to be a nuisance or hazard, mitigation will be proposed.

Assessment Methodology

- 17.3.21 As discussed in Section 3.2 of this EIA Scoping Report, the current options being considered at this scoping stage are fixed south facing solar PV panels, and single axis tracker. The type of Solar PV Mounting Structure taken forward may be refined as the Proposed Development design progresses. The glint and glare assessment includes detailed geometric analysis, and secondary modelling utilising the Sandia methodology being completed for aviation receptors. This will assess impacts from each Solar PV Mounting Structure presented in the ES.
- 17.3.22 The assessment methodology, findings, and recommendations for glint and glare will be incorporated into the Proposed Development design and presented as a technical appendix to the ES. Any mitigation planting or fencing recommended by the modelling will be incorporated into the Proposed Development design and assessed by the other technical chapters in the ES. It is considered that this will negate the need for a specific glint and glare chapter in the ES, however the assessment will be summarised the Other Environmental Topics chapter of the ES and will inform other technical assessments, including LVIA, that will be presented in the Landscape and Visual Amenity chapter of the ES, as appropriate.
- 17.3.23 Mitigation measures relevant to this topic at this stage are also included in the **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

17.4 Ground Conditions

Introduction

- 17.4.1 This section sets out the proposed approach to the assessment of likely significant effects on ground conditions during the construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward within the Environmental Statement (ES).
- 17.4.2 This chapter is supported by **Figure 17-2: Ground Conditions Study Area Boundaries**.
- 17.4.3 The ground conditions topic focuses on geological designated sites, mineral resources (including Mineral Safeguarding Areas (MSA)/Mineral Consultation Areas (MCA)), and receptors sensitive to land contamination. There are interrelationships between the potential effects on ground conditions and other environmental topics. Therefore, other chapters should also be referred to, as follows:
- Groundwater, surface water and ecological receptors are discussed within this chapter as they will be assessed as potential receptors to any land

contamination. However, groundwater and surface water as strategic resources and/or discharge points, hydrogeological response to dewatering, and flooding are considered in **Chapter 10: Water Environment**. Ecological receptors are considered in more detailed in **Chapter 9: Ecology and Biodiversity**;

- Pollution related impacts from construction, operation (and maintenance), and decommissioning of the Proposed Development are considered in **Chapter 10: Water Environment**;
- Air pollution related impacts from increased dust during construction are also covered in Section 17.1 Air Quality of **Chapter 17: Other Environmental Topics**;
- Excavated materials and waste management are also covered in **Chapter 16: Materials and Waste**; and
- Soils and agricultural land are covered in **Chapter 14: Agriculture and Soils**.

Study Area

- 17.4.4 For the purposes of determining the local baseline conditions with respect to ground conditions, a study area extending 250 m from the Proposed Development will be adopted. This will be extended for hydrogeology to 1 km from the Proposed Development.
- 17.4.5 This study area is appropriate to assess the local geological and hydrogeological setting, and any influence that potential land contamination may have on the Proposed Development or local sensitive receptors.
- 17.4.6 The study area boundaries for ground conditions are presented on **Figure 17-2**.
- 17.4.7 In the event that an export Grid Connection Route which extends outside of the Development Consent Order (DCO) Site Boundary is required this will be included within the Preliminary Risk Assessment (PRA) that will be submitted as part of the DCO Application.

Legislation, Planning Policy Context and Guidance

- 17.4.8 Legislation, planning policy and guidance relating to ground conditions and pertinent to the Proposed Development is set out below.

Legislation

- 17.4.9 Relevant legislation includes:
- Environmental Protection Act 1990 (Ref 394);
 - Water Act 2003 (Ref 395);
 - Water Resources Act 1991 (Ref 396);
 - Building Act 1984 (Ref 397);
 - Environment Act 1995 (Ref 375);
 - Environment Act 2021 (Ref 21);
 - Climate Change Act 2008 (Ref 398);
 - Planning Act 2008 (Ref 399);

- Water Environment (Water Framework Directive (WFD)) (England and Wales) Regulations 2017 (Ref 400);
- Environmental Permitting (England and Wales) Regulations 2016, as amended 2018 (Ref 183);
- Waste (England and Wales) Regulations 2011 (Ref 401);
- Hazardous Waste (England and Wales) (Amendment) Regulations 2016 (Ref 402);
- Contaminated Land (England) Regulations 2006 (Ref 403);
- Building (Amendment) Regulations 2016 (Ref 404);
- Anti-Pollution Works Regulations 1999 (Ref 405); and
- Construction (Design and Management) Regulations 2015 (Ref 406).

National Planning Policy

17.4.10 The following planning policies from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5);
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6); and
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7).

17.4.11 Other relevant national planning and guidance includes:

- National Planning Policy Framework (NPPF) (Ref 8); and
- Planning Practice Guidance. Paragraph 013 ID: 5-013-20150327 – ‘Renewable and low carbon energy: What are the particular planning considerations that relate to large scale ground-mounted solar photovoltaic farms’ (Ref 407).

Local Planning Policy

17.4.12 Relevant local planning policy includes:

- Kent County Council planning policies (Ref 408); and
- Folkestone and Hythe District Council adopted development plan (Ref 409).

Relevant Industry Guidance

17.4.13 Relevant industry guidance includes:

- HM Government, Part 2A Contaminated Land Statutory Guidance, 2012 (Ref 410);
- Environment Agency’s online guidance for the management of land contamination ‘Land contamination: risk management (LCRM) (Ref 411);
- BS 10175 (2011 +A2 2017), Investigation of Potentially Contaminated Sites - Code of Practice (Ref 412);
- BS 8576 (2013), Guidance on investigations for ground gas. Permanent gases and Volatile Organic Compounds (VOCs) (Ref 413);
- BS 8485 (2019), Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (Ref 414);

- CIRIA C665, assessing risks posed by hazardous ground gases to buildings, 2007 (Ref 415);
- CIRIA C552 Contaminated Land Risk Assessment: A Guide to Good Practice (Ref 416);
- CIRIA C811 5th Edition 'Environmental Good Practice On Site' 2023 (Ref 417);
- Contaminated Land: Applications in Real Environments (CL:AIRE), Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (Ref 418)
- BRE series 'Concrete in Aggressive Ground' (2005) (Ref 419); and
- CL:AIRE, Framework for Assessing the Sustainability of Soil and Groundwater Remediation (2010) (Ref 420).

Consultation

17.4.14 Consultation as part of the Environmental Impact Assessment (EIA) process will be undertaken following submission of this EIA Scoping Report with statutory parties including local councils, the Environment Agency and local geological groups. This will be to obtain further information on:

- Potential land contamination sites across the Proposed Development and within the study area; and
- Information on geological sites (if present).

Baseline Conditions

17.4.15 This section describes a high-level review of baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to ground conditions.

Geology

Introduction

17.4.16 The British Geological Survey (BGS) Map Sheet 305 & 306 (Folkestone and Dover, 1:50,000 scale) (Ref 421) along with online freely available geological mapping tools provided by the BGS (Ref 422), indicate the geological setting of the Proposed Development.

Made Ground

17.4.17 The BGS mapping does not indicate presence of Made Ground within 250 m of the Proposed Development. Although not mapped, Made Ground may exist along roadways, railway lines (such as in the southern extent) and developed areas (albeit the Proposed Development is located in a predominantly rural setting, with only isolated farms, buildings and small residential areas).

Superficial Deposits

17.4.18 Superficial deposits of Tidal Flat Deposits 'sand' and 'clay and silt' are indicated to underlie the whole extent of the Proposed Development and study area. Locally in the southern extent, Blown Sand is mapped.

Bedrock geology

17.4.19 The Proposed Development is underlain by the parent unit of the Wealden Group which is defined by the BGS lexicon (Ref 423) as “*interbedded thick sandstones, siltstones, mudstones ("shales"), limestones and clay ironstones of predominantly non-marine facies.*”

17.4.20 The bedrock geology underlying the Proposed Development is not divided into formations and is only referred to as the Wealden Group ‘sandstone, siltstone and mudstone’.

Mining

17.4.21 According to the Mining Remediation Authority (Ref 424), the Proposed Development and study area is not located within a Coal Mining Reporting Area.

Geological Sites

17.4.22 According to the Kent County Council, Planning Policies (Ref 408), there are no Local Geological Sites (LGS) within the Proposed Development or study area. According to Department for Environment, Food and Rural Affairs (DEFRA) Magic mapping (Ref 130), there are no geological sites of special scientific information (SSSI) within the Proposed Development or study area. It is recommended that further consultation be undertaken to confirm the absence of geological sites of interest.

Mineral Resources

17.4.23 According to the Folkestone and Hythe District Council, Adopted Development Plan (Ref 409), the Proposed Development is not located within an MSA/MCA.

Hydrogeology

17.4.24 According to DEFRA Magic mapping (Ref 130) the Environment Agency classifies the superficial Tidal Flat Deposits ‘sand’ as Secondary A aquifers, and the Tidal Flat Deposits ‘clay and silts’ and Blown Sand as Unproductive strata.

17.4.25 The Wealden Group bedrock geology across the Proposed Development (including the Tunbridge Wells Sand Formation ‘sandstone’) is classified as a Secondary A aquifer.

17.4.26 There are no Source Protection Zones within 1 km of the Proposed Development.

Hydrology

17.4.27 Surface water features are present in abundance across the Proposed Development, primarily in the form of land drains (often referred to as “sewers” along the edges of field parcels).

17.4.28 An unnamed water feature (pond/small lake) is located within the southern area of the Main Site.

Current Land Uses

17.4.29 The Proposed Development is located in a predominantly rural setting with farms and associated agricultural land, and a railway in the southern area of the Main Site.

Landfills

17.4.30 According to Groundsure Insights (Ref 426), there are no historical landfills or authorised landfill sites within 250 m of the Proposed Development.

UXO

17.4.31 The Proposed Development is indicated on Zetica's online risk mapping (Ref 427) to be entirely within an area of low risk from unexploded ordnance (UXO).

Potential Effects and Mitigation

17.4.32 This section sets out the potential effects of the Proposed Development on ground conditions.

Construction and Decommissioning

17.4.33 Potential impacts during the construction and decommissioning phases of the Proposed Development include, but are not limited to:

- Disturbance of geological features of interest (if present);
- Human exposure through direct contact/inhalation/dermal uptake of contaminants potentially present in soil and groundwater;
- Creation of preferential pathways and mobilisation of contamination;
- Contamination of natural soils, driving of contamination into an aquifer during piling, contamination of groundwater with concrete, paste or grout;
- Pollution and degradation of water quality of any underlying aquifer; infiltration and/or runoff into the local drainage/sewerage network - pollution of drainage and sewerage network and any adjacent surface water features;
- Run-off and infiltration of contaminants from material stockpiles;
- Contamination of drainage and sewerage network and/or groundwater; and
- Spread of nuisance dusts and soils to the wider environment and local roads.

17.4.34 At this stage, based upon an initial, high-level review of publicly available data, there is considered to be a low likelihood of any significant effects relating to the Proposed Development. This will be subject to confirmation following completion of a PRA as detailed in paragraphs 17.4.39 and 17.4.40.

Operation and Maintenance

17.4.35 On-site activities will be limited to the maintenance and monitoring of the Proposed Development. During maintenance activities there may be the need to use oils, grease, fuels, lubricants or cleaning agents on-site. There is a small risk of chemical pollution arising from accidental spillages during these operations.

