Shepway Energy Park

Environmental Impact Assessment Scoping Report

May 2025

sse Renewables

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1. Introduction

1.1 Background

1.1.1 SSE Newchurch Solar Limited (hereafter referred to as 'the Applicant') has commissioned this Environmental Impact Assessment (EIA) Scoping Report for Shepway Energy Park (hereafter referred to as the 'Scheme'). The Scheme comprises the installation of solar photovoltaic (PV) modules, associated electrical equipment, battery energy storage facilities, cabling, on-site electrical substation, and associated infrastructure across a proposed site which lies within the Romney Marsh area of Kent, approximately 10km south of Ashford, 15km west of Folkestone and 15km northeast of Rye.

1.1.2 The Scheme location is shown in **Figure 1-1: Scheme Location Plan** and **Figure 1-2: Aerial Scheme Location Plan**. The Battery Energy Storage System (BESS) element of the Scheme would have a capacity of circa 400 Megawatts (MW). The solar PV element of the Scheme would have a capacity of circa 200 MW. The project has an export capacity of circa 400 MW to a new National Grid Electricity Transmission (NGET) owned substation, proposed by NGET, which is expected to be located nearby to the Scheme along the Dungeness to Sellindge overhead line (OHL).

1.1.3 Due to the Scheme comprising of solar PV arrays with a generating capacity of more than 50 MW, it is classified as a Nationally Significant Infrastructure Project (NSIP) and will therefore require consent via a Development Consent Order (DCO) under the Planning Act 2008 (Ref 1-1). The DCO is being sought for the 40-year operation period of the Scheme (exclusionary of construction and decommissioning phases).

1.1.4 The proposed solar PV modules, battery energy storage facilities, on-site electrical substation, associated electrical equipment and cabling will be places on 6 areas which together form the 'Energy Park Site'. The Energy Park Site is located within Romney Marsh, immediately north of the Village of Newchurch at its closest point. It is denoted by the solid red line on **Figure 1-1.** The Scheme is described in **Chapter 2: The Scheme and Scheme Location** of this Scoping Report.

1.1.5 It should be noted that the Scheme has not yet determined specific routes for the interconnecting underground cables between the field parcels. **Figure 1-1** and **Figure 1-2** show the expected extent of land for the Scheme, which includes all land being considered for the purposes of the Energy Park Site and where cables will be placed to connect these, hereafter referred to as the 'Interconnecting Cable Corridor Search Area'. Together the Energy Park Site and the Interconnecting Cable Corridor Search Area are known as the 'Site'.

1.1.6 A new NGET substation is proposed to be constructed by NGET to manage supply from a range of potential energy generation projects in the Kent area, along the Dungeness to Sellindge OHL, which passes through Site 1 of the Energy Park Site. This would be subject to a separate planning or development consent application by NGET, who would also own and operate the substation.

1.1.7 If the NGET substation location is known at Preliminary Environmental Information Report (PEIR) or Enivronmental Statement (ES) stage, then an export Grid Connection Route will be included as a component of the Scheme. The new NGET substation would be considered in the cumulative effects assessment. If the NGET substation location is not known at PEIR or ES stage, the Grid Connection Route and NGET substation will both be considered in the cumulative effects assessment.

1.1.8 The Site boundary will be subject to consultation and will be refined as the Scheme design progresses. The Grid Connection Route will be defined following disclosure of the proposed NGET substation location, and if an export route extending out of the Energy Park Site is required then the scope of assessment would replicate the assessment of the Interconnecting Cable Corridors which form part of the Scheme.

1.1.9 This EIA Scoping Report forms a formal request for a Scoping Opinion under Regulation 10(1) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations') (Ref 1-2).

Purpose and Structure of Scoping Report

1.1.10 A Scoping Report is produced by an applicant to formally request a Scoping Opinion. Although the Scoping Opinion is sought from the Secretary of State (SoS), the process is undertaken by the Planning Inspectorate (PINS) on behalf of the SoS.

1.1.11 An EIA Scoping Report provides information to support such a request and is used to inform the PINS Scoping Opinion as well as formal consultation with statutory environmental bodies.

1.1.12 Regulation 10(3) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as the 'EIA Regulations') (Ref 1-2) sets out the requirements for requesting a Scoping Opinion stating that the request (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.

1.1.13 The purpose of this EIA Scoping Report is therefore to fulfil these requirements and also to:

- Provide a summary of the Scheme;
- 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 Scheme at an early stage of development so that 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 significant impacts are predicted); and
- Set out the proposed structure and coverage of the Environmental Statement (ES) to be submitted with the DCO application.

1.1.14 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 1-3) and 'Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development' (Ref 1-4).

1.1.15 **Table 1-1** lists the suggested requirements identified in Advice Note 7 (Ref 1-3) and details where they are presented in this Scoping Report.

1.1.16 A summary of terms used within this Scoping Report are presented in **Appendix B: Glossary** and **Appendix C: Abbreviations** of this Scoping Report.

Table 1-1: Contents for the Scoping Report based on the Planning Inspectorate's Advice Note 7

Suggested Scoping Reports Contents	Location in this Scoping Report
Transboundary Screening Matrix	**Appendix A: Transboundary** Screening Matrix
The Proposed Development:	
An explanation of the approach to addressing uncertainty where it remains in relation to elements of the Proposed Development e.g.: design parameters	**Chapter 2: The Scheme and Scheme Location**
Referenced plans presented at an appropriate scale to convey clearly the information and all known features associated with the Proposed Development	**Figure 1-1: Scheme Location Plan** **Figure 1-2: Aerial Scheme Location Plan** **Figure 2-1: Environmental Features Plan** **Figure 2-2: Public Rights of Way**
EIA Approach and Topic Areas:	
An outline of the reasonable alternatives considered and the reasons for selecting the preferred option	**Chapter 3: 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 18: Summary and Conclusions**
A detailed description of the aspects and matters proposed to be scoped out of further assessment with justification provided	**Chapters 6 to 16 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 6 to 16 Technical Topics**

Suggested Scoping Reports Contents	Location in this Scoping Report
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 6 to 16 Technical Topics**
Any avoidance or mitigation measures proposed, how they may be secured and the anticipated residual effects	**Chapters 6 to 16 Technical Topics**
Information Sources:	
References to any guidance and best practice to be relied upon	**Chapters 6 to 16 Technical Topics**
Evidence of agreements reached with consultation bodies (for example the statutory nature conservation bodies or local authorities)	**Chapters 6 to 16 Technical Topics**
An outline of the structure of the proposed ES	**Chapter 17 Structure of the Environmental Statement**

1.2 Legislative Context and Need for Environmental Impact Assessment

1.2.1 The solar element of the Scheme is defined as a Nationally Significant Infrastructure Project (NSIP) under Section 14(1)(a) and 15(2) of the Planning Act 2008 (Ref 1-1) as an onshore generating station in England with a capacity exceeding 50 MW, while the Battery Energy Storage System (BESS) element is associated development as defined in Section 115 of the Planning Act 2008 (Ref 1-1).

1.2.2 The EIA requirement for NSIP developments is transposed into law through the EIA Regulations (Ref 1-2). The EIA Regulations specify which developments are required to undergo EIA, and 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 subjected 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'.

1.2.3 The Scheme is a Schedule 2 development, listed under Schedule 2, Part 3(a) - industrial installations for the production of electricity, steam and hot water (projects not included in Schedule 1). Owing to its size, nature and location, the Scheme is likely to have significant effects on the environment and therefore, is considered to constitute an EIA development.

1.2.4 Following the completion of the surveys, assessments, and consultation processes outlined in this Scoping Report and taking account of the Scoping Opinion, an application for a DCO will be made to the SoS for determination in accordance with the Planning Act 2008 (Ref 1-1). The DCO application will be accompanied by an Environmental Statement (ES), in accordance with Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 ('APFP Regulations') (Ref 1-5). The ES will set out the methods and findings of a comprehensive EIA undertaken in line with the EIA Regulations (Ref 1-2).

1.2.5 The Localism Act 2011 (Ref 1-6) appointed PINS as the government agency responsible for operating the DCO process for NSIPs. The SoS will appoint an Examining Authority from PINS, who will examine the application for the Scheme and then will make a recommendation to the SoS, who will in turn make the decision on whether to grant or to refuse the DCO.

1.2.6 In accordance with Section 104(2) of the Planning Act 2008 (Ref 1-1), the SoS is required to have regard to the relevant National Policy Statement (NPS), amongst other matters, when deciding whether or not to grant a DCO. They must also have regard to any other matters which they think are both important and relevant to their decision (Section 104(2)(d)). Section 104(3) requires the SoS to decide the application in accordance with the relevant NPS, except to the extent that one or more of the circumstances listed in subsections (4) to (8) applies, which include for example that deciding the application in accordance with any relevant NPS would lead to the UK being in breach of any of its international obligations, or if the

adverse impact of the proposed development would outweigh its benefits (Ref 1-1).

1.2.7 The following NPSs have effect in relation to, or are otherwise important and relevant to, the Scheme: Overarching NPS for Energy (EN-1) (Ref 1-7), NPS for Renewable Energy Infrastructure (EN-3) (Ref 1-8), and NPS for Electricity Networks Infrastructure (EN-5) (Ref 1-9). The NPS for Renewable Energy EN-3 (Ref 1-9) includes *Section 2.10 Solar Photovoltaic Generation* which sets out policy requirements specific to solar generation. In this case, technology-specific policy is in place and Section 104(2) of the Planning Act 2008 (Ref 1-1) applies.

1.2.8 On the 24 April 2025 the UK Government released drafts of updated NPS EN-1 (Ref 1-10), NPS EN-3 (Ref 1-11) and NPS EN-5 (Ref 1-12) for consultation through to the end of May 2025. These Draft NPS are not yet enforced and subject to change. Any changes to the relevant NPS's will be considered throughout the EIA and application process within the Preliminary Environmental Information Report and Environmental Statement.

1.2.9 Given the importance of these NPSs, the EIA approach takes account of these documents and any subsequent updates to NPSs for energy infrastructure will be considered where relevant during the production of the ES. A summary of the relevant considerations for each technical assessment is provided for each environmental topic (**Chapters 6 to 16** of this EIA Scoping Report).

1.2.10 The National Planning Policy Framework (NPPF), updated in December 2024 (Ref 1-13) sets out the Government's national planning policies for England. NPPF paragraph 5 confirms that the NPPF may be a matter that is both important and relevant for the purposes of assessing DCO applications. Relevant policies of the NPPF will therefore be considered in the EIA.

1.2.11 Policies within local plans are frequently considered 'important and relevant' matters, and can influence the content of local impact reports (which the host local authorities will produce following submission of the DCO application), and which the SoS must have regard to in its decision making in accordance with the Planning Act 2008 (Ref 1-1). The Scheme lies within the administrative areas of Ashford Borough Council (ABC), Folkestone & Hythe District Council (FHDC) and Kent County Council (KCC). The following documents form the Development Plans for the land within which the Scheme is located:

- Ashford Local Plan 2030 – Adopted February 2019 (Ref 1-14);
- Ashford Local Plan 2030 Policies Map – Adopted February 2019 (Ref 1-15);
- Ashford Local Plan Supplementary Planning Documents (Ref 1-16);
- Chilmington Green Area Action Plan (AAP) (2013) (Ref 1-17);
- Aldington & Bonnington Neighbourhood Plan (2022-2030) (Ref 1-22)
- Folkestone and Hythe Core Strategy Review to 2037 – adopted March 2022 (Ref 1-18);

- Folkestone and Hythe Core Strategy Review to 2037 Policies Map – adopted March 2022 (Ref 1-19);
- Folkestone & Hythe Places and Policies Local Plan – adopted 16 September 2020 (Ref 1-23);
- Kent Downs Area of Outstanding Natural Beauty (AONB) Management Plan 2021-2026 – adopted January 2021 (adjoining) (Ref 1-24);
- Kent Minerals and Waste Local Plan 2013-2030 as amended by Early partial Review – Adopted September 2020 (Ref 1-20); and
- Kent Minerals and Waste Local Plan 2013-2030 – Minerals Sites Plan – Adopted September 2020 (Ref 1-21).

1.2.12 The adopted local plan for ABC is being revised to provide guidance for development up to 2042. Statutory consultation on ABC's new draft plan is expected in Q2 of 2025 with publication of the draft local plan in Q1 of 2026 and submission to the Secretary of State (SoS) expected in Q3 2026.

1.2.13 FHDC held a call for sites in early 2025 in preparation for their next local plan.

1.2.14 KCC submitted the Kent Minerals and Waste Local Plan 2024-2039 to the SoS for independent examination on 17 May 2024.

1.2.15 The emerging plans are pertinent since they will be at an advanced stage once the DCO application is submitted to the SoS.

1.2.16 The Aldington and Bonnington Neighbourhood Plan area partially adjoins the Scheme and so its policies may be of some relevance.

1.2.17 The purpose of considering the abovementioned planning policy at the scoping stage of the EIA is twofold:

1. To identify policy that could influence the sensitivity of receptors (and therefore the significance of effects) and any requirements for mitigation; and
2. 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.

1.2.18 A summary of national and local planning policy relevant to each technical assessment is provided for each environmental topic in the technical **Chapters 6 to 16** 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 technical assessments include 'A Green Future: Our 25 Year Plan to Improve the Environment (published in 2018 and updated in 2023) (Ref 1-25), the Energy White Paper: Powering our Net Zero Future (2020) (Ref 1-26), Clean Power 2030 Advice Paper (Ref 1-27), and Clean Power Action Plan 2030 (Ref 1-28).

1.3.2 The 25 Year Environment Plan first published in 2018 (Ref 1-25) and last updated in February 2023 sets out the Government's 25-year plan to improve the environment within a generation. It aims to achieve 10 goals which include: achieve clean air; achieve clean and plentiful water; achieve thriving plants and wildlife; reduce risk of harm from environmental hazards like flooding and drought; use resources from nature more sustainably and efficiently; enhance beauty, heritage and engagement with the natural environment; mitigate and adapt to climate change; minimise waste; manage exposure to chemicals; and enhance biosecurity. This plan therefore highlights the Government's support for the reduction in the UK's carbon footprint; protection and enhancement of the natural environment; and ensuring land is managed with environmental gains.

1.3.3 The Energy White Paper published in December 2020 (Ref 1-26) 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.

1.3.4 The Paper explains that the Government is not targeting a particular generation mix. However, it commits the Government to maintaining the market conditions which stimulate the cost reductions that have been seen in the renewables energy market over the last five years. It does, however, state that it is possible to determine key characteristics of the future generation mix at this stage, identifying that a "*low-cost, net zero consistent system is likely to be composed predominantly of wind and solar*". It highlights that this will need to be complemented by technologies which provide power, or reduce demand, to manage intermittency. Currently this includes "*nuclear, gas with carbon capture and storage and flexibility provided by batteries, demand side response, interconnectors and short-term dispatchable generation providing peaking capacity, which can be flexed as required*".

1.3.5 This Paper therefore highlights the Government's commitment to solar and battery storage to achieve net zero targets and the need to provide this urgently.

1.3.6 The National Energy System Operator (NESO) published the Clean Power 2030 Advice Paper in November 2024 (Ref 1-27). The paper outlines how the British Government can achieve a clean power system by 2030, with onshore wind and solar expected to deliver 29% of Great Britain's power generation in 2030. NESO encourages major expansions of solar capacity to more than 3 times its current levels and emphasises the need to accelerate planning decision-making to facilitate the transition to clean power.

1.3.7 The British Government published the Clean Power 2030 Action Plan in December 2024 (Ref 1-28). The paper states that *"all routes to a Clean Power system will require mass deployment of offshore wind, onshore wind, and solar"*. The paper emphasises the SoS's commitment to expanding ground based solar capacity to 47 GW by 2030, a threefold increase, as in the Clean Power Advice Paper (Ref 1-27). As with NESO, the need to accelerate the rolling out of clean energy projects is expressed, in order to meet supply targets.

1.4 The Applicant

1.4.1 The Applicant (SSE Newchurch Solar Limited) is a wholly owned subsidiary of SSE Renewables Solar & Battery Holdings Limited (SSER-S&B), who specialise in solar and battery storage projects. SSER-S&B was founded in 2021 under the parent organisation SSE Renewables Limited (SSER) and FTSE-100 listed SSE PLC, with an aim to provide solar projects across the UK to accelerate progress towards the UK governments net-zero ambitions.

1.4.2 SSER is a leading developer and operator of renewable energy generation including the world's largest offshore wind farm, Dogger Bank. In addition to wind and hydro, SSER is committed to progressing the delivery of a 1.2 GW pipeline of solar and battery projects across the UK and Ireland. The proposed Shepway Energy Park project is part of a further 1.3 GW of prospective sites currently under development and will make a considerable contribution to the UK's energy sector.

1.4.3 Currently, SSER-S&B is constructing two major solar projects in the UK, expected to produce a total of 81 MW, powering 25,000 homes. A further 2 major solar PV projects are currently seeking planning approval which would provide a further 99.8 MW of power to the UK, enough to power 36,400 homes if approved. Shepway Energy Park, if approved, would have the capacity to produce circa 200 MW from solar PV. The Scheme would have a BESS capacity of circa 400 MW, expanding the existing 620 MW of BESS currently under construction by SSER-S&B in England, and 50 MW of BESS now in operation in Sailsbury.

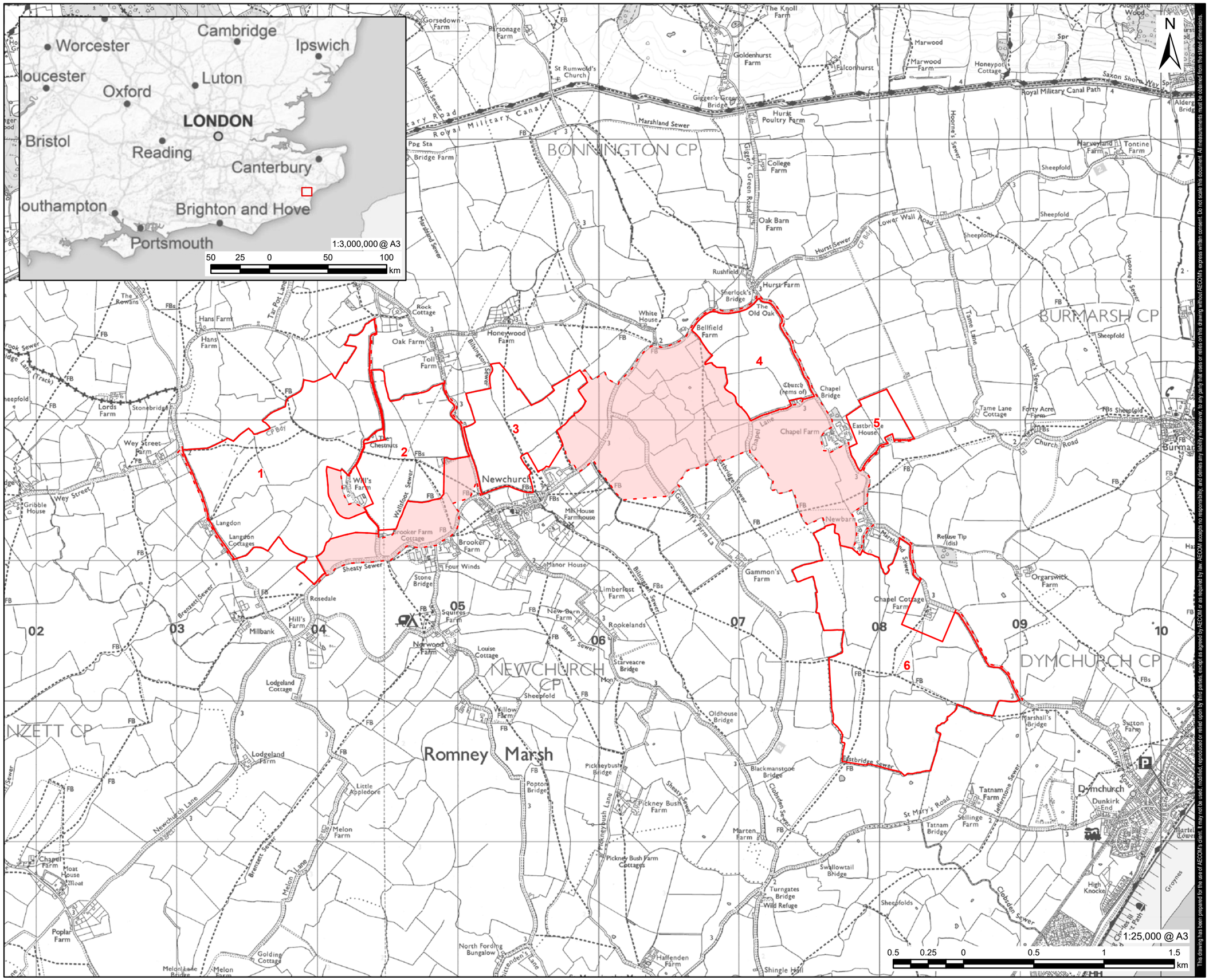
1.5 IEMA Quality Mark

1.5.1 Regulation 14 (4) of the EIA Regulations (Ref 1-2) requires that "in order to ensure the completeness and quality of the environmental statement (a) the applicant must ensure that the environmental statement is prepared by competent experts; and (b) the environmental statement must be accompanied by a statement from the applicant outlining the relevant expertise or qualifications of such experts".

1.5.2 AECOM is an Institute of Environmental Management and Assessment (IEMA) Registered Impact Assessor and also holds the IEMA EIA Quality Mark as recognition of the quality of our EIA product and continuous training of our 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.

Figure 1-1: Scheme Location Plan

Revision: 0 Drawn: DD Checked: AK Approved: GE Date: 2025-04-30



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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area

NOTES

ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Scheme Location Plan

FIGURE NUMBER

Figure 1-1

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Figure 1-2: Aerial Scheme Location Plan

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ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Aerial Scheme Location Plan

FIGURE NUMBER

Figure 1-2

2. The Scheme and Scheme Location

2.1 Introduction

2.1.1 As stated in paragraph 1.1.1, the Scheme will include the installation of solar photovoltaic (PV) modules, associated electrical equipment, battery energy storage facilities, cabling, on-site electrical substation, and associated infrastructure across the proposed Energy Park Site.

2.1.2 This chapter presents a description of the Scheme in sufficient detail to inform the approach and scope of the EIA.

2.2 Site Description

Site and Surrounding Area

2.2.1 The Energy Park Site and Interconnecting Cable Corridor Search Area is located within the administrative areas of ABC, FHDC and KCC. The maximum extent of land that is expected to be included within the DCO application for the Energy Park Site is shown on **Figure 1-1**.

2.2.2 The land within the Energy Park Site and the Interconnecting Cable Corridor Search Area comprises arable agricultural fields, with rural lanes, hedgerows, and drainage ditches across the area.

2.2.3 The Energy Park Site is approximately centred on National Grid Reference (NGR) SE756330 and is located approximately 10km south of Ashford, 15km west of Folkestone and 15km northeast of Rye.

2.2.4 The Energy Park Site comprises 6 land parcels as shown on **Figure 1-1**, which are hereafter referred to as the 'Sites'. The area covered by the Sites is shown in **Table 2-1**. The total area of the Energy Park Site is approximately 406.1 hectares (ha).

2.2.5 The Energy Park Site boundary represents the current maximum extent of land being considered for solar PV, BESS, onsite substation, and associated electrical infrastructure. This area will be further refined as part of the EIA, consultation, and design processes. Some of this land will also be used for landscaping and habitat enhancement.

Table 2-1: Site Locations and Areas

Site	National Grid Reference	Area (ha)
Site 1	TR0375331610	118.4
Site 2	TR0465431773	50.1
Site 3	TR0542631936	46.6
Site 4	TR0710932440	41.5

Site	National Grid Reference	Area (ha)
Site 5	TR0800432009	14.0
Site 6	TR0810030288	135.5
Total		**406.1**

** Any differences are due to rounding*

2.2.6 Key environmental planning constraints within and around the Energy Park Site are shown on **Figure 2-1**.

2.2.7 Interconnecting buried cables connecting the infrastructure across the Sites will be required. The location of the cable routes is being considered through survey and design, however, an indicative search area has been shown in **Figure 1-1**, and presented as the 'Interconnecting Cable Corridor Search Area'. The routes of the interconnecting cables will be designed to avoid sensitive receptors as far as possible and will eventually become 'Interconnecting Cable Corridors' for assessment. The Interconnecting Cable Corridor Search Area covers approximately 192.2 ha.

2.2.8 The Scheme will require connection to the proposed NGET substation which will be located along the Dungeness to Sellindge OHL, and it is noted that the OHL crosses through Site 1 of the Energy Park Site. Should the NGET substation not be proposed within the immediate proximity of the Scheme, a 'Grid Connection Route' will be included as a component of the Scheme. The assessment of any Grid Connection Route will replicate that of the Interconnecting Cable Corridors included in the Scheme.

Ecology and Nature Conservation

2.2.9 The nearest Ancient Woodland to the Sites is located 1.7 km from Site 1 and shown on **Figure 8-3**. Individual trees and areas of woodland have been identified in close proximity to the Sites from the National Tree Map (Ref 2-1).

2.2.10 There are no National Nature Reserves (NNR) located within 2 km of the Sites. Ham Street Woods NNR is located 2.5 km from Site 1. There are no Local Nature Reserves (LNR) located within 2 km of the Sites. There are two LNR located within 5 km - Poulton Wood LWS located 3.8 km north-east of Site 1 and Romney Warren LWS located 2.9 km south of Site 6.

2.2.11 The Energy Park Site does not contain any sites with statutory nature conservation designations. The Dungeness, Romney Marsh and Rye Bay Ramsar site, Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) are located within 5 km of several of the Sites as detailed in **Chapter 8: Ecology and Nature Conservation**. There are no Sites of Special Scientific Interest (SSSI) located within 2 km of the Sites. SSSI located within 5 km of the Sites are listed in **Chapter 8: Ecology and Nature Conservation.**

2.2.12 There are no priority habitats within the Sites. The closest priority habitats are a traditional orchard located approximately 85 m north-west of Site 1,

and areas of coastal and floodplain grazing marsh located approximately 170 m east of Site 6.

2.2.13 The Site is located next to and partly within The Dungeness To Pett Levels Important Bird Area (IBA) which extends North East into the Site and to the South and South West areas of Rye and Lydd. Site 3 and 4 and the Interconnecting Cable Corridor Search Area are located within the IBA. The condition of the IBA is classed as Poor, and its vulnerability to threat as Medium (Ref 2-14).

2.2.14 The full list of statutory and non-statutory designated conservation sites is detailed in **Chapter 8: Ecology and Nature Conservation** and presented on **Figure 2-1.**

Land Use

2.2.15 Nearby recreational and residential receptors include (but are not limited to) isolated farms and rural properties, the village of Newchurch, the PRoW (Public Right of Way) network and quiet rural lanes.

2.2.16 There is an extensive network of public rights of way (PRoW) both within the Energy Park Site and across the surrounding area, as shown on **Figure 2-2**. The PRoW that cross or are adjacent to the Energy Park Site boundary are detailed in **Chapter 12: Socio-Economics and Land Use.**

2.2.17 The current land use within the Energy Park Site consists predominately of agricultural fields as can be seen on **Figure 1-2**. According to Natural England's Provisional Agricultural Land Classification mapping (Ref 2-2) the land within the Energy Park Site is Agricultural Land Classification (ALC) Grade 2 with some limited ALC Grade 1 areas. The land within the Interconnecting Cable Corridor Search Area is mainly ALC Grade 1. This is discussed further in **Chapter 13: Soils and Agricultural Land** and presented on **Figure 13-1: Provisional Agricultural Land Classification**.

Cultural Heritage

2.2.18 There are no designated heritage assets within the Energy Park Site. However within 3km there are eight scheduled monuments, with the closest being Eastbridge Church, located immediately south of Site 4.

2.2.19 There are 87 listed buildings within 3 km of the Energy Park Site, of which 5 and Grade I listed buildings and 6 and Grade II* listed buildings. The closest listed buildings are Eastbridge Church Ruins (Grade II*), located immediately south of Site 4.

2.2.20 The lists of designated assets surrounding the Energy Park Site are included in **Chapter 7: Cultural Heritage.**

Flood Risk

2.2.21 The entirety of the Energy Park Site is located within Flood Zone 3 (high risk). This may influence the design elements of the Scheme such as location of infrastructure or the height of equipment and panels. There are also numerous watercourses across the Energy Park Site. More detailed information on watercourses and flood risk in relation to the Energy Park Site is included in **Chapter 15: Water Environment.**

Landscape

2.2.22 The Energy Park Site is situated within two landscape designations:

- National Character Area (NCA) 123: Romney Marshes (2013) (Ref 2-2); and
- All of the Sites are within Romney Marsh Mixed Farmlands Character Area, as noted by the Landscape Assessment of Kent (LAK) (Ref 2-4).

2.2.23 The Kent Downs National Landscape designation, an Area of Outstanding Natural Beauty (AONB) is located to the immediate north of Site 4.

2.2.24 Further detail on the Energy Park Site and the surrounding area is provided in the technical topics **Chapters 6 to 16**.