17.4.36 It is anticipated that there will be no significant effects during the operation (and maintenance) phase of the Proposed Development as maintenance and operation will be in accordance with environmental legislation and good practice.

Mitigation

17.4.37 This section sets out the potential ground conditions mitigation measures.

17.4.38 Mitigation measures relevant to ground conditions are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Construction

17.4.39 The Environment Agency's LCRM Guidance (Ref 411) identifies that the first step, known as Stage 1, Tier 1, in evaluating land contamination risks is a Preliminary Risk Assessment (PRA). The objective of the PRA is to identify and evaluate potential land quality risks and development constraints associated with the Proposed Development and to construct an initial conceptual site model (CSM) that can be used to inform future decision making and the design of future ground investigation and or mitigation, should it be required.

17.4.40 A PRA report will be prepared, covering land within the Proposed Development. The PRA report will be presented as a technical appendix to the ES. The PRA will include the following:

- Details of land within the Proposed Development and surrounding area including development history, geology, hydrogeology, hydrology, soil and groundwater quality and environmental setting;
- A review of the environmental data report provided by Groundsure or Landmark Information Group;
- Details of geological sites (if present);
- Details of any available site investigation reports for land within the Proposed Development;
- Details from a site walkover documenting:
 - The existing layout, current operations and condition of land within the Proposed Development, the property boundaries and immediately surrounding land;
 - The visual inspection of any potential indicators of any land contamination, for e.g., spillages, disturbed ground; and
 - The visual inspection of any geohazards or ground conditions constraints.
- An initial CSM and an evaluation of potential contamination linkages; and
- Conclusions and recommendations based on the findings.

17.4.41 Based upon the PRA, environmental design and management measures will be employed as standard best practice to minimise impacts to both human health and controlled waters during the construction phase of the Proposed Development, including those listed in **Table 17-3** below. These will be incorporated into the Outline Construction Environmental Management Plan

(OCEMP) which will be provided alongside the ES as part of the DCO Application.

Table 17-3: Environmental Design and Management Measures to be included in the OCEMP

ENVIRONMENTAL DESIGN AND MANAGEMENT MEASURES

Regulatory/Guidance

1. Work will be carried out in accordance with relevant Construction Design Management Regulations 2015 (Ref 406), details of these measures will be presented within the Health and Safety Plan (H&SP), and the OCEMP.
2. The OCEMP will be prepared prior to commencement of works, setting out the management, monitoring, auditing and training procedures, and the mitigation measures that will be put in place during enabling works and construction, to maintain compliance with the applicable regulations. In order to reduce the likelihood of contamination and protect human health and controlled waters from effects related to ground conditions, the OCEMP will include mitigation measures such as those presented here.
3. A Pollution Response Plan will be drafted prior to the commencement of works on-site. The plan will outline key pollution mitigation measures including a Control of Substances Hazardous to Health (COSHH)/fuel inventory and key contacts to be notified in the event of a significant pollution incident, which may subsequently lead to the contamination of controlled waters. Any fuel and COSHH chemicals will be stored in accordance with the relevant Environment Agency Pollution Prevention Guidance (PPG) notes (while these guidance notes have been withdrawn, they are still considered to provide a useful data source). Tanks and dispensing pumps will be locked when not in use to prevent unauthorised access. Information regarding spill prevention and disposal of COSHH items will be provided as part of the standard site induction presentations and during regular too box talks and the works progress.
4. Piling will be carried out in accordance with CL:AIRE, Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (Ref 418) and ground investigations will inform the Foundation/Piling Risk Assessment which will define the appropriate piling methods and foundation design to mitigate risk.
5. Specification of concrete used in foundations and building structures will be selected based on the results of the chemical composition of the site soil and groundwater. Guidance is provided by the BRE series 'Concrete in Aggressive Ground' (Ref 419).

Waste

6. Waste materials will be disposed of by the contractor(s) to appropriate recycling facilities or appropriately licensed landfills in line with the Site Waste Management Plan (SWMP). The appropriate landfill for the disposal of any contaminated soil off-site will depend on the waste classification determined from the chemical analysis or Waste Acceptance Criteria (WAC) testing as necessary. Where possible, non-contaminated excavated material will be reused.
7. Waste effluent will be tested for appropriate physical and chemical parameters and, where necessary, disposed of at the correctly licensed facility by a licensed specialist contractor(s).

Construction Related

8. Oils and hydrocarbons will be stored in designated locations with specific measures to prevent leakage and release of their contents, include the siting of storage area away from surface water drains, on an impermeable base with an impermeable bund that has no outflow and is of adequate capacity to contain 110% of the contents. Valves and trigger guns will be protected from vandalism and kept locked up when not in use. Details of appropriate storage and handling measures will be presented within the OCEMP.
9. Vehicles will be well maintained to prevent accidental pollution from leaks. Static machinery and plant will include drip trays beneath oil tanks/engines/gearboxes/hydraulics, which will be checked and emptied regularly via a licensed waste disposal operator.
10. The Lead Flood Authority (LFA) and the appropriate utility company will be consulted on the potential requirement for an oil interceptor and sediment trap at the point where site surface water runoff enters any sewerage network.

ENVIRONMENTAL DESIGN AND MANAGEMENT MEASURES

11. A spillage Emergency Response Plan (ERP) will be produced (and could form part of the OCEMP), which site staff will be required to have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of booms, bunding and absorbent material
12. Appropriate handling and disposal of concrete pastes and/or grouts during the laying of foundations.
13. During the enabling and construction stage of work, the contractor(s) will employ dust suppression measures when necessary to prevent the potential mobilisation of contaminated dust particles and their migration off-site.
14. Stockpiles and material handling areas will be kept as clean as practicable to avoid nuisance from dust. Dusty materials will be dampened down using water sprays in dry weather or covered.
15. The length of time materials are stockpiled on-site before being removed for re-use, recycling or disposal is to be kept to a minimum and stockpiles are to be covered with tarpaulins prior to disposal.
16. Dust generating equipment and screening equipment will be located to minimise potential nuisance impacts to receptors, as far as practicable.
17. Complaints about dust will be investigated at the earliest opportunity and appropriate action taken to control the source or remedy the impact as appropriate.
18. Access roads will be regularly cleaned and damped down with water.
19. All vehicles entering and leaving the site during the construction period will pass through a wheel washing facility. Vehicles used to transport materials and aggregates will be enclosed or covered in a tarpaulin. Vehicle movements will be kept to a minimum and vehicle speeds within the site will be limited.
20. Appropriate use of personal protective equipment (PPE) and implementation and adherence to Health & Safety Protocols, Plans and Procedures (such as CIRIA C811 5th Edition 'Environmental Good Practice On Site' (Ref 417). Construction workers will remain vigilant of ground conditions at all times and will report to the Principal Contractor any suspect areas of potential contamination.
21. Potentially contaminated Made Ground will be quantified prior to removal from excavations.
22. Advice will be sought by an environmental specialist should materials suspected of being contaminated be uncovered.

Operation and Maintenance

- 17.4.42 A detailed Operational Environmental Management Plan (OEMP) will be prepared following consent of the DCO to address all operational related issues. An Outline OEMP (OOEMP) will be prepared as part of the DCO Application which will set out the general principles to be followed during the operation (and maintenance) phase of the Proposed Development. This will include a spillage Emergency Response Plan (ERP), which maintenance staff will be required to have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of booms, bunding and absorbent material.

Decommissioning

- 17.4.43 An Outline Decommissioning Environmental Management Plan (ODEMP) will be prepared as part of the EIA and will set out the general principles to be followed during the decommissioning of the Proposed Development. Where specific information relating to decommissioning is not known, it is anticipated that, as they are expected to be very similar, construction information will be used. A detailed DEMP will be prepared and agreed with the relevant authorities at that time of decommissioning.

Limitations and Assumptions

17.4.44 The following limitations are applicable to this EIA Scoping Report:

- The baseline conditions included are high-level and based only on freely available sources of information. These will be developed and expanded as part of the PRA;
- No walkover of the Proposed Development and study area has been undertaken at this stage;
- No stakeholder consultations have been undertaken at this stage;
- Historical maps were not reviewed; and
- Detailed desk-based assessment (PRA) will be undertaken at ES stage (including review of historical maps and third-party data, and consultation).

Summary of Elements Scoped In and Out

17.4.45 It is anticipated that the results and recommendations of the PRA, once incorporated into the OCEMP and the ODEMP, along with the environmental design and management measures (identified in **Table 17-3** for the construction, operation (and maintenance), and decommissioning phases (including controls in the Outline OEMP), negate the need for a specific ground conditions chapter in the ES. The ground conditions assessment will thus be set out in Chapter 17: Other Environmental Topics of the ES.

17.5 Health

Introduction

- 17.5.1 This chapter sets out the proposed approach to the assessment of likely significant effects on health during construction, operation (and maintenance), and decommissioning phases, how these effects will be identified and assessed, and how suitable mitigation strategies will be put forward.
- 17.5.2 The World Health Organisation (WHO) Europe defines health as “...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. Consequently, public health encompasses general well-being, not just the absence of illness. Health is defined as incorporating both physical and mental health and is affected by a range of factors, termed the ‘wider determinants of health’, which span bio-physical, social, behavioural, economic and institutional factors.

Legislation, Planning Policy Context and Guidance

- 17.5.3 Legislation, planning policy and guidance relating to health and pertinent to the Proposed Development is set out below.

Legislation

- 17.5.4 Relevant legislation includes:
- The Environmental Impact Assessment (EIA) Regulations (2017) (Ref 428) which require the consideration of the likely significant direct or indirect effects of projects on ‘population and human health’.

National Planning Policy

- 17.5.5 The following planning policies from relevant National Policy Statements (NPS) have been considered as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:
- NPS EN-1 (adopted 2025) (Ref 5), with specific reference to Section 4.4. Paragraph 4.4.1 acknowledges that access to energy is beneficial to society as a whole and that the production, distribution, and use of energy may have negative impacts on some people’s health. Paragraphs 4.4.4 to 4.4.6 set out the assessment criteria.
- 17.5.6 Other relevant national planning and guidance includes:
- The National Planning Policy Framework (NPPF) (Ref 8) with specific reference to Section 8, ‘Promoting healthy and safe communities’ sets out the need for planning policies to promote healthy, inclusive and safe places.

Local Planning Policy

17.5.7 Relevant local planning policy includes:

- Folkstone and Hythe District Council Places and Policies Local Plan (2020) (Ref 13) with specific reference to Policy HW3 ‘Development That Supports Healthy, Fulfilling and Active Lifestyles’ sets out the requirement of increasing, creating and safeguarding opportunities for healthy lifestyles and reduce the environmental impact of development proposals.
- Kent County Council’s Health and Wellbeing Board has agreed the strategic direction and principles of the Joint Health & Wellbeing Strategy (2021) (Ref 429). The strategy aims to improve health outcomes and reduce health inequalities through four key priorities:
 - Tackle key health issues where Kent is performing worse than the England average;
 - Tackle health inequalities;
 - Tackle the gaps in provision; and
 - Transform services to improve outcomes, patient experience and value for money.
- Further, the County Council’s Joint Strategic Needs Assessment (JSNA) (2016) (Ref 430) identifies the health and social care needs of the local population in order to support local organisations to plan, commission and deliver the best possible services. The JSNA supports and underpins implementation of Kent County Council’s strategic statement “Our Vision” which states:
 - Children and young people in Kent to get the best start in life;
 - Kent communities feel the benefits of economic growth by being in work, healthy, and enjoying a good quality of life; and
 - Older and vulnerable residents are safe and supported with choices to live independently.

Relevant Industry Guidance

17.5.8 Relevant industry guidance includes:

- The Institute of Environmental Management and Assessment (IEMA) (now Institute of Sustainability and Environmental Professionals (ISEP)) guidance on Determining Significance for Human Health in EIA (2022) (Ref 431) presents a framework for EIA practitioners to identify significant effects of a Proposed Development on human health. It defines significance as informed expert judgement of the importance, desirability or acceptability of a change. The guidance highlights the need to consider the significance of human health effects in relation to vulnerable groups.

Baseline Conditions

17.5.9 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to health.

17.5.10 A summary of the health profile of the population currently residing in proximity to the Proposed Development is set out in **Table 17-4** below, drawing on Public Health England and Census data (Ref 432, Ref 433). Data is presented for the study area, comprised of all lower layer super output areas⁹ (LSOAs) within 500 m of the DCO Site Boundary. The LSOAs include Folkestone and Hythe 11D, 011E, 012D, and 013D. Middle layer super output areas¹⁰ (MSOAs) are used in instances of a lack of available data on LSOAs. MSOAs within the study area include Folkestone and Hythe 011, 012, and 013.

17.5.11 Data is also presented for the local authority district of Folkestone & Hythe, the county of Kent, and the nation (England), in order to provide geographical comparators for the local population.

Table 17-4: Human Health Profile

EXAMPLE	STUDY AREA AVERAGE OF LSOAS/MSOAS	FOLKESTONE & HYTHE	KENT (COUNTY)	ENGLAND
Population (2021)	6,780	109,754	1,576,069	56,490,045
Population aged under 16 (%) (2021)	19.9%	16.7%	18.9%	18.5%
Population aged 65+ (%) (2021)	26.0%	25.0%	20.3%	18.3%
Unemployment (% working age population claiming out of work benefits) (2024/25)	3.57%	4.0%	3.4%	4.1%
Long-Term Unemployment- rate per 1,000 working age population (2024/25)	1.15	1.20	0.41	0.51
General Health – bad or very bad (%) (2021)	6.3%	6.5%	5.0%	5.2%
Long term illness or disability (%) (2021)	21.3%	21.8%	17.9%	17.3%
Emergency hospital admissions for all causes (SAR) (2016/17 - 20/21)	103.8	95.0	95.5	100.0
Deaths from respiratory diseases, all ages (SMR) (2019 – 2023)	117.1	107.2	99.7	100,0

Source: PHE Local Health: Small Area Public Health Data 2025 and 2021 Census.

17.5.12 The human health profile shows that:

- Data from Public Health England (PHE) shows that in 2021 the proportion of the population aged under 16 in the study area is 19.9%. This is greater than in all other geographies.

⁹ Areas made up of groups of output areas (Oas), usually four or five. They comprise between 400 and 1,200 households and have a usually resident population between 1,000 and 3,000 persons.

¹⁰ Areas made up of groups of LSOAs, usually four or five. They comprise between 2,000 and 6,000 households and have a usually resident population between 5,000 and 15,000 persons.

- The proportion of the population aged over 65 in the study area is 26.0% which is also the highest for all areas.
- From 2024 to 2025, long-term unemployment rates per 1,000 people in the study area (1.15) are higher than in Kent (0.41) and England (0.51) but lower when compared to Folkestone & Hythe (1.20).
- In the 2021 Census, the percentage of people self-reporting their health as 'bad' or 'very bad' is 6.3% in the study area which is lower than in Folkestone & Hythe (6.5%) but higher than in Kent (5.0%) and England (5.2%).
- The percentage of people with a long-term illness or disability in the study area is 21.3% which is lower than Folkestone & Hythe (21.8%) but higher than Kent (17.9%) and England (17.3%).
- PHE data from 2016/17 to 2020/21 also shows that the standardised admissions ratio (SAR) for emergency hospital admissions of all causes in the study area is 103.8, higher than Folkestone & Hythe (95.0) and Kent (95.5) and the national average (100.0). Notably, the study area has a higher standardised mortality ratio (SMR) of deaths from respiratory diseases (117.1) when compared to all other geographies between the years 2019 and 2023.

Potential Effects and Mitigation

17.5.13 This section sets out the potential effects of the Proposed Development on health.

17.5.14 A standalone assessment of health is proposed to be scoped out of the ES. This is because other chapters in the ES will comprehensively assess potential effects of the Proposed Development which could be relevant to health effects (both physical and mental) and given the nature of the development and its potential impacts this is considered a proportionate approach.

17.5.15 The following ES technical chapters will cover potential effects during the construction, operation (and maintenance), and decommissioning phases that could be relevant for health:

- **Chapter 7: Climate Change;**
- **Chapter 10: Water Environment;**
- **Chapter 11: Landscape and Visual Amenity;**
- **Chapter 12: Noise and Vibration;**
- **Chapter 13: Socio-Economics;**
- **Chapter 15: Transport and Access;**
- **Chapter 17: Other Environmental Topics (including Air Quality, Electromagnetic Fields, Glint and Glare and Ground Conditions); and**
- **Appendix 17-A: Long List of Major Accidents and Disasters;**

17.5.16 Specific mitigation measures that can be committed to at this stage are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report, as relevant.

17.6 Major Accidents and Disasters (MADs)

Introduction

- 17.6.1 This chapter sets out the proposed approach to the assessment of likely significant effects on Major Accidents and Disasters (MADs) during construction, operation (and maintenance), and decommissioning phases of the Proposed Development.
- 17.6.2 The Environmental Impact Assessment (EIA) Regulations (Ref 434) consider MADs, citing two specific Directives as examples of risk assessments to be brought into EIA, namely Directive 2012/18/EU of the European Parliament and of the European Council which deals with major accident hazard registered sites (Ref 435) and Council Directive 2009/71/Euratom which deals with nuclear sites (Ref 436). Neither of these Directives are relevant to the Proposed Development.
- 17.6.3 Schedule 4 article 5d of the EIA Regulations requires that the EIA contains “a description of the likely significant effects of the development on the environment resulting from the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)” whilst Schedule 4, Part 8 requires that the EIA contains “a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned”.
- 17.6.4 There is no specific guidance available which sets out the approach for undertaking a MADs assessment within an EIA, as such this assessment for MADs is guided by a Primer published by the Institute of Sustainability and Environmental Professionals (ISEP) (formerly Institute of Environmental Management and Assessment (IEMA)) (Ref 437). The Primer provides the following definitions:

“Major accident: events that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the Client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events;

Disaster: may be a natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident.”

- 17.6.5 This chapter is supported by **Appendix 17-A: Long List of Major Accidents and Disasters**.

Study Area

- 17.6.6 The study area for the assessment of MADs is not defined within regulatory guidance or a standardised methodology. The distances identified for the

different features outlined below were identified based on a combination of a review of the study area boundaries set within each of the individual technical chapters of this EIA Scoping Report, along with an appraisal of the types of features considered within this major accidents and disasters assessment.

17.6.7 In the event that an export Grid Connection Route which extends outside of the DCO Site Boundary is required, this will be included within the study area and assessed following the same methodology as outlined in this chapter.

17.6.8 The following factors and associated distances were taken into consideration for setting the study area, in order to capture the adverse consequences caused by other events, on the Proposed Development and relate to distances from the Proposed Development:

- Built Environment:
 - Airports and airfields within 13 km;
 - Control of Major Accident Hazards (COMAH) establishments within 5 km;
 - Major Accident Hazard (MAH) Pipelines within 1 km;
 - Fuel bulk storage within 1 km;
 - Rail within 1 km;
 - Utilities/transmission crossing the Proposed Development boundaries;
- Natural Features:
 - Flooding within 1 km;
 - Ground stability within 1 km;
 - Dam failures within 3 km; and
 - Seismic activity within 5 km.

Legislation, Planning Policy Context and Guidance

17.6.9 Legislation, planning policy and guidance relating to MADs and pertinent to the Proposed Development is set out below.

Legislation

17.6.10 Relevant legislation includes:

- Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (Ref 434);
- Health and Safety at Work etc. Act 1974 (Ref 438);
- The Electricity at Work Regulations 1989 (Ref 439)
- The Workplace (Health, Safety and Welfare) Regulations 1992 (Ref 440);
- The Management of Health and Safety at Work Regulations 1999 (Ref 441);
- Construction Design Management (CDM) Regulations 2015 (Ref 442);
- The Dangerous Substances (Notification and Marking of Sites) Regulations 1990 (Ref 443);
- The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR) (Ref 444);
- Civil Contingencies Act 2004 (Ref 445); and

- The Regulatory Reform (Fire Safety) Order 2005 (Ref 446).

National Planning Policy

17.6.11 The following planning policies from relevant National Policy Statements (NPS) have been taken into account as part of identifying the assessment methodology, receptor selection/sensitivity, potential significant environmental effects, and mitigation:

- Overarching NPS for Energy (EN-1) (adopted 2025) (Ref 5);
- NPS for Renewable Energy Infrastructure (EN-3) (adopted 2025) (Ref 6); and
- NPS for Electricity Networks Infrastructure (EN-5) (adopted 2025) (Ref 7).

17.6.12 Other relevant national planning and guidance includes

- National Planning Policy Framework (NPPF) (Ref 8); and
- Planning Practice Guidance (PPG) – Renewable and Low Carbon Energy (Ref 447).

Local Planning Policy

17.6.13 Relevant local planning policy includes Folkestone and Hythe District Council (FHDC) adopted development plan (Ref 448).

Relevant Industry Guidance

17.6.14 Relevant industry guidance includes:

- ISEP (formerly IEMA), Major Accidents and Disasters in EIA: A Primer 2020 (Ref 437);
- Department for Environment, Food and Rural Affairs (DEFRA), Guidelines for Environmental Risk Assessment and Management (Ref 449);
- ISO 31000: 2018 Risk Management – Guidelines (Ref 450);
- DESNZ, Health and safety in grid scale electrical energy storage systems (Ref 451);
- Health and Safety Executive (HSE), Grid-scale battery energy storage systems (Ref 452);
- National Fire Chiefs Council, Grid Scale Battery Energy Storage System planning – Guidance for Fire and Rescue Services (FRS) (Ref 453); and
- Cabinet Office, National Risk Register 2025 (Ref 454).

Consultation

17.6.15 Consultation as part of the EIA process will be undertaken following submission of this EIA Scoping Report with statutory parties including the relevant local authorities, and HSE. Although not a statutory consultee, following PPG advice (Ref 447) Kent Fire & Rescue Service will also be consulted as part of the EIA process.

Baseline Conditions

17.6.16 This section describes the baseline environmental characteristics for the Proposed Development and surrounding areas with specific reference to MADs.

Infrastructure and Industrial Sites

- 17.6.17 There are no Control of Major Accident Hazards (COMAH) establishments within the study area. The closest industrial receptors are commercial units within towns near the Proposed Development. The Dungeness nuclear power station is also located 8.5 km southeast of the Proposed Development.
- 17.6.18 Transport infrastructure in the area consists of A roads and B roads including the A259, A2070 and the B2075. The closest railway line runs adjacent to the Proposed Development extending from Dungeness Power Station before joining the southern railway line connecting Hastings to Ashford. There is one airport within the study area, the Lydd airport located approximately 2.6 km southeast of the Proposed Development. there are also multiple airfields within the study area all located north of the Proposed Development the closest of which being the Woodridge/Meadow Farm Airfield located 6.7 km away.
- 17.6.19 The nearest residential areas to the Proposed Development include the village of Old Romney as well as farmhouses within the vicinity.