Figure 2-1: Environmental Features

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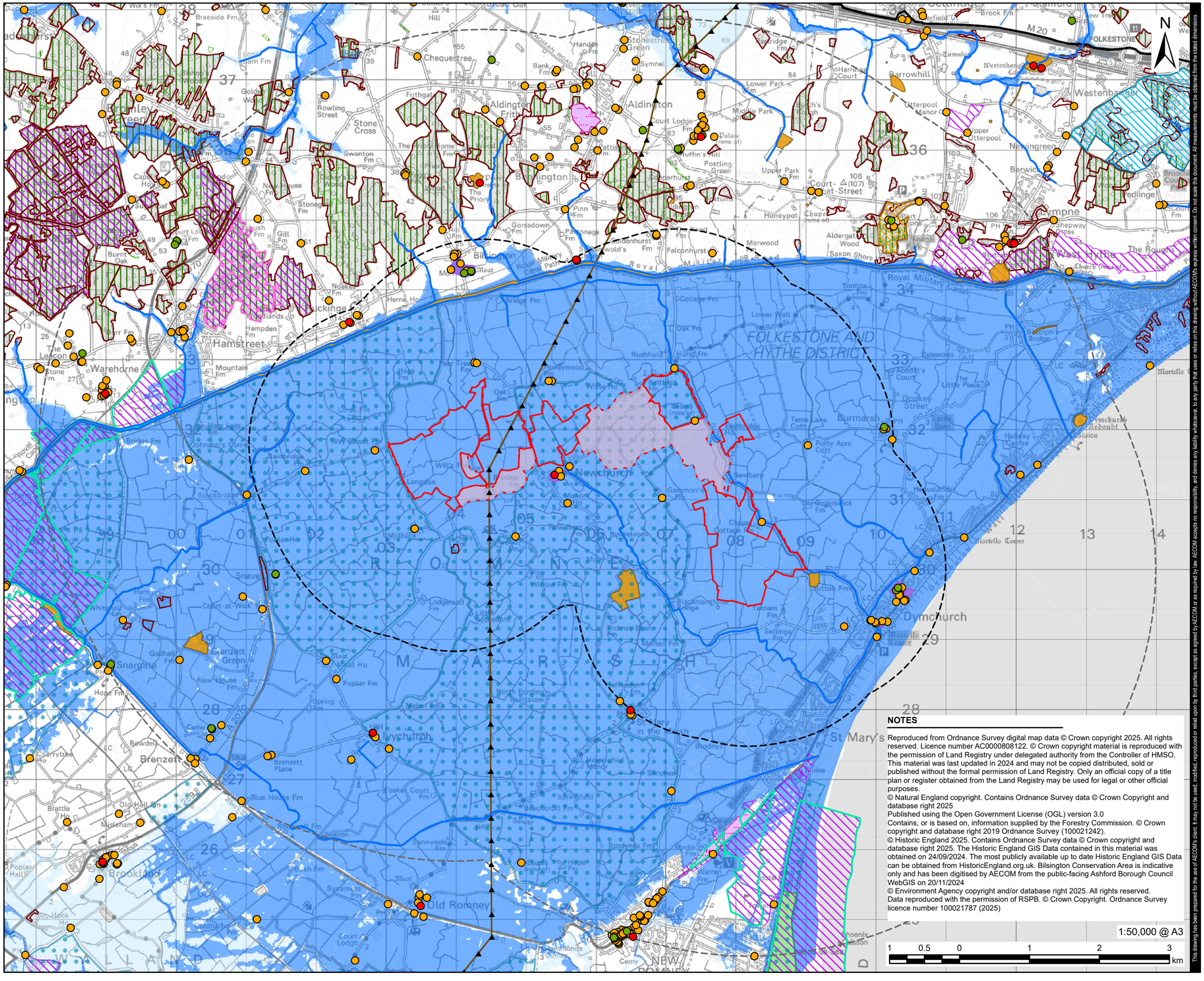

NOTES

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 2km Buffer of the Energy Park Site
- 5km Buffer of the Energy Park Site
- Listed Building - Grade I
- Listed Building - Grade II*
- Listed Building - Grade II
- Main Rivers
- Tower (National Grid)
- Overhead Line (National Grid)
- Cable (National Grid)
- Conservation Area up to 3km
- Registered Parks and Gardens - Grade II*
- Registered Parks and Gardens - Grade II
- Scheduled Monument
- National Nature Reserves (NNR)
- Local Nature Reserves (LNR)
- Sites of Special Scientific Interest (SSSI)
- Special Areas of Conservation (SAC)
- RSPB Important Bird Area (IBA)
- Ramsar
- National Forest Inventory
- Ancient Woodland
- Flood Zone 3
- Flood Zone 2

ISSUE PURPOSE

Scoping Report

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60736659

FIGURE TITLE

Environmental Features Plan

FIGURE NUMBER

Figure 2-1

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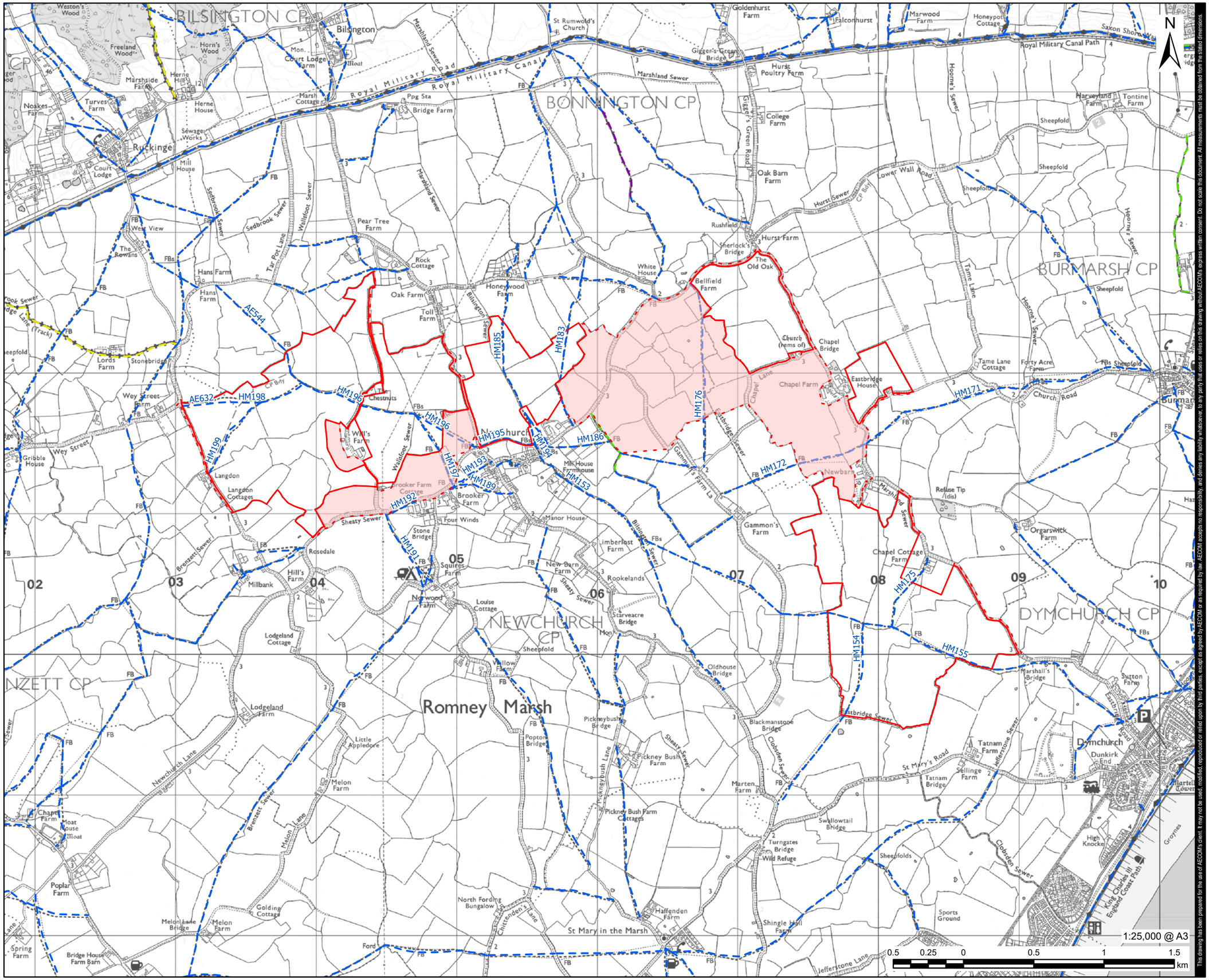
Figure 2-2: Public Rights of Way

Revision: 0 Drawn: DD Checked: AK Approved: GE Date: 2025-04-30

Filename: C:\Users\PringL\OneDrive - AECOM\Stepway Energy Park DCO - Digital Environment Only\02_Maps\Scoping Report\SEP_SCO_EIA.aprx



AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

AECOM Limited
Midpoint,
Alencon Link
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area

Public Rights of Way

- Bridleway
- Byway Open to all Traffic
- Footpath
- Restricted Byway

NOTES

ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Public Rights of Way

FIGURE NUMBER

Figure 2-2

2.3 Description of the Scheme

The Rochdale Envelope

2.3.1 The Planning Inspectorate's Advice Note 9: Using the 'Rochdale Envelope' ('Advice Note 9') (Ref 2-5) provides guidance regarding the degree of flexibility that may be considered appropriate within an application for development consent under the Planning Act 2008 (Ref 2-6). The advice note acknowledges that there may be aspects of the Scheme design that are not yet fixed. Therefore, it may be necessary for the EIA to assess likely worst-case variations so that all foreseeable significant environmental effects of the Scheme will be assessed.

2.3.2 The amount of flexibility required will depend upon the progress of the design at the stage that the detailed EIA work is undertaken. It is expected that the following aspects of the Scheme will still require design flexibility when the EIA is being carried out:

- The type of PV module mounting structure (panel orientation, fixed or tracker type);
- The arrangement of supporting infrastructure such as inverters, transformers and switchgear (decentralised or centralised options);
- The inclusion and arrangement of battery energy storage systems (decentralised or centralised options);
- The expanse, types, and location of ecological enhancement areas; and
- Location of access tracks.

2.3.3 It is necessary for there to be some flexibility built into the design of the Scheme when submitting the DCO application, in order that the detailed design of the Scheme can be informed by environmental and technical considerations, post-consent work, and to take advantage of innovation in technology. Where such flexibility or optionality is required, this is explained below.

2.3.4 It is therefore necessary for the technical assessments to assess an 'envelope' within which the works will take place. As such, the application and EIA will be based on maximum and, if relevant, minimum parameters. To remain in accordance with the EIA Regulations, it will be essential that the parameters are as 'limited' as possible so that the 'likely significant effects' are identified, rather than unrealistically amplified effects, which could be deemed to be unlikely. These parameters will be considered in detail by technical authors in the ES so that the realistic worst-case effects of the Scheme are assessed for each potential receptor. This is of particular importance to maintain flexibility due to the rapid pace of change in solar PV and battery storage technology.

Overview of Solar PV and Battery Energy Storage System Infrastructure

2.3.5 The Energy Park Site infrastructure will be as follows:

- Solar photovoltaic (PV) modules;
- PV module mounting structures (fixed tilt or tracker type);

- DC/AC Inverters (string or central type);
- Transformers (Low Voltage (LV) / Medium Voltage (MV) & MV / High Voltage (HV));
- LV, MV, and HV switchgear;
- MV Stations;
- Switchgear buildings;
- Battery Energy Storage System (BESS);
- Underground LV and MV cabling;
- Underground HV cabling;
- Onsite substation (grid transformers and associated HV infrastructure);
- Combiner boxes;
- Control building(s);
- Storage building(s);
- Construction and welfare compounds;
- Welfare building(s);
- Weather monitoring stations;
- Fencing and security measures;
- CCTV and emergency lighting;
- Main accesses and access tracks;
- Surface water drainage; and
- Biodiversity and ecological enhancement areas.

2.3.6 The Scheme will also include a 400kV export circuit connecting the onsite substation to the proposed NGET substation (within a Grid Connection Route defined when the NGET substation location is known). The circuit may comprise three power cables, earthing, and fibre optic cables.

2.3.7 During the construction phase, one or more temporary construction compound(s) will be required as well as temporary roadways to facilitate access to all land within the Site. Further information on construction activities is provided in Section 2.4.

2.3.8 In areas around the PV arrays and on other land within the Energy Park Site, opportunities for landscaping, biodiversity enhancements, and habitat enhancement and management will be explored.

Solar PV Infrastructure

Solar PV Modules

2.3.9 Solar PV modules convert sunlight into electrical current (as direct current, DC). Individual modules are typically up to 2.5m long and up to 1.3m wide and typically consist of a series of photovoltaic cells beneath a layer of toughened glass. The module frame is typically built from anodised aluminium.

2.3.10 Each module could have a DC generating capacity of between 400 and 900 watts (W) or more depending on advances in technology at the time of construction (the latest technology currently widely available is 750 W). The modules are fixed to a mounting structure in rows and electrically connected together, known as ‘strings’. Various factors will help to inform the number and

arrangement of modules in each string and row, and it is likely some flexibility will be required to accommodate future technology developments, as referenced in paragraph 2.3.3.

PV Module Mounting Structures

2.3.11 There are various types of PV module mounting structures. While fixed tilt (FT) south facing mounts are the most commonly seen on solar PV facilities in the UK, the ongoing technological advances and economic considerations make other options increasingly more feasible. The type of the mounting structures to be used for the Scheme is currently being evaluated by the Applicant. The options considered at this stage are:

- Fixed tilt (FT); and
- Single axis tracker (SAT).

2.3.12 Modules will be mounted on a metal rack, known as a frame or table. The modules can be mounted onto the table in various configurations, such as 2 in portrait (2P), 2 in landscape (2L), 4 in landscape (4L), etc.

2.3.13 The frames are usually supported by galvanised steel poles typically driven 1 m into the ground depending on local geology, topography, etc. Other foundation types may be considered, depending on these factors.

2.3.14 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 will be influenced by various design factors such as local topography, flood risk, inter-row shading, and maintenance considerations. Where relevant, technical topics **Chapters 6 to 16** consider which option would represent the reasonable worst-case scenario and the potential scoping implications associated with this option.

Fixed Tilt Option

2.3.15 A Fixed Tilt (FT) system is the configuration where the modules are arranged in rows running from east to west, facing to the south at a fixed tilt as commonly seen on existing UK solar farms (see **Plate 2-1**). The indicative fixed tilt system parameters (subject to detailed design) are as follows:

- Fixed tilt: 15 to 35 degrees from horizontal;
- Height: up to 4 m (this allows for if the base of the panels need to be elevated above predicted flood water levels);
- Clearance above ground: approx. 0.8 m; and
- Spacing between rows: up to 9 m.

Plate 2-1: Fixed tilt modules, finished array

Single Axis Tracker Option

2.3.16 A Single Axis Tracker (SAT) system involves attaching the PV modules to a motorised table that can rotate in one axis, with the intention to do this in relation to the position of sun. This allows for optimal power generation throughout the day as the PV modules follow the path of the sun. This system usually tilts the tables around a horizontal north-south axis thus tracking the sun's movement from east to west, as illustrated in

2.3.17 **Plate** 2-2. The indicative tracker system parameters (subject to detailed design) are as follows:

- Tracking tilt range: +/-60 degrees from horizontal;
- Height at maximum tilt: up to 5.0 m;
- Clearance above ground at maximum tilt: approx. 0.5 m; and
- Spacing between rows: up to 9 m.

Plate 2-2: Single axis tracker system, finished array

Supporting Infrastructure: Inverters, Transformers and Switchgear

2.3.18 The supporting infrastructure comprises inverters, transformers, and switchgear.

2.3.19 Inverters are required to convert the DC electricity collected by the PV modules into alternating current (AC), which allows the electricity generated to be exported. Inverters are sized to deal with the level of voltage and current, which is output from the strings of PV modules. These may be in the form of string or central inverters, which are discussed below.

2.3.20 Transformers are required to step up the voltage of the electricity generated across the Energy Park Site from LV (typically 0.8 kV) produced by the PV panels to MV (typically 33 kV) to HV (400 kV) ready for transmission to the National Electricity Transmission System (NETS).

2.3.21 Switchgears are the combination of electrical disconnect switches, fuses, or circuit breakers used to control, protect, and isolate electrical equipment. Switchgear is used both to protect and isolate / de-energise equipment to allow work to be done and to clear faults downstream.

2.3.22 The Applicant is currently exploring the configuration of this supporting infrastructure which is described in the paragraphs below. As the Scheme design develops, the configuration of the supporting infrastructure will be determined based upon environmental and technical factors. A reasonable worst-case scenario will be assessed in the ES.

String Inverter Option

2.3.23 String inverters are typically small enough to be mounted underneath the PV modules, as shown on **Plate 2-3**. One string inverter unit could be utilised, for example, for every 12 strings. String inverters output is LV (0.8 kV).

Plate 2-3: Typical string inverters installed under PV modules

Central Inverter Option

2.3.24 Alternatively, central inverters may be used, and these could be sited at regular intervals throughout the PV field, near to access tracks. Central inverters are typically housed in containers with an approximate footprint of up to 14 m x 3 m and a height of up to 4 m. These may also contain transformers and switchgear. One central inverter unit could be utilised, for example, for every 120 strings.

Central inverters output is typically MV (33 kV). **Plate 2-4** shows a typical outdoor central inverter.

Plate 2-4: Typical central inverters

Transformers and Switchgear

2.3.25 LV electricity from the inverters is fed into MV Stations which consist of transformers and switchgear. LV electricity passes through 33/0.8 kV transformers and exits through switchgear into 33 kV cables.

2.3.26 MV Stations are typically packaged in containers with an approximate footprint of up to 14 m x 3 m and a height of up to 4 m, as illustrated on **Plate 2-5**. MV Stations will normally be mounted on concrete foundations, although other types of foundations may be used depending on the local geology.

2.3.27 MV Stations will be distributed throughout the Energy Park Site. The exact number of MV Stations is subject to detailed design; however, it is estimated to be approximately 100.

Plate 2-5: Example MV station

2.3.28 Transformers and switchgear may also be packaged in standalone units. Standalone transformers could have a footprint of up to 7 m x 4 m and with a height of up to 4 m. Transformer cabins are typically externally finished in keeping with the prevailing surrounding environment, often with a green painted finish. Standalone switchgear buildings will be housed in a cabin of up to 14 m x 3 m and up to 4 m in height.

Battery Energy Storage System Facility

2.3.29 The Scheme will include a Battery Energy Storage System (BESS). The BESS is designed to provide peak demand and grid balancing services to the NETS. It will do this primarily by allowing excess electricity generated from the solar PV panels to be stored and dispatched at strategic times of the day, when required.

2.3.30 There are a number of different designs for the BESS that will be explored as part of the iterative design process. The maximum height of the BESS units will be 4.5 m. Full maximum parameters for the compound layouts will be defined in the DCO application in order to present and assess a worst case in the ES.

2.3.31 Batteries will likely be housed within enclosures (also referred to as units). The precise number of units will depend upon the level of power capacity and duration of energy storage that the Scheme will require; investigations are ongoing to determine this. There needs to be an element of flexibility in this aspect as both the technology and business models are evolving.

2.3.32 BESS units will be accompanied by MV stations which could contain inverters, transformers, and switchgear. These may be of similar dimensions to the BESS units. Multiple BESS units could be grouped together and electrically connected to one MV station, known as a BESS group or BESS block.

2.3.33 As the system is AC-coupled, the BESS, transformers, and dedicated switchgear will be located together in one or more ‘centralised’ areas, which can be installed, operated, and maintained easily.

2.3.34 Each BESS unit will require a heating, ventilation and air conditioning (HVAC) system to allow for the efficiency and safety of the batteries. These are typically integrated, although may also be external to the containerised unit located either on the top of the unit or attached to the side of the unit. If this uses air to heat and cool it will have a fan built into it that is powered by auxiliary power.

2.3.35 Switchgear buildings operates, isolates, and controls the power from the BESS. This would comprise buildings with footprint of approx. 39 m x 7 m and height of up to 7 m. These would be located within the BESS compound.

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

Onsite and Offsite Cabling

2.3.37 LV and MV onsite electrical cabling is required to connect the various elements of the Scheme and the Sites.

2.3.38 Cabling between PV modules and the inverters (typically 1.5 kV) will typically be required to be above ground level, fixed to the mounting structure, and then underground if required (between tables to the inverter’s input). All other on-site

cabling will likely be underground. An example of underground cable installation is shown in **Plate 2-6**.

2.3.39 MV cables (typically 33 kV) are required between the transformers / switchgear and the onsite substation. These cables will start within a Site (onsite) and extend between the Sites (within the Interconnecting Cable Corridor Search Area) connecting them to the onsite substation as required. These cables will be buried underground. The dimension of the trenches will vary depending on the number of cables or ducts they contain but could be typically up to 3.5 m in width and up to 1.5 m in depth.

2.3.40 Data cables (typically fibre optic) will also be installed, typically alongside electrical cables, in the same trenches, in order to allow for the monitoring and control during operation.

Plate 2-6: Example underground cable installation

Onsite Substation

2.3.41 An onsite 400 / 33 kV substation will receive the electricity from the PV fields and BESS compounds and step up the voltage to 400 kV ready to be exported to the proposed National Grid Substation via 400 kV cables.

2.3.42 A typical 400 / 33 kV substation is approximately 150 m x 100 m with equipment up to 12 m in height, securely fenced with a separate control building measuring 20 m x 15 m and up to 4.5 m in height.

Electricity Export Connection

2.3.43 The Scheme aims to connect into a proposed NGET substation along the Sellindge to Dungeness OHL, which could be in proximity to the Energy Park Site as part of the OHL crosses Site 1. The electricity will be exported via a 400 kV circuit.

2.3.44 The circuit may comprise three power cables, earthing, and fibre optic cables. The cables will be buried below ground at approximately 1.5 m depth. Underground cables are typically installed using an open trench method requiring 20 – 40 m working corridor, with trench widths approximately 2 m wide

and 1.5 m deep. At certain locations, such as river, railway, and road crossings, trenchless methods of cable installation may be required. Trenchless methods include horizontal directional drilling (HDD), micro-tunnelling, and boring.

2.3.45 The Scheme will not feature any new OHL.

Operations and Maintenance

2.3.46 Permanent operations and maintenance storage areas will be established onsite. This would comprise welfare buildings approximately 10.0 m x 15.0 m and up to 4.5 m in height, parking provisions (normal bays, EV bays, and disabled bays as necessary), and spares buildings approximately 10.0 m x 15.0 m and up to 6.5 m in height. These would be strategically located to enable good access to welfare from anywhere on the Energy Park Site.

Fencing and Security

2.3.47 A security fence will enclose the operational areas of the Energy Park Site. The fence is likely to be up to 3.0 m in height. It is anticipated that this fencing could be of palisade or 358 mesh type (**Plate 2-7**). PRoWs that cross the Energy Park Site will be preserved with the fence installed on both sides with an appropriate offset to the PRoW, and possibly screening measures such as vegetation.

2.3.48 Pole mounted closed circuit television (CCTV) systems, infrared cameras, and motion sensors are also likely to be deployed around the perimeter of the operational areas of the Energy Park Site. It is anticipated that these would be up to 5 m in height. The CCTV systems will capture an area outside of and along the fence line.

2.3.49 Lighting may be installed on the CCTV columns, around the Energy Park Site perimeter, and throughout the Energy Park Site near to critical equipment (such as MV stations, welfare buildings, etc.). Lighting is expected to be used only in emergency situations, security situations or during critical maintenance activities.

Plate 2-7: Stock Proof Fencing and CCTV pole

Access Tracks

2.3.50 Access tracks will be constructed across the Energy Park Site. These would typically be up to 6 m wide compacted stone tracks with 1:2 gradient slopes on either side (where required). An example access track within a solar PV facility is shown on **Plate 2-8**.

Plate 2-8: Typical crushed stone access track laid on hardcore and geotextile

Surface Water Drainage

2.3.51 The detailed operational drainage design will be carried out pre-construction so that drainage of the land to the present level is maintained. It will follow either the design of a new drainage system taking into account the proposed new infrastructure (access tracks, cable trenches, structure foundations) to be constructed, or, if during the construction of any of the infrastructure, there is any interruption to existing schemes of land drainage, then new sections of drainage will be constructed.

2.3.52 The design of new drainage systems will be based on the Flood Risk Assessment (FRA) and hydrological assessment to be undertaken. Infiltration drainage design will be in accordance with Building Research Establishment (BRE) Digest 365: Soakaway Design and Sewers for Adoption (Ref 2-6) and infrastructure will be placed at least 10 m away from watercourses where possible.

Biodiversity and Landscaping

2.3.53 The Scheme will involve field boundary enhancement and planting of seed mixes along the perimeter of the solar PV area (see **Plate 2-9** as an example). Planting of hedges and small trees will also be used to provide screening where suitable.

2.3.54 The enhancements and planting would increase biodiversity throughout the landscape and contribute to the Scheme achieving Biodiversity Net Gain (BNG) in line with the requirements of the Environment Act 2021 (Ref 2-8), the National Planning Policy Framework and local planning policy. The Scheme

design will aim to achieve BNG levels greater than the minimum 10% required by the Environment Act 2021 (Ref 2-8).

Plate 2-9: Landscaped solar PV facility

2.4 Construction Programme and Activities

Construction Programme

2.4.1 Subject to being granted consent and following a final investment decision, construction could start in Q3 2030, and will require an estimated 24-36 months, with operation 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.

Indicative Construction Activities

2.4.2 The types of construction activities that are likely to be required include (non-exhaustive and not necessarily in order):

- Site preparation to include:
  - Import of construction materials, plant, and equipment to site;
  - The establishment of construction compound(s);
  - 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;
  - Marking out the location of the infrastructure;
  - Earthworks including cut and fill as required;

- Drainage and silt management works;

- Solar PV and BESS construction to include:
  - Import of components to site;
  - Construction of foundations;
  - Erection of module mounting structures;
  - Mounting of modules;
  - Installation of electric cabling;
  - Installation of MV stations;
  - Installation of transformers;
  - Installation of BESS units;
  - Construction of substation compound;
  - Construction of site buildings and other infrastructure;

- Cable installation:
  - The establishment of mobilisation areas and running tracks;
  - Temporary construction compounds (to be located on or near cable route, which are yet to be determined);
  - Stripping of topsoil in sections;
  - Trenching in sections;
  - Appropriate storage and capping of soil;
  - Appropriate construction drainage with pumping where necessary;
  - Sectionalised approach of duct installation;
  - Excavation and installation of jointing pits;
  - 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.);

- Testing and commissioning; and
- Site reinstatement with habitat and ecological enhancement.

2.4.3 It is anticipated that construction activities will be carried out in a sequential manner with construction teams responsible for specific type of works moving from one site area to the next. In this case the works would start with fencing, followed by frame installation, then panel installation, then cabling and connection. It may be possible to generate power from some plots whilst others are being built, providing the onsite substation and cabling is in place, as well as other safety and security measures.

2.4.4 Temporary construction compounds comprising parking, storage, staff welfare, and waste management will be located within the Site Boundary.

Construction Staff

2.4.5 Based on AECOM's experience of other similar sized solar projects, it is currently estimated that up to a peak 400 staff per day will be required to work on the Scheme during the peak construction period. This is likely to include construction of the onsite substation, export cabling, connection to the proposed NGET Substation (Grid Connection), and building of some of the solar PV and BESS compounds. This is expected to be a worst case based on the most rapid build out programme, and there will be noticeably fewer workers outside peak activities which would be an average of 100 staff per day.

Construction Traffic and Site Access

2.4.6 Based on the preliminary construction material and equipment requirements, it is anticipated that there could be approx. 40 heavy goods vehicle (HGV) movements per day during 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.

2.4.7 Provisional construction site access are discussed in **Chapter 14: Transport and Access** and shown in **Figure 14-1: Existing Highway Network and Proposed Access Points**. All construction access will be confirmed as the Scheme design progresses and in consultation with the relevant authorities.

2.4.8 It is anticipated that the existing local roads will be utilised, subject to suitability of these roads to carry HGVs. Many of the roads around the Energy Park 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 Scheme design develops and will be assessed as appropriate.

2.4.9 A Framework Construction Traffic Management Plan (CTMP) will be developed and submitted with the application.

Construction Environmental Management

2.4.10 A Framework Construction Environmental Management Plan (CEMP) will accompany the DCO application, which will describe the framework of mitigation measures identified in the ES to be followed and to be carried forward to a Detailed CEMP prior to construction. The aim of the CEMP is to reduce nuisance impacts from:

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

2.4.11 The ES will likely identify other environmental mitigation and management measures which may include:

- Measures to manage surface water quality, such as water pollution controls for oils and hydrocarbons;
- Avoidance of sensitive areas during bird breeding seasons;
- Protecting any sensitive habitats and species identified during surveys;
- Measures to reduce air pollution;
- Protocols in the event of any emergencies; and
- Management of access and PRoW.

2.4.12 The detailed CEMP will be produced by the appointed construction contractor and consulted upon with the local planning authorities 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.

2.4.13 Contracts with companies involved in the construction works will incorporate environmental control, health and safety regulations, and current guidance so that construction activities are sustainable and that all contractors involved with the construction stages are committed to best practice and meet all relevant environmental legislation including: Control of Pollution Act 1974 (COPA) (Ref 2-9), Environment Act 1995 (Ref 2-10), Hazardous Waste Regulations 2005 (as amended) (Ref 2-11) and the Waste (England and Wales) Regulations 2011 (Ref 2-12).

2.4.14 Records will be kept and updated regularly, so that all waste transferred or disposed of has been correctly processed with evidence of signed Waste Transfer Notes (WTNs) that will be kept on-site for inspection whenever requested. Furthermore, all construction works will adhere to the Construction (Design and Management) Regulations 2015 (CDM) (Ref 2-13).

Site Reinstatement and Habitat Creation

2.4.15 Following construction, a programme of site reinstatement and habitat enhancement will commence. A Framework Landscape and Ecology Management Plan (LEMP) will be submitted as part of the DCO application, and this document will set out the principles for how the land will be managed throughout the operational phase, following the completion of construction. The Framework LEMP will specify mitigation and enhancement measures that would support any BNG. A detailed LEMP will be produced following grant of the DCO and prior to the start of construction (for example, as part of a requirement attached to the DCO).

2.5 Operational and Maintenance Activities

2.5.1 During the operational phase, activity on the Energy Park Site will be minimal and would be restricted principally to sheep grazing (where possible), vegetation management, equipment maintenance and servicing, replacement of any components that fail, periodic inspections, and monitoring to allow for the continued effective operation of the Scheme.

2.5.2 Operational Site access will be determined as the Scheme design progresses and in consultation with the relevant highways authorities.

2.5.3 It is anticipated that there will be approximately 10 full time workers employed onsite carrying out maintenance and upkeep during the operational phase. This is indicative and, depending on the nature and complexity of any maintenance activity, could require more workers and equipment.