Sensitive Receptors of Relevance to MA&Ds

- 17.6.20 The following sensitive receptors which could be vulnerable to a MADs event have been identified:
- Private residences (and their inhabitants) within the local area;
 - Local economic receptors including businesses and employees;
 - Community receptors, including public rights of way, community land, and community buildings;
 - The historic and cultural environment including archaeological heritage and built heritage;
 - Designated ecological sites, fully described in **Chapter 9: Ecology and Biodiversity**, including:
 - Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA) and Ramsar Site, and Dungeness Special Area of Conservation (SAC) and Dungeness, Romney Marsh and Rye Bay Site of Specific Scientific Interest (SSSI);
 - Ham Street Woods SSSI;
 - Romney Warren Local Nature Reserve (LNR);
 - Poulton Wood, Aldington LNR;
 - Ham Street Woods National Nature Reserve (NNR);
 - Dungeness NNR; and
 - Other non-statutory sites and priority habitats.
 - The water environment, including groundwater, local rivers, and surrounding ponds / lagoons;
 - Infrastructure and built environment including transport infrastructure, industrial infrastructure, and energy infrastructure; and
 - The interactions between the receptors above.
- 17.6.21 It is considered reasonable and proportionate to exclude certain receptor groups from the outset. Construction workers, as a receptor, can be excluded from the assessment because existing legal protection is considered to be

sufficient to minimise any risk from major accidents or disasters to a reasonable level.

Potential Effects and Mitigation

17.6.22 This section sets out the potential effects of the Proposed Development with respect to MADs.

17.6.23 An initial scoping exercise has been undertaken to identify and review all major accidents or disasters that could be relevant to the Proposed Development. This initial list was drawn from a number of sources, including the National Risk Register 2025 (Ref 454). This initial scoping exercise shows the potential vulnerability of the Proposed Development to the risk of a major accident and/or disaster associated with a variety of different events during each phase of the Proposed Development and is presented in **Appendix 17-A: Long list of Major Accidents and Disasters**.

17.6.24 In general, major accidents or disasters, as they relate to the Proposed Development, fall into three categories:

- Events that could not realistically occur, due to the nature of the Proposed Development or its location;
- Events that could realistically occur, but for which the Proposed Development, and associated receptors, are either no more vulnerable than any other project or would not have an impact should the event occur; and
- Events that could occur, and to which the Proposed Development could be vulnerable, or which the Proposed Development itself has a particular capacity to exacerbate.

17.6.25 Events falling into the '*Events that could occur, and to which the Proposed Development could be vulnerable, or which the Proposed Development itself has a particular capacity to exacerbate*' category are scoped in for further assessment in the ES.

17.6.26 The long list within **Appendix 17-A: Long list of Major Accidents and Disasters** was screened further to identify the third group of MADs listed above to short list events (see **Table 17-5** to **Table 17-7**) for further consideration within the ES. **Appendix 17-A: Long List of Major Accidents and Disasters** therefore provides further clarity on the topics and events which have been scoped into the ES, and those which have been scoped out, with suitable reasoning provided.

Construction

Table 17-5: Construction phase major accident and disasters to be considered further

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
Flooding	Parts of the Proposed Development are located within Flood Zones 2 and 3. Both the vulnerability of the Proposed Development to flooding, and its potential to exacerbate flooding, will be covered in the Flood Risk Assessment (FRA) and reported in the ES. Mitigation will be considered and, where necessary, incorporated into the Proposed Development design.	Property and people in areas of increased flood risk	Chapter 10: Water Environment
Plant Disease	Standard control measures would be implemented by the appointed contractor during construction to handle and dispose of any diseased, invasive plants to prevent their spread. Measures, such as an invasive plant management plan would be a commitment within the Outline Landscape and Ecology Management Plan (LEMP).	Habitats and species	Chapter 9: Ecology and Biodiversity and Outline LEMP
Road Accidents	During construction there will be an increase in heavy construction plant and equipment on the local road network which may increase the risk of road traffic accidents. The main mitigation for traffic and transport effects would be described within an Outline Construction Traffic Management Plan (CTMP) which would be submitted with the ES.	Road users	Chapter 15: Transport and Access
Rail Accidents	There is a railway line that runs adjacent to the Proposed Development used for transport and delivery to / from Dungeness Power Station. During construction activities there is an increase in risk of rail related injuries whilst working close to the railway line. The main mitigation for traffic and transport effects would be described within an Outline CTMP which would be submitted with the ES.	Rail users	Chapter 15: Transport and Access

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
Utilities failure (electricity, gas, water supply and sewage)	The Proposed Development has the potential to affect existing utility infrastructure. To identify any existing infrastructure constraints, both consultation and a desk-based study will be undertaken. Consultation with relevant utilities providers is a routine part of solar development and consultees may include water, gas and electricity utilities providers and telecommunications providers as appropriate.	Local residents and businesses	Chapter 17: Other Environmental Topics (Telecommunications and Utilities)
Pollution incident to Ground Receptors	During the construction phase there may be an increase in the risk of leaks and spillages of hazardous materials associated with the construction activities. This risk would be controlled through standard control measures which would form commitments within the Outline CEMP.	Local residents and businesses, local habitats and species	Chapter 17: Other Environmental Topics (Ground Conditions)

Operation

Table 17-6: Operation Phase Major Accident and Disasters to be considered Further

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
Fires	There may be potential for fire due to the battery storage element of the Proposed Development. However, the Battery Energy Storage System (BESS) would include cooling systems designed to regulate temperatures to within safe conditions which minimises the risk of fire. In addition, the Proposed Development design would include adequate separation between battery banks to ensure an isolated fire would not become widespread and lead to a major incident. Fire detection and suppression features would be installed to detect (e.g. multispectral infrared flame detectors) and suppress (e.g. water base suppression systems) fires to minimise this risk.	Local residents, local aquatic habitats and species	Outline Battery Safety Management Plan (Standalone document to be submitted with DCO)

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
	An Outline Battery Safety Management Plan will be prepared for the Proposed Development and submitted alongside the DCO Application. The Outline Battery Safety Fire Management Plan will be considered in the iterative design of the Proposed Development ensuring that design requirements to ensure fire safety (such as ensuring adequate provision of land for water storage) and management of any firewater runoff are captured.		
Pollution incident to Aquatic Receptors	Liquid hazardous substances are not expected to form part of the operation of the Proposed Development, however there is potential for release of toxic substances entrained within firewater originating from a fire at the BESS. Mitigation for this includes measures as outlined above.	Local residents, local aquatic habitats and species	Chapter 10: Water Environment and Outline Battery Safety Management Plan
Pollution incident to Air	Hazardous substances released to air are not expected to form part of the operation of the Proposed Development, however there is potential for release of toxic substances due to a fire at the BESS. Mitigation for this includes measures as outlined above and will be included in the Outline Operation Environmental Management Plan (OEMP).	Local residents, local aquatic habitats and species	Outline OEMP
Flooding	Parts of the Proposed Development are located within Flood Zones 2 and 3. Both the vulnerability of the Proposed Development to flooding, and its potential to exacerbate flooding, will be covered in the FRA and reported in the ES. Mitigation will be considered and, where necessary, incorporated into the Proposed Development design.	Property and people in areas of increased flood risk	Chapter 10: Water Environment
Flood defence failure	Parts of the Proposed Development may be at risk of flooding from coastal flood defence failure. This will be covered in the FRA and reported in ES, both in terms of the risk to the Proposed Development and increased risk caused by the Proposed Development. Mitigation will be considered and, where necessary, incorporated into the Proposed Development design.	Property and people in areas of increased flood risk	Chapter 10: Water Environment

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
Road Accidents	The operation of the Proposed Development would not result in increased traffic flow or changes to traffic composition which could have an adverse impact on highway safety. The potential for glint and glare to affect road users will be considered in the Other Environmental Topics ES chapter. Mitigation will be considered and, where necessary, incorporated into the Proposed Development design.	Road users	Chapter 15: Transport and Access and Chapter 17: Other Environmental Topics (Glint and Glare)
Rail Accidents	The operation of the Proposed Development would not result in increased usage of or changes to the railway line which could have an adverse impact on railway safety. The potential for glint and glare to affect rail users will be considered in the Other Environmental Topics ES chapter. Mitigation will be considered and, where necessary, incorporated into the Proposed Development design.	Rail users	Chapter 15: Transport and Access and Chapter 17: Other Environmental Topics (Glint and Glare)
Aviation Disasters	The closest airfield is the Woodridge/Meadow Farm Airfield located approximately 6.7 km north of the Proposed Development. The closest airport is the Lydd airport located approximately 3.0 km southeast of the Proposed Development. The following airfield are also located within the study area north of the Proposed Development: Hamilton Farm Airfield is approximately 9.6 km away and Harringe Court Airstrip airfield is approximately 11 km away. The potential for glint and glare to affect planes will be considered in the Other Environmental Topics ES chapter. Mitigation will be considered and, where necessary, incorporated into the Proposed Development design.	Aircraft users	Chapter 17: Other Environmental Topics (Glint and Glare)
Utilities failure (electricity, gas, water supply and sewage)	The Proposed Development has the potential to affect existing utility infrastructure. To identify any existing infrastructure constraints, both consultation and a desk-based study will be undertaken. Consultation with relevant utilities providers is a routine part of solar development and consultees may include	Local residents	Chapter 17: Other Environmental Topics (Telecommunications)

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
	water, gas and electricity utilities providers and telecommunications providers as appropriate.		

Decommissioning

Table 17-7: Decommissioning Phase Major Accident and Disasters to be considered Further

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
Road Accidents	During decommissioning there will be an increase in heavy construction plant and equipment on the local road network which may increase the risk of road traffic accidents. The main mitigation for traffic and transport effects would be described within an Outline Decommissioning Environmental Management Plan (DEMP).	Road users	Chapter 15: Transport and Access
Rail Accidents	During decommissioning there is an increase in risk of rail related injuries whilst working close to the railway line. The main mitigation for traffic and transport effects would be described within an Outline DEMO.	Rail users	Chapter 15: Transport and Access
Utilities failure (electricity, gas, water supply and sewage)	The Proposed Development has the potential to affect existing utility infrastructure. Consultation with relevant utilities providers is a routine part of solar development and consultees may include water, gas and electricity utilities providers and telecommunications providers as appropriate.	Local residents	Chapter 17: Other Environmental Topics (Telecommunications)
Pollution incident to Ground Receptors	During the construction phase there may be an increase in the risk of leaks and spillages of hazardous materials associated with the construction activities. This risk would be	Local residents, local habitats and species	Chapter 9: Ecology and Biodiversity and Chapter 17: Other Environmental Topics (Ground Conditions)

MAJOR ACCIDENT OR DISASTER	COMMENTARY	POTENTIAL RECEPTORS	CONSIDERED IN OTHER CHAPTERS?
	controlled through standard control measures which would form commitments within the Outline DEMP.		