2.5.4 The Applicant will explore the option of utilising the solar PV areas for sheep grazing during the Scheme operation, subject to confirmation of the absence of any restrictive covenants that would prevent such use, or any other restriction.

2.5.5 Sheep grazing on solar PV facilities is successfully used in the UK and carries with it multiple benefits such as soil health improvement and biodiversity enhancement. Sheep are able to move safely between and under the PV modules, and shelter under the PV modules from sun or rain. The ES will demonstrate that this measure is secured in respect of the operation of the Scheme. An example of sheep grazing within a solar PV facility is shown in **Plate 2-10.**

Plate 2-10: Sheep grazing on a solar PV facility

2.6 Decommissioning

2.6.1 The design life of the Scheme is 40 years. It is expected that throughout this period, faulty or damaged PV modules and other components will require replacement as part of the normal maintenance. The equipment will be reviewed at the end of its design life to determine whether it remains in a viable condition to continue operation after that time.

2.6.2 When the operational phase ends, the Energy Park Site will require decommissioning. All PV modules, mounting poles, inverters, transformers, switchgear, BESS, buildings, and fencing would be removed from the Energy Park Site and recycled or disposed of in accordance with good practice and market conditions at that time. The Energy Park Site will be returned to its original condition after decommissioning.

2.6.3 The mode of cable decommissioning for the interconnecting cables and possible grid connection will be dependent upon government policy and best practice at that time. Currently, the most environmentally acceptable option is generally considered to be leaving the cables in situ, as this avoids disturbance to overlying land and habitats and to neighbouring communities. 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.

2.6.4 The impact assessment will be based on the worst-case parameters for each technical topic. As further described in paragraph 5.5.13, a Framework Decommissioning Environmental Management Plan (DEMP) will be prepared as part of the EIA and will set out the general principles to be followed in the decommissioning of the Scheme. A detailed DEMP be prepared and consulted upon with the relevant authorities at that time of decommissioning, in advance of the commencement of decommissioning works, and would include timescales and transportation methods.

2.6.5 Decommissioning is expected to take approximately 24 months and could be undertaken in phases.

2.6.6 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 Scheme at the end of its operational life is uncertain at present as the engineering approaches to decommissioning will evolve over the operational life of the Scheme. Assumptions will therefore be made where appropriate.

2.6.7 Decommissioning would be undertaken safely and with regard to the environmental legislation at the time of decommissioning, including relevant waste legislation.

3. Alternatives Considered

3.1 Requirement

3.1.1 Schedule 4, paragraph 2 of the EIA Regulations (Ref 3-1) requires that the ES must describe the reasonable alternatives considered by the developer as part of the EIA process. These alternatives may include considerations such as development design, technology, location, size and scale, along with the environmental and social impacts associated with these. The ES must also contain an indication of the main reasons for selecting the chosen option.

3.1.2 Paragraphs 4.3.22 to 4.32.29 of NPS EN-1 (Ref 3-2) give further guidance on how alternatives should be considered by the SoS when making a decision on an application for a DCO.

3.1.3 Paragraph 4.2.24 states "*The Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals.*"

3.2 Approach

3.2.1 For the Scheme, the alternatives analysis is likely to focus on different Scheme layouts, sizing, technologies and design parameters.

3.2.2 A 'no development' alternative would not deliver the additional electricity generation capacity and other benefits associated with the Scheme which include, but are not limited to, landscape and habitat enhancement, a positive climate impact, and increases in soil resource and land quality. The 'no-development' scenario will therefore not be discussed as a 'considered alternative' 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. future baseline conditions in relation to the impact assessment.

3.2.3 The ES will include a description of the alternatives relevant to the Scheme 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 environmental effects. This will include alternative Site layouts, which will be considered during the design process. A more detailed appraisal of the options considered will be presented as part of the ES, discussing the rationale for the final site layout and design selection, as well as explaining the flexibility sought within the consent in this regard.

3.2.4 Further refinement will be undertaken as the Scheme design progresses to determine the DCO application boundaries and layout for the Site submitted with the DCO application.

4. Consultation

4.1 Context

4.1.1 Effective stakeholder engagement and consultation is intrinsic to the Planning Act 2008 (Ref 4-1) and fundamental to the success of the Scheme.

4.1.2 The process of consultation is critical to the development of a comprehensive and balanced ES. 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 mitigation measures to be incorporated into the project design thereby limiting adverse effects and enhancing environmental benefits.

4.1.3 The Scheme has a wide range of stakeholders (including landowners, statutory consultees, local communities and specialist interest groups) with differing interests that will require varied levels of consultation. Specific communication activities therefore need to be focussed to determine the needs of particular individuals and groups. This requires an understanding of the stakeholders and their interests in the Scheme.

4.1.4 Stakeholder consultation for the Scheme is based on the following principles:

- Early and ongoing consultation to inform and influence the design process;
- Seeking feedback in the iterative design process and taking this feedback into consideration;
- Building of long-term relationships with key stakeholders throughout the different stages of the Scheme to help better understand their views;
- Where possible and practicable concerns are addressed; and
- Appropriate statutory consultation is undertaken in compliance with requirements of the Planning Act 2008 (Ref 4-1), EIA Regulations (Ref 4-1) and associated guidance.

4.2 DCO Consultation Requirements

4.2.1 The DCO process currently has a number of statutory requirements regarding consultation. These requirements stipulate that certain stakeholder groups and the community must be consulted as part of the pre-application process, as set out in Sections 42, 47 and 48 of the Planning Act 2008 (Ref 4-1) and Regulation 13 of the EIA Regulations (Ref 4-2). Further requirements set out how the Scheme must be publicised, and specific documents produced, including a Statement of Community Consultation (SoCC), Preliminary Environmental Information (PEI) Report and a Consultation Report.

4.2.2 The Applicant will be holding a non-statutory consultation part way through the undertaking of the EIA to inform the community of its plans and seek their feedback. Feedback will be recorded and documented in a Consultation Report. Feedback from both the non-statutory consultation and the EIA process will feed into the statutory consultation.

4.3 Regulatory Engagement to Date

4.3.1 A number of meetings with statutory consultees have already taken place to provide an introduction to the proposals, including:

- Natural England;
- Environment Agency;
- Historic England;
- Ashford Borough Council;
- Folkestone and Hythe District Council;
- Kent County Council; and
- Kent Downs National Landscape Unit.

4.4 Scoping Consultation

4.4.1 The Planning Inspectorate (on behalf of the SoS) will consult on this Scoping Report under the EIA Regulations (Ref 4-2). 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).

4.4.2 Under Regulation 10(6) of the EIA Regulations (Ref 4-2), the SoS must undertake consultation with statutory consultation bodies, including environmental bodies (such as Natural England, the Environment Agency and Historic England) and relevant planning authorities (Ashford Borough Council, Folkestone and Hythe District Council and Kent County Council) before adopting a Scoping Opinion.

4.5 Non-Statutory Consultation

4.5.1 A non-statutory consultation will run between May 2025 to July 2025 to introduce stakeholders to the Scheme and give them an opportunity to share their views.

4.6 Public Statutory Consultation

4.6.1 In accordance with Section 47(1) of the Planning Act 2008 (Ref 4-1) for an NSIP, the Applicant will prepare a Statement of Community Consultation (SoCC). This will outline how the Applicant intends to consult with the local community about the Scheme, including, in accordance with Regulation 12 of the EIA Regulations (Ref 4-2), and how it intends to publicise and consult on the Preliminary Environmental Information (PEI). The Applicant is required to consult the local authorities identified pursuant to section 42 and 43 of the Planning Act 2008 on the draft SoCC and they will have a period of at least 28 days following receipt of the request to comment on a draft SoCC prior to its publication for inspection by the public.

4.6.2 SSE will undertake a further round of statutory public consultation, which will include the Preliminary Environmental Information Report. The Applicant will publish the proposed application in the prescribed manner, including a deadline for receipt of responses to the publicity, as is required under Section 48 of the Planning Act 2008.

5. Environmental Impact Assessment Methodology

5.1 Introduction

5.1.1 The 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 DCO pre-application process;
- Consideration of relevant local, regional and national planning policies, guidelines and legislation relevant to EIA;
- Consideration of technical standards for the development of 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.

5.1.2 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 made will be clearly identified.

5.1.3 The EIA process is designed to be capable of, and sensitive to, changes that occur as a result of design development, including any mitigation measures that are incorporated during the EIA. This will be particularly important for this EIA as the design and layout of the Scheme 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 Scheme that is the subject of the EIA and DCO application will be materially different from the Scheme that is the subject of this EIA Scoping Report, as its location, scale, design and use of technology, etc., will all be within the parameters set out in **Chapter 2: The Scheme and Scheme Location.**

5.1.4 Impacts will be considered on the basis of their magnitude, duration, and reversibility. Cumulative and combined effects will also be considered where appropriate. Significance will be evaluated on the basis of the scale of the impact and the importance or sensitivity of the receptors, in accordance with standard assessment methodologies. More information on the assessment methodology is provided in Section 5.6.

5.1.5 Where potentially significant adverse environmental effects are identified in the assessment process, measures to mitigate these effects will be identified as far as practicable. A reassessment of the potential significant adverse effects will then be undertaken to determine the resulting environmental effects. Detail will also be provided on how any mitigation measures which have been identified will be secured within the application or the design of the Scheme.

5.2 Determining the Baseline Conditions

5.2.1 In order to predict the potential environmental effects of the Scheme, it will be necessary to determine the environmental conditions that currently exist within the Site boundary and surrounding area, in the absence of the Scheme. These are known as 'baseline conditions'.

5.2.2 Detailed, environmental baseline 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 GroundSure, EnviroCheck, Historic Environment Record, Kent & Medway Biological Records Centre (KMBRC);
- Baseline site surveys; and
- Environmental information submitted in support of other planning applications for developments in the vicinity of the Scheme.

5.2.3 Consideration will also be given to how the baseline conditions would evolve in the absence of the Scheme, known as the 'future baseline'. As described in **Chapter 3: Alternatives Considered**, this involves the consideration of the 'no development' or 'do nothing' scenario and, where required, allows impact assessments to consider and compare the scale of environmental changes, such as noise levels, with and without the Scheme in place at both the construction and operational phase.

5.3 Mitigation

5.3.1 Regulation 14, Part (2 c) of the EIA Regulations requires that the ES provides 'a description of any features of the 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.

5.3.2 The Scheme will adopt a standard hierarchical approach to identifying mitigation requirements as outlined by IEMAs EIA Mitigation Guidance (Ref 5-1):

- **Avoid:** In the first instance, mitigation should seek to identify and avoid potential environmental and social impacts for example, by siting PV panels away from a sensitive receptor;
- **Prevent:** Where avoidance (e.g. site change) is not possible, action should be taken to prevent significant effects from occurring by removing the impact at source or intervene in its pathway to prevent it affecting the receptor for example, by rerouting the interconnecting cable corridors;
- **Reduce:** If the effect is unavoidable, mitigation measures should be implemented which seek to reduce the significance of the effect for example, the use of a noise barriers to reduce construction noise at 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.

5.3.3 Mitigation measures fall into two categories: 'embedded mitigation measures,' which are built into the design of the Scheme; and 'additional mitigation measures' which are in addition to project design commitments (Ref 2-9).

Embedded Mitigation Measures

5.3.4 The Scheme 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 Scheme, for example through the appropriate routeing and siting of infrastructure.

5.3.5 Once these measures are incorporated into the design, they are termed 'embedded measures'. Embedded measures relevant to the construction phase will be described within each technical ES chapter and listed within **Appendix D: Environmental Mitigation and Commitments Register** that accompanies this scoping report. For the operational phase, such embedded measures will be represented primarily in the design. Embedded measures are therefore either incorporated into the design from the outset or identified through the assessment process.

5.3.6 The ES will also incorporate industry standard control measures, which are common practice on construction sites, into the embedded measures. These will be described in each technical chapter and included in a Framework Construction Environmental Management Plan (CEMP), which will be prepared as part of the DCO application. The Framework CEMP provides a framework within which the appointed Contractor (including any sub-contractors or suppliers involved in the works) will plan, implement and deliver environmental management, mitigation and monitoring requirements during the construction phase of the Scheme. The Framework CEMP will be developed into a detailed (or construction issue) CEMP by the appointed Contractor prior to the start of construction. It is intended that the detailed CEMP will be a 'live' document and will be updated as and when there are changes to the project team or should additional information become available.

Additional Mitigation Measures

5.3.7 The ES assesses effects with embedded measures in place. Where significant adverse effects are identified after considering these embedded measures, 'additional mitigation measures' are proposed to further avoid or reduce the identified adverse environmental effects. These additional measures are presented within each of the technical chapters, where required, and may include measures beyond industry standard controls such as bespoke/ site specific measures like temporary fencing to prevent glint and glare until the vegetation planting has properly established. These measures will also be discussed within the relevant framework environmental management plan(s).

5.4 Timescales and Assessment Years

Construction Phase Effects

5.4.1 For the assessment, construction phase effects will be taken to be those for which the source begins and ends during the construction stage, and the effects do not endure beyond the completion of the construction phase. This covers sources of effects 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 aspects of construction related effects will last for 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.

Operational Phase Effects

5.4.2 For the assessment, these are the effects that, although they may start during construction, are either permanent, endure for a substantial period beyond construction, 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 (unless otherwise specified within a technical chapter):

- Short term — endures for up to 12 months after construction or decommissioning;
- Medium term — endures for 1 to 5 years;
- Long term — endures for more than 5 years;
- Reversible long-term effects — long-term effects, which endure throughout the lifetime of the Scheme, but which cease once the Scheme has been decommissioned (operational effects will all fall into this category); and
- Permanent effects — effects which cannot be reversed following decommissioning (e.g., where buried archaeology is permanently removed during construction).

5.4.3 Environmental management and mitigation measures for the operational phase of the Scheme will be planned, implemented and delivered through an Operational Environmental Management Plan (OEMP) to be prepared following grant of the DCO and secured through a requirement in the DCO, in line with the Framework OEMP which will be prepared for the application.

Decommissioning Phase Effects

5.4.4 For the assessment, decommissioning phase effects will be taken to be those for which the source begins and ends during the decommissioning stage, and the effects do not endure beyond the completion of the decommissioning phase. This covers sources of effects such as traffic, noise and vibration from decommissioning activities, dust generation, site runoff, mud on roads, risk of

fuel/oil spillage, and the visual intrusion of plant and machinery on-site, for example. As with construction phase effects, some aspects of decommissioning will endure for longer than others.

Assessment Years

5.4.5 In order to enable the EIA to be robust in considering the likely significant effects of the Scheme, appropriate assessment scenarios and years have been identified and are discussed below.

5.4.6 The peak construction year for the purpose of the EIA is anticipated to be during 2031. This is based on the assumption that the Scheme is built out rapidly (over approximately 24 to 36 months), which is a worst case from a traffic generation point of view because it compresses the trip numbers into a shorter duration. This would therefore also be the worst case in terms of effects on drivers, pedestrians and cyclists, and traffic-related air quality and noise effects.

5.4.7 The peak construction assessment year will be reviewed as the anticipated construction programme is considered in more detail during design development. A full justification for the reasonable worst-case scenario that is assessed will be provided in the ES.

5.4.8 The proposed operational assessment year for the purpose of the EIA is 2033. This is expected to be the earliest that the Scheme will be fully built out and operational. However, as the Energy Park Site comprises of a number of Sites and due to the anticipated sequential nature of the construction activities, it is possible that some plots may be operational (generating power) whilst others are still being built, as further detailed in Section 2.4. Any impacts associated with overlap of phases will be explored in the ES.

5.4.9 A future year of 2048 will also be considered for specific topics including landscape and visual amenity, in terms of the maturation of vegetation (i.e. 15 years after the operational assessment year). This is a requirement of the Landscape Institute guidelines, which is discussed further in Sections 9.6.1 and 9.6.7.

5.4.10 The decommissioning assessment year for the purpose of the EIA is 2073, as the DCO sought is for a 40-year operational lifespan.

5.5 Assessment of Impacts and Significance of Effects

5.5.1 The evaluation of the significance of an effect is important; it is the 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 Scheme is a matter for the SoS to determine, having taken into account, amongst other matters, the environmental information that is set out in the ES, including all likely beneficial and adverse environmental effects. Where it has not been possible to quantify effects, qualitative assessments will be undertaken, based on available knowledge and professional judgment. Where uncertainty exists, this will be noted in the relevant topic chapter and valid assumptions made/a worst case approach taken as appropriate.

5.5.2 The significance of residual effects will be determined by reference to criteria for each assessment topic. Specific effect significance criteria for each technical discipline will be developed, giving due regard to the following:

- Scale of the impact (described as high, medium, low and very low);
- Effect duration (see Paragraph 5.4.2), 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 (described as high, medium, low and very low); and
- Compatibility with environmental policies.

5.5.3 Further guidance specifically relating to the magnitude of an impact, the sensitivity of a receptor and the significance of any resultant effects is provided in the following sections.

Magnitude of Change

5.5.4 General criteria for defining the magnitude of change are set out in **Table 5-1**. Key factors that influence this include:

- Scale of change – The scale of change refers to the degree of change to or from the baseline environment 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 will occur.

Table 5-1: 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 will be fundamentally changed.
Medium	Medium term loss and/or local level change (greater than the Project footprint) or alteration to one or more key elements/features of the baseline conditions such that post development character/composition of the baseline condition will be materially changed.

Magnitude	Criteria
Low	Short term, site specific and/or a minor shift away from baseline conditions. Changes arising from the alteration will be detectable but not material; the underlying character/composition of the baseline condition will 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 the Receptor / Resource

5.5.5 The sensitivity (or value) of a receptor or feature is characterised by the vulnerability to change, recoverability and importance of the receptor or feature (**Table 5-2**). Characterisation of the receptor is achieved by balancing out these three considerations to determine the receptor’s sensitivity:

- **Vulnerability** – The vulnerability of the receptor relates to its capacity to accommodate change i.e., the tolerance/intolerance of the receptor to change;
- **Recoverability** – The ability of the receptor to return to the baseline state before the Project impact caused the change; and
- **Importance** – The importance of the receptor or feature is a measure of the value assigned to that receptor based on biodiversity and ecosystem services, social value and economic value. Importance of the receptor is also defined within a geographical context, whether it is important internationally, nationally or locally.

Table 5-2: Sensitivity criteria

Sensitivity	Description
High	Receptor has little or no ability to absorb change without fundamentally altering its character. For example: • Receptor has low/no capacity to return to baseline conditions within the Project 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. • The receptor is a designated feature of a protected site or is rare or unique. • Receptor is economically valuable
Medium	Receptor has moderate capacity to absorb change without significantly altering its character, however some damage to the receptor will occur. For example: a. Receptor has intermediate tolerance to change. b. Medium capacity to return to baseline condition, e.g. >5 of up to 10 years. The receptor is valued but not protected.
Low	The receptor is tolerant to change without significant detriment to its character. Some minor damage to the receptor may occur. For example: • Receptor has 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. • The receptor is common and/or widespread.
Very Low	The receptor is tolerant to change with no effect on its character. The activity resulting from the Scheme does not have a detectable effect on survival or viability.

Evaluating the Significance of Effects

5.5.6 Having established the magnitude of change and the sensitivity of the receptor the significance of an effect can be assessed. The significance of residual effects will be evaluated with reference to available definitive standards, accepted criteria and legislation. For issues where definitive quality standards do not exist, significance will be based on the:

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

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

5.5.7 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 environmental topics, the following terminology will be used in the ES to define residual effects:

- **Adverse** – detrimental or negative effects to an environmental/socio-economic resource or receptor; or
- **Beneficial** – advantageous or positive effect to an environmental/socio-economic resource or receptor.

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

- **Negligible** (also referred to as 'neutral' for some topics) – imperceptible effects to an environmental/socio-economic resource or receptor;
- **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 ES technical chapter); and
- **Major** – considerable effect (by extent, duration or magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy or standards; considered significant.

5.5.9 Each of the technical chapters provides the criteria, including sources and justifications, for quantifying 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 judgment and expert interpretation to establish to what extent an effect is environmentally significant. **Table 5-3** illustrates an example of the classification of effects matrix (often referred to as a significance matrix).

Table 5-3: Example matrix to classify environmental effects

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

5.5.10 Following the classification of an effect, clear statements will be made within the topic chapters as to whether that 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 5-3** above), whilst minor and 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/frequency, whether it is reversible, and/or its likelihood of occurrence. A precautionary / worst case approach will be adopted so that the recorded effects are not understated. Generic definitions for the classification of effects are shown in **Table 5-4.**

Table 5-4: 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 project 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.

5.5.11 Where mitigation measures (both embedded and additional) are identified to eliminate, mitigate or reduce adverse impacts, these have either been incorporated into the design of the Scheme; translated into construction commitments; or operational 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 given above.

5.5.12 It should be noted that some technical disciplines may utilise different criteria when undertaking assessments due to differences in industry accepted guidelines and specifications. Where this is the case, the technical topic will discuss how the assessment methodology or classification of effects differs for the general EIA methodology as described in this section and provide justification.

Assessment of Construction and Decommissioning Effects

5.5.13 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), phasing and timing of construction and decommissioning activities. A Framework DEMP will set out the general principles to be followed in the decommissioning of the Scheme. Where specific information relating to decommissioning is not known it is anticipated that, as the operations required for each are very similar, construction information will be used.

5.5.14 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, etc. The purpose of this, is to focus on the scheme specific effects, rather than generic construction effects that can be easily addressed using generic best practice mitigation measures. Construction and decommissioning assumptions, including what has been assumed in terms of good practice measures, will be set out within the ES, and the Framework CEMP. The ES will identify and assess construction and decommissioning effects that are likely to remain after these mitigation measures are in place.

5.6 Cumulative Effects

5.6.1 In accordance with the EIA Regulations (Ref 5-2), 'cumulative effects' will be considered. By definition, these are effects that result from incremental changes caused by other past, present or reasonably foreseeable actions together (i.e., cumulatively) with the Scheme. A range of public sector and industry-led guidance is available on the approach to assessing cumulative effects but at present there is no single, agreed industry standard method. As the Scheme is classified as an NSIP, the approach to the assessment of cumulative effects follows the guidance set out in the Planning Inspectorate's Advice on Cumulative Effects Assessment (Ref 5-3).

5.6.2 For the cumulative impact assessment, two types of impact will be considered:

- The combined effect of individual impacts from the Scheme, for example where a single receptor if affected by noise and traffic disruption during the construction of the Scheme (these will be referred to as 'effect interactions'); and
- The combined effects of several development schemes which may, on an individual basis be insignificant but, cumulatively with the Scheme, have a new or different likely significant effect.

5.6.3 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 to the Scheme. The assessment will assume that publicly available information is accurate; the assessment is also reliant on collaboration with a range of statutory consultees, neighbouring

authorities and other developers to identify changes in information which may be pertinent to the assessment.

5.6.4 Where there are specific limitations associated with data, these will be highlighted as the assessment progresses.

Effect Interactions

5.6.5 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 5-4).

5.6.6 AECOM has reviewed these guidelines and has developed an approach which uses the defined residual effects of the Scheme to determine the potential for effect interactions that lead to combined effects.

5.6.7 The EIA will predict beneficial and adverse effects during construction, operation, and decommissioning of the Scheme, 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.

5.6.8 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 effect interactions as, by virtue of their definition (see **Table 5-4**), they are considered to be imperceptible effects to an environmental / socio-economic resource or receptor.

Cumulative Effects with Other Developments

5.6.9 The Planning Inspectorate's Advice on Cumulative Effects Assessment (Ref 5-3) identifies a four-stage approach as follows:

Stage 1 – Establish the NSIP's ZoI and identify long list of 'other development'

5.6.10 A review of other developments will be undertaken, initially encompassing a 'zone of influence' (ZoI) defined by the environmental topic specialists to prepare a long list of 'other development'. At this stage, it is anticipated that the long list will be based on up to a 5 km area of search which aligns with the Study Area for landscape and visual amenity and the likely maximum range of any potential significant effects.

5.6.11 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.

5.6.12 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;
- Refused applications, subject to appeal procedures not yet determined;
- On the National Infrastructure Planning Programme of Projects;
- Development identified in the relevant Development Plan (and emerging Development Plans); and
- Development identified in other plans and programmes which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

5.6.13 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.

Stage 2 – Identify shortlist of 'other development' for Cumulative Effects Assessment

5.6.14 At Stage 2, to allow 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 the local planning authorities and consideration of the likely Zone of Influence (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 Matrix 1 (Appendix 1) of the Planning Inspectorate's Advice (Ref 5-3). For example, this will include whether the 'other developments' are within the ZoI and whether there is likely to be overlap in the timing of the construction phases.

Stage 3 – Information gathering

5.6.15 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'.

Stage 4 – Assessment

5.6.16 The assessment will include a list of those developments considered to have the potential to generate a cumulative effect together with the Scheme, and this will be documented in a matrix, in line with Matrix 2 of the Planning Inspectorate's Advice (Ref 5-3) which includes the following:

- A brief description of the development;

- An assessment of the cumulative effect with the Scheme;
- Proposed mitigation applicable to the Scheme including any apportionment; and
- The likely residual cumulative effect.

5.6.17 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 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.

5.7 Proposed Topics to be Included in the ES

5.7.1 The following chapters of this EIA Scoping Report present a discussion of the likely or potential significant environmental effects associated with the Scheme that are proposed will be considered as part of the EIA. The methodology and assessment criteria that will be used to assess the identified effects are also outlined. These topics comprise:

- Climate Change (Chapter 6);
- Cultural Heritage (Chapter 7);
- Ecology and Nature Conservation (Chapter 8);
- Landscape and Visual Amenity (Chapter 9);
- Materials and Waste (Chapter 10);
- Noise and Vibration (Chapter 11);
- Socioeconomics and Land-Use (Chapter 12);
- Soils and Agricultural Land (Chapter 13);
- Transport and Access (Chapter 14);
- Water Environment (Chapter 15); and
- Other Environmental Topics (Chapter 16).

5.7.2 **Chapter 16 Other Environmental Topics** provides a summary of environmental topics which have been considered during the preparation of this Scoping Report, and for which standalone chapters are not anticipated to be required in the ES. For these topics it is considered, from previous experience, that the demonstration of no likely significant effects being expected can be quickly established without the need for detailed information on legislation and policy, methodology and baseline conditions being provided. Therefore, technical appendices will be provided for these topics with a short summary provided in a single chapter within the ES.

5.7.3 This methodology has been used for previous NSIP solar and battery projects and means that a proportionate approach to assessment can be undertaken. For clarity, these topics are not scoped out of the EIA. They are scoped in, and

an assessment will be undertaken but the format of presentation within the ES will be different to the topics listed above. These topics comprise:

- Air Quality (Section 16.1);
- Electromagnetic Fields (Section 16.2);
- Glint and Glare (Section -16.3);
- Ground Conditions (Section 16.4);
- Human Health (Section 16.5);
- Major Accidents or Disasters (Section 16.6); and
- Telecommunications and Utilities (Section 16.7).

5.8 Proposed Assessment Scoped Out of the ES

5.8.1 Based upon the work presented in this EIA Scoping Report, each of the detailed technical **Chapters 6 to 16** will provide a summary of assessment elements to be scoped in and out for each technical topic area. **Chapter 18** also summarises the elements to be scoped out for each of the topics discussed. This information is summarised in **Table 18-1** and **Table 18-2.**

5.9 Topic Chapter Structure

5.9.1 Each of **Chapters 6** to **16** of this EIA Scoping report is set out as follows:

- Introduction to the topic;
- Description of the Study Area for the topic;
- Planning Policy Context, Guidance and Legislation in relation to the topic;
- Consultation and Engagement;
- Baseline Conditions;
- Potential Effects and Mitigation;
- Assessment Methodology;
- Assumptions, Limitations and Uncertainties; and
- Summary of elements scoped in and scoped out.

5.9.2 For **Chapter 16: Other Environmental Topics**, a general discussion of each topic is provided, including elements listed above where relevant, but the text is not confined to the structure above.

6. Climate Change

6.1 Introduction

6.1.1 This section of the Scoping Report sets out the requirements and the approach to the assessment of climate impacts from and on the Scheme. This includes the effects of greenhouse gas emissions from the Scheme on the climate, the impact of climate change on the Scheme and the combined impact of the Scheme and climate change on receptors in the surrounding environment identified by other chapters. The purpose of the assessment will be to identify and characterise any relevant climate change factors, to consider the nature and scale of potential impacts arising from and on the Scheme, and to assess the significance of any likely effects.

6.1.2 There are no supporting technical figures or technical appendices to this chapter.

6.2 Study Area

6.2.1 There are specific study areas for each of the three elements of the assessment: Greenhouse Gas (GHG) Emissions, Climate Change Risk Assessment (CCRA) and In-combination climate change impact (ICCI) assessment

6.2.2 The GHG assessment considers all direct GHG emissions arising from activities undertaken within the Site during the construction, operation and maintenance, and decommissioning of the Scheme. It also includes indirect emissions usually arising outside the Site such as 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 Scheme such as other grid electricity production activities.

6.2.3 The CCRA assessment considers the impact of climate change at the Site during the construction, operation, maintenance and decommissioning of the Scheme.

6.2.4 The ICCI assessment considers impacts on receptors in the surrounding environment: the effect of climate change on the effects assessed within the other technical assessments (e.g. the consideration of increased flood risk due to climate change within **Chapter 15: Water Environment**). The study areas for the ICCI assessment are aligned with those in the relevant technical assessments within the ES.

6.3 Legislation, Planning Policy Context and Guidance

Legislation

6.3.1 Legislation that has been considered includes:

- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017: Section 5(2) and Schedule 4, paragraphs 4 and 5 (Ref. 6-1).
- The Climate Change Act 2008 (as amended by the Climate Change Act 2008 (2050 Target Amendment) Order 2019 (Ref. 6-2)). 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. 6-3).
- UK Updated Nationally Determined Contribution (2022) (Ref. 6-4).
- The Carbon Budget Order 2011 (sets the carbon budget for the 2023–2027 budgetary period (Ref. 6-5).
- The Carbon Budget Order 2016 (sets the carbon budget for the 2028–2032 budgetary period) (Ref. 6-6).
- The Carbon Budget Order 2021 (sets the carbon budget for the 2033-2037 budgetary period) (Ref. 6-7).
- The Paris Agreement (2015) (Ref. 6-8) 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 nationally determined contribution (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.

National Planning Policy

6.3.2 National policy that has been considered includes:

- UK Climate Change Risk Assessment (2022) (Ref. 6-9) - 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 Climate Change Committee (CCC), commissioned by the UK government and devolved administrations.
- Net Zero Strategy: Build Back Greener (2020) (Ref. 6-10), 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. 6-11), 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.
- National Infrastructure Strategy (2020) (Ref. 6-12).
- National Policy Statement for Energy (NPS EN-1) (2023) (Ref. 6-13) with particular reference to paragraphs 4.10.1 to 4.10.4 in relation to climate impacts and adaptation; paragraphs 4.10.14 to 4.10.17 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.
- National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (2023) (Ref. 6-14), specifically paragraph 1.1.2 which underlines the importance of the generation of electricity from renewable sources, and paragraph 2.10.9 which refers to the government's commitment to sustained growth in solar capacity.
- National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (2023) (Ref. 6-15) – 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.
- National Planning Policy Framework (December 2024) (Ref. 6-16) – specifically chapter 14 which sets out the need to support renewable and low carbon energy infrastructure to meet the challenge of climate change and
- Powering Up Britain: Net Zero Growth Plan (2023) (Ref. 6-17).

Local Planning Policy

6.3.3 Local policies that have been considered includes:

- Renewable Energy Action Plan Kent County Council (KCC) 2017 Update (2017) (Ref. 6-18), produced by AECOM 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.
- Ashford Local Plan 2030 - Adopted February 2019 (Ref. 6-19), which sets out the vision for Ashford Borough and posits a positive approach to adapting to and mitigating against the effects of climate change, with reference to the implementation of sustainable energy technologies as a key component in realising this vision.
- Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022 (Ref. 6-20). Policy SS8 states that the Council is ensuring that a new

settlement proposed in the area is guided by an energy strategy and the development will aim to achieve carbo neutrality.

- Ashford Climate Change Strategy 2022 (Ref. 6-21) – particular reference is made to the significant contribution of renewable energy infrastructure in supporting a move towards net zero - objective 3.2 of the Climate Action Plan 2022-24 aims to increase local renewable energy generation.
- Folkestone & Hythe Creating Tomorrow Together – corporate plan 2021-2030 (Ref. 6-22), sets out the nine-year vision for Folkestone & Hythe with commitment to deliver a 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.

Guidance

6.3.4 Guidance that has been considered includes:

- Planning Practice Guidance – Climate Change (Ref. 6-31), which advises how to identify suitable mitigation and adaptation measures in the planning process to address the impacts of climate change.

6.4 Consultation

6.4.1 Consultation as part of the EIA process will be undertaken following submission of this Scoping Request with statutory parties including ABC, FHDC 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 Scheme.

6.5 Baseline Conditions

Greenhouse Gas (GHG) Emissions

6.5.1 The baseline condition for the lifecycle GHG assessment is a ‘business as usual’ scenario where the Scheme does not go ahead. The current land use within the site and the local area consists predominately of agricultural fields mainly under arable production. The current land use has relatively low levels of land use GHG emissions in the context of the overall emissions in the wider area as it is largely arable land. 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 such as fertiliser and pesticide use. Agricultural emissions displaced from the Scheme are not considered, as it is assumed that these agricultural activities would continue in a new location hence no reduction.

6.5.2 The future baseline comprises existing carbon stock and sources of GHG emissions resulting from the existing activities within the Site (**Figure 1-1**), as well as the existing emissions from the generation of grid electricity if the Scheme does not go ahead.

Climate Change Risk Assessment (CCRA)

6.5.3 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 B) to the Scheme. Current baseline data from the best available 30-year period for historic climate data is displayed below in **Table 6-1**. This data is considered robust accounting for the 2010 cut off.

Table 6-1: Historic Climate Data (1981 - 2010) at the nearest climate station (Dungeness B) from UK Met Office (Ref. 6-23)

Climate Variable	Baseline (1981 - 2010)
Temperature	
Mean annual maximum daily temperature (°C)	13.57
Mean summer maximum daily temperature (°C)	19.12
Mean winter minimum daily temperature (°C)	3.15
Number of days of air frost per annum	N/A
Highest temperature for baseline period (°C)	20.21 (August)
Lowest temperature for baseline period (°C)	2.73 (February)
Rainfall	
Mean annual rainfall (mm)	705.12
Mean summer rainfall (mm)	47.92
Mean winter rainfall (mm)	61.50
Wettest month on average (mm)	85.16 (October)
Driest month on average (mm)	45.27 (February)
Other	
Mean monthly wind speed at 10m (knots)	11.32

6.5.4 Future baseline data is obtained using UK Climate Projections 2018 (UKCP18) data for the 25 km grid square within which the Scheme is located. UKCP18

projections suggest that by the 2050s time period (2040–2069), the region could experience an increase of around 2.5°C in summer mean air temperature at 1.5 m, and an increase of 1.7°C in winter mean air temperature at 1.5 m, compared to a 1981–2010 baseline period. For the same time period, the summer mean precipitation could decrease by around 9.8%, whilst in winter it could increase by 7.9%. This is based on 50th percentile of the Representative Concentration Pathway (RCP) 8.5 scenario, 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.

In-combination Climate Change Impacts

6.5.5 The receptors for in-combination climate change impact are receptors within the surrounding environment that will be impacted by the Scheme in combination with future climatic conditions. Baseline conditions for the in-combination climate change impact assessment are determined using the climate change projections data.

6.5.6 The historic baseline and future climate baseline data will be the same as the CCRA.

Baseline Surveys/Information Gathering

6.5.7 The sources of information used to inform the baseline and assessment methodology include:

- UK Climate Projections (UKCP) (2018), in accordance with NPS-EN1 (2023) (Ref. 6-23);
- NASA Sea Level Projection Tool – IPCC 6th Assessment Report Sea Level Projections (Ref. 6-24);
- World Business Council for Sustainable Development and World Resources Institute (2001) The GHG Protocol (Ref. 6-25);
- Department for Energy Security and Net Zero (DESNZ) (2024) Conversion Factors Database (Ref. 6-26);
- Inventory of Carbon and Energy Database v.3 (2019) (Ref. 6-27); and
- The British Standards Institution (BSI) (2023) PAS 2080:2023, Carbon management in buildings and infrastructure (Ref. 6-28).

6.6 Potential Effects and Mitigation

Greenhouse Gas Emissions

6.6.1 **Table 6-2** below provides the lifecycle stages, related activities and primary emission sources from the Scheme that will be considered in the GHG assessment, in line with the Publicly Available Standard (PAS) 2080 – carbon management in buildings and infrastructure (Ref. 6-26).

6.6.2 No specific climate mitigation measures have been identified yet but a number of measures for associated topics like flood risk are identified in **Appendix D: Environmental Mitigation and Commitments Register** of this document.

Table 6-2: Potential sources of GHG emissions

Lifecycle stage	Activity	Primary emission sources
Product stage	Raw material extraction and manufacturing of products required to build the equipment for the Scheme. Due to the complexity of the equipment, this stage 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 stage	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-stage).	Fuel consumption from transportation of materials to the Site, where these are not included in product-stage 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/gain of carbon sink.
	Water use.	Provision of clean water, and treatment of wastewater.

Lifecycle stage	Activity	Primary emission sources
Operation and maintenance stage	Operation and maintenance and replacement of the Scheme.	GHG emissions from energy consumption. These operational emissions are expected to be negligible in the context of the overall Scheme GHG impact. 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.
Decommissioning stage	On-site decommissioning activity.	Consumption of energy (electricity and other fuels) from plant, vehicles, and generators on the Site.
	Transportation and disposal of waste materials.	Emissions from the disposal and transportation of waste.
	Worker travel.	GHG emissions from transportation of workers to the Site.

6.6.3 GHG emissions from the Scheme 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 and grid balancing function of the BESS as compared to other electricity generation methods. The baseline considered most representative for a scenario where the Scheme does not go ahead is to use the current grid carbon intensity as a baseline, as the grid is unlikely to decarbonise without projects such as the Scheme.

6.6.4 Where land use is changed from arable to permanent grassland this could provide additional carbon mitigation.

6.6.5 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. A Framework CEMP will be submitted with the DCO application.

6.6.6 Further measures to mitigate GHG emission during construction, operation and decommissioning of the Scheme will be presented in the ES.

Climate Change Risk Assessment

6.6.7 Climate parameters relevant to the CCRA are detailed in **Table 6-3** below.

Table 6-3: Climate Parameters for the CCRA of the Scheme

Parameter	Scoped In/Out	Rationale for Scoping Conclusion
Temperature change	In	The various receptors in the surrounding environment may be vulnerable to changes in temperature with potential effects of the Scheme identified by technical specialists. A detailed assessment will be conducted as part of the PEI Report and the ES.
Sea level rise	In	The Scheme is located in an area susceptible to sea level rise, based on data in the NASA Sea Level Projection Tool (Ref. 6-24).
Precipitation change (frequency and magnitude of precipitation events and droughts)	In	The environmental receptors may be susceptible to precipitation changes with the potential effects of the Scheme identified by technical specialists. A detailed assessment will be conducted as part of the PEIR and the ES.
Wind	In	The environmental receptors may be susceptible to changes in wind pattern with the potential effects of the Scheme identified by technical specialists. A detailed assessment will be conducted as part of the PEIR and the ES.

6.6.8 The climate change resilience review will qualitatively assess the Scheme'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 Scheme.

6.6.9 A statement will be provided within the ES to describe how the Scheme will be adapted to improve its resilience to future climate conditions.

In-combination effects

6.6.10 In-combination Climate Impact Assessment identifies how the resilience of various receptors in the surrounding environment is affected by a combination of future climate conditions and the Scheme. The climate parameters relevant to the Scheme are detailed in **Table 6-4** below together with the rationale for scoping.

6.6.11 It is not anticipated there will be any ICCIs on the receptors in the surrounding environment. Therefore, an ICCI Assessment has been scoped out of the climate change assessment.

Table 6-4: Climate parameters for the in-combination climate change impact

Parameter	Scoped In/Out	Rationale for Scoping Conclusion
Temperature change	Out	While impacts are expected as a result of projected temperature increases, these temperature increases in combination with the Scheme are not expected to have a significant impact upon receptors identified by other environmental disciplines. Similarly, it is not expected that projected temperature increases would have impacts on the modules themselves as Solar PV schemes operate all over the world in climates which are already much warmer than the predicted climate of the UK.
Sea level rise	Out	The Scheme, in combination with projected changes in sea levels, is not expected to have a significant impact upon receptors identified by other environmental disciplines.
Precipitation change (frequency and magnitude of precipitation events and droughts)	Out	Climate change may lead to an increase in substantial precipitation events that could lead to flash flooding or changes to groundwater levels. However, no significant impacts on surface water or groundwater levels are expected as a result of precipitation changes, in combination with the Scheme, as the flow of precipitation to ground will not be significantly hindered and the conversion of agricultural land to grassland should increase

Parameter	Scoped In/Out	Rationale for Scoping Conclusion
		infiltration and reduce runoff rates. The Scheme, in combination with projected changes in precipitation, is also not expected to have a significant impact upon receptors identified by other environmental disciplines.
Wind	Out	The Scheme, in combination with projected changes in wind patterns, is not expected to have a significant impact upon receptors identified by other environmental disciplines.

6.7 Assessment Methodology

Guidance

6.7.1 The assessment methodology is informed by the following guidance:

- IEMA Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance (2022) (Ref. 6-29);
- IEMA Environmental Impact Assessment Guide to: Climate Change Resilience and Adaptation (2020) (Ref. 6-30).
- The British Standards Institution (BSI) (2023) PAS 2080:2023 (Ref. 6-28).

Assessment Approach

Greenhouse Gas Emissions

6.7.2 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 decommissioning of the Scheme 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 IEMA guidance.

6.7.3 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 (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Sulphur hexafluoride (SF_6)
- Hydrofluorocarbons (HFCs)

- Perfluorocarbons (PFCs)
- Nitrogen trifluoride (NF_3)

6.7.4 Expected GHG emissions arising from the construction activities, embodied carbon in materials and operational and decommissioning emissions of the Scheme, as well as baseline emissions, will be quantified using a calculation-based methodology as per the following equation, and aligned with the GHG Protocol:

Activity data x GHG emissions factor = GHG emissions

6.7.5 Department for Energy Security and Net Zero (DESNZ) 2024 emissions factors (Ref. 6-26) and embodied carbon data from the University of Bath Inventory of Carbon and Energy (ICE) (Ref. 6-27) are among those that will be used as the primary data sources for calculating GHG emissions.

6.7.6 The magnitude of GHG emissions will be put into context by comparing with the carbon budget period in which they arise. The UK carbon budgets (Ref. 6-5, Ref. 6-6, Ref. 6-7) are currently only available to 2037 (6th Carbon Budget). Where further carbon budgets are not available (7th, 8th and 9th Carbon Budget periods), these will be projected based on data published by the Climate Change Committee (CCC). Totals for these periods have not been approved or ratified and are not legally binding, but indicative figures can provide valuable context at this stage.

6.7.7 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 1.5°C this century is widely accepted by the International Paris Agreement and the climate science community.

Climate Change Risk Assessment

6.7.8 The receptor for Climate Change Resilience (CCR) is the Scheme itself including its construction, operation and maintenance, and decommissioning stages. The CCR assessment will provide a description of how the Scheme will be designed to be more resilient to the climate change effects identified during the review of the UKCP 2018 data.

6.7.9 A detailed assessment of climate change projections will be conducted for the Scheme Location Plan (**Figure 1-1**) boundary as part of the PEIR and the ES. The CCR review will qualitatively assess the Scheme's resilience to climate change considering climate parameters using UKCP 18 projections. This will be completed in liaison with the Scheme design team and the other EIA technical disciplines by considering the climate change projections for the geographical location and timeframe of the Scheme. Potential climate change impacts on the Scheme and associated receptors will be identified, and the potential consequence and likelihood of occurrence of the impacts will be considered, taking account of the measures incorporated into the design of the Scheme.

6.7.10 The methodology for the climate change resilience assessment will use a combination of quantitative information on climate change projections and qualitative information related to potential impacts.

6.7.11 The overall risk of different impacts will be assessed both initially, then after mitigation and resilience measures are accounted for. In accordance with the IEMA guidance, a risk assessment type process will be adopted to assess Scheme resilience to climate change impacts. An initial risk profile is developed to assess the risks due to climate change in the development's lifecycle. **Table 6-5** and **Table 6-6** show the methods and criteria used to assess the likelihood, magnitude and overall climate change resilience risk for the assessment.

Table 6-5: Likelihood 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 6-6: Magnitude of consequence of risk assessment

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
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.
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% of turnover	2-10% of turnover	10-25% of turnover	25-50% of turnover	> 50% of turnover

Risk Areas	Magnitude of Consequence				
	Insignificant	**Minor**	**Moderate**	**Major**	**Catastrophic**
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	Insignificant impact	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

Determining Significance of Effect

Effects of the Scheme on Climate (GHG Emissions)

6.7.12 For the purposes of this assessment, it has been considered that any increases in GHG emissions compared to the baseline has the potential to have an impact, due to the high sensitivity of the receptor (global climate) to increases in GHG emissions. This is in line with the IEMA guidance, which states that the combined environmental effect of GHG is environmental degradation, and that this degradation is reaching a defined limit. Therefore, any GHG emissions or reductions from a Scheme might be considered to be significant. As such, the application of the standard EIA significance criteria is not considered to be appropriate for GHG assessments.

6.7.13 While all new GHG emissions contribute to a negative environmental impact, some projects will replace existing developments or baseline activity that has a higher GHG impact. The significance of a Scheme's emissions should therefore be based on its net impact over its lifetime, which may be positive, negative or negligible, considering its contribution to reduce GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050.

6.7.14 The level of significance associated with the GHG impact of a Scheme is to be contextualised and assigned through the professional judgement of the appropriate practitioner in accordance with the IEMA guidance. The magnitude GHG impacts of the Scheme will be put into context of the UK's five-year carbon budgets, which set legally binding targets for GHG emissions. GHG impacts will also be put into context for the sub-sectoral budgets for energy generation.

6.7.15 For further context, net GHG emissions from the Scheme will be assessed through comparison with other likely alternative sources of electricity generation. The assessment will therefore seek to quantify any emissions reduction due to the displacement of higher carbon grid electricity, which would not decarbonise if the Scheme does not go ahead, as this currently provides the UK's marginal generating capacity. This is the generating capacity that must be replaced with low-carbon alternatives for the UK to achieve its net zero target.

6.7.16 Essentially, the lifetime generation in MWh from the Scheme is generation that displaces existing grid electricity, and the associated reduction in emissions can be quantified by multiplying the lifetime generation in MWh by a representative carbon intensity of grid electricity and other energy generating alternatives including Combined-Cycle Gas Turbines (CCGT).

6.7.17 **Table 6-7** below presents the different significance levels as per the latest version of the IEMA guidance 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 6-7: 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 emissions and does not make a meaningful contribution to the UK's trajectory towards net zero.	Significant Adverse
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

Effects of Climate Change on the Scheme

6.7.18 To identify the level of significance, the likelihood of a climate impact occurring is considered along with the consequence of the impact. **Table 6-8** presents how the significance is determined.

Table 6-8: Identification of significance ("S" Significant "NS" Not Significant)

		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)

6.8 Limitations and Assumptions

6.8.1 There are currently no anticipated limitations to the assessment. There may be limitations at the time of assessment based on availability of data to conduct the assessment and any limitations will be presented as part of the PEI Report/ES chapter.

6.9 Summary of Elements Scoped In and Scoped Out

6.9.1 A summary of the elements scoped into and out of the climate change chapter is presented in **Table 6-9**.

6.9.2 GHG Impact Assessment is scoped in and will cover all aspects of the Scheme from raw products and manufacture of materials, through to construction, operation and maintenance, and decommissioning.

6.9.3 Climate Change Resilience assessment is scoped in and will consider the vulnerability of the Scheme to extreme weather events and changes in temperature, precipitation and wind patterns. Sea level rise is proposed to be scoped in as the Scheme is in an area susceptible to sea level rise.

6.9.4 As set out in **Table 6-4**, In-combination Climate Impact Assessment is scoped out.

6.9.5 The climate parameters relevant to the assessment are detailed in **Table 6-9** below together with the rationale for scoping in or out.

Table 6-9: Elements scoped in and scoped out of the assessment of Climate Change

Element	Scoped In/ Scoped Out
GHG Emissions	Scoped In: Product stage – Raw material extraction, manufacturing and transport of products required to build the equipment for the Scheme. Scoped In: Construction process stage – On-site construction activity including emissions from construction compounds. Scoped In: Operation and maintenance stage – Operation and maintenance of the Scheme. Scoped In: Decommissioning stage – on-site decommissioning activity.
Climate Change Resilience	Scoped In: Temperature change. Scoped In: Sea level rise. Scoped In: Precipitation change. Scoped In: Wind.
In-combination Climate Impact Assessment	Scoped Out: Temperature change. Scoped Out: Sea level rise. Scoped Out: Precipitation change. Scoped Out: Wind.

7. Cultural Heritage

7.1 Introduction

7.1.1 This chapter sets out the approach to assessment of the Scheme's impacts on cultural heritage (comprising built heritage, archaeology, and the historic landscape). The purpose of the assessment will be to identify and characterise any relevant cultural heritage resources, and to consider the nature and scale of potential impacts and effects arising from the Scheme.

7.1.2 This chapter is supported by the following figures and technical appendices:

- **Figure 7-1: Location of Designated Heritage Assets;**
- **Figure 7-2: Location of Non-Designated Heritage Assets;**
- **Appendix E: Designated Heritage Assets Gazetteer;** and
- **Appendix F: Non-Designated Heritage Assets Gazetteer.**

7.2 Study Area

7.2.1 The study area for all designated assets will extend to a distance of 3 km from the Energy Park Site and 1 km from the Grid Connection Route (once defined) and the Interconnecting Cable Corridors (**Figure 7-1**). The study area for non-designated assets will extend to a distance of 1 km from the whole of the Site, (including the Energy Park Site, the Grid Connection Route and the Interconnecting Cables) (**Figure 7-2**). This will allow for all cultural heritage assets to be set within their wider context and allow for the assessment of archaeological potential within the Energy Park Site, Interconnecting Cable Corridor Search Area and Grid Connection Route.

7.2.2 A flexible approach will be taken to the identification of assets of the highest value (i.e., World Heritage Sites, scheduled monuments, Grade I and II* listed buildings and Registered Parks and Gardens, protected wrecks and Conservation Areas containing a number of assets of the highest value), where there may be an impact through change to setting up to 5 km beyond the Energy Park Site. High value assets up to this distance may be considered, where identified as necessary by the EIA technical discipline team or through consultation. This will be guided by the Scheme's Zone of Theoretical Visibility (ZTV) (to be prepared as part of the Landscape and Visual Amenity chapter) but will also consider physical and historical connectivity and relationships with other monuments and the wider landscape. The preliminary ZTV is shown on **Figures 9-1a to 9-1i: Zone of Theoretical Visibility (Screened).**

7.3 Legislation, Planning Policy Context and Guidance

7.3.1 Legislation, planning policy and guidance relating to cultural heritage and pertinent to the Scheme comprises:

Legislation

- Electricity Act 1989 (Ref 7-1) Schedule 9 requires new electricity networks infrastructure to have regard to the desirability of protecting sites, buildings and objects of architectural, historic or archaeological interest and that they do what they reasonably can to mitigate any effects on them.
- Infrastructure Planning (Decisions) Regulations 2010 (Ref 7-2), with specific reference to Regulation 3 which sets out the desirability of preserving listed buildings, conservation areas and scheduled monuments;
- Planning (Listed Buildings and Conservation Areas) Act 1990 (Ref 7-3), with specific reference to Sections 66 and 72 that set out the principal statutory provisions that must be considered in the determination of any application affecting listed buildings and conservation areas;
- Ancient Monuments and Archaeological Areas Act 1979 (Ref 7-4) (amended by the National Heritage Act 1983 (Ref 7-5) and 2002 (Ref 7-6)), which imposes a requirement for Scheduled Monument Consent for any works of demolition, repair and alteration that might affect a designated scheduled monument;
- The Hedgerows Regulations 1997 (Ref 7-7), which set out the criteria for determining important hedgerows; and
- The Protection of Military Remains Act 1986 (Ref 7-27), which is concerned with the protection from unauthorised interference of the remains of military aircraft and vessels that have crashed, sunk or been stranded and of associated human remains.

National Planning Policy

- The overarching NPS for Energy (EN-1) (Ref 7-8) sets out the overall national planning policy for delivering major energy infrastructure. Part 5 of the document sets out guidance on generic impacts for the Applicant's assessment and decision making on the application. These impacts concern, amongst other matters, the historic environment. Section 5.9 provides further detail on the assessment of the historic environment and requires Applicants to identify the significance of an asset (both designated and non-designated) and to establish the potential impact. Guidance is given on the means of reducing any impact which should be considered through the design process. in relation to the significance, impact and recording of the historic environment;
- In considering the impact on the historic environment as set out in Section 5.9 of NPS EN-1 and whether it is satisfied that the substantial public benefits would outweigh any loss or harm to the significance of a designated asset, NPS EN-3 (Ref 7-9) states in Paragraph 2.3.8 that the SoS should take into account the positive role that large-scale renewable

projects play in the mitigation of climate change, the delivery of energy security and the urgency of meeting net zero. Relevant policies within the NPS EN-3 will also be considered. This seeks to introduce national policies in relation to solar photovoltaics with Section 2.10 setting out technical considerations for solar photovoltaic generation including cultural heritage (Paragraphs 2.10.107 – 2.10.119);

- Paragraphs 2.10.107 – 2.10.110 state that: “the impacts of solar PV developments on the historic environment will require expert assessment in most cases and may have effect both above and below ground. Above ground impacts may include the effects on the setting of Listed Buildings and other designated heritage assets as well as on Historic Landscape Character. Below ground impacts, although generally limited, may include direct impacts on archaeological deposits through ground disturbance associated with trenching, cabling, foundations, fencing, temporary haul routes etc. Equally, solar PV developments may have a positive effect, for example archaeological assets may be protected by a solar PV farm as the site is removed from regular ploughing and shoes or low-level piling is stipulated.”;
- NPS EN-5 (Ref 7-10) provides the primary policy for decisions relating to electricity networks infrastructure. Paragraph 2.2.10 of the document remind applicants that site selection needs to have regard to Schedule 9 of the Electricity Act 1989, in that they must have regard to the desirability of protecting sites, buildings and objects of architectural, historic or archaeological interest and that they must do what they reasonably can to mitigate any effects on them. Paragraph 2.9.25 highlights the potential disruptive effects to archaeological and heritage sites of underground works; and
- NPPF (Ref 7-11) with particular reference to Section 16: Conserving and Enhancing the Historic Environment, sets out the Government’s planning policies for England and how these should be applied to contribute to the achievement of sustainable development. The NPPF sets out the importance of being able to assess the significance of heritage assets that may be affected by a development. Paragraph 194 of the NPPF states that in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. Paragraphs 212 to 216 of the NPPF introduce the concept that heritage assets can be harmed or lost through alteration, destruction or development within their setting. This harm ranges from less than substantial through to substantial.

National Guidance

7.3.2 The following guidance is of relevance for cultural heritage:

- Planning Practice Guidance (PPG) on Conserving and Enhancing the Historic Environment (Ref 7-12). The PPG is an interactive online document that provides further advice and guidance to accompany the policies in the NPPF;
- Historic England has published a series of Good Practice Advice (GPA) of which those of most relevance to this appraisal are: GPA2 – Managing Significance in Decision-Taking in the Historic Environment (March 2015) (Ref 7-13); GPA 3 – The Setting of Heritage Assets (2nd Edition, 2017) (Ref 7-14); and Advice Note 12: Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019) (Ref 7-15). GPA2 emphasises the importance of having a knowledge and understanding of the significance of heritage assets likely to be affected by the development and that the "*first step for all applicants is to understand the significance of any affected heritage asset and, if relevant, the contribution of its setting to its significance"* (Paragraph 4). Early knowledge of this information is also useful to a local planning authority in pre-application engagement with an applicant and ultimately in decision making (Paragraph 7). GPA3 (2nd Edition) provides advice on the setting of heritage assets and consolidates and supersedes earlier advice on that matter published by Historic England in 2015 and 2011. Advice Note 12 provides guidance on the production of a heritage statement and advice on the development of an analysis of heritage significance;
- Historic England have also produced specific guidance relating to Commercial Renewable Energy Development and the Historic Environment. Historic England Advice Note 15 (2021) (Ref 7-16) describes the potential impacts on the historic environment of commercial renewable energy proposals;
- Documents produced by the Chartered Institute for Archaeologists (CIfA), including Standard and Guidance for Historic Environment Desk-Based Assessment (Ref 7-17) and the Code of Conduct (Ref 7-18) which provide industry best practice when working within the historic environment; and
- Institute of Environmental Management and Assessment (IEMA), Institute of Historic Building Conservation (IHBC) and the Chartered Institute for Archaeologists (CIfA), Principles of Cultural Heritage Impact Assessment in the UK (Ref 7-19).

Local Planning Policy

7.3.3 The Scheme falls within the administrative boundaries of ABC and FHDC. The following local policies are of relevance to the historic environment:

- Ashford Local Plan 2030 – Adopted February 2019 (Ref 7-20):
    - Policy ENV10 – Renewable and Low Carbon Energy which states that applications permitted only if they do not result in significant adverse

impacts on historic assets, having special regard to nationally recognised designations and their setting, such as Conservation Areas and Listed Buildings;

- Policy ENV13 – Conservation and Enhancement of Heritage Assets of which the key points are:
    - Proposals will be supported where they preserve or enhance heritage assets.
    - Development that causes loss or substantial harm to heritage assets will need to demonstrate the substantial public benefits that will outweigh the harm or loss.
    - Where a development will lead to less than substantial harm or will impact a non-designated heritage asset, the harm will be weighed against the public benefits of the proposal.
    - All applications should be supported by an appropriate level of detail related to the asset and any likely impacts of the proposal on its significance;

- Policy ENV14 – Conservation Areas which sets out the requirements for development within conservation areas including within its setting; and
- Policy ENV15 – Archaeology which requires the archaeological and historic integrity of Scheduled Monuments and other important archaeological sites, together with their settings, to be protected, and where possible enhanced. If this assessment reveals that important or potentially significant archaeological heritage assets may exist, developers will be required to conduct field evaluations prior to the determination of planning applications. Archaeological remains should be preserved in situ wherever possible, where this is not possible or justified, appropriate provision for preservation by record may be an acceptable alternative.
- Folkestone and Hythe Core Strategy Review to 2037 – Adopted March 2022 (Ref 7-21) sets out the spatial strategy for Folkestone and Hythe.
- Folkestone and Hythe Places and Policies Local Plan (2020) – Adopted September 2020 (Ref 7-22):
- Policy CC6 – Solar Farms states that developments will only be acceptable if they do not cause an adverse impact on sensitive local landscapes or heritage assets.
- Policy HE1 – Heritage Assets in which the Council will support proposals which promote an appropriate and viable use of heritage assets;
- Policy HE2 – Archaeology which states that important archaeological sites, and their settings, will be protected and where possible enhanced. Development proposals which will have an impact on heritage assets should be sufficiently assessed, using appropriate expertise. Where development will affect a heritage asset, there is a preference for preservation in situ and where this is not possible, preservation by record may be an acceptable alternative; and

- Policy HE3 – Local List of Heritage Assets states that proposals affected buildings or sites identified on the local list, or sites that would meet this criteria, will be permitted where the significance of those buildings or sites are protected and conserved.