Mitigation

- 17.6.27 Mitigation measures relevant to Major Accidents and Disasters are included in **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.
- 17.6.28 Mitigation for specific MADs risk events will be set out within the relevant chapters of the ES as set out in **Table 17-5, Table 17-6, and Table 17-7.**

Assessment Methodology

- 17.6.29 A standalone assessment of Major Accidents and Disasters is proposed to be scoped out of the ES. This is because other chapters in the ES will comprehensively assess potential effects of the Proposed Development which could give rise to the MADs events. Given the nature of the development and its potential impacts this is considered a proportionate approach.
- 17.6.30 The Other Environmental Topics ES chapter will include a MADs section clearly signposting the reader to the chapters where these assessments take place and highlighting their relevance to MADs.

Limitations and Assumptions

- 17.6.31 The location and layout of certain elements of infrastructure (including cable routes, construction methodologies and BESS location), have not yet been determined. It is assumed that the risk of MADS will be taken into account within the iterative design process, including the choice of locations within the Proposed Development and use of best practice methodologies for construction.
- 17.6.32 Although the majority of the major accidents or disasters identified in the long list in **Appendix 17-A** are considered under other legislative or design requirements, this is not considered to be sufficient reason to automatically eliminate the major accident or disaster from further consideration. However, where it is concluded that the need for compliance is so fundamental that the risk of any receptors being affected is remote, major accidents or disasters on the long list are scoped out.

Summary of Elements Scoped In and Out

- 17.6.33 All potential MADS will be adequately covered elsewhere in the assessment and therefore scoped out of the assessment, including:
- Flooding;
 - Plant disease;
 - Road accidents;
 - Rail accidents;
 - Utilities failure;
 - Pollution incident to ground receptors;
 - Fires;
 - Pollution incident to aquatic receptors;
 - Pollution incident to air;

- Flood defence failure;
- Aviation disasters;
- Cyber accident/failure; and
- Electrical accident.

17.7 Telecommunications and Utilities

Introduction

- 17.7.1 This section sets out the proposed approach to the assessment of likely significant effects on telecommunications and utilities during the construction, operation (and maintenance), and decommissioning phases.
- 17.7.2 Solar farms have the potential to affect existing below ground utility infrastructure, for example, through ‘cable strike’ when piling the Solar photovoltaic (PV) Mounting Structures or excavating the cable trenches.

Study Area

- 17.7.3 The study area for telecommunications and utilities comprises the Development Consent Order (DCO) Site Boundary (see **Figure 1-1: Proposed Development Location Plan**), as potential interactions with existing infrastructure are considered to be limited to the location of Proposed Development activities only.

Consultation

- 17.7.4 Consultation as part of the Environmental Impact Assessment (EIA) process will be undertaken following submission of this EIA Scoping Report with statutory parties including, but not limited to:
- Relevant telecommunication providers; and
 - Utilities providers (including water, gas, oil and fuel pipelines, and electricity providers).

Baseline Conditions

- 17.7.5 There is an existing National Grid Overhead Line (OHL) that runs north to south through the DCO Site Boundary, connecting to the National Grid Substation near Sellindge to the north, and to the National Grid Substation near Dungeness to the South. There is also a 33 kV OHL which crosses the northern end of the Main Site horizontally. Multiple High Voltage (HV) OHLs cross the Proposed Development. There is a Doppler VHF Omni-directional Range (DVOR) facility located at the western border of the Main Site which is used by aircraft.
- 17.7.6 Existing infrastructure constraints will be identified and confirmed in **Chapter 17: Other Environmental Topics** of the Environmental Statement (ES), as described below.

Potential Effects and Mitigation

- 17.7.7 The Proposed Development will be designed to ensure appropriate buffers are applied in relation to buried infrastructure to allow safe access and working areas.

- 17.7.8 Mitigation measures relevant to this topic at this stage are also included in the **Appendix 1-B: Environmental Mitigation and Commitments Register** of this EIA Scoping Report.

Assessment Methodology

- 17.7.9 Consultation with relevant telecommunication and utilities providers is a routine part of development and consultees will include water, gas and electricity utilities providers and telecommunication providers, as appropriate. Information obtained from consultation will be used to inform the Proposed Development design and appropriate protective provisions will be included in the DCO to ensure the protection of apparatus wherever any existing infrastructure has the potential to be affected by the Proposed Development and to mitigate against any identified risks, such as utilities failure.
- 17.7.10 With the identification of these assets and implementation of suitable offset distances for the Proposed Development infrastructure, it is considered that any effects would be adequately mitigated and there is not potential for likely significant effects. A separate telecommunications and utilities chapter is therefore not considered to be required in the ES.

18. Proposed Structure of the Environmental Statement

- 18.1.1 The Environmental Statement (ES) will consist of three volumes and a Non-Technical Summary (NTS). This section provides a summary of each volume that will form the ES.

Environmental Statement Volume I: Main Document

- 18.1.2 This will form the main body of the ES, detailing the results of the Environmental Impact Assessment (EIA), likely significant effects arising from the Proposed Development, and the proposed mitigation measures. The ES will also identify opportunities for social and economic benefits and environmental enhancement. The ES will be divided into a number of background and technical chapters, each being supported with figures and tabular information. **Volume I** of the ES will consider the environmental effects associated with a number of identified topics, which may receive significant environmental effects. Each topic will be assigned a separate technical chapter in the ES as follows:

- Chapter 7: Climate Change;
- Chapter 8: Cultural Heritage;
- Chapter 9: Ecology and Biodiversity;
- Chapter 10: Water Environment;
- Chapter 11: Landscape and Visual;
- Chapter 12: Noise and Vibration;
- Chapter 13: Socio-economics;
- Chapter 14: Agriculture and Soils;
- Chapter 15: Transport and Access;
- Chapter 16: Materials and Waste
- Chapter 17: Other Environmental Topics.
 - Electromagnetic Fields
 - Glint and Glare
 - Ground Conditions

- 18.1.3 In addition to the above, the following background chapters will be produced as part of this volume of the ES:

- Chapter 1: Introduction;
- Chapter 2: The DCO Site and Surroundings;
- Chapter 3: The Proposed Development;
- Chapter 4: Alternatives Considered and Design Evolution;
- Chapter 5: EIA Methodology;
- Chapter 18: Cumulative Effects and Interactions; and
- Chapter 19: Summary of Environmental Effects.

18.1.4 The following chapters included within this EIA Scoping Report are proposed to be scoped out of the ES subject to feedback received as part of the Scoping Opinion:

- Chapter 17-1: Air Quality;
- Chapter 17-5: Health (this will be considered within the technical chapters i.e. Chapters 7-17 of the ES);
- Chapter 17-6: Major Accidents and Disasters (this will be considered within the technical chapters); and
- Chapter 17-7: Telecommunications and Utilities.

Environmental Statement Volume II: Figures

18.1.5 This will include drawings and diagrams to be read alongside the environmental chapters in **ES Volume I**.

Environmental Statement Volume III: Technical Appendices

18.1.6 These will provide supplementary information comprising background data, technical reports, tables, figures and surveys which support the assessments in **Volume 1** of the ES.

Environmental Statement Non-Technical Summary

18.1.7 The NTS will be presented in a separate document and will provide a concise description of the Proposed Development, the alternative designs considered, baseline conditions, assessment methodology, predicted residual environmental effects and mitigation measures. The NTS will be designed to provide some information on the Proposed Development in an accessible format which can be understood by a wide audience and to assist interested parties with understanding of the Proposed Development and its associated environmental effects.

19. Summary and Conclusions

- 19.1.1 This EIA Scoping Report represents notification under Regulation 8(1)(b) of the EIA Regulations (Ref 2) that the Applicant will undertake an Environmental Impact Assessment (EIA) in respect of the Proposed Development and produce an Environmental Statement (ES) to report the findings of the EIA. It also presents a formal application to the Planning Inspectorate under Regulation 10 of the EIA Regulations for a ‘Scoping Opinion’ as to the information to be provided within the ES that will form part of the Development Consent Order (DCO) Application.
- 19.1.2 This report has identified the environmental effects that are considered to have the potential to be significant and proposes the approach to be used in assessments that will be undertaken for the EIA to characterise and understand the significance of these effects. The prescribed consultees are invited to consider the contents of this report and comment accordingly within the statutory 42-day time period.
- 19.1.3 In line with Planning Inspectorate recommendations, **Table 19-1** presents a summary of assessment which is proposed to be ‘scoped out’ and the rationale for this.

Table 19-1: Summary of matters proposed to be Scoped Out of the EIA

TOPIC	PROPOSED SCOPE OF ASSESSMENT	ELEMENT PROPOSED TO BE SCOPED OUT	RATIONALE FOR SCOPING OUT
Climate Change	• Lifecycle Greenhouse Gas Impact Assessment • Climate Change Risk Assessment • In-Combination Climate Impact Assessment	None	N/A
Cultural Heritage	• Archaeology (construction, operation (and maintenance) and decommissioning) • Built Heritage (construction, operation (and maintenance) and decommissioning) • Historic Landscape (construction, operation (and maintenance) and decommissioning)	None	N/A
Ecology and Biodiversity	• Habitats categorised as Important Ecological Features (IEFs). • Biodiversity Net Gain	Habitats not categorised as IEFs	Potential impacts from construction, operation (and maintenance) and decommissioning will be managed via embedded mitigation measures.
	The following designated sites will be scoped in: • Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA); • Dungeness, Romney Marsh and Rye Bay Ramsar; • Dungeness Special Area of Conservation (SAC); • Dungeness, Romney Marsh and Rye Bay Sites of Special Scientific Interest (SSSI); • Romney Warren Local Nature Reserve (LNR); • Dungeness National Nature Reserve (NNR); • Midley Chapel Pasture; • Hawthorn Corner Local Wildlife Site (LWS); • St. George's Churchyard Ivychurch LWS; • St Mary the Virgin Churchyard; and • Lydd Common and Pastures LWS.	• National Site Network sites greater than 10 km from the DCO Site; • Statutorily designated sites of national importance greater than 5 km from the DCO Site; and • Non-statutorily designated sites greater than 2 km from the DCO Site.	There are no potential impact pathways during any phase (construction, operation (and maintenance), and decommissioning) of the Proposed Development which could interact with sites not identified as Scoped In.
	The following species during construction, operation (and maintenance) and decommissioning of the Proposed Development: • Terrestrial Invertebrates categorised as IEFs;	The following species during construction, operation (and maintenance). and decommissioning of the Proposed Development:	Observations of these species will be recorded during other ecological surveys. Embedded mitigation described and included in the ES,

TOPIC	PROPOSED SCOPE OF ASSESSMENT	ELEMENT PROPOSED TO BE SCOPED OUT	RATIONALE FOR SCOPING OUT
	• Aquatic Invertebrates categorised as IEFs; • Aquatic Macrophytes categorised as IEFs; • Fish • Amphibian species categorised as IEFs; • Reptiles; • Breeding and non-breeding birds; • Bats; • Riparian mammals; • Badgers; • Other SPI mammals, including Brown Hare, Hedgehog and Harvest Mouse; and • INNS.	• Terrestrial invertebrates not categorised as IEFs; • Aquatic Invertebrates not categorised as IEFs; • Aquatic Macrophytes not categorised as IEFs; • Amphibian species not categorised as IEFs; and • Hazel Dormouse and Eurasian Beaver.	submitted as part of the DCO Application, will minimise the risk of injury or killing of such species (where present) during construction of the Proposed Development.
Water Environment	• Groundwater (construction, operation (and maintenance) and decommissioning); • Hydromorphology (construction operation (and maintenance) and decommissioning); • Surface water (potential impact to land-based surface water features during construction, operation (and maintenance) and decommissioning); and • Flood Risk, including drainage (construction, operation (and maintenance) and decommissioning).	• Water supply; • Foul drainage; • Impact from heat emissions; • Kent South and Sussex East Coastal Water Framework Directive (WFD); • Nature Conservation Sites (including SSSI, SPA, SAC Ramsar, Nitrate Vulnerable Zone (NVZ) and chalk rivers); and • Nutrient Neutrality assessment.	No significant effects are expected and therefore further assessment will not be required. Potential impacts from construction, operation (and maintenance), and decommissioning will be managed via embedded mitigation measures.
Landscape and Visual Impact	• Impacts to Site landscape character; • Impacts to local landscape character; • Impacts to published landscape character areas; • Impacts to Kent Downs National Landscape (including its setting); • Impacts to High Weald National Landscape (including its setting); • Impact to peoples views identified; and • Impacts to residential amenity.	• Impacts on the character of the night sky; • Impacts on seascape character and marine receptors; and • Visual impacts to aircraft users at Lydd Airport.	It is expected that the Proposed Development would not lead to any significant visual effects to receptors at this distance (3 km to Lydd Airport and 4.5 km to the coast) due to the absence of lighting during operation (and maintenance) other than motion detection lighting for maintenance staff.
Noise and Vibration	• Noise and vibration levels associated with construction works;	• Operational traffic noise; • Construction traffic vibration;	Operational traffic flows will be minimal and not sufficient to result

TOPIC	PROPOSED SCOPE OF ASSESSMENT	ELEMENT PROPOSED TO BE SCOPED OUT	RATIONALE FOR SCOPING OUT
	- Noise and vibration associated with decommissioning works; - Operational noise - Construction traffic noise; and - Decommissioning traffic noise.	- Decommissioning traffic vibration; and - Vibration from the operation (and maintenance) of the Proposed Development.	in a 1 dB increase in noise, which would require a 25% increase in traffic. Construction and decommissioning traffic vibration is scoped out under the assumption that the County Council will maintain good quality conditions for highways. Therefore, no major vibration sources are envisaged to be introduced as part of the Proposed Development and as such there will be no associated vibration effects during operation (and maintenance).
Socio-Economics	- Employment, economic growth and training (construction, operation (and maintenance), and decommissioning); - Recreation, open space (including PRow), community facilities and local services (construction, operation (and maintenance), and decommissioning); - Private assets (construction, operation (and maintenance), and decommissioning); - Community identity, structure and way of life (construction, operation (and maintenance), and decommissioning); - Tourism (construction, operation (and maintenance), and decommissioning); and - Farming businesses	Development land (development proposals within and adjacent to the DCO Site Boundary).	There are no mineral safeguarding areas, mineral consultation areas, waste safeguarding areas, or transport safeguarding areas within or adjacent to the DCO Site Boundary and as such these will not experience significant effects arising from the Proposed Development.
Agriculture and Soils	- BMV agricultural land within the DCO Site Boundary (construction, operation (and maintenance), and decommissioning); and - Soil resources within the DCO Site Boundary (construction, operation (and maintenance), and decommissioning).	Crop selection and agricultural production.	The topic is considered by UK Government at the national scale and land use change is not considered a likely significant effect. DEFRA maintains that food production levels can be maintained or moderately increased alongside

TOPIC	PROPOSED SCOPE OF ASSESSMENT	ELEMENT PROPOSED TO BE SCOPED OUT	RATIONALE FOR SCOPING OUT
			the land use change required to meet our Net Zero and Environmental Act targets and commitments.
Transport and Access	- Impact of the construction phase; - Severance (construction phase); - Driver Delay (construction); - Pedestrian Delay (construction); - Non-motorised users amenity (construction); - Fear and intimidation (construction); - Road Safety (construction); and - Hazardous/ Large loads (construction, operation (and maintenance) and decommissioning).	- Impact on traffic in the Decommissioning phase; and - Impact on traffic in the operational phase.	The trips associated with the operational phase of the Proposed Development are expected to be nominal and therefore not result in significant impact.
Materials and Waste	- Changes in available landfill void capacity (construction, operation (and maintenance) and decommissioning); and - Changes in availability of materials (construction, operation (and maintenance) and decommissioning).	- Waste arising from extraction, processing and manufacture of construction components and products; - Impacts associated with the management of waste from Proposed Development; - Effects associated with operation (and maintenance) of offsite waste management facilities (construction, operation (and maintenance) and decommissioning); and - Changes to safeguarded mineral and waste sites.	Environmental impacts associated with the management of waste from the Proposed Development e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are addressed separately in other relevant sections.
Air Quality	Air Quality is to be scoped out.	- Traffic Emissions; - Dust Emissions (construction, operation (and maintenance) and decommissioning); and - Non Road Mobile Machinery (NRMM) Emissions.	Based on the worst-case scenario, it is unlikely that the 500 Annual Average Daily Total (AADT) threshold will be met for modelling being required to check for likely significant effects.

TOPIC	PROPOSED SCOPE OF ASSESSMENT	ELEMENT PROPOSED TO BE SCOPED OUT	RATIONALE FOR SCOPING OUT
			It is unlikely that the NRMM exhaust emissions will have any adverse effects on air quality as emissions dissipate quickly with distance and there are no sensitive receptors within 50 m and the works are transient and therefore would only occur in most places for a short period of time before moving on to another location.
Electromagnetic Fields	Assessment of EMF impacts including electrical components and associated development with a main focus on the underground cabling.	None	N/A
Glint and Glare	Glint and Glare impacts on residential, road, rail, bridleways and aviation will be included in a technical appendix, with a short summary in the chapter.	None	N/A
Ground Conditions	Preliminary Risk Assessment (construction, operation (and maintenance) and decommissioning).	None	N/A
Human Health	It is considered that human health as a result of the Proposed Development will be covered through the assessment findings undertaken in other technical chapters of the ES namely: • Landscape and Visual Amenity; • Noise and Vibration; • Transport and Access; and • Air Quality. • A standalone assessment of human health is not proposed.	A standalone assessment of Human Health is proposed to be scoped out of the EIA.	The technical chapters of the ES will consider the potential effects of human health within their own assessments. There are not expected to be any significant human health effects beyond those identified for these assessments. A detailed human health assessment is therefore not proposed.
Major Accidents and Disasters	All potential MADS will be adequately covered elsewhere in the assessment. A standalone assessment is not proposed.	• Flooding; • Plant disease; • Road accidents; • Rail accidents; • Utilities failure;	A standalone assessment of Major Accidents and Disasters is proposed to be scoped out of the ES. This is because other chapters in the ES will comprehensively assess potential

TOPIC	PROPOSED SCOPE OF ASSESSMENT	ELEMENT PROPOSED TO BE SCOPED OUT	RATIONALE FOR SCOPING OUT
		• Pollution incident to ground receptors; • Fires • Pollution incident to aquatic receptors; • Pollution incident to air; • Flood defence failure; • Aviation disasters; • Cyber accident; and • Electrical accident.	effects of the Proposed Development which could give rise to the MADs events described.
Telecommunications and Utilities	Assessing impacts to Telecommunications and Utilities.	All telecommunications matters.	With the identification of these assets and implementation of suitable offset distances for the Proposed Development infrastructure, it is considered that any effects would be adequately mitigated and there is not potential for likely significant effects. Telecommunications and Utilities will be assessed in the Other Environmental Chapter and a separate chapter is not warranted as likely significant effects can be avoided through good design

20. Glossary and Abbreviations

TERM	DEFINITION
“A” Weighting (dB(A))	The human ear does not respond uniformly across the audible frequency range. The “A” weighting is commonly used to simulate the frequency response of the ear.
Agro-climatic characteristics	The interrelationship between climate and farming systems, influencing crop suitability and agricultural productivity
Agricultural Land Classification (ALC)	The standard method for classifying agricultural land according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage. These factors form the basis for classifying agricultural land into one of five grades (with Grade 3 land divided into Subgrades 3a and 3b), ranked from excellent (Grade 1) to very poor (Grade 5). ALC is determined using the Ministry of Agriculture, Fisheries and Food (MAFF) Agricultural Land Classification of England and Wales: Revised guidelines and criteria for grading the quality of agricultural land, 1988
Abnormal Indivisible Load (AIL)	An abnormal load that cannot be broken down into smaller loads for transport. An abnormal load is a vehicle that has a weight of more than 44,000 kg, an axle load of more than 10,000 kg for a single non-driving axle and 11,500 kg for a single driving axle, a width of more than 2.9 metres or a rigid length of more than 18.65 metres.
Abnormal Load	A vehicle that has a weight of more than 44,000kg, an axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle, a width of more than 2.9 metres or a rigid length of more than 18.65 metres.
Additional On-Site Substations	Consist of electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from the Main Site to the National Grid. The substations could operate at 132 kV and/or 33 kV and would be located on the Main Site.
Air Quality Management Area (AQMA)	Places where air quality objectives are not likely to be achieved. Where an AQMA is declared, the local authority is obliged to produce an Action Plan in pursuit of the achievement of the air quality objectives.
Ancient Woodland	Land that has been continually wooded since at least 1600 in England. Regarded as irreplaceable habitat’ in national planning guidance. Ancient woodland greater than 2 ha is recorded on the National England Woodland Inventory.
Annex 1 Habitat	Annex 1 Habitat refers to a habitat as defined under the EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Annex 2 Habitat	Annex 2 species refers to species as defined under the EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Annual Average Daily Traffic (AADT)	Traffic data obtained by calculating daily traffic flows and then calculating the annual average. Often used in predicting noise levels and air quality, usually in conjunction with other parameters such as average vehicle speed and percentage heavy vehicles.
APFP Regulations	The Infrastructure Planning (Application: Prescribed Forms and Procedure) Regulations 2009 (as amended).
Applicant	South Kent Energy Park Limited

TERM	DEFINITION
Application	The application for a DCO for the Proposed Development submitted by the Applicant.
Automatic Traffic Count	A traffic count which is undertaken automatically such as through the installation of a temporary or permanent electronic traffic recording device.
Ambient Sound Level, LAeq,T	The equivalent continuous A-weighted sound pressure level of the totally encompassing sound in a given situation at a given time that is usually composed of sound from many sources near and far.
Background Sound Level LA90,T	The A-weighted sound pressure level of the residual noise at the assessment position that is exceeded for 90% of a given time interval, T, measured using the fast time weighting, F, and quoted to the nearest whole number.
Baseline Conditions	The conditions against which potential effects arising from the Proposed Development are identified and evaluated.
Bare earth Zone of Theoretical Visibility	A digitally produced map showing areas of land within which the Proposed Development is theoretically visible, without including existing vegetation or buildings.
Battery Energy Storage System (BESS)	A system which allows for the storage and exportation of energy to the National Grid.
BESS Compound	The area within which the BESS would be located for the storage, import, and export of energy.
Biodiversity	The variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.
Biodiversity Net Gain (BNG)	BNG is an approach to development which aims to leave nature in a better state than it was before the project was completed. National Grid has made a commitment to delivering a BNG target of 10% above baseline on its development projects (as agreed with Ofgem).
Biodiversity Action Plan	A strategy for conserving and enhancing wild species and wildlife habitats in the UK.
Blown Sand	Blown sand is sand that has been transported by wind, or sand consisting predominantly of wind-borne particles.
Claimant count	A measure of the number of people claiming benefits principally for the reason of being unemployed, based on administrative data from the benefits system
CO ₂ equivalent (CO ₂ e)	A measure of how much a gas contributes to global warming, relative to carbon dioxide, by multiplying the mass of the gas (in tonnes), by the gas' global warming potential (GWP).
Collision Rate	The rate at which traffic collisions typically occur on a particular road type.
Conceptual Site Model	A conceptual site model is a representation of the characteristics of the site. It shows the possible relationships between contaminants, pathways and receptors.
Control Building	The control building would allow around three permanent staff to operate and maintain the plant in day-shifts only. The operational staff would also grant access for operations and maintenance works which are typically CCTV surveyed to prevent unauthorised access.
DC/DC Converter	Manages the charge and discharge of the battery following the demand profile of the plant operator.
Desk-Based Assessment (DBA)	A Desk-Based Assessment is a supporting planning document that identifies the archaeological potential and significance within an Application site.