7.4 Consultation

7.4.1 Consultation will be carried out at an early stage with the Archaeology Officers of KCC and the Conservation Officers of ABC and FHDC so that, as far as practicable, that cultural heritage issues are identified and potential impacts to cultural heritage assets are included in the assessment. Consultation will also be carried out with Historic England if potential impacts to designated heritage assets, or non-designated heritage assets of high value, are anticipated.

7.4.2 The scope of an archaeological geophysical survey has been set out in a Written Scheme of Investigation which has been agreed with the Archaeology Officer for Kent County Council prior to the start of work.

7.5 Baseline Conditions

7.5.1 For the purpose of this Scoping Report, the three study areas have been measured from the Energy Park Site only. The ES's study areas will also extend from the Grid Connection Route and the Interconnecting Cable Corridors once these have been further designed.

7.5.2 The Interconnecting Cable Corridor Search Area, as shown **Figure 1-1** and **Figure 1-2,** indicates the maximum area in which the interconnecting cables could be laid. The Grid Connection Route will be defined at a later date. Impacts in the Interconnecting Cable Corridor Search Area and the Grid Connection Route will ultimately be limited to corridors less than 100m in width and efforts will be made to reduce or remove impacts to sensitive receptors. Assets which lie within the Interconnecting Cable Corridor Search Area and the Grid Connection Route are therefore not individually presented in the below summary baseline, although they will be fully considered in the ES once the Scheme's design has been further refined.

7.5.3 To assist with the Scoping Report, data has been obtained from the National Heritage List (Ref 7-23) and through a search of the Kent Historic Environment Record (HER) to gain an understanding of the designated and non-designated heritage assets within the study areas.

7.5.4 All designated and non-designated heritage assets identified within the study areas are listed in gazetteers (**Appendix E: Designated Heritage Assets Gazetteer** and **Appendix F: Non-Designated Heritage Assets Gazetteer**) and illustrated on **Figure 7-1: Location of Designated Heritage Assets** and **Figure 7-2: Location of Non-Designated Heritage Assets**. They are referred to in the text by their National Heritage List entry number (e.g. NLHE 1278140), Historic Environmental Record (HER) identification number in brackets (e.g., MKE16929), or, in the case of newly identified non-designated assets, by a unique 'A' number (e.g. A1).

Figure 7-1: Location of Designated Heritage Assets

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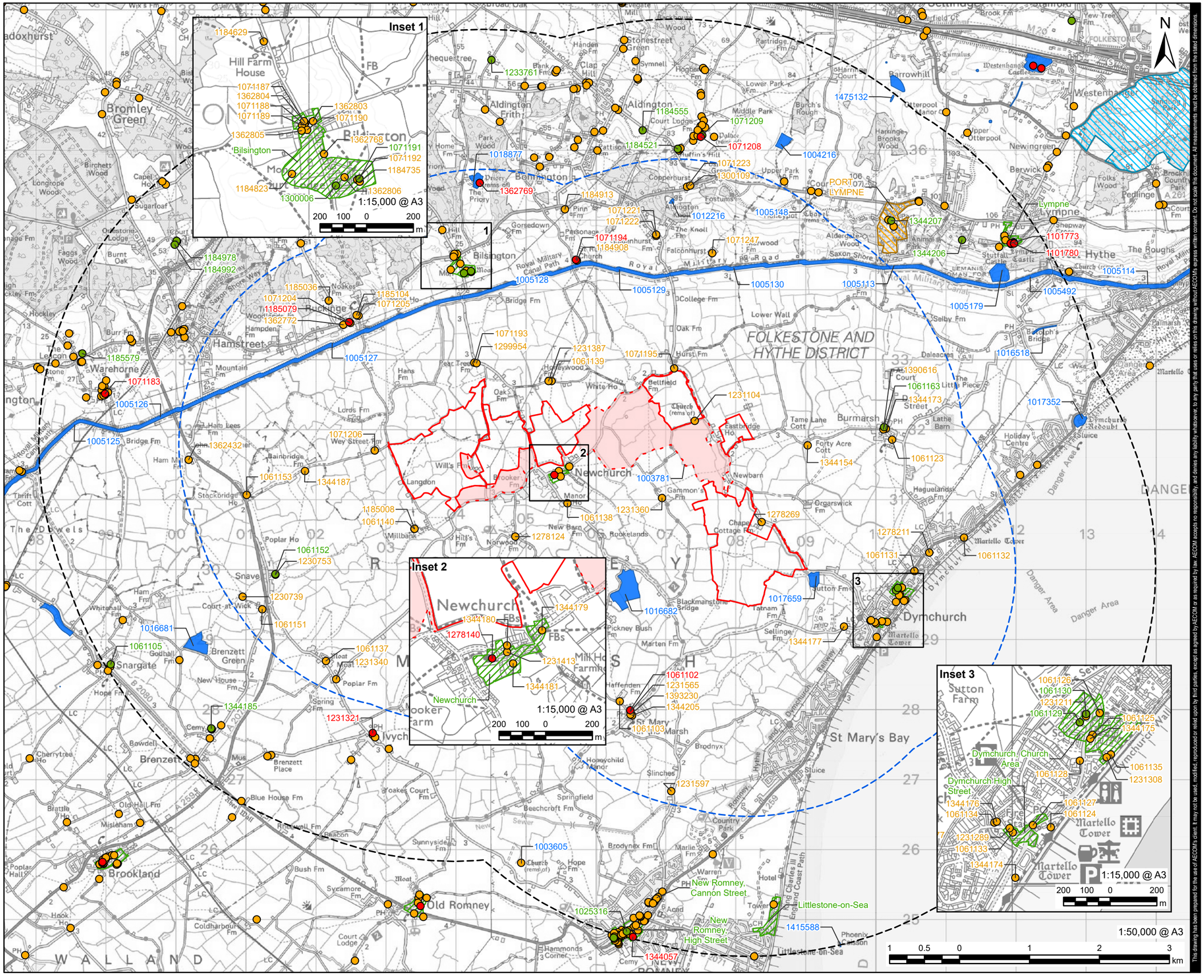

AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

AECOM Limited
Midpoint,
Alencon Link
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 3km Study Area
- 5km Study Area
- Listed Building - Grade I
- Listed Building - Grade II*
- Listed Building - Grade II
- Conservation Area
- Registered Parks and Gardens - Grade II*
- Registered Parks and Gardens - Grade II
- Scheduled Moument

NOTES

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Bilsington Conservation Area is indicative only and has been digitised by AECOM from the public-facing Ashford Borough Council WebGIS on 20/11/2024.
Conservation areas are only shown within 3km of the Energy Park Site.

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60736659

FIGURE TITLE

Designated Heritage Assets

FIGURE NUMBER

Figure 7-1

Figure 7-2: Location of Non-Designated Heritage Assets

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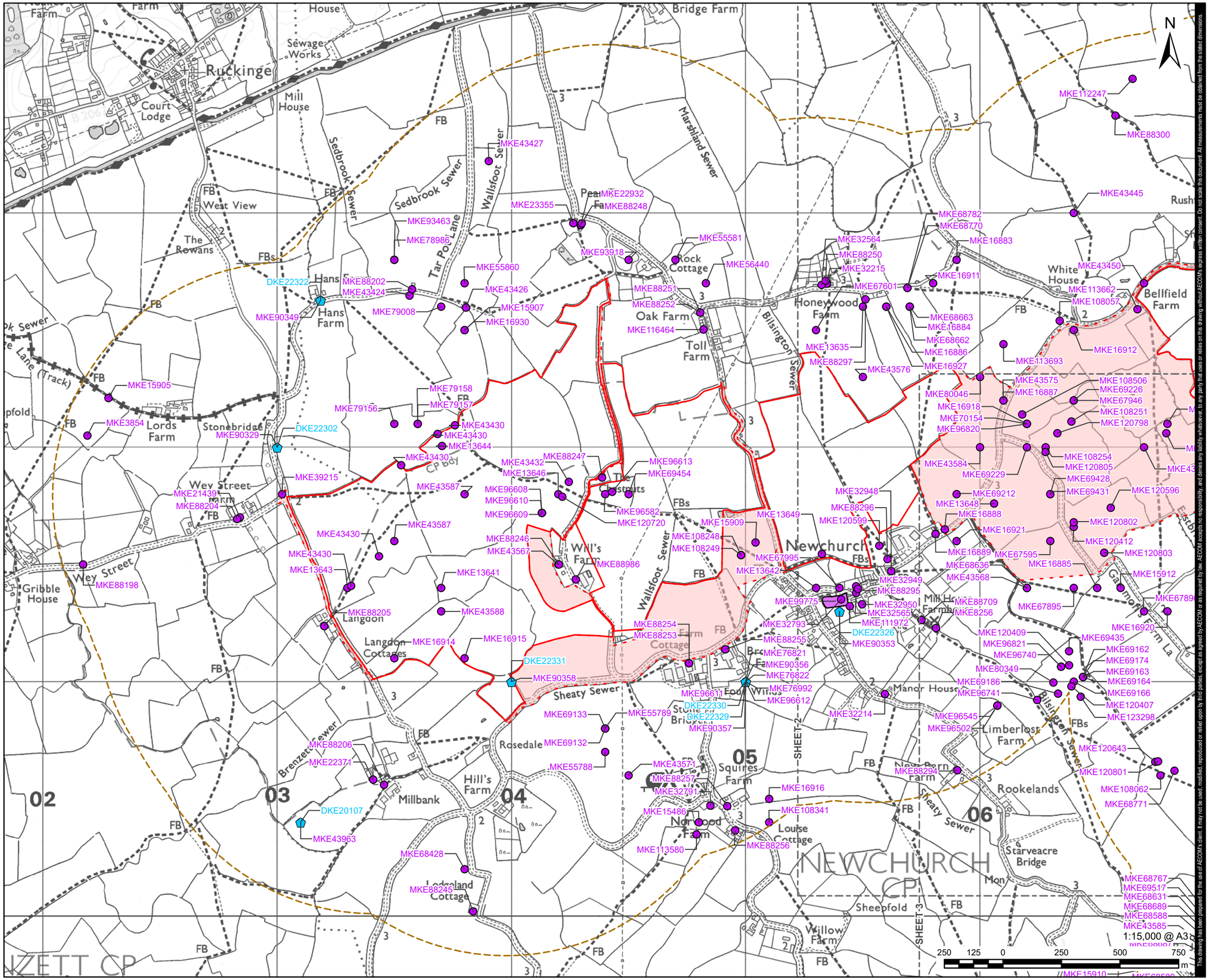

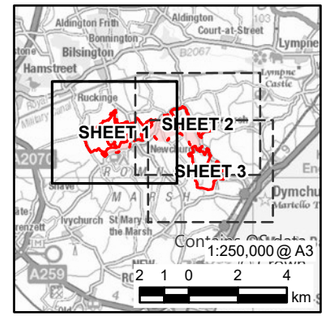

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 1km Study Area
- Protected Military Remians - Aircraft
- Monument - Point
- Monument - Line
- Monument - Polygon

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FIGURE TITLE

Non-Designated Heritage Assets

FIGURE NUMBER

Figure 7-2

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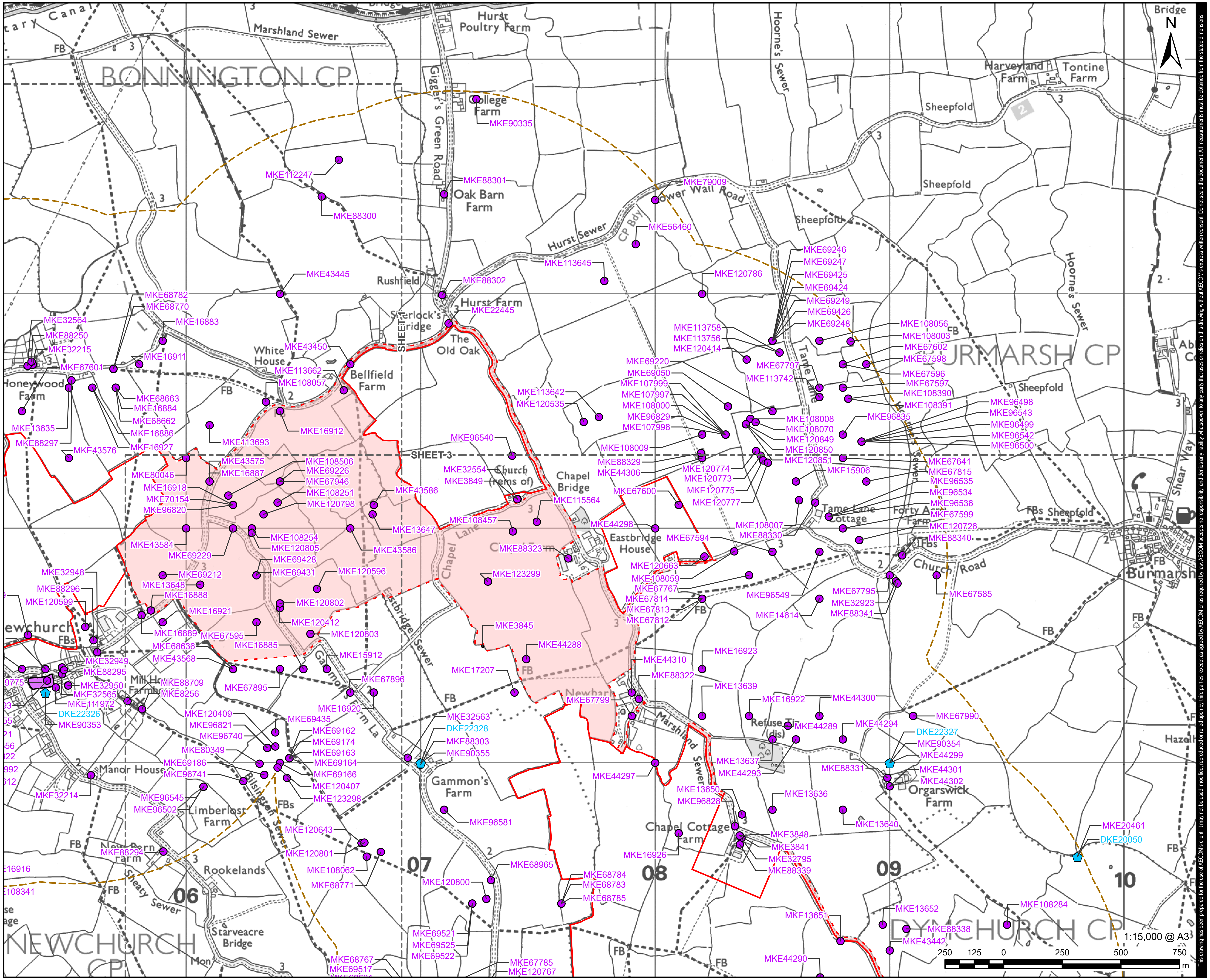

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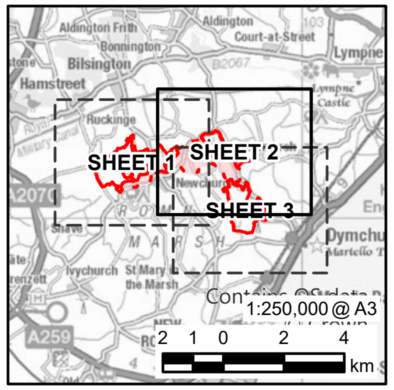

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FIGURE TITLE

Non-Designated Heritage Assets

FIGURE NUMBER

Figure 7-2

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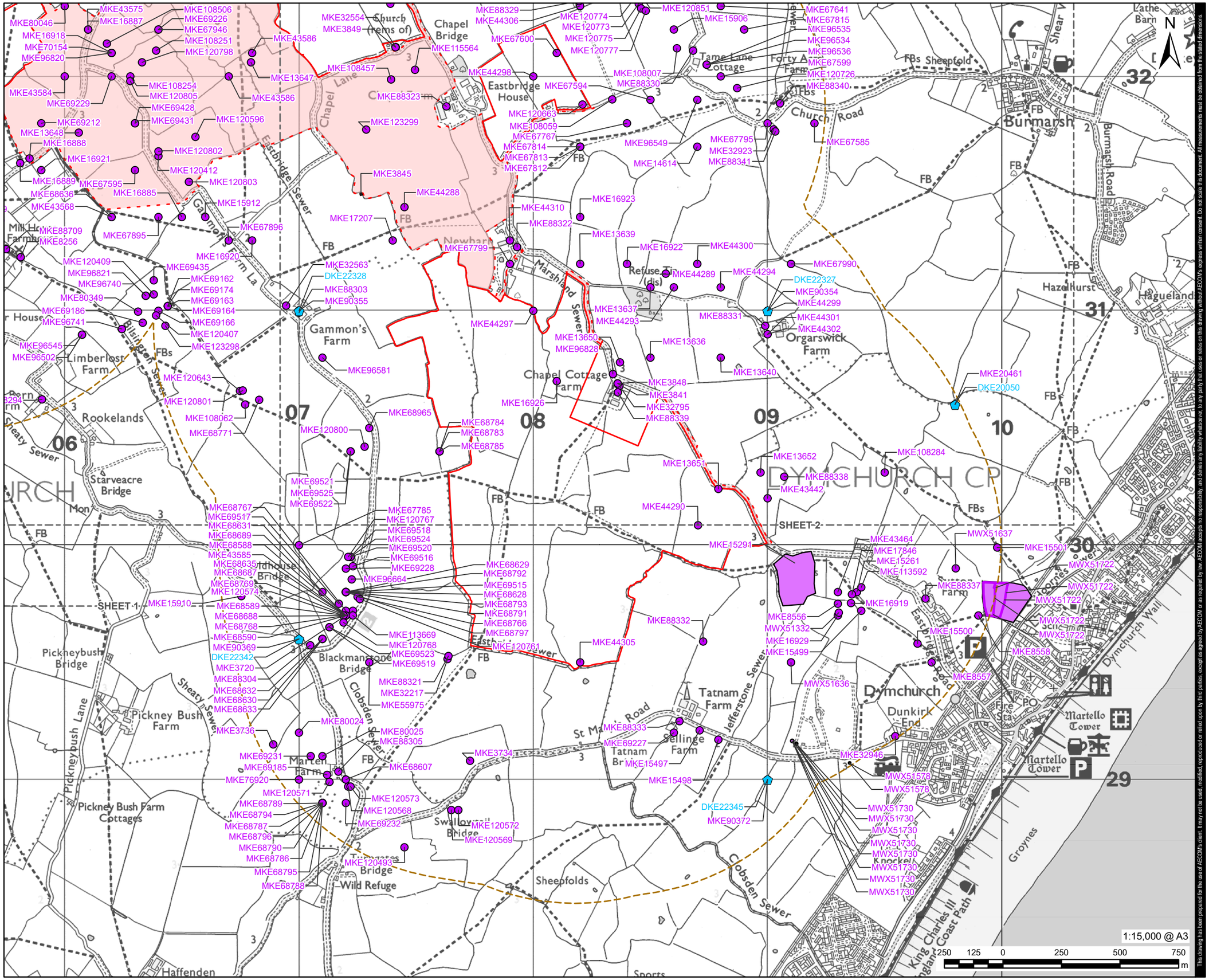

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- Energy Park Site
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FIGURE TITLE

Non-Designated Heritage Assets

FIGURE NUMBER

Figure 7-2

Designated Assets

7.5.5 There are no designated assets within the Energy Park Site and there are no World Heritage Sites or registered battlefields or protected wrecks within any of the study areas.

7.5.6 Within the 3 km study area, there are 101 designated assets comprising nine scheduled monuments, 88 listed buildings and four Conservation Areas.

7.5.7 The scheduled monuments comprise the following assets:

- Eastbridge Church (NHLE 1005132), located immediately south of Site 4;
- Moat and associated closes at Marshall's Bridge (NHLE 1017659), located approximately 95 m south of Site 6;
- World War II underground operational post, 1/3 mile (540m) SW of Chapel Farm (NHLE 1003781), located approximately 500 m from Sites 4, 5, and 6;
- Royal Military Canal, Bonnington Bridge to Gigger's Green Bridge (NHLE 1005129), located approximately 1.2 km to 1.4 km north of Sites 1, 2, 3, and 4
- Moated site and associated fields, 460 m north east of Pickney Bush Farm (NHLE 1016682), located approximately 1.1 km west of Site 6;
- Martello tower no. 24 at Dymchurch (NHLE 1014626), located 1.4 km south-west of Site 6;
- Aldington Knoll Roman barrow and later beacon (NHLE 1012216), located approximately 2.8 km to 3 km north of Sites 1, 2 and 3;
- Bilsington Priory (NHLE 1018877), located approximately 2.4 km north of Site 4; and
- Chapel at Court-at-Street (NHLE 1005148), located approximately 3 km north-east of Site 4.

7.5.8 The complete list of listed buildings within the 3 km study area is presented in **Appendix E: Designated Heritage Assets Gazetteer**. The majority of the listed buildings are listed at Grade II, however there are five Grade I listed buildings, and six Grade II* listed buildings, as follows:

- Church of St Peter and St Paul (NHLE 1278140, Grade I), located approximately 155 m south of Site 3;
- Church of St Mary Magdalene (NHLE 1185079, Grade I), located approximately 1.8 km north of Site 1;
- Church of St Rumwold (NHLE 1071194, Grade I), located approximately 1.9 km north-west of Site 4;
- Church of St Mary the Virgin (NHLE 1061102, Grade I), located approximately 2 km south-west of Site 6;
- St Augustines Priory (Medieval Buildings) (NHLE 1362769, Grade I), located approximately 2.8 km north of Site 1;

- Church of St Peter and St Paul (NHLE 1071191, Grade II*), located approximately 1.5 km north of Site 1;
- Barn About 50 Metres South West of Court Lodge (NHLE 130006, Grade II*), located approximately 1.5 km north of Site 1;
- Church of All Saints (NHLE 1061163, Grade II*), located approximately 1.9 km east of Site 5;
- Church of St Peter and St Paul (NHLE 1061130, Grade II*), located approximately 1.3 km south-east of Site 6;
- New Hall New Hall Cottage the Expenditors House (NHLE 1061129, Grade II*), located approximately 1.3 km south-east of Site 6; and
- Church of St Augustine (NHLE 1061152, Grade II*), located approximately 2.2 km west of Site 1.

7.5.9 The Conservation Areas within the 3 km study area compromise:

- Newchurch Conservation Area, located approximately 20 m south of Site 3;
- Bilsington Conservation Area, located approximately 1.5 km north of Site 1;
- Dymchurch Church Conservation Area, located approximately 1.2 km south-east of Site 6; and
- Dymchurch High Street Conservation Area, located approximately 1.2 km south-east of Site 6.

7.5.10 Excluding those already listed in the 3 km study area, the wider 5 km study area for assets of the highest value contains 28 assets comprising nine scheduled monuments, six Grade I listed buildings, 12 Grade II* listed buildings and one Grade II* Registered Park and Garden. There are also nine Conservation Areas, however, these do not contain multiple assets of the highest value and therefore do not meet the criteria for inclusion within the assessment of assets of the highest value. The complete list of assets of highest value is contained within **Appendix E: Designated Heritage Assets Gazetteer**.

Historical and Archaeological Background

7.5.11 The Scheme is wholly situated on bedrock of the Tunbridge Wells Sand Formation of Cretaceous date overlain by clay and silt tidal flat deposits which formed since the last glaciation, approximately 12,000 years ago. This geological context is the result of coastal changes somewhat unique to the area of the Romney Marsh. Broadly, the Scheme is situated in a region of land now submerged beneath the southern North Sea that was repeatedly exposed at various times during the Pleistocene epoch due to the lowering of sea levels during glacial periods. The Site therefore formed part of a land bridge which connected the British Isles to the European continent for extended periods of time. However, the Romney Marsh and the Energy Park Site became entirely submerged following the retreat of glaciers following the last glaciation (~10,000 BP) and the formation of the English Channel. Approximately 6,000 years ago, shingles covering the base of the channel began to drift and formed a barrier extending from Dungeness to Dymchurch, resulting in the formation of a lagoon

which gradually infilled as tidal mudflats prone to marine transgression and flooding.

7.5.12 The Stour Basin Palaeolithic Project (Ref 7-24) assessed the northernmost portion of the Scheme (Sites 1 and 2) and found that although no Palaeolithic finds were recorded in the area, it retained a potential for undisturbed Late Upper Palaeolithic sites sealed below the tidal flat deposits. The project noted a very low potential for Palaeolithic remains, but that should any such remains be encountered they would be of high importance.

7.5.13 There is limited potential for late prehistoric or Roman remains to survive within the Energy Park Site given that the Romney Marsh was largely under water during these periods, although there remains a slight potential for shipwrecks or evidence of exploitation of the tidal flat environment to be present.

7.5.14 Prehistoric finds tend to be concentrated along the edges of the marsh, typically along the higher ground of the former sea cliffs, the Weald and along the North Downs, north of the Energy Park Site. Nevertheless, three isolated finds of prehistoric date have been recovered from the 1 km study area, comprising a lithic implement broadly dated to the Mesolithic to the Bronze Age (MKE68771) 600 m south-west of Site 6, a Bronze Age copper alloy ingot (MKE96612) 475 m south-east of Site 2, and an Iron Age copper alloy strap fitting (MKE108284) 620 m east of Site 6.

7.5.15 The most significant Roman remains in the area are those of a scheduled Saxon Shore Roman fort (NHLE 1005179), known in the 3rd century as *Portus Lemanis* or *Lemanae*. It is located 3 km north-east of the Energy Park Site, on the shores of a tidal inlet in the marsh and below the escarpment of the former sea cliffs. Connected to the Roman town of Canterbury (*Durovernum Cantiacorum*), via Stone Street, the settlement's location would have allowed it to overlook the open expanse of tidal mudflats and the English Channel as part of the late 3rd century and later Saxon Shore defences. While 25 Roman period assets are recorded in the HER in the 1 km study area, nearly all of these (23 no.) are isolated finds. These most likely indicate Roman exploitation of the tidal flats for salt extraction and seasonal pasture, although the finds may also have resulted from the redeposition of material through alluvial and tidal action. A rich cremation burial recorded 900 m north-west of Site 1 (TR 03 SW 5) may indicate more permanent Roman settlement along the northern edge of the marsh, possibly the result of reclamation efforts and the silting up the marsh in the later Roman period. A cluster of Roman finds (TR 03 SE 25) near Orgarswick Farm, 100 m east of Site 6, could indicate the presence of a seasonal settlement, a small island, or late Roman occupation as the marsh silted in gradually from the north.

7.5.16 While the areas to the south of Romney Marsh (Walland Marsh, Denge Marsh, Pett Level, and the Rother Levels) remained largely tidal until active efforts to reclaim the land in the 13th and 14th centuries, the Domesday book of 1086 indicates that much of the area which constitutes the Romney Marsh itself (north of the Rhee Wall) was settled by the 11th century. This is largely because the natural shingle bank to the east of the marsh (along what is now the Dymchurch Wall) had been stable for several centuries, allowing the silting-up of the marshlands to progress from north to south since at least the Late Roman period. While the land within the Energy Park Site do not appear to have been directly affected, several flood events in the 13th century, culminating in the

storm of 1287, caused extensive damage to settlements in the marshes. It also led to the relocation of several villages, including the near abandonment of Old Romney and its relocation to New Romney, and concerted efforts to prevent further marine transgressions. The construction of the Rhee Wall, a pair of earthen banks 5.5 km south-west of the Energy Park Site, was intended to carry water from Appledore to Old – and later to New Romney in an effort to prevent the silting-up the latter harbours. This effectively marked the beginning of extensive efforts to strengthen coastal defences to prevent further coastal ingress and drain the marshland.

7.5.17 A single early medieval monument, comprising an enclosure marking the probable location of Cobbs Place moated site (TR 03 SE 33), is located north-west of Newchurch. This asset is situated in an area excluded from the Site and lies approximately 100m to the east, south and west of Site 2. The Energy Park Site and 1 km study area also contain 92 dispersed find spots of pottery fragments and metal detected objects.

7.5.18 The most prominent medieval assets in proximity to the Energy Park Site are the scheduled and grade II listed remains of Eastbridge Church (NHLE 1005132, NHLE 1231104, TR 03 SE 66) and the possible associated deserted medieval village of the same name (TR 03 SE 13) 5 m south of Site 4. The remains of Orgarswick deserted medieval village (TR 03 SE 12) and church (TR 03 SE 5) are thought to also survive beneath Orgarswick Farm, approximately 100m east, north and west of Site 6. A number of assets relate to the medieval village of Newchurch, including the grade I listed Church of St Peter and St Paul (NHLE 1278140, TR 03 SE 68, TR 03 SE 145), which dates to the 13th century, and possible medieval field systems (TR 03 SW 15), all of which are recorded 50 m to the south of the Energy Park Site. An extensive series of scheduled earthworks believed to be the remains of a moated site with adjacent ponds and field systems (NHLE 1016682, TR 02 NE 32) are situated 90 m south-east of Site 6. Other, more distant medieval assets are largely agricultural in nature and comprise listed medieval buildings (NHLE 1278124, TR 03 SW 36, NHLE 1231387, TR 03 SE 71, NHLE 1344154, TR 03 SE 73), field systems (TR 03 SE 99, TR 02 NE 101), or other former medieval settlements (TR 02 NE 3, MKE115564). Further evidence of extensive medieval occupation in the area is attested by 132 medieval find spots, six of which consist of scatters of pottery while the remainder are artefacts found through metal detecting.

7.5.19 The area remained relatively poor throughout the post-medieval period until the construction of the Royal Military Canal (NHLE 1005127, scheduled monument) in 1806 and the effective draining of the marsh. This led to the drastic reduction in rampant diseases that had previously plagued the area and to an increase in population density. A total of 66 post-medieval farmsteads, other agricultural buildings, or houses are recorded in the HER throughout the 1 km study area, 13 of which are listed buildings. Other post-medieval assets in the 1 km study area include the remains of a windmill (TR 03 SE 93) and methodist chapel (TR 03 SW 124) in Newchurch, drainage ditches (1534137), field boundaries (TR 03 SE 148) and stack stands (1535621). In addition, 35 find spots, once more largely metal detected objects, are also reported in the 1 km study area. Aside from a few isolated find spots, a single post-medieval asset lies within the Energy Park Site, comprising the site of a former sheep hut in Site 6 (TR 02 NE 114).

7.5.20 The military conflicts of the late post-medieval and modern periods saw renewed focus on the strategic defence of the Kent coastline. The Romney Marsh was no exception, and several remains in the 1 km study area and beyond attest to the militarisation of the landscape in the 19th and 20th centuries. The scheduled remains of the Royal Military Canal (NHLE 1005129, TR 03 SE 9), just over 1 km north of the Energy Park Site, and the WWII underground operational post (NHLE 1003781), situated approximately 500 m between Sites 4, 5 and 6, are the two most significant military assets in the area. A WWII auxiliary unit hide (TR 03 SE 55) is located 170 m north of Site 6 and may relate to the scheduled operational post. The Newchurch Advanced Landing Ground (ALG; A1) occupied large parts of Sites 1 and 2 between 1943 and September 1944. Given that the airfield comprised of two grass airstrips and a tented camp and only included a scatter of sheds and other temporary structures, it is likely that few, if any, archaeological remains of this asset survive today. However, the presence of the airfield is reflected in the 13 aircraft crash sites and three bombing craters recorded in the 1 km study area. One of these aircraft crash sites (TR 03 SW 107, DKE22331) is known to be situated within Site 1 and is considered a protected military remain. Other WWII remains comprise a pillbox (TR 03 SW 46) and two light anti-aircraft batteries (1477709, 1477714). The only other modern asset consists of a grade II listed 1938 memorial cross marking the location of the ancient church of Orgarswick erected when the Parish of Orgarswick was incorporated in Burmarsh in 1938 and thus ceased to exist.

Historic Landscape

7.5.21 The historic landscape is largely defined by the relationship between the Romney Marsh to the surrounding escarpment to the west and north, the sea to the east and the resulting settlement pattern that has emerged organically through the changes to the coastline. This is reflected by the concentration of settlements and monuments either along the ridge overlooking the marsh and the flat low-lying marshland. Much of the historic landscape is today defined by the medieval landscape, characterised by small, scattered settlements with short yet prominent church spires and the network of canals and field boundaries that drain the marsh.

7.6 Potential Effects and Mitigation

7.6.1 There are a number of designated and non-designated heritage assets within the Study Area which may be affected by the Scheme. Such effects could consist of:

- Physical effects on a heritage asset; and
- Effects upon the significance of a heritage asset due to changes to its setting.

1.1.1 There is potential for previously unrecorded archaeological assets to survive within the Site. These remains could potentially be affected during excavation works required during construction; this includes, but is not limited to, construction of the PV module mounting structures, electrical equipment, BESS, electrical substation, cabling, the laying of the required connector cables, and the establishment of construction compounds and access tracks.

1.1.2 There is also the potential for effects on designated and non-designated heritage assets within the Site and study areas through change to their setting during construction and/or operation and decommissioning of the Scheme. An initial list of such assets, based on their proximity to the Scheme, includes, but is not limited to:

- Eastbridge Church (NHLE 1005132, scheduled monument), located immediately south of Site 4;
- Moat and associated closes at Marshall's Bridge (NHLE 1017659, scheduled monument), located 95 m south of Site 6;
- Eastbridge Church Ruins (NHLE 1231104, Grade II listed building) located immediately south of Site 4;
- The Old Oak (NHLE 1071195, Grade II listed building) located immediately north of Site 4;
- Church of St Peter and St Paul (NHLE 1278140, Grade I listed building) located approximately 155 m south of Site 3;
- Honeywood Farmhouse (NHLE 1061139, Grade II listed building) located approximately 175 m north of Site 3;
- Barn Circa 34 Yards West of Honeywood Farmhouse (NHLE 1231387, Grade II listed building) located approximately 175 m north of Site 3;
- Cosway Monument (NHLE 1184823, Grade II listed building) located approximately 1.5 km north of Site 1;
- Church of St Mary Magdelene (NHLE 1185079, Grade I listed building) located approximately 1.8 km north of Site 1; and
- Church of St Rumwold (NHLE 1071194, Grade I listed building) located approximately 1.9 km north-west of Site 4.
- Remains of Second World War Newchurch ALG (A1), situated across Sites 1 and 2;
- Crash site of Consolidated B24J Liberator (TR 03 SW 107, DKE22331), located in Site 1;
- Probable medieval moated site of Cobbs Place (TR 03 SE 33), located in Site 1;
- Medieval remains of Eastbridge deserted medieval village (TR 03 SE 13) and remains associated with Eastbridge church (NHLE 1005132, scheduled monument), adjacent to but possibly extending into Site 4; and
- Medieval remains of Orgarswick church (TR 03 SE 5) and possible associated deserted medieval village (TR 03 SE 12), adjacent to and possibly extending into Site 6.

7.6.2 Given the potential for effects on the historic environment, all aspects of cultural heritage, comprising built heritage, archaeology and historic landscape, are to be assessed within the EIA (**Table 7-3**).

7.6.3 Following guidance from the Planning Inspectorate in relation to *'Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development'* (Ref 7-26), lighting is considered within this chapter and the

effects of lighting during construction, operation and decommissioning of the Scheme will be scoped in alongside other aspects.

7.6.4 Mitigation measures relevant to this topic at this stage are also included in **Appendix D: Environmental Mitigation and Commitments Register** of this document.

7.7 Assessment Methodology

7.7.1 The assessment of potential effects as a result of the Scheme (construction, operation and decommissioning) on cultural heritage will be undertaken using the methodology set out below. This assessment methodology will be applied to the Interconnecting Cable Corridors and Grid Connection Route once they are defined.

7.7.2 The value of a heritage asset (its heritage significance or sensitivity) is guided by its designated status but is derived also from its heritage interest, which may be archaeological, architectural, artistic or historic (NPPF Annex 2, Glossary) (Ref 7-11). Each identified heritage asset can be assigned a value in accordance with the criteria set out in **Table 7-1** using professional judgement and the results of consultation carried out as part of the assessment. Heritage assets are also assessed on an individual basis and regional variations and individual qualities are taken into account where applicable to assign the value.

Table 7-1: 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, monument, parks, gardens or landscapes) that can be shown to have demonstrable national or international importance Well preserved historic landscape character areas, 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, parks, gardens or landscapes) that can be shown to have demonstrable regional importance Averagely preserved historic landscape character areas, exhibiting reasonable coherence, time-depth or other critical factor(s) 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, parks, gardens or landscapes) that can be shown to have demonstrable local importance Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade Historic landscape character areas whose value is limited by poor preservation and/or poor survival of contextual associations

Asset Value	Description
Very Low	Assets identified on national or regional databases, but which have no archaeological, architectural, artistic or historic value Assets whose values are compromised by poor preservation or survival of contextual associations to justify inclusion into a higher grade Landscape with no or little historical merit

7.7.3 Having identified the value of the heritage asset, the next stage in the assessment will be to identify the level and degree of impact to an asset arising from the Scheme. Impacts may arise during construction, operation or decommissioning and can be temporary, reversible, or permanent. Impacts can occur to the physical fabric of the asset or affect its setting. The contribution of the setting to the significance of any affected assets will be subject to assessment. A reasonable worst case will be assessed based on the Scheme design and likely construction, operation and decommissioning activities.

7.7.4 The level and degree of impact (impact rating) will be assigned with reference to a four-point scale as set out in **Table 7-2**. The assessment of the level and degree of impact will be made in consideration of any scheme design mitigation (embedded mitigation). If no impact is identified, no impact rating will be given and no resulting effect reported.

Table 7-2: Factors influencing the assessment of magnitude of impacts

Magnitude of Impact	Description of Impact
High	Change such that the significance of the asset is totally altered or destroyed Comprehensive change to, or total loss of, elements of setting that would result in harm to the asset or our ability to understand and appreciate its significance
Medium	Change such that the significance of the asset is significantly altered or modified Changes such that the setting of the asset is noticeably different, affecting significance and result in changes in our ability to understand and appreciate the significance of the asset
Low	Changes such that the significance of the asset is slightly affected Changes to the setting that have a slight impact on significance resulting in changes in our ability to understand and appreciate the significance of the asset
Very Low	Changes to the asset that hardly affect significance. Changes to the setting of an asset that have little effect on significance and no real change in our ability to understand and appreciate the significance of the asset

7.7.5 An assessment to classify the effect, having taken into consideration any embedded mitigation, is determined using the matrix in **Table 5-3**. The ES will highlight 'residual' effects, which remain following the implementation of suitable additional mitigation measures and classify these in accordance with the effect classification terminology given above.

7.7.6 Major and moderate effects will be considered significant. Within NPS EN-1, section 5.8 Paragraphs 5.9.27 – 5.9.34 (Ref 7-8) and the NPPF Section 16 Paragraphs 205 - 209 (Ref 7-11), impacts affecting the value (heritage significance) 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 EN-1 (Ref 7-8) or NPPF (Ref 7-11).

7.7.7 Pursuant to NPS EN-1, Paragraphs 5.9.31-5.9.32 (Ref 7-8), any harmful impact to the significance of a designated heritage asset should be weighed against the public benefit of the Scheme, whilst Regulation 3 of the Infrastructure Planning (Decision) Regulations 2010 (Ref 7-1) requires the Secretary of State to have regard to the desirability of preserving a listed building or its setting. In all cases, the determination of the level of harm to the significance of the asset arising from development impact is one of professional judgement and will be undertaken adopting a precautionary approach.

7.7.8 This baseline assessment will be undertaken in accordance with the guidance set out by the CIfA and Historic England, in particular the CIfA Standard and Guidance for Desk-Based Assessment (Ref 7-17) and the Code of Conduct (Ref 7-18).

7.7.9 Principles of Cultural Heritage Impact Assessment in the UK (Ref 7-19) is a guide to good practice in cultural heritage impact assessment published jointly by IEMA, IHBC and CIfA. The document provides guidance on understanding cultural heritage assets and evaluating the consequences of change and will be considered when undertaking the assessment.

Desk-Based Assessment

7.7.10 A cultural heritage Desk-Based Assessment (DBA) will be prepared in accordance with industry standards and best practice guidelines (Ref 7-17), and with reference to any consultation responses received as part of the Scoping Opinion. The DBA will inform the cultural heritage chapter of the ES and will form an appendix to the ES. The DBA, alongside the results of the agreed geophysical survey, will confirm whether additional surveys are required to better determine the nature, extent and origin of archaeological remains within the construction footprint of the Scheme.

Desk-Based Sources

7.7.11 Sources of information that will be consulted include:

- National Heritage List for England (NHLE) database (Ref 7-23);
- Formal searches of the Kent HER, including Historic Landscape Characterisation (HLC) data for the area;
- Online sources such as British Geological Survey (BGS) Geology of Britain Viewer (Ref 7-25), and the local authority planning portal;
- Published grey literature reports for archaeological investigations within the Site and surrounding study area;
- Existing geotechnical data;
- Available LiDAR and aerial photography;
- Available Portable Antiquities Scheme data;

- Documentary, cartographic and other resources as deposited within the local Archives and Local Studies Library and the National Archives at Kew; and
- Local Planning Authority Plans, Guidance and Lists.

1.1.3 Consultation will be undertaken with all relevant heritage bodies as part of the assessment process and will include:

- Historic England;
- The Historic Environment Officers for KCC;
- The Conservation Officer for FHDC; and
- The Conservation Officer for ABC.

Surveys

Walkover Survey

7.7.12 An initial site walkover survey has been undertaken (26-27 September 2024) and additional walkover surveys will be undertaken including a survey of known archaeological and built heritage assets within the Energy Park Site and the Grid Connection Route and the immediate vicinity to record their survival, extent, condition, setting, and significance.

7.7.13 A site visit to publicly accessible areas will also be undertaken in the study areas to assess the setting of assets which could potentially be affected by the Scheme. This visit will establish the key features of the asset's setting, alongside any intervisibility with the Scheme.

Additional Survey

7.7.14 The desk-based research will be supported by a programme of non-intrusive and intrusive archaeological evaluation. A geophysical survey will be undertaken within areas of the Energy Park Site that are suitable for survey and where land access can be obtained by way of landowner agreement. Additional geophysical survey will be undertaken within the Interconnecting Cable Corridor Search Area and along the Grid Connection Route once a route option has been selected and access has been granted.

7.7.15 Further archaeological evaluation, e.g. trial trenching evaluation and detailed setting assessments will be undertaken as part of the assessment process if required, the scope of which will be informed by the desk-based analysis of information, the outcomes of the geophysical survey, and through consultation with relevant bodies.

7.8 Limitations and Assumptions

7.8.1 It is assumed that there will be access to all required land within the Energy Park Site to undertake the walkover survey and any additional surveys that may be required to support the ES. In the event that access is not available, professional judgement will be used, based on available research and data, to assess the archaeological potential of the area and the setting of heritage assets.

7.8.2 It is assumed that the data provided by external sources will be accurate.

7.9 Summary of Elements Scoped In and Scoped Out

7.9.1 A summary of the elements scoped into and out of the cultural heritage assessment is presented in **Table 7-3**.

Table 7-3: Elements scoped in and scoped out of the cultural heritage assessment

Element	Scoped In/ Scoped Out
Archaeology during construction	Scoped in: An assessment of impact on archaeological assets resulting from construction activities, including impacts arising from changes to their setting.
Built Heritage during construction	Scoped in: An assessment of impact on built heritage assets resulting from construction activities, including impacts arising from changes to their setting.
Historic Landscape during construction	Scoped in: An assessment of impact of construction activities on the historic landscape character of the Site.
Archaeology during operation	Scoped out: Archaeological matters will be addressed prior to and/or during construction and no impacts will arise to the buried resource in the operation phase.
Built Heritage during operation	Scoped in: An assessment of impact on built heritage assets derived from the presence of the Scheme in the landscape and its operation, including impacts arising from changes to their setting.
Historic Landscape during operation	Scoped in: An assessment of impact on built heritage assets derived from the presence of the Scheme in the landscape and its operation, including impacts arising from changes to their setting.
Archaeology during decommissioning	Scoped in: An assessment of impact on archaeological assets resulting from decommissioning activities, including impacts arising from changes to their setting.
Built Heritage during decommissioning	Scoped in: An assessment of impact on built heritage assets through decommissioning activities and the removal of the Scheme from the landscape, including impacts arising from changes to their setting.
Historic Landscape during decommissioning	Scoped in: An assessment of impact on the historic landscape character through decommissioning activities and the removal of the Scheme from the landscape, including impacts arising from changes to their setting.

8. Ecology and Nature Conservation

8.1 Introduction

8.1.1 This chapter of the Scoping Report presents an initial overview of the baseline conditions for ecology and nature conservation (collectively referred to as biodiversity) that are relevant to the Scheme. It identifies the scope of the assessment and requirement for additional surveys to accurately characterise the baseline. In addition, this chapter provides an overview of the potential impacts of the Scheme on biodiversity and the proposed assessment method for the ecological impact assessment (EcIA) that will be included in the ES and presented in the Ecology and Nature Conservation chapter.

8.1.2 To support this scoping exercise 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);
- A walkover survey of accessible areas of the Site, to record the broad habitats (using UKHab methods (Ref 8-1)); and
- A protected species scoping survey, to inform the likelihood of the habitats on Site supporting protected species and other species of conservation concern.

8.1.3 The PEA Report (information from which has informed this chapter) confirmed the need for ecological surveys and these commenced in October 2024 (with surveys for non-breeding birds) and will continue through 2025 and into 2026 (where necessary), to gather detailed baseline ecological information relevant to the Scheme. The PEA Report is included in **Appendix G: Preliminary Ecological Appraisal** of this Scoping Report.

8.1.4 The ecology and nature conservation chapter of the ES will fully identify and characterise any relevant important ecological features (IEFs) (including designated sites, priority habitats and protected or notable species) and will consider the effects that the Scheme is likely to have on their conservation status and contribution to local, regional and (if appropriate) national biodiversity targets.

8.1.5 The assessment will identify prevention, avoidance, reduction, mitigation and, if necessary, compensation measures that may be required to enable the Scheme to proceed, in compliance with relevant legislation and planning policies. The works for the Scheme will be planned accordingly, to demonstrate that due consideration has been given to IEFs, including provisions for biodiversity enhancements, where appropriate.

8.1.6 This chapter is supported by the following figures:

- **Figure 8-1: Sites Statutorily Designated for their Biodiversity Value within 10km of the Scheme**;
- **Figure 8-2: Sites Non-Statutorily Designated for their Biodiversity value within 2km of the Scheme**; and
- **Figure 8-3: Ancient Woodland and Priority Habitats identified within 2km of the Scheme**.

8.2 Study Area

8.2.1 Within this chapter, the following terminology is used when referring to the geographic areas within which assessments will be made:

- Study Area – the Scheme and an appropriate radius (as defined in paragraph 8.2.4)) which has and will be subject to collection of background information e.g., the location of non-statutorily designated sites within 2km of the Scheme;
- Zone of Influence (ZoI) - the area over which biodiversity features may be affected by biophysical changes as a result of the Scheme and associated activities and based on:
    - The nature of the project (a solar farm, and associated infrastructure), associated project activities, and the potential for effects at all development stages (construction, operation (including maintenance) and decommissioning);
    - The nature of the current land use (predominately 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 based on the location of the Scheme and desk study data; and
    - The different habits, behaviours and preferences of different species that could be affected, and how these vary both spatially and seasonally.
- Survey Area – the area within which field survey work was, or will be, undertaken.

8.2.2 The Scheme includes the Energy Park Site and the Interconnecting Cable Corridor Search Area.

8.2.3 The Study Area captures all designated sites, sensitive habitats, and species of importance that occur within the relevant ZoI of the Scheme. The boundaries and zones for the Study Area reflect standard good practice and are informed by published guidance (Ref 8-2) and professional judgement. Once the Grid Connection Route is defined, this will be included within the Study Area.

8.2.4 In defining individual Study Areas, consideration was given to the geographic location, nature, and scale of the Scheme. The Study Area within which data were searched and collated through a desk study, within the Site and up to:

- 10km for European sites (see **Figure 8-1**), extended to 20km where birds with extensive foraging ranges (e.g. Golden Plover *Pluvialis apricaria*) are noted as a qualifying feature and 30km from the Site for any Special Area for 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 Site is hydrologically connected to any European sites;
- 5km for sites statutorily designated for their biodiversity value at a National level, e.g. Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) (see **Figure 8-1**). In addition, for the purposes of potential air quality impacts on biodiversity, consideration beyond this distance will be given where a designated site is identified as being within 200m of the Affected Road Network, if appropriate;
- 2km for sites non-statutorily designated for their biodiversity value, e.g. Local Wildlife Sites (LWSs), Sites of Importance for Nature Conservation (SINC) (see **Figure 8-2: Sites Non-Statutorily Designated for their Biodiversity Value within 2km of the Scheme**). In addition, for the purposes of air quality, consideration beyond this distance will be given where a designated site is identified as being within 200m of the Affected Road Network, if appropriate;
- 2km for Ancient Woodland, veteran trees and Priority Habitats (see **Figure 8-2**);
- 2km for records (from the preceding ten years) of protected and notable species;
- 2km for aquatic species records. However, where relevant records of notable aquatic species were available from connected water bodies, a wider search area was utilised to consider connectivity for migratory species (e.g., fish);
- 2km for any applications for European Protected Species Licences and agri-environment schemes, e.g., Countryside Management Schemes; and
- 2km for the status of water bodies subject to the Water Framework Directive (WFD) (Ref 8-3). As impacts may propagate downstream in hydrologically linked surface water bodies, the Study Area was extended beyond 2km where data was not available within 2km.

8.3 Legislation, Planning Policy Context and Guidance

Legislation

8.3.1 Legislation applicable to the Scheme and biodiversity is:

- Habitats Directive – Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Ref 8-4);
- 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 8-5);
- 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 8-6);
- Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ref 8-7);
- Wildlife and Countryside Act 1981 (as amended) (Ref 8-8);
- Environment Act 2021 (Ref 8-9);
- Countryside and Rights of Way (CRoW) Act 2000 (Ref 8-10);
- The Conservation of Habitats & Species Regulations 2017 (as amended) (Ref 8-11);
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 8-12);
- The Natural Environment and Rural Communities (NERC) Act 2006 (Ref 8-13);
- Protection of Badgers Act 1992 (Ref 8-14);
- The Hedgerows Regulations 1997 (Ref 8-15);
- Wild Mammals (Protection) Act 2006 (Ref 8-16);
- Salmon and Freshwater Fisheries Act 1975 (Ref 8-17);
- The Eels (England and Wales) Regulations 2009 (Ref 8-18);
- The Invasive Alien Species (Enforcement and Permitting) Order 2019 (Ref 8-19);
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 8-3); and
- The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 (Ref 8-20).

8.3.2 The above legislation will be referenced when identifying potential constraints to the Scheme, design options and mitigation. Compliance with the above legislation may require obtaining relevant protected species licences prior to the implementation of the Scheme. The requirement for these will be determined through specific species surveys and in consultation with relevant consultees.

Habitats Regulations Assessment

8.3.3 As part of the assessment of a development, it is necessary to consider whether the Scheme is likely to have a significant effect on areas that have been internationally designated for nature conservation purposes (i.e., European sites (previously the 'Natura 2000 network' and now referred to as 'Habitats Sites')). European Union (EU) legislation as it applied to the UK on 31st December 2020 is now a part of UK domestic legislation as 'retained EU legislation'. European sites are protected under the Conservation of Habitats and Species Regulations 2017 (Ref 8-11) which effectively continues the legislation which implemented the EU Habitats Directive (Ref 8-5) and parts of the Wild Birds Directive (Ref 8-6) through the provisions of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 8-12). The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref 8-12) make it clear that the need for Habitats Regulations Assessment (HRA) continues to apply.

8.3.4 The HRA will be undertaken with reference to the general EU guidance on HRA (Ref 8-21), general guidance on HRA published by the UK government in July 2019 (Ref 8-22) and Planning Inspectorate (PINS) Guidance on Nationally Significant Infrastructure Projects: Advice on Habitats Regulations Assessments (Ref 8-23). Although the UK has departed the EU, the HRA will nonetheless take account of relevant EU case law (for instance, the Holohan (Ref 8-24) and People over Wind (Ref 8-25) cases) as a precaution and where relevant.

8.3.5 Whilst the HRA decisions must be taken by the competent authority (the Secretary of State, informed by the recommendations of the appointed Examining 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 Scheme and to assist in carrying out its Appropriate Assessment, will be provided in the HRA Report.

8.3.6 Stage 1 of the HRA process (Screening) will consider the potential impact pathways between the Scheme and European sites within 10km of the Site (on the basis that it is unlikely that a Scheme such as this will affect sites further afield), and whether there is potential to have a significant adverse effect on the integrity of European sites, either alone or in combination with other plans or projects. The Study Area for HRA will be extended to 20km from the Site where birds with extensive foraging ranges (e.g., Golden Plover) are noted as a qualifying feature and 30km for any European site for which bats are a qualifying feature. In addition, a search beyond these distances will be undertaken to determine whether the Site is hydrologically connected to any European site or sites.

8.3.7 Stage 1 will result in the preparation of a HRA Screening Report which will be presented at the Preliminary Environmental Information (PEI) Report 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

8.3.8 The Ecology and Nature Conservation chapter of the ES will consider relevant National Policy Statements (NPS) for energy, including relevant sections for

solar and biodiversity. The following NPSs have been reviewed and are relevant to the Scheme and biodiversity:

- Overarching National Policy Statement for Energy (NPS EN-1) (with particular reference to Section 5.4) (Ref 8-26);
- NPS for Renewable Energy Infrastructure (NPS EN-3) (with particular reference to Section 2.10) (Ref 8-27); and
- NPS for Electricity Networks Infrastructure (NPS EN-5) (with particular reference to Section 2.5) (Ref 8-28).

8.3.9 The National Planning Policy Framework (NPPF) (Ref 8-29) 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) like those in the above NPSs, it remains a relevant matter for consideration as to the Government's general directions in respect of planning. The NPPF with particular reference to Section 15 (conserving and enhancing the natural environment) states 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, including by establishing coherent ecological networks that are more resilient to current and future pressures. A core principle for planning is that sustainable developments should contribute to conserving and enhancing the natural environment and reducing pollution.

8.3.10 The NPPF (Ref 8-29) also specifies the obligations that the local planning 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, using the mitigation hierarchy.

8.3.11 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

8.3.12 The following planning policies are relevant to biodiversity and the Scheme:

- Kent County Council Environment Policy (Ref 8-30).
- Ashford Local Plan 2030 (Ref 8-31), Chapter 9: The Natural and Built Environment and specifically policies:
  - ENV1 – Biodiversity;
  - ENV2 – The Ashford Green Corridor; and
  - ENV5 – Protecting Important Rural Features.
- Folkestone and Hythe Core Strategy Review (Ref 8-32), specifically policies:

- CSD4 – Green Infrastructure of Natural Networks, Open Spaces and Recreation; and
- CSD5 – Water and Coastal Environmental Management.

- Folkestone and Hythe District Council Places and Policies Local Plan – Adopted September 2020 (Ref 8-33), specifically:

  - Chapter 14: Natural Environment and Policy NE2 - Biodiversity; and
  - Chapter 15: Climate Change and Policy CC6 – Solar Farms.

Other Guidance

8.3.13 Other guidance documents relevant to the assessment of the impacts of the Scheme on biodiversity, are:

- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Costal and Marine (Ref 8-2);
- Environmental Improvement Plan 2023 (Ref 8-34);
- Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services (Ref 8-35);
- Biodiversity Guidance for Solar Developments (Ref 8-36);
- Natural England (NE) and Department for Environment, Food and Rural Affairs (DEFRA) Standing Advice (protected species) (Ref 8-37);
- The UK Biodiversity Action Plan (BAP) list of priority habitats and species (Ref 8-38), succeeded by the UK Biodiversity Framework (Ref 8-39);
- The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (Ref 8-40);
- Mitigating biodiversity impacts associated with solar and wind energy development: Guidelines for project developers (Ref 8-41);
- NE's evidence review of the impacts of solar farms on birds, bats and general ecology (Ref 8-42);
- NE's Technical Information Note TIN101 Solar parks: Maximising Environmental Benefits (Ref 8-43);
- Kent Landscape Information System (Ref 8-44);
- Kent Nature Partnership Biodiversity Strategy 2020 to 2045 (Ref 8-45);
- The Guidelines for the Selection of Biological SSSI (Ref 8-46)
- Local Wildlife Sites in Kent: Criteria for Selection and Delineation of Wildlife Sites (Ref 8-47); and
- State of Nature 2023 report (Ref 8-48).

8.3.14 Technical guidance that has been used to define the survey methods for habitats and species included in **Table 8-4** will be included in the methods section of the relevant technical appendices, submitted with the ES chapter.

8.4 Consultation

8.4.1 Consultation will be carried out as necessary with statutory consultees, including Natural England, local council biodiversity officers and the Environment Agency, as well as other non-statutory interested parties such as Kent Wildlife Trust. We will seek agreement on the scope and methodology of surveys necessary to inform the assessment, potential ZoIs as defined by the CIEEM Guidance (Ref 8-2), and the important ecological features to be considered as part of the assessment. Initial meetings with Natural England and the Environment Agency to introduce the Scheme were held in December 2024.

8.5 Baseline Conditions

8.5.1 The known or predicted ecological baseline conditions 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

8.5.2 Statutory sites that are designated for their biodiversity value were identified through a review of the Multi-Agency Geographic Information for the Countryside (MAGIC) (Ref 8-49) website.

8.5.3 Within the relevant Study Area, European sites that have been identified include Dungeness, Romney Marsh and Rye Bay Special Protection Area (SPA), Dungeness, Romney Marsh and Rye Bay Special Protection Area Ramsar site and Dungeness SAC. These sites are designated for their habitats and the species for which they support, including birds.

8.5.4 There are no European sites within 30km of the Site for which bats are a qualifying feature and no other European sites within 30km of the Site for which birds are a qualifying feature.

8.5.5 A description of European sites within 10km of the Site are presented in **Table 8-1**. Designation details are taken from citation documents, published online by Natural England (SPA, Ramsar and SSSI, NNR and LNR sites) (Ref 8-83) and Joint Nature Conservation Committee (JNCC) (SAC sites) (Ref 8-84). The locations of European sites are presented in **Figure 8-1**.

8.5.6 There are seven nationally designated sites within the 5km Study Area, and a description of the designated sites is presented in **Table 8-2**. Designation details are taken from citation documents, published online by the Joint Nature Conservation Committee (JNCC). The locations of statutory sites are presented in **Figure 8-1.**

8.5.7 A check of Natural England's SSSI Impact Risk Zone (England) website (Ref 8-50), indicates that the Scheme does not fall within the impact risk zones for solar schemes. However, consultation will be undertaken with Natural England regarding potential impacts to nationally designated sites.

Table 8-1: European sites within 10km of the Site.

Statutory site name and designation	Statutory site description	Approximate distance and direction from closest point of the Site
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.	1.4 km south of the Site.

Statutory site name and designation	Statutory site description	Approximate distance and direction from closest point of the Site
Dungeness, Romney Marsh and Rye Bay Ramsar site	Dungeness, Romney Marsh and Rye Bay Ramsar site (6377 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, an natural or near-natural wetland habitats.	2.7 km south of the Site.
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 some 1,600 ha, though the	4.1km south of the Site.