TERM	DEFINITION
Development Consent Order (DCO)	Where the Secretary of State proposes to grant consent for a NSIP, this will be through a DCO which is in the form of a statutory instrument – a form of secondary legislation. The DCO not only provides planning consent for the Proposed Development but may also incorporate other consents and include authorisation for the compulsory acquisition and temporary use of land.
DCO Site Boundary (also referred to as DCO Site)	The boundary of the Proposed Development, consisting of the Main Site and Interconnecting Areas.
Decibel (dB)	The decibel is a logarithmic ratio of two values of a variable. The range of audible sound pressures is approximately 2×10^{-5} Pa to 200 Pa. Using decibel notation presents this range in a more manageable form, 0 dB to 140 dB.
Disaster	A natural hazard (e.g. earthquake) or a man-made/external hazard (e.g. act of terrorism) with the potential to cause an event or situation that meets the definition of a major accident
Ecological Feature	Habitats, species or ecosystems
Economic activity rate	The proportion of the population aged 16 to 64 who are economically active.
Ecosystem	A dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
Effect Interactions	The intra project effects. These are the combined effects of individual impacts from the Proposed Development, for example noise and air pollutants impacting on a single receptor.
Environmental Impact Assessment (EIA)	An EIA is a tool for systematically examining and assessing the impacts and effects of a development on the environment. The objective of the EIA is to identify any likely significant effects which may arise from the Proposed Development and identify measures to prevent, reduce or offset any adverse effects.
Environmental Statement (ES)	A document produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations to report the results of an EIA.
European Protected Species	Animals and plants listed under the Habitats Directive and protected under the Conservation of Habitats and Species Regulations 2017, as amended.
Fixed South Facing Arrays	. The configuration where panels are arranged in rows running from east to west facing to the south at a fixed tilt is commonly seen on existing UK solar farms. Individual panels consist of a series of bifacial, mono-crystalline cells. These panels are then arranged into strings of approximately 30 panels which are fixed to the mounting system.
Flood Zone 1	This is land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding
Flood Zone 2	This zone comprises land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year
Flood Zone 3	This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year
Frequency (Hz)	The number of cycles per second (i.e., the number of vibrations that occur in one second); subjectively this is perceived as pitch.
Frequency Spectrum	The relative frequency contributions that make up a noise.
Geophysical Survey	A non-intrusive method for scanning sub-surface deposits to identify archaeological anomalies and features.

TERM	DEFINITION
Gross value added (GVA)	A measure of the value of goods and services produced in an area, industry or sector of an economy calculated as the value of all output minus the value of intermediate consumption.
Habitat of Principal Importance (HaPI)	HPI are covered under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC). The term is interchangeable with 'UK Priority BAP Habitat', 'Section 41 habitat' and 'NERCs41 habitat'.
Health	A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
Heavy Goods Vehicle (HGV)	A vehicle that has a weight over 3.5 tonnes.
Historic Environment Record (HER)	Historic Environment Record Data is data supplied by the Kent County Council that records all non-designated heritage assets within the agreed study area.
Impacts	For the purposes of the EIA, the term 'impacts' is used to describe the changes that arise as a result of the Proposed Development.
Interconnecting Areas	Encompass land required for underground cabling to connect the land parcels within the Main Site together. There are four Interconnecting Areas in total.
Invasive non-native species	An invasive non-native species is any non-native animal or plant that has the ability to spread, causing damage to the environment, the economy, health, and way of life.
Inverter	It is currently expected that either string or central inverters would be used. Inverters convert the DC electricity collected by the PV panels into alternating current (AC), which allows the electricity generated to be exported to the national electricity transmission network.
Joint Strategic Needs Assessment (JSNA)	An evidence-based process analysing the current and future health and care needs of local populations to inform and guide the planning of health, well-being and social care services within a local authority area.
Landscape	An area, as perceived by people, the character of which is the result of the action and integration of natural and/or human factors.
Level LA10,T	The A-weighted sound pressure level exceeded for 10% of a given time interval, T, measured using the fast time weighting, F.
Light Goods Vehicle (LGV)	A vehicle that has a weight below 3.5 tonnes that is specifically designed to carry goods.
Local Road Network	Roads in the vicinity of the Proposed Development managed by the local authority.
Local Wildlife Site (LWS)	Non-statutory nature conservation sites of local value.
Long term illness or disability	Has long term physical or mental health condition or is disabled under the Equality Act with Day-to-day activities limited a lot or limited a little.
Long-term unemployment	The number of people claiming out of work benefit for over 12 months (aged 16 to 64).
Lower layer Super Output Areas (LSOAs)	Areas made up of groups of OAs, usually four or five. They comprise between 400 and 1,200 households and have a usually resident population between 1,000 and 3,000 persons.
Made Ground	Made Ground is an area where the pre-existing (natural or artificial) land surface is raised by artificial deposits.
Magnitude (of impact)	A term that combines judgements about the size and scale of the impact, the extent of the area over which it occurs, whether it is reversible or irreversible

TERM	DEFINITION
	and whether it is short or long term in duration. This is considered against the sensitivity of the receptor to provide an overall effect level.
Main Site	Comprises the area that is being considered for solar arrays, a SKEP Main on-site substation, Additional On-Site Substations, the National Grid Substation, battery storage infrastructure, and areas for landscape and biodiversity mitigation and enhancement.
Materials	Defined in the ISEP Guidance as <i>“physical resources that are used across the lifecycle of a development. Examples include key construction materials such as concrete, aggregate, asphalt and steel.”</i>
Major Accident	Events that threaten immediate or delayed serious environmental effects to human health, welfare and/or the environment and require the use of resources beyond those of the Client or its appointed representatives to manage. Whilst malicious intent is not accidental, the outcome (e.g. train derailment) may be the same and therefore many mitigation measures will apply to both deliberate and accidental events
Middle layer Super Output Areas (MSOAs)	Areas made up of groups of LSOAs, usually four or five. They comprise between 2,000 and 6,000 households and have a usually resident population between 5,000 and 15,000 persons. MSOAs fit within local authorities.
Mitigation	The action of reducing the severity and magnitude of change (impact) to the environment. Measures to avoid, reduce, remedy or compensate for significant adverse effects.
MSAs	Defined <i>“as an area designated by minerals planning authorities which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development”</i>
National Vegetation Classification	System of classifying natural habitat types in Great Britain according to their vegetation types.
Network Peak Hour	The hour in the AM period in which the highest traffic flows are recorded.
Nationally Significant Infrastructure Projects (NSIP)	NSIPs are large scale developments such as certain new harbours, power generating stations (including solar farms), highways developments and electricity transmission lines, which require a development consent under procedures governed by the Planning Act 2008 (and amended by the Localism Act 2011).
Nitrate Vulnerable Zone (NVZ)	NVZs are statutory designated areas identified as being at risk from agricultural nitrate pollution. These constitute about 55% of land in England. The designations are made in accordance with the Nitrate Pollution Prevention Regulations 2015.
Noise	Unwanted or unexpected sound.
Order Limits	The limits shown on the land plans and works plans within which the authorised development may be carried out and land acquired or used.
Outline Construction Environmental Management Plan (OCEMP)	This plan provides an outline for environmental management during the construction phase of the Proposed Development, with the aim to provide a clear and consistent approach to environmental mitigation during construction.
Outline Construction Traffic Management Plan (OCTMP)	This plan provides an outline for traffic management practices for construction traffic and staff vehicles during the construction of the Proposed Development.
Outline Decommissioning Environmental Management Plan (ODEMP)	This plan provides an outline for how the mitigation measures included within the ES will be implemented during the decommissioning stage. It also sets out the monitoring and auditing activities designed to ensure that such mitigation measures are carried out, and that they are effective.

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National Grid Substation	The Proposed Development includes an expected 400 kV substation, potentially operating at lower voltages such as 132 kV or 33 kV too, which is assumed to provide the point of connection to the National Electricity Transmission System.
Outline Landscape and Ecology Management Plan (OLEMP)	This plan provides an outline for achieving the outline design, including the successful establishment and future management of biodiversity and landscaping works.
Outline Operational Environmental Management Plan (OOEMP)	This plan provides an outline for how the operational mitigation measures included within the ES will be implemented and sets out the monitoring and auditing activities designed to ensure that such mitigation measures are carried out, and that they are effective.
Output Areas (OAs)	The lowest level of geographical area for census statistics.
Peak Particle Velocity (PPV)	The peak speed of particle movement in the ground due to vibration and used to assess impacts from construction activity induced vibration. The Peak Particle Velocity is defined as millimetres per second (mm/s).
Priority habitat	Habitats identified as of principal importance in England, in accordance with requirements of the NERC Act 2006. These are based on the UK Biodiversity Action Plan Priority Habitats.
Priority species	Species identified as of principal importance in England, in accordance with requirements of the NERC Act 2006. These are based on the UK Biodiversity Action Plan Priority Species
Point of Connection	Connection to National Grid, may be onsite or offsite, remains subject to National Grid's ongoing optioneering process.
Power Conversion Units	Comprises an inverter, a transformer, and switchgear, which can be grouped together or distributed throughout the Main Site.
Preliminary Risk Assessment	A preliminary risk assessment will establish if there are any potentially unacceptable risks arising from contamination at the site.
Principal Aquifer	These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.
Proposed Development	South Kent Energy Park: which comprises the construction, operation (and maintenance) and decommissioning of solar photovoltaic (PV) generating panels, interconnecting cables, associated Battery Energy Storage System(s) (BESS), a 'National Grid Substation', a 'South Kent Energy Park (SKEP) Main On-Site Substation' and 'Additional On-Site Substations' and other supporting infrastructure including fencing, access tracks, drainage, and biodiversity and landscape enhancements
Proximity principle	Managing waste as close as possible to where waste has been generated.
Public Right(s) of Way (PRoW)	Designated routes under the Countryside and Rights of Way (CROW) Act 2000, which the public can use at any time.
Rating Level, LAr,Tr	The specific noise level plus any adjustment for any characteristic features of the noise.
Ramsar sites	Wetlands of international importance designated under the Ramsar Convention.
Receptor	A component of the natural or man-made environment that is affected by an impact, including people.