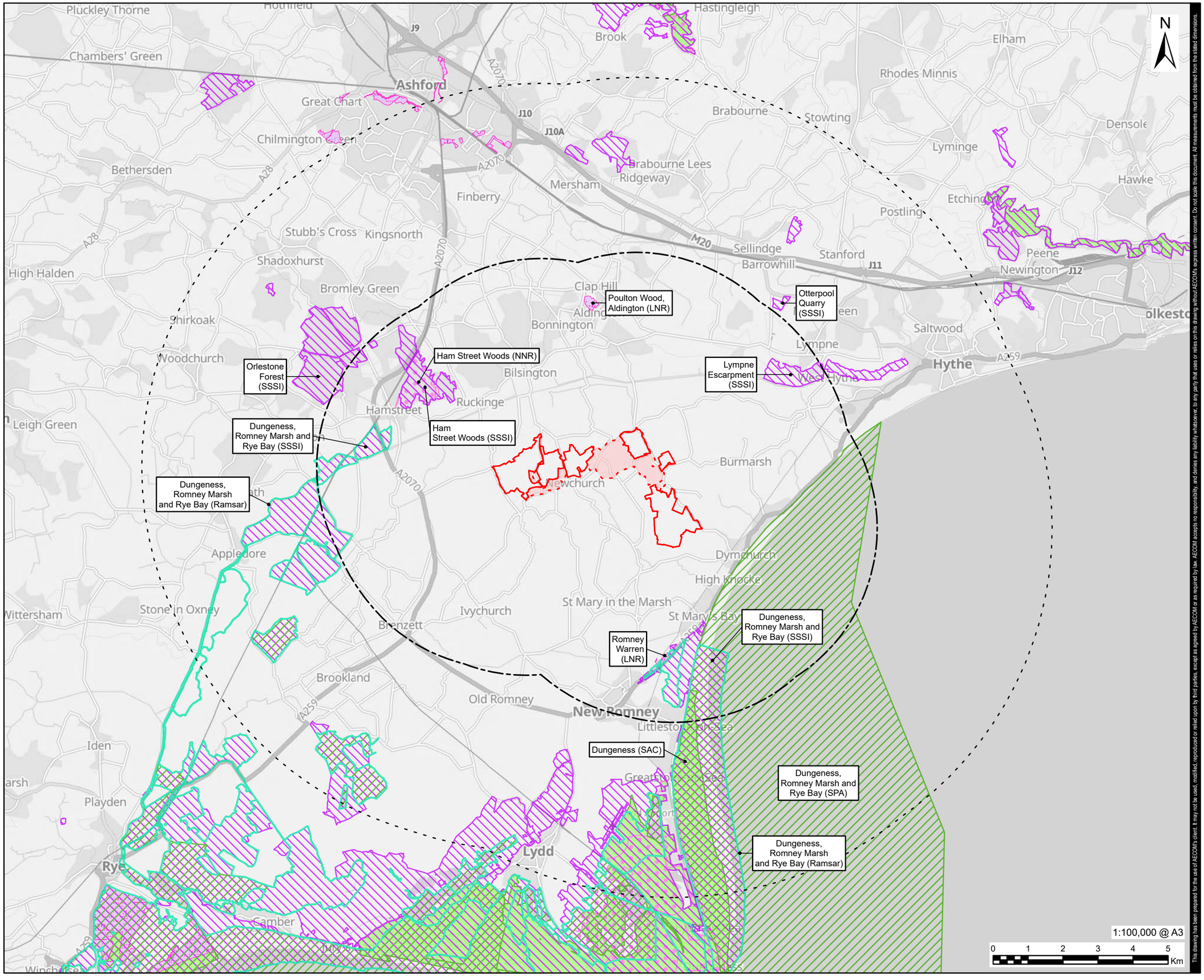
Statutory site name and designation	Statutory site description	Approximate distance and direction from closest point of the Site
	extent of the buried shingle ridges is much greater. Despite considerable disturbance and destruction of the surface shingle, the site retains very large areas of intact parallel 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 (*Cytisus scoparius*) and Blackthorn (*Prunus spinosa*). 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 (*Atriplex glabriuscula*). Dungeness contains a large number of waterbodies, hosting a large and viable Great Crested Newt population in a range of natural and anthropogenic habitats.	

Table 8-2: Sites statutorily designated for their biodiversity value within 5km (national) of the Site.

Statutory site name and designation	Description	Approximate distance and direction from closest point of the Site
Ham Street Woods SSSI, NNR	A series of broadleaved woodlands supporting a number of rare species including Silky Wave Moth (*Idaea dilutaria*), White Admiral (*Limenitis camilla*), Nightingale (*Luscinia megarhynchos*), as well as two protected species, Great Crested Newt (*Triturus cristatus*) and Hazel Dormouse (*Muscardinus avellanarius*)	SSSI – 2.1km north-west of the Site. NNR - 2.5km north-west of the Site.
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 9,000ha. 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.	2.2km south of the Site.
Romney Warren LNR	Dune grassland, willow scrub and ponds, rich in wildlife.	2.9km south of the Site
Lympne Escarpment SSSI	The site consists of a steep escarpment of Kentish ragstone formed by the Hythe Beds of the Lower Greensand. The grassland and woodland of this site are among the best remaining examples of semi-natural habitats on ragstone in Kent. Wet Ash Maple (*Acer negundo*) is the predominant woodland type with a small area of calcareous Ash (*Fraxinus excelsior*), Wych Elm (*Ulmus glabra*) wood. Many plants usually associated with chalk soils occur in the grassland.	3.4km north-east of the Site.

Statutory site name and designation	Description	Approximate distance and direction from closest point of the Site
	Past landslips have produced much scree at the foot of the escarpment and the grassland here is dominated by Tor-grass (*Brachypodium pinnatum*). The marshy ground below the springline has tall herb vegetation including plants such as Great Horsetail (*Equisetum Telemateia*), Great Willowherb (*Epilobium hirsutum*), Ragged-Robin (*Lychnis flos-cuculi*) and Water Figwort (*Scrophularia auriculata*).	
Poulton Wood Aldington LNR	An Ancient semi-natural hornbeam coppice with Pedunculate Oak (*Quercus robur*) standards, with a diverse mix of flora and fauna. Poulton Wood is a working woodland and a team of Rangers coppice and work the wood gathered from the reserve.	3.6km north of the Site.
Orlestone Forest SSSI	Ancient woodland site near Ham Street and an important invertebrate locality of national significance.	4.7km north west of the Site.

Figure 8-1: Sites Statutorily Designated for their Biodiversity Value within 10km of the Scheme.



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AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

AECOM Limited
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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 5km Study Area
- 10km Study Area

International Sites (Labelled within 10km of Site)

- Special Protection Area (SPA)
- Special Areas of Conservation (SAC)
- Ramsar

Statutory Sites (Labelled within 5km of Site)

- Sites of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Local Nature Reserve (LNR)

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FIGURE TITLE

Sites statutorily designated for their biodiversity value within 10km (European sites) and 5km (National sites) of the Scheme.

FIGURE NUMBER

Figure 8-1

Non-statutorily designated sites

8.5.8 There are four sites that are non-statutorily designated for their biodiversity value within 2km of the Site (as per the Study Area in paragraph 8.2.4 of this Scoping Report). These are:

- SH37 Pasture, Ditches and Pond, Dymchurch Local Wildlife Site (LWS);
- SH26 Royal Military Canal LWS;
- AS16 Bilsington Woods and Pasture LWS; and
- SH52 St Mary the Virgin Churchyard, St Mary in the Marsh New Romney LWS.

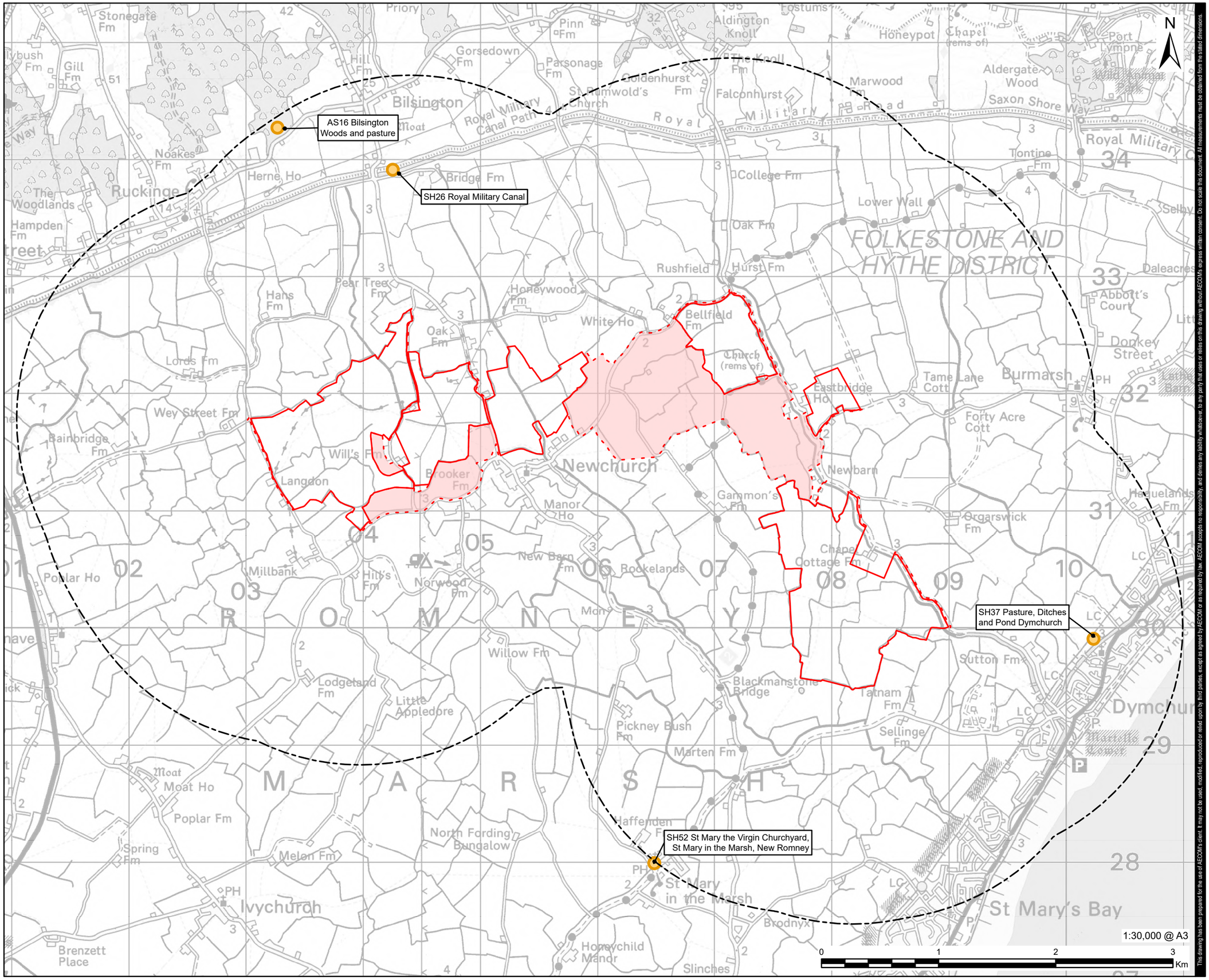
8.5.9 The closest non-statutorily designated site is SH37 Pasture, Ditches and Pond, Dymchurch LWS which is approximately 1.1km from the Site boundary. Whilst details of these sites were not included with the data search results from KMBRC, these sites have been designated as LWS for their biodiversity value at a county level and are known to have supporting value to a wide variety of protected and ecologically import species and/ or habitats.

8.5.10 The locations of these non-statutorily designated sites, relevant to the Scheme, are presented in **Figure 8-2**.

8.5.11 In addition, one area of Ancient Woodland was identified within 2km of the Site (Ref 8-51). This was Horn's Wood, an area of ancient and semi-natural woodland, approximately 1.9 km north of the Site. The location of Horn's Wood is presented in **Figure 8-3: Ancient Woodland and Priority Habitats Identified within 2km of the Scheme.**

8.5.12 The Site falls within the wider Dungeness to Pett Levels Important Bird Area (IBA). IBAs are sites or areas identified as being internationally significant for the conservation of birds and other biodiversity. IBAs do not receive statutory protection per se, however, they are used as an inventory for identifying key areas for formal designation and protection. In the UK this protected site network is delivered through SPAs and SSSIs and relevant to the Scheme, through the Dungeness, Romney Marsh and Rye Bay SPA / Ramsar site / SSSI, as set out in **Table 8-1** and **Table 8-2**. The assessment will consider the relevant component sites of the IBA, i.e., the relevant SPA, Ramsar site and SSSI, and their associated qualifying species.

Figure 8-2: Sites Non-Statutorily Designated for their Biodiversity Value within 2km of the Scheme.



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AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 2km Study Area
- Local Wildlife Site, within 2km of Site

NOTES

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FIGURE TITLE

Sites non-statutorily designated for their biodiversity value within 2km of the Scheme.

FIGURE NUMBER

Figure 8-2

Figure 8-3: Ancient Woodland and Priority Habitats identified within 2km of the Scheme.

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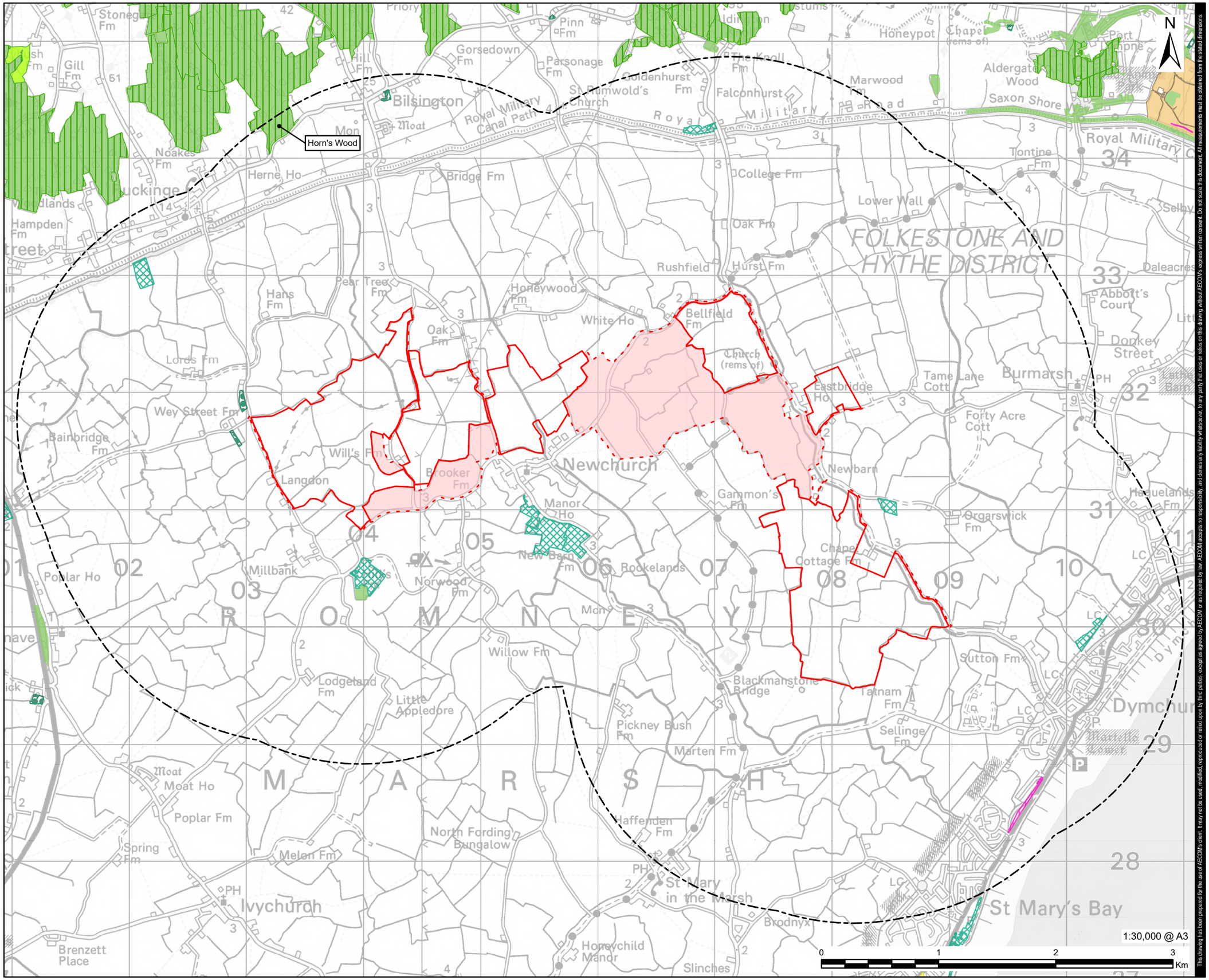

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 2km Study Area
- Ancient Woodland

Priority Habitats Inventory

- Coastal and floodplain grazing marsh
- Coastal sand dunes
- Deciduous woodland
- Good quality semi improved grassland
- Lowland calcareous grassland
- Traditional orchard
- No main habitat but additional habitats present

NOTES

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FIGURE TITLE

Ancient Woodland and Priority Habitats identified within 2km of the Scheme.

FIGURE NUMBER

Figure 8-3

Habitats

8.5.13 A walkover survey of accessible areas of the Energy Park Site, undertaken in October and December 2024 as part of the PEA, identified that the majority of habitat within this area is arable farmland, used for the production of crops (e.g., Wheat).

8.5.14 Potential Habitats of Principal Importance (HaPI) under Section 41 of the NERC Act 2006 (Ref 8-13) present (where determination by further survey is required) on land within the Energy Park Site include: hedgerows, standing water / ponds and arable field margins. These habitats have potential to support a range of protected and notable species. However, detailed surveys will be undertaken throughout the Site to confirm these HaPI.

8.5.15 Outside of the Site, but within the 2km Study Area, the MAGIC website (Ref 8-49) identified the presence of the following HaPI:

- Coastal and floodplain grazing marsh;
- Coastal sand dunes;
- Deciduous woodland;
- Good quality semi-improved grassland;
- Lowland calcareous grassland; and
- Traditional orchard.

8.5.16 A review of the Ancient Tree Inventory (Ref 8-52) indicates that there are no notable or veteran trees within the Site, but there are notable or veteran trees outside of the Site and within the 2km Study Area. Further survey will be undertaken to determine the location of any veteran or notable trees not recorded in the Inventory (Ref 8-52), within the Site.

8.5.17 There are three Water Framework Directive (WFD) waterbodies that have the potential to be impacted either directly or indirectly by the proposed construction works within the study area (**Table 8-3**). The Romney Marsh between Appledore and West Hythe and New Sewer at New Romney fall within the Reading Cradlebridge and 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 8-3: 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	

Water body	WFD Water Body ID	Ecological status	Operational Catchment
GB70710007	Royal Military Canal (West Hythe to sea) Water Body	Good	Reading Cradlebridge and RMC Canals Operational Catchment

Species

Desk Study

8.5.18 The desk study, including a data request through KMBRC, the Environment Agency Fish and Ecology dataset and NBN via their Atlas (undertaken in December 2024), identified records of the following species that are present within the 2km Study Area of the Site:

- Terrestrial invertebrates, including butterfly species (Small Heath *Coenonympha pamphilus*) and at least six moth species (including, Jersey Tiger *Euplagia quadripunctaria*, Gypsy Moth *Lymantria dispar,* Marsh Mallow Moth *Hydraecia osseola,* Orache Moth *Trachea atriplicis*, Rolled Grass-moth *Pediasia contaminella* and Hook-tipped Grass-moth *Platytes alpinella*);
- One fish species: European Eel *Anguilla Anguilla*;
- Seven macrophyte species: Frog-bit *Hydrocharis morsus-ranae*, Greater Water-parsnip *Sium latifolium*, Tubular Water-dropwort *Oenanthe fistulosa*, Water Violet *Hottonia palustris*, Rootless Duckweed *Wolffia arrhiza*, Fringed Water-lily *Nymphoides peltata*, and Lesser Spearwort *Ranunculus flammula*;
- 15 notable macroinvertebrates: White-clawed Crayfish *Austropotamobius pallipes*. The beetles, Great Silver Water Beetle *Hydrophilus piceus*, *Limnoxenus niger*, and *Naucoris maculatus.* The dragonflies and damselflies Common Darter *Sympetrum striolatum*, Blue-tailed Damselfly *Ischnura elegans*, Red-eyed Damselfly *Erythromma najas*, and Emerald Damselfly *Lestes sponsa*. The mayflies: *Caenis robusta* and *Caenis horaria.* The caddisflies: *Limnephilus lunatus, Limnephilus centralis, Plectrocnemia conspersa, Micropterna lateralis, and Micropterna sequax*;
- Five amphibian species (Great Crested Newt, Smooth Newt *Lissotriton vulgaris*, Common Frog *Rana temporaria,* Common Toad *Bufo bufo* and Marsh Frog *Pelophylax ridibundus*);
- Over 60 species of bird, including specially protected bird species such as Peregrine *Falco peregrinus*, Hobby *Falco subbuteo* and Barn Owl *Tyto alba*;
- Three reptile species (Common Lizard *Zootoca vivipara*, Slow Worm *Anguis fragilis* and Grass Snake *Natrix helvetica*);

- At least four bat species (Brown Long-eared Bat *Plecotus auritus*, Natterer's Bat *Myotis nattereri*, Noctule *Nyctalus noctula*, Serotine *Eptesicus serotinus,* Nathusius' Pipistrelle *Pipistrellus nathusii*) and unidentified Pipistrellus species *Pipistrellus sp*);
- Three species of Principal Importance (SPI) mammal species (Water Vole *Arvicola amphibius*, Brown Hare *Lepus europaeus* and Hedgehog *Erinaceus europaeus*; and
- 17 invasive non-native plant species: Water Fern *Azolla filiculoides*, Canadian Waterweed *Elodea canadensis*, Nuttall's Waterweed *Elodea nuttallii,* Three-cornered Garlic *Allium triquetrum*, Spanish Bluebell *Hyacinthoides hispanica*, Montbretia *Crocosmia pottsii x aurea = C. x crocosmiiflora*, Winter Heliotrope *Petasites fragrans*, Japanese Knotweed *Fallopia japonica,* Himalayan Balsam *Impatiens glandulifera,* Rhododendron *Rhododendron ponticum,* Yellow Archangel *Lamiastrum galeobdolon subsp. argentatum*, Wall Cotoneaster *Cotoneaster horizontalis*, Japanese Rose *Rosa rugosa*, New Zealand Pigmyweed *Crassula helmsii*, Parrot's-feather *Myriophyllum aquaticum*, Virginia-creeper *Parthenocissus quinquefolia, Least Duckweed Lemna minuta*.
- Three aquatic non-native species: *Crangonyx pseudogracilis/floridanus*, New Zealand mud snail *Potamopyrgus antipodarum*, Acute bladder snail *Physella acuta*.
- Two non-native fauna species: Western Conifer Seed Bug *Leptoglossus occidentalis* and American Mink *Neovison vison*

8.5.19 Several of the species recorded during the desk study are offered full or part protection under the Wildlife and Countryside Act 1981 (Ref 8-8) and, or, are listed as SPI under Section 41 of the NERC Act (Ref 8-13). Full details of these species and their legal status and conservation value will be provided in the ecology chapter of the ES.

8.5.20 Non-native plant species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (Ref 8-8) 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.

Field Surveys

8.5.21 Review of ecological data within the Study Areas enabled the identification of specific areas requiring ecological survey (Survey Areas) (see **Table 8-4**) which are specific to a given species, group of species or habitat. The Study Areas (see Section 8.2) and Survey Areas defined are the maximum distances that statutory consultees would typically expect to be considered.

8.5.22 **Table 8-4** presents details of the identified surveys, methods and survey periods that have commenced or will be undertaken within the relevant Survey Areas. As appropriate, these surveys will be undertaken for the land identified for the Grid Connection Route following the disclose of the proposed NGET substation. 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.

8.5.23 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 (EPS) mitigation licences (where required). As part of the DCO application for the Scheme these will be prepared in draft for advisory comment from Natural England.

Table 8-4: Ecological surveys that have been, or will be, undertaken to characterise the baseline conditions within the Site (Energy Park Site, as well as the Interconnecting Cable Corridor and Grid Connection Route once identified).

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
UKHab Survey, including Habitat Condition Assessment for Biodiversity Net Gain	Walkover survey recording habitat types and boundary features, following the standard UKHab method (Ref 8-1). 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 Site and a zone of up to 50m (where visible from within the Site or accessible)	In progress. Habitat condition assessment surveys will be undertaken between April to October.	Using professional judgement, 50m from the Site is an appropriate Survey Area within which to record habitats, acknowledging that those that are likely to be directly impacted by the Scheme are within the Site itself and surveying up to 50m from the Site 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 Scheme. The information from surveys undertaken within the Site to support the BNG assessment will form the basis of the calculation of potential permanent and temporary

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
				habitat effects within the Ecological Impact Assessment (EcIA).
Terrestrial Habitat and Flora: Arable Flora Survey Phase 2 botanical / NVC Survey	Surveys for important arable flora species involve walking arable field boundaries to record notable species as listed in Great Britain (Ref 8-53, Ref 8-54) and England (Ref 8-55) 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 rarity of higher plants given based on	The Site.	Not yet commenced. May to September.	Using professional judgement, areas of terrestrial habitat to be surveyed in further detail are those within the Site that have the potential to be impacted by the Scheme, 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.

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
	'*New Flora of the British Isles*' (Ref 8-56).			
Hedgerows	Hedgerows will be surveyed in accordance with the methodology as outlined in DEFRA's Hedgerow Survey Handbook (Ref 8-57), to assess their 'importance' against the Wildlife and Landscape Criteria, detailed in the Hedgerows Regulations (Ref 8-15) and to determine whether a hedgerow is species-poor or species-rich.	The Site.	Not yet commenced. May to September.	Using professional judgement, surveying all hedgerows within the Site is appropriate, acknowledging that those hedgerows that are likely to be impacted by the Scheme are within the Site itself. Hedgerows outside of the Site will remain intact and unaffected by Scheme.
Aquatic habitat and species surveys including for any invasive non-native species (potentially	An aquatic scoping survey comprising a desk-based assessment of available aquatic ecology data and a walkover survey will inform site selection for further surveys. Selected waterbodies (ponds, ditches, rivers) likely to be	Up to 2km from the Site for the desk study and up to 250m for field survey.	In progress. RHS – May and June (not restrictive) Macroinvertebrates - two seasons: Autumn (September – November 2024;	Up to 250m from the Site is an appropriate Survey Area to determine any potential impacts arising from the Scheme both upstream and downstream (the desk study will assess a wider 2km area).

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
including River Habitat Surveys (RHS), pond Predictive System for Multimetrics (PSYM), macrophytes, macroinvertebrates and fish surveys)	impacted will be surveyed and assessed using relative standard methodologies for aquatic macrophytes (Ref 8-58), aquatic macroinvertebrates (Ref 8-59, Ref 8-60), River Habitat Surveys (Ref 8-61), Fish (Ref 8-62) and PSYM specifically for ponds (Ref 8-63).		completed) and Spring (March – May 2025; Not yet commenced) PSYM – June to August Macrophytes – June to September Fish – June to September	
Terrestrial invertebrates scoping survey	Desk-based study and walkover survey to identify areas of likely greater importance to terrestrial invertebrates.	The Site.	Not yet commenced. April to September.	Professional judgement was used to determine that habitat within the Site is an appropriate Survey Area, acknowledging that habitats that have the potential to be permanently impacted (i.e. lost) by the Scheme and potentially supporting notable terrestrial invertebrates or assemblages are within this area. A scoping

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
				survey will identify any areas likely to be important for terrestrial invertebrates and inform avoidance, mitigation and enhancement.
Amphibians, including Great Crested Newt	Water bodies within 500m of the Site 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 8-64). Further to the HSI assessment, suitable (as defined by the results of the HSI survey) and accessible water bodies identified within the Survey Area will then be scoped in for Environmental DNA (eDNA) survey (Ref 8-65) to determine	HSI surveys will be undertaken on water bodies within 250m of the Site and, where further survey identified as being required (based on the HSI score), using eDNA methods.	In progress. HSI and eDNA surveys to be undertaken between mid-April and 30 June.	With reference to published guidance, habitats within and up to 250m of the Site could constitute significant foraging areas, hibernation or resting sites for Great Crested Newt, which typically utilise terrestrial habitat up to 500m from their breeding ponds (Ref 8-66). However, 250m is an appropriate Survey Area from the Site for determining Great Crested Newt populations within the ZoI of the Scheme through HSI and eDNA surveys, acknowledging that there is a notable decrease in abundance of Great Crested Newt beyond a

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
	presence or absence of Great Crested Newt.			distance of 250m from a breeding pond (Ref 8-67).
Reptiles	A Habitat Suitability Assessment will determine the suitability of the Site for reptiles. Surveys of terrestrial habitats for reptiles to record species presence (or absence) using artificial refugia and observations of species in accordance with standard guidance for survey (Ref 8-68, Ref 8-69).	Suitable habitat for reptiles (such as grassland) within the Site that is potentially directly impacted by the Scheme.	In progress. May to June and August to September.	With reference to published guidance, any surveys that are required within the Survey Area will provide sufficient information on reptile presence within the Site, acknowledging that good quality habitats, potentially supporting populations of reptiles and where these may be permanently impacted (i.e. lost) by the Scheme are within this area.
Non-breeding birds (including farmland birds)	Twice monthly non-breeding bird surveys, using an adapted walkover survey method, including frequent stopping points to view and observe bird behaviour (Ref 8-70, Ref 8-71).	For the general non-breeding bird assemblage, the land within the Site and up to 50m from the Site will be surveyed. For species of greater conservation value	In progress. October to March.	Whilst standardised survey zones for assessing the impacts of development on bird populations do not exist, the Survey Area provides information on the non-breeding bird population within the area immediately surrounding and

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
		and/ or higher sensitivity to potential noise or visual disturbance (e.g. Golden Plover *Pluvialis apricaria*), where any such species are recorded, the Survey Area will be extended up to 250m from the Site.		contiguous with the 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 Scheme on non-breeding bird species occurring or likely to occur in the area.
Breeding birds (including farmland birds)	Surveys for breeding birds are based on a standard territory mapping method for surveying breeding birds (Ref 8-70, Ref 8-71) and were adapted where necessary to include species-specific methods (as detailed in 'Bird Monitoring Methods' (Ref 8-70)) for other species, as required.	For the general breeding bird assemblage, the Survey Area is the land within the Site and up to 50m from the Site. For species of greater conservation value and/ or higher sensitivity to potential noise or visual disturbance, where	In progress. March to mid-June for the general breeding bird assemblage, with additional survey effort as necessary in August and September to record any late-breeding	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 contiguous with the Site, where birds may potentially be adversely affected. Published guidance (Ref 8-72) on

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
		any such species are recorded, the Survey Area will be extended up to 250m from the Site.	species (e.g. Hobby *Falco subbuteo*)	disturbance distances for specially protected species e.g. those listed on Schedule 1 of the WCA (Ref 8-8) was used to define the Survey Area for any such species likely to be present.
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 8-73).	Relevant features within the Site and up to 15m from the Site, where accessible and likely to be impacted by the Scheme.	Not yet commenced. Any time of year, but winter months are best when there is little foliage on the trees (November to February)	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).
Bats – Roost Surveys including Ground Level Tree	Where any works to trees potentially supporting bat roosts (as recorded during the DBW survey) has been confirmed prior to ES	Features with bat roost suitability within the Site that will be impacted by the Scheme (i.e. if the	If required, May to September.	Based on the Scheme design, it is anticipated that impacts to potential roosts are likely to be avoided and that any further survey work, if required, is likely

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
Assessment (GLTA) and aerial survey	submission, a GLTA and aerial survey and/ or bat emergence surveys will be undertaken in accordance with standard survey guidance (Ref 8-73).	design cannot avoid the loss of trees).		to be minor (i.e. possibly a few individual trees) and undertaken on a precautionary basis.
Bats – Night-time Bat Walkover (NBW)	Walked transect routes, to cover representative habitats within the Energy Park Site, with each transect surveyed once in spring, summer and autumn. The survey method is based upon published guidance (Ref 8-73) and supplemented by the deployment of static bat detectors, (at least one per transect).	The Energy Park Site.	Not yet commenced. May to September.	Using professional judgement and with reference to published guidance, the Survey Area will provide sufficient information on bat activity (commuting and foraging) of the Site and where impacts are predicted, assessing commuting and foraging habitat and nearby roosts, and enabling determination of impacts on bat populations occurring within, or adjacent to, the Site acknowledging that any impacts within the Grid Connection Route will be temporary and loss of important features (such

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
				as hedgerows) minimised/ avoided.
Riparian mammals (Water Vole *Arvicola amphibius*, Otter *Lutra lutra* and the INNS, Mink *Mustela vison*)	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 8-74, Ref 8-75) and for Otter (Ref 8-76, Ref 8-77, Ref 8-78). Any evidence of Mink will also be recorded, using these survey methods.	All water bodies and watercourses within the Site (and to a maximum of 10m from the 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 200m upstream and downstream (where accessible). Additional surveys of woodland in the vicinity of water courses will also be checked for Otter holts.	In progress. May to September.	With reference to published guidance and using professional judgement, surveying riparian habitats up to 10m (Water Vole) and 200m (Otter) from the Site is sufficient to determine presence or absence of riparian mammals within, or adjacent to, the Site as it covers the appropriate avoidance buffers around Water Vole burrows or Otter holts (which may be present outside of the Site).

Survey	Survey method	Survey Area	Status of survey and survey timing	Justification for Survey Areas
Badger	A walkover survey, searching for signs of Badger activity (such as setts and latrines), and following standard survey guidance (Ref 8-79, Ref 8-80).	Within the Site and to a maximum of 50m from the Site, where viewable from within the Site or where access is permitted.	In progress. Any time of year, ideally when vegetation not in leaf (November to February).	With reference to published guidance and applying professional judgement, 50m beyond the Site is an appropriate Survey Area as it covers the 30m distance of avoidance around setts at which direct or indirect effects on Badger setts could occur.
Invasive non-native species (INNS)	INNS species observations will be recorded when noted during other ecological surveys. 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.	The land within the Site and a zone of 50m (where visible from within the Site or accessible).	In progress. Any time of year, but April to September is the optimal period for recording INNS plants.	Using professional judgement, INNS will be recorded within the Site and to a maximum of 50m to avoid and reduce the spread of any INNS species before, during and after construction.

8.5.24 It is likely that mammal species listed in accordance with Section 41 of the NERC Act (Ref 8-13) e.g. Hedgehog, Brown Hare *Lepus europaeus* and Harvest Mouse *Micromys minutus* may be present within the Site (although only Hedgehog was recorded during the desk study as being present within the 2km Study Area). Ongoing ecological surveys will continue to note the presence of any other SPI mammal species, if observed. Where the Site is within the known geographical range for these species and if there are desk study records of any such species occurring within 2km of the Site and there is suitable habitat on site to support them, then they will be assumed to be present on Site and assessed as such within the ES. No species-specific surveys are proposed and the precautionary approach of assuming presence (if desk top data and habitat suitability suggest this is likely), is considered proportionate. Consideration for any embedded mitigation required for relevant SPI will be described and included in the ES, submitted as part of the DCO Application. It is anticipated that the proposed landscape design for the Scheme will be largely beneficial for any such mammal species present as the Scheme will retain habitats and ensure that connectivity is maintained across the Site.

8.5.25 Water bodies and ditches located within and close to the Site may support common and widespread amphibian species (e.g. Common Frog and Smooth Newt) and the Site also offers suitable terrestrial habitats for these species in the form of hedgerows, scrub, modified grassland and woodland. Surveys are not required for such species, as they receive limited legislative protection and as such will not be specifically undertaken for these species, but observations of these species will be recorded during 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 (if present) during construction of the Scheme.

Future Baseline

8.5.26 The future ecological baseline of the Site, in the absence of the Scheme, is not anticipated to materially change between now and the beginning of the construction and operation phases as the land will continue to be in agricultural management. Habitats within the Site (such as arable fields (cropped on rotation), mature trees, hedgerows, ponds and woodland) have and will continue to provide a number of species with potential habitat for foraging and reproduction, such as arable farmland for ground-nesting breeding birds.

8.5.27 In the longer term, in the absence of the Scheme, habitats within the Site will 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.

8.5.28 Irrespective of whether the Scheme 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 Scheme throughout its duration.

8.6 Potential Effects and Mitigation

Potential Effects

8.6.1 Prior to the implementation of any mitigation, the Scheme has the potential to affect biodiversity (positively or negatively) during construction, operation and decommissioning in the following ways:

Construction

8.6.2 Impacts on biodiversity features during construction of the Scheme potentially include:

- Habitat loss or gain – direct impacts associated with changes in land use resulting from the construction of the Scheme, for example temporary works associated with site clearance, and permanent land-take (mainly arable land) associated with the installation of the Scheme;
- Fragmentation of populations or habitats – indirect impacts due to the Scheme potentially dividing a habitat, group of related habitats, site or ecological network, or the creation of partial or complete barriers (e.g. culverts) 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 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

8.6.3 Impacts on biodiversity features during operation and maintenance of the Scheme are likely to include:

- Potential avoidance by species using the Site, such as bats and birds, due to indirect impacts through, for example, operational lighting;
- Disturbance or displacement of sensitive species during operational maintenance activities;
- Disturbance or displacement of sensitive species caused by Electro-Magnetic Fields (EMF) created by EHV cables during operation. This will be further explored if the Scheme design interacts with watercourses

containing migratory fish species. Where this is the case, an EMF assessment will be appended to the ES. See **Chapter 16: Other Environmental Topics**, Section 16.2 for further information; and

- Fragmentation of habitats causing a barrier effect e.g., due to fencing.

Decommissioning

8.6.4 Impacts on ecological features during decommissioning of the Scheme 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 Site returned to landowners in the condition as at the end of operation, including the established habitats.

Biodiversity Net Gain (BNG)

8.6.5 When the relevant legislative provisions come into force, the Environment Act 2021 (Ref 8-9) will include a mandate for at least 10% biodiversity net gain (BNG) for NSIPs. However, the BNG arrangements for NSIPs are not yet finalised, so the Scheme will continue to monitor their progress and adapt the required documents, as necessary, prior to DCO submission. The Scheme will achieve at least this level of net gain in habitat units, hedgerow units, and watercourse units where applicable (as set out in the incoming legislation).

8.6.6 The CIEEM's Biodiversity Net Gain: Good Practice Principles for Development (Ref 8-81) defines BNG 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 management of existing habitats. Although BNG allows for these measures to be provided on-site, off-site, or in combination, based on the experience of other solar NSIPs, it is anticipated that the Scheme will be able to deliver BNG on-site through the implementation of measures such as field boundary enhancements and planting seed mixes within the Energy Park Site, planting of new hedgerows and enhancement of existing hedgerows and enhancements to watercourse and associated riparian habitats.

8.6.7 NPS EN-1 (Ref 8-26) 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 that "biodiversity net gain should be applied after compliance with the mitigation hierarchy [as presented in paragraph 8.5.18] and does not change or replace existing environmental obligations".

8.6.8 A BNG assessment will be undertaken (using Defra's Statutory Biodiversity Metric Tool or the most up to date metric) to identify on-site opportunities to deliver BNG. These opportunities will be identified and set out within the ES, in line with the requirements of the Environment Act (Ref 8-9), the NPPF (Ref 8-29) and local planning policy.

8.6.9 A Framework Landscape and Ecology Management Plan (LEMP) will be submitted with the DCO Application and will specify mitigation and enhancement measures that would deliver BNG. A detailed LEMP will be produced in accordance with the Framework LEMP following DCO consent to implement the measures outlined in the Framework LEMP for the Scheme.

8.6.10 Compliance with planning policy in NPS EN-1 (Ref 8-26) requires that the Scheme considers and engages a mitigation hierarchy, requiring the highest level to be applied, where practicable, similar to what is described in the NPPF (Ref 8-29) . The mitigation hierarchy 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 development to a different location).
- **Minimisation** – measures taken to reduce the duration, intensity, extent and/ or likelihood of the unavoidable environmental impacts caused by development (e.g. adapting the development design to minimise impacts).
- **Restoration or rehabilitation** – actions taken to repair environmental degradation or damage following unavoidable impacts caused by the Scheme.
- **Offsets** – measures taken to compensate for any adverse environmental impacts caused by development which cannot be avoided, minimised and/ or restored (e.g. including habitat creation to offset losses).

Design, Avoidance, and Mitigation

8.6.11 The design for the Scheme 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 8.6.10) and relevant planning policy. The measures that will be identified and adopted include those that are inherent to the design of the Scheme, and those that can realistically be expected to be applied as part of environmental best practice, or as a result of legislative requirements.

8.6.12 Standard best practice construction measures will be set out within a Framework Construction Environmental Management Plan (CEMP), secured through the DCO, to reduce the effect of potentially harmful impacts on IEFs, in compliance with environmental legislation. The Framework CEMP will detail and formalise measures that will be implemented prior to and during construction of the Scheme to mitigate construction-related effects on IEFs. A detailed CEMP will be produced in accordance with the Framework CEMP following DCO consent to implement the measures outlined in the Framework CEMP for the Scheme.

8.6.13 The Scheme will occur mostly on lower value habitats (i.e. arable farmland). Use of these lower valued habitats substantially reduces the potential for the Scheme to result in significant adverse effects on ecological features.

8.6.14 The Scheme will be designed so that impacts upon important habitats (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.

8.6.15 The Scheme will aim to avoid, protect and retain notable habitats where practicable, all of which will be included in the design. This will include offsets of:

- At least 10m from watercourses and water bodies;
- At least 15m from existing woodland features;
- At least 5m from hedgerows without trees; and
- Offsets applicable to each tree's root protection area (RPA) (Ref 8-82) for individual trees and trees occurring within hedgerows.

8.6.16 Where practicable, retained trees will be protected as per British Standard BS: 5837 Trees in relation to design, demolition and construction – Recommendations (Ref 8-82). Fencing, as appropriate, will be included around working areas to protect above-ground vegetation and below-ground root systems.

8.6.17 The Scheme will also aim to avoid, protect and retain protected or notable species where practicable, all of which will be included in the design. This will include:

- Retaining Badger setts, with an undeveloped zone of at least 30m from the sett (dependent on the activity); and
- Retaining trees with the potential to support roosting bats, with an undeveloped zone of at least 15m around the tree.

8.6.18 With the incorporation of enhancements into the Scheme design, there are likely to be beneficial effects following completion of the Scheme 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 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 grasslands 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 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.

8.7 Assessment Methodology

8.7.1 The assessment of potential effects as a result of the Scheme on biodiversity will be undertaken using the methodology set out below.

Assessment Criteria

8.7.2 The approach used for the Ecological Impact Assessment (EcIA) will be undertaken in accordance with best practice guidance, issued by the CIEEM (the CIEEM guidelines) (Ref 8-2). The aims of the assessment will be to:

- Identify IEFs which may be impacted by the Scheme;
- Undertake a scientifically rigorous and transparent approach to the assessment of the likely ecological impacts and resultant effects of the Scheme, where the level of detail provided is proportionate to the scale of the development and the complexity of its potential impacts. Impacts and effects may be positive or negative; and
- Set out what steps will be taken to adhere to policy (in terms of national, regional and local policies) and legal requirements relating to the relevant IEFs concerned.

8.7.3 The principal steps involved in the CIEEM approach can be summarised as:

- Ecological features that are both present and might be affected by the Scheme are identified (both those likely to be present at the time works begin and those predicted to be present at a set time in the future) through a combination of targeted desk-based study and field survey work to determine the relevant baseline conditions;
- The importance of the identified ecological features is evaluated, placing their relative nature conservation importance into geographic context, which is then used to define the relevant biodiversity features that need to be considered further;
- The changes or perturbations predicted to result as a consequence of the Scheme (i.e. the potential impacts) and which could potentially affect relevant ecological features are identified and their nature described. Established best-practice, legislative requirements or other incorporated design measures to minimise or avoid impacts are also described and are taken into account;
- The likely effects (positive or negative) on relevant ecological features are then assessed, and where possible quantified;
- Measures to avoid or reduce any predicted significant effects, if practicable, are then developed in conjunction with other elements of the design (including mitigation for other environmental disciplines) and if

necessary, measures to compensate for effects on features of nature conservation importance are also included; and

- Any residual effects of the Scheme are reported; and scope for ecological enhancement is considered.

8.7.4 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., ecological features that are considered to be important (IEFs) and potentially affected by the Scheme. This does not mean that efforts should not be made to safeguard wider biodiversity; and requirements for this have been considered, where appropriate.

Determining Importance

8.7.5 To support a focussed assessment, there is a need to determine the scale at which the relevant ecological features identified through the desk studies and field surveys undertaken for the Scheme are of value. The value or sensitivity, as termed elsewhere within the EIA, of each relevant ecological feature 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 Scheme will comply with statutory requirements and policy objectives for biodiversity, in accordance with Section 4.3 of the CIEEM guidelines (Ref 8-2).

8.7.6 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.

8.7.7 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 judgment of experienced ecologists.

8.7.8 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.

8.7.9 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 Scheme. For European protected species there is a requirement that the Scheme should not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

8.7.10 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 (Ref 8-2) 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”.

8.7.11 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.

8.7.12 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 (Ref 8-2), is presented in **Table 8-5.**

Table 8-5: Summary of sensitivity of ecological features, according to geographic context.

Sensitivity	Geographic Frame of Reference	Examples
Very High	International (or European)	European sites, 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 designation as a European 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 designation as a European or Ramsar site. Qualifying species connected to an SAC (such as bats).
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 site, such as a SSSI or NNR. HaPI (Ref 8-13), considering factors such as its size, distribution and the size of the habitat which would be affected. This would include 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 (Ref 8-46).
Medium / High	Regional (South East)	Species, including SPI (Ref 8-13), occurring in numbers of greater geographical importance than within the county of Kent but does not reach the threshold to be of National importance.

Sensitivity	Geographic Frame of Reference	Examples
Medium	County (Kent) and/or District (Folkestone and Hythe)	Non-statutorily designated sites, such as LWSs. HaPI (Ref 8-13) 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	The Site	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 Site	Species that are common and widespread and are not legally protected or included within local planning policy (e.g. Field Vole *Microtus agrestis*). Areas of habitat that are widespread and of no local value (such as a fence-line or hard-standing).

Characterising Ecological Features

8.7.13 In accordance with Section 1.21 in the CIEEM guidelines (Ref 8-2), the terminology used within the assessment will draw a clear distinction between the terms ‘impact’ and ‘effect’. For the purposes of the EcIA 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.

8.7.14 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 - 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. 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 Scheme (in the context of the feature being assessed).

8.7.15 Combined, these characteristics form the magnitude criteria for effects of the Scheme on IEFs as summarised in **Table 8-6.**

Table 8-6: Magnitude criteria for impacts and effects.

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

8.7.16 For each ecological feature, only those characteristics relevant to understanding the ecological effect of the Scheme 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 ecological features, as follows:

- Not significant - no effect on structure and function, or conservation status; and
- Significant - structure and function, or conservation status is affected.

8.7.17 Effects that should be determined as being significant (a 'significant effect') are described in Sections 5.24 to 5.28 of the CIEEM guidelines (Ref 8-2) as

"*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)".

8.7.18 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 8-7**.

8.7.19 There are a number of approaches for determining the significance of effects on ecological features. Whilst the CIEEM guidelines (Ref 8-2) 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 8-7**, but still remain consistent with the CIEEM guidelines.

8.7.20 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.

8.7.21 Beneficial effects, as described in **Table 8-7**, 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 8-7: 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.

Effect Classification Terminology	Equivalent CIEEM Terminology
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.

8.8 Limitations and Assumptions

8.8.1 Baseline ecological surveys commenced in October 2024 and will continue to determine the baseline ecological conditions. The surveys may highlight new important ecological features with potential to be significantly affected which 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 may be undertaken to inform the detailed design stage of the Scheme.

8.8.2 An assumption has been made that the following habitats will be retained as part of the Scheme:

- woodlands
- 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)
- the majority of hedgerows (assuming hedgerows are not lost as a whole, but could require either a temporary or permanent gap through occasionally, which would be minimised to smallest necessary).

8.8.3 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.

8.8.4 It is assumed that mammal species listed in accordance with Section 41 of the NERC Act (Ref 8-13) e.g. Hedgehog, Brown Hare and Harvest Mouse may be present within the Site, where there is suitable habitat to support them. Therefore, no species-specific surveys are proposed and the precautionary approach of assuming presence will be applied. Further detail is provided in Section 8.5.24.

8.8.5 Any compound and material storage areas will be contained within the Energy Park Site.

8.9 Summary of Elements Scoped In and Scoped Out

8.9.1 The surveys to inform the baseline characterisation and support the biodiversity assessment, along with justification as to their scope, are set out in **Table 8-8**. A summary of the scope of the biodiversity assessment, including any ecological features or specific impact pathways that are scoped out, is presented in **Table 8-8**.

Table 8-8: IEFs scoped in and out of the Ecology and Nature Conservation assessment

IEF	Scoped In/ Scoped Out
Statutorily designated sites (European sites)	Scoped In – European sites up to 10km from the Site and up to 30km from the Site with mobile species as qualifying criteria (up to 20km for birds and up to 30km for bats). Potential for impact pathways to include indirect impacts such as disturbance and habitat degradation as per Section 8.6. The assessment will identify any European sites within 10km of the Site, to determine whether there are any pathways to effects on any such sites.
	Scoped out – European sites beyond 10km from the Site (without mobile species as qualifying criteria). Beyond 10km there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme.
Statutorily designated sites of National importance	Scoped In – Statutory sites of national importance, designated for their biodiversity value and within 5km of the Site. Where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
	Scoped out - sites beyond 5km from the Site (without mobile species as qualifying criteria). Beyond 5km there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme.

IEF	Scoped In/ Scoped Out
Non-statutorily designated sites	Scoped In – non-statutorily designated sites within 2km of the Site Four non-statutorily designated sites are present within the 2km Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
	Scoped Out - non-statutorily designated sites beyond 2km of the Site. Beyond 2km there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme.
Habitats	Scoped In - Habitats of Principal Importance (HaPI) within the ZoI of the Site Habitats of Principal Importance (HaPI) have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
	Scoped Out – common and widespread habitats of no conservation value. No formal assessment on common and widespread habitats is required due to an absence of legal protection or direction from relevant policy.
Biodiversity Net Gain	Scoped In.

IEF	Scoped In/ Scoped Out
Terrestrial invertebrates	Scoped In – notable terrestrial invertebrate species and assemblages categorised as IEFs. Notable terrestrial invertebrate species have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
	Scoped Out – common and widespread species of no conservation value and species outside of the Scheme and not categorised as IEFs. No formal assessment is required due to an absence of legal protection or direction from relevant policy. However, the Scheme design will follow to 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 Scheme, avoidance of habitats outside the Scheme and following good practice environmental methods during any phase (construction, operation and maintenance and decommissioning) of the Scheme.
Aquatic Macroinvertebrates	Scoped In – notable aquatic macroinvertebrate species and assemblages categorised as IEFs. There are potential impact pathways for direct and indirect impacts to aquatic invertebrates as per Section 8.6 of this Scoping Report, and where necessary an assessment of these will be provided in the ES.
	Scoped out - common and widespread species of no conservation value and species outside of the Scheme and not categorised as IEFs. No formal assessment is required due to an absence of legal protection or direction from relevant policy. However, the Scheme design will follow to 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 Scheme, avoidance of habitats outside the Scheme and following good

IEF	Scoped In/ Scoped Out
	practice environmental methods during any phase (construction, operation and maintenance and decommissioning) of the Scheme.
Aquatic Macrophytes	Scoped In. There are potential impact pathways for direct and indirect impacts to aquatic macrophytes as per Section 8.6 of this Scoping Report, and where necessary an assessment of these will be provided in the ES.
Fish	Scoped In. There are potential impact pathways for direct and indirect impacts to fish as per Section 8.6 of this Scoping Report, and where necessary an assessment of these will be provided in the ES.
Amphibians including Great Crested Newt	Scoped In. Protected and notable amphibians have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
Reptiles	Scoped In. Reptiles have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
Breeding and non-breeding birds	Scoped In. Protected and notable bird species have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.

IEF	Scoped In/ Scoped Out
	Scoped Out - potential collision / attraction to solar PV modules from breeding or non-breeding birds during operation. Surveys of breeding and non-breeding birds will confirm the usage of the Site by birds, including of birds flying over the Site. There is no conclusive evidence in the UK that PV modules increase the risk of mortality (due to collision) or displacement of waterbird populations, where PV modules may present as water bodies from overflying species. The maximum height of the solar PV panels will be up to 4m above ground level (at maximum tilt) and in the context of existing vegetation in the landscape, e.g. hedgerows, trees and woodland, the solar PV panels will not cause a physical impediment to bird movements across the landscape. Equally, birds transiting across the landscape are doing so on a broad front, i.e., there are no topographical or geographical features in the landscape to 'funnel' or concentrate bird movements between water bodies and over the Site, therefore, the exposure time to any possible reflected polarised light (glint or glare) is extremely low risk of attraction and collision with PV modules is therefore proposed to be scoped out of the assessment.
Bats	Scoped In. Roosting and foraging/commuting bats have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
Riparian mammals	Scoped In. Water Vole and Otter have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.
Badger	Scoped In. Badger have been identified within the Study Area. Therefore, where appropriate, the potential impact pathways identified in Section 8.6 of this Scoping Report will be considered in the assessment provided in the ES.

IEF	Scoped In/ Scoped Out
Other SPI mammals, including Brown Hare, Hedgehog and Harvest Mouse	Scoped In. Brown Hare and Hedgehog are likely to be present within the Site and Harvest Mouse has the potential to be present, based on the habitat within the Site. Therefore, the species will be presumed 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 Framework CEMP secured as part of the DCO requirements. Scoped Out – surveys for SPI mammals. As set out above no formal surveys will be undertaken for these species will be undertaken, but their presence will be assumed and assessed as such.
Hazel Dormouse and European Beaver	Scoped Out. Although present in Kent, neither species is currently known to be present on Romney Marsh and so are scoped out of the assessment. 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.
Other mammals, e.g. common and widespread species of no conservation value (such as Deer)	Scoped Out. No formal assessment is required due to an absence of legal protection or direction from relevant policy. However, the Scheme design will consider the maintenance of ecological corridors and connectivity across the Scheme for common and widespread mammal species. The design of the perimeter fence will include gaps to allow mammals, including small deer to pass underneath at strategic locations to maintain ecological connectivity.

9. Landscape and Visual Amenity

9.1 Introduction

9.1.1 This chapter sets out the approach to the assessment of impacts arising from the Shepway Energy Park (hereafter referred to as the 'Scheme') for the two related sub-topics of landscape and visual amenity. These two components of a Landscape and Visual Impact Assessment (LVIA) are defined in the Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013 (GLVIA3) (Ref 9-1) as:

- Landscape Effects: effects on the landscape as a resource in its own right; and
- Visual Effects: effects on specific views and on the general visual amenity experience by people.

9.1.2 The purpose of the chapter will be to identify sensitive landscape and visual receptors in the vicinity of the area within which the Scheme will be located (hereafter referred to as the 'Site') that will need to be scoped into the LVIA. The chapter also outlines the potential landscape and visual impacts, likely significant effects and key mitigation principles that could be incorporated into the design of the Scheme. It also sets out the proposed approach to assessment that will be taken within the LVIA.

9.1.3 With reference to **Chapter 1: Introduction** and **Chapter 2: The Scheme and Scheme Location** of this Scoping Report the Site comprises the Energy Park Site and the Interconnecting Cable Corridor Search Area. The Scheme will also require connection to a proposed National Grid Electricity Transmission (NGET) substation, via an export Grid Connection Route will be included as a component of the Scheme. The Grid Connection Route will be defined following disclosure of the proposed NGET substation location; if an export route extending out of the Energy Park Site is required, then the LVIA methodology for this element would replicate that which is presented here.

9.1.4 The chapter will consider landscape and visual effects at the construction, operation and decommissioning stages, as summarised in Section 9.7 below. With reference to the elements of the Scheme described in **Chapter 2: The Scheme and Scheme Location**, the assessment approach will be broadly similar for each. However, the study areas, baseline and assessment for the Interconnecting Cable Corridors and the Grid Connection Route will differ from those for the Energy Park Site due to the temporary nature of these works, for which no permanent built structures are proposed.

9.1.5 The LVIA will be undertaken in accordance with recently published notes and clarifications on aspects of GLVIA3 (Landscape Institute Technical Guidance Note LITGN-2024-*01*) (Ref 9-2). It will be prepared in conjunction with the assessments for other environmental topics, particularly Ecology, Cultural Heritage, Arboriculture and Glint and Glare.

9.1.6 This chapter is supported by the figures stated below. These include preliminary Zones of Theoretical Visibility (ZTV) (**Figures 9-1b** to **9-1h**), details of which are provided in Paragraphs 9.2.3 to 9.2.10; and the locations of proposed (draft)

representative viewpoints. Further information regarding the selection of these viewpoints is provided in Paragraphs 9.5.44 and **Table 9-1.**

- **Figure 9-1a: Zone of Theoretical Visibility (Screened): Sites 1 to 6**;
- **Figure 9-1b: Zone of Theoretical Visibility (Screened): Site 1**;
- **Figure 9-1c: Zone of Theoretical Visibility (Screened): Site 2**;
- **Figure 9-1d: Zone of Theoretical Visibility (Screened): Site 3**;
- **Figure 9-1e: Zone of Theoretical Visibility (Screened): Site 4**;
- **Figure 9-1f: Zone of Theoretical Visibility (Screened): Site 5**;
- **Figure 9-1g: Zone of Theoretical Visibility (Screened): Site 6**;
- **Figure 9-1h Zone of Theoretical Visibility (Bare Earth): Sites 1 to 6**;
- **Figure 9-2: Proposed LVIA Viewpoint Locations**; and
- **Figure 9-3: Landscape Designations.**

9.1.7 In addition to the figures noted above, further figures will be produced for the LVIA ES Chapter, including:

- Topography;
- Landscape Designations;
- Public Rights of Way; and
- Landscape Character Types and Areas.

9.1.8 An Indicative Landscape Masterplan and a Framework Landscape and Ecology Management Plan (FLEMP) will be submitted with the DCO Application, prepared in conjunction with other disciplines including Ecology and Arboriculture. The mitigation indicated and described in these documents will be incorporated into the assessment of landscape and visual effects, such that any effects arising following the implementation and establishment of this mitigation will be considered as 'residual'. The Indicative Landscape Masterplan and the FLEMP will also provide information on design principles that deliver landscape enhancements, green infrastructure benefits and Biodiversity Net Gain (BNG).

9.2 Study Area

9.2.1 GLVIA3 indicates that the study area should be proportionate to the Scheme and may include refinement by professional judgement.

9.2.2 The LVIA Study Area encompasses all elements of the Scheme, including the Energy Park Site, Interconnecting Cable Corridors and the Grid Connection Route. It has been informed by a site survey undertaken over two days on the 26th and 27th September 2024. This is supported by ongoing desk-based review of the landform, landcover, designations and potential sensitive receptors within and around the Scheme, followed by further site surveys.

9.2.3 Preliminary computer-generated Zones of Theoretical Visibility (ZTV) (**Figures 9-1a to 9-1h: Zone of Theoretical Visibility**) have been produced for the Energy Park Site to assist with the definition of the Study Area for this part of the Scheme. These preliminary ZTVs provide an initial indication of areas of potential visibility for solar infrastructure elements within the seven identified land parcels (the Sites). They help to identify the range of the receptors likely to

be affected, as well as assisting in the identification of important viewpoints to form the basis of the assessment.

9.2.4 ZTVs shown in **Figures 9-1a to 9-1g: Zone of Theoretical Visibility (Screened)** for the Energy Park Site are based on an indicative 5m proposed PV module height, reflecting the worst-case maximum height of the Single Axis Tracker Option (refer to **Chapter 2**), across a grid of points at 50 m intervals within the full extent of each of the Sites. They also take into account the 'screening' effects of woodland and the majority of hedges through the incorporation of National Tree Map (NTM) data, based on the mean height of individual tree canopies and hedgerow heights, accurate to +/- 1 m. The indicative influence of screening by buildings has also been included, through an 8 m height applied to buildings derived from Ordnance Survey (OS) Open Map Local data. A 'bare earth