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Reference Time Interval, Tr	The specified interval over which an equivalent continuous A-weighted sound pressure level is determined.
Regulated Qualifications Framework (RQF)	A standardised framework that categorises qualifications based on their level of learning outcomes.
S41 of NERC Act	Section 41 of the NERC Act 2006 lists species of principal importance in England for the purpose of conserving biodiversity.
Schedule 1 species	Bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), for which it is an offence to intentionally or recklessly disturb birds and their young at, on or near an 'active' nest.
Scoping Opinion	A Scoping Opinion is requested from the Planning Inspectorate on behalf of the Secretary of State to inform the requirements of EIA process and ultimately the ES which will be submitted as part of the application for development consent. Through the scoping process the views of the statutory consultees and other relevant organisations on the proposed scope of the EIA are sought.
Secondary A Aquifers	Permeable layers that can support local water supplies, and may form an important source of base flow to rivers.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptors to the specific type of change or development proposed and the value related to that receptor.
Significance	A measure of the importance or gravity of the environmental effect, defined by significance criteria specific to the environmental topic.
Sites of Special Scientific Interest (SSSI)	An area of land designated by Natural England as of special interest by reason of its flora, fauna or geological or physiographical features.
Single Axis Tracker Arrays	A Tracker system involves attaching the PV panels to a motorised table that can move in relation to the sun. This allows for optimal power generation throughout the day. Individual panels consist of a series of bifacial, mono-crystalline cells. These panels are then arranged into strings varied length which are fixed to the mounting system.
SKEP Main On-Site Substation	Consist of electrical infrastructure such as the transformers, switchgear and metering equipment required to facilitate the export of electricity from the Main Site to the National Grid. The substation could operate at 400 kV, 132 kV and/or 33 kV and would be located on the Main Site.
Standardized Admission ratio (SAR)	The ratio of observed number of admissions in a specific group, to the expected number in the general population adjusted for confounding factors like age and sex, expressed as a percentage.
Standardized mortality ratio (SMR)	The ratio of observed deaths in the a specific group to expected deaths in the general population expressed as a percentage.
Solar photovoltaic (PV) Panels	Solar panels which convert sunlight into electrical current (as direct current, DC). Individual panels are typically up to 2.4 m in length and up to 1.4 m wide and consist of a series of photovoltaic cells beneath a layer of toughened, low reflectivity glass.
Solar PV Mounting Structures	A metal frame that holds the solar PV panels in place and secures them to the ground via galvanised steel piles driven into the ground (depth dependant on ground conditions). The option to install a weighted solution may be considered where necessary, for example to minimise ground disturbance.
Soil associations	Groupings of related soil series

TERM	DEFINITION
Soil series	The lowest category in the soil classification system and are precisely defined based upon particle-size distribution, parent material (substrate) type, colour and mineralogical characteristics
Soil Management Plan (SMP)	A site-specific plan developed to ensure appropriate management practices are followed during excavation, storage, and restoration of soils.
Sound Pressure Level (Lp)	ual to 20 times the logarithm to the base 10 of the ratio of the root mean squared (RMS) sound pressure to the reference sound pressure. In air the reference sound pressure is 2×10^{-5} Pa. Mathematically: Sound Pressure Level (dB) = $20 \log_{10} \{p(t) / P_0\}$ Where $P_0 = 2 \times 10^{-5}$ Pa
Source Protection Zone	SPZs show the risk of contamination from any activities that might cause pollution to groundwater sources such as wells, boreholes and springs used for public water supplies. The closer the activity, the greater the risk. SPZs can comprise of up to three main zones (inner, outer and total catchment). A fourth zone of special interest can also occasionally be applied to a groundwater source.
Special Areas of Conservation (SACs)	Protected areas in the UK designated under: the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales.
Special Protection Areas (SPA)	Protected areas for birds in the UK classified under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales.
Species of Principal Importance (SPI)	Covered under Section 41 of the NERC Act 2006. The term is interchangeable with 'UK Priority BAP Species', 'Section 41 species' and 'NERCs41 species'.
Specific Noise Level, LAeq,Tr	The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source over a given reference time interval.
Statutory designated site	A site which receives protection by means of legislation in recognition of its biodiversity value.
Strategic Road Network (SRN)	The SRN is made up of motorways and trunk roads (the most significant 'A' roads).
Subsoil	Layer (or horizon) of soil immediately beneath the surface topsoil. Generally, less structurally developed and less nutrient rich than the topsoil
Sustainable drainage systems (SUDS)	Surface water drainage systems developed in line with the ideals of sustainable development (e.g. swales, ponds, basins, filtration flow control).
Swept Path Analysis	The calculation and analysis of the movement and path of different parts of a vehicle when that vehicle is undertaking a turning manoeuvre.
Switchgear	Switchgear are the combination of electrical disconnect switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment. Switchgear are used both to de-energise equipment to allow work to be done and to clear faults downstream.
Tidal Flat Deposits	Tidal flat deposits, including mud flat and sand flat deposits, form extensive nearly horizontal marshy land in the intertidal zone that is alternately covered and uncovered by the rise and fall of the tide. They consist of unconsolidated sediment, mainly mud and/or sand. They may form the top surface of a deltaic deposit.
Topsoil	Natural topsoil or manufactured topsoil, varies in depth with soil type but usually covering the top 20-30 cm in which plants can grow healthily.
Transformers	LV/MV transformers control the voltage of the electricity generated across the Proposed Development before it reaches the substation.

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Underground cabling	LV on-site cabling will connect the solar PV panels and BESS to inverters (typically via 0.6 / 1 kV cables), and the inverters to the transformers on-site. Higher rated cables (likely 33 kV) are then installed between the transformers and the switchgear and from switchgear to the On-site Substations. Cabling between solar PV panels and the inverters would typically be above ground level (along a row of racks), fixed to the mounting structure, and then underground (between racks and inverters and/or transformers). All other on-site cabling would be underground where possible.
Unemployment rate	The proportion of the labour force that does not have a job and is actively seeking work.
Unproductive Strata	Largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them.
Viewpoints	A publicly accessible location from which to take a photograph.
Visual Receptor	Individuals and/or defined groups of people who have the potential to be affected by the proposal.
Water Framework Directive	The Water Framework Directive ("WFD") introduced a new system for monitoring and classifying the quality of surface and ground waters. The Directive requires that Environmental Objectives be set for all surface waters and groundwater to enable them to achieve Good Ecological Potential/Status by a defined date.
Waste	Defined as per the European Waste Framework Directive as <i>"any substance or object which the holder discards or intends or is required to discard"</i> .
Wealden Group	Interbedded thick sandstones, siltstones, mudstones ("shales"), limestones and clay ironstones of predominantly non-marine facies. Divided into formations and members.
Wider determinants of health	The range of factors which affect health, spanning bio-physical, social, behavioural, economic and institutional factors.
Working age population	The share of 15- to 64-year-olds in the total population.
Written Proposed Development of Investigation (WSI)	A specification document that sets out the scope of works for archaeological evaluation and mitigation.
Zone of Influence	The limit determined for each specialist study in which the construction or operation of the Proposed Development component has the potential to cause an adverse or beneficial effect on a receptor. This will inform the definition of the discipline-specific study area defined for their assessment.

Abbreviations

ABBREVIATION	DEFINITION
AADT	Annual Average Daily Traffic
AC	Alternating current
AEP	Annual Exceedance Probability
ALC	Agricultural Land Classification
AIL	Abnormal Indivisible Load
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
APFP	Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009
AQMA	Air Quality Management Area
BAP	Biodiversity Action Plan
BESS	Battery Energy Storage System
BNG	Biodiversity Net Gain
BRE	Building Research Establishment
BS	British Standard
BSI	British Standards Institution
CCC	Climate Change Committee
CCGT	Combined-Cycle Gas Turbine
CCRA	Climate Change Risk Assessment
CCTV	Closed Circuit Television
CIEEM	Chartered Institute for Environmental and Ecological Management
CIRIA	Construction Industry Research and Information Association
DBA	Desk-Based Assessment
DC	Direct Current
DCO	Development Consent Order
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
DrWSA	Drinking Water Safeguard Area
DVOR	Doppler VHF Omni-directional Range facility
EA	Environment Agency
EIA	Environmental Impact Assessment
EIA Regulations	Infrastructure Planning (EIA) Regulations 2017
ES	Environmental Statement
EU	European Union
FHDC	Folkestone and Hythe District Council
FRA	Flood Risk Assessment
GCN	Great Crested Newt
GHG	Greenhouse Gas

ABBREVIATION	DEFINITION
GLVIA 3	Guidelines for Landscape and Visual Impact Assessment, Third Edition.
GVA	Gross Value Added
GW	Groundwater
GW	Gigawatts
GWDTE	Groundwater Dependent Terrestrial Ecosystem
Ha	Hectares
HDD	Horizontal Directional Drilling
HER	Historic Environment Record
HGV	Heavy Goods Vehicles
HRA	Habitat Regulation Assessment
HV	High Voltage
ICCI	In-combination climate change impact
ICE	Inventory of Carbon and Energy
IDB	Internal Drainage Board
ILP	Institute of Lighting Professionals
IPCC	Intergovernmental Panel on Climate Change
ISEP	Institute of Sustainability and Environmental Professionals
JSNA	Joint Strategic Needs Assessment
KCC	Kent County Council
Km	Kilometres
kV	Kilovolts
LA	Local Authority (also used as abbreviation in DMRB references)
LiDAR	Light Detection and Ranging
LCA	Landscape Character Area
LCT	Landscape Character Type
LGV	Light Goods Vehicle
LLCA	Local Landscape Character Area
LLFA	Lead Local Flood Authority
LPA	Local Planning Authority
LSE	Likely Significant Effect
LSOAs	Lower Layer Super Output Areas
LWS	Local Wildlife Site
LV	Low Voltage
mAOD	metres Above Ordnance Datum
MAGIC	Multi Agency Geographic Information for the Countryside
MSOAs	Middle layer Super Output Areas
MW	Megawatts
MV	Medium Voltage
NCA	National Character Area
NCR	National Cycle Route
NDC	Nationally Determined Contribution

ABBREVIATION	DEFINITION
NGET	National Grid Electricity Transmission
NGR	National Grid Reference
NHLE	National Heritage List for England
NPS	National Policy Statement
NTS	Non-Technical Summary
NSIP	Nationally Significant Infrastructure Project
NPPF	National Planning Policy Framework 2021
NPPG	National Planning Policy Guidance
NPS	National Policy Statement
NVZ	Nitrate Vulnerable Zone
OAs	Output Areas
OCEMP	Outline Construction Environmental Management Plan
OCTMP	Outline Construction Traffic Management Plan
ODEMP	Outline Decommissioning Environmental Management Plan
OLEMP	Outline Landscape and Ecology Management Plan
OOEMP	Outline Operational Environment Management Plan
OFRA	Outline Flood Risk Assessment
OSMP	Outline Soil Management Plan
OS	Ordnance Survey
OSWDS	Outline Surface Water Drainage Strategy
PAS	Publicly Available Standard
PCU	Power Conversion Unit
PEI	Preliminary Environmental Information
PINS	Planning Inspectorate
PPV	Peak Particle Velocity
PRoWs	Public Rights of Way
PWS	Private Water Supply
PV	Photovoltaic
RBMP	River Basin Management Plan
RCP	Representative Concentration Pathway
RMAIDB	Romney Marsh Area Internal Drainage Board
RMC	Royal Military Canal
RSuDS	Rural Sustainable Drainage Systems
SAC	Special Area of Conservation
SKEP	South Kent Energy Park
SoS	Secretary of State
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems
SW	Surface Water

ABBREVIATION	DEFINITION
TAG	Technical Advisory Group
TFD	Tidal Flat Deposits
UNFCCC	United Nations Framework Convention on Climate Change
W	Watts
WFD	Water Framework Directive
WQ	Water Quality
WRMP	Water Resources Management Plan
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Visibility.

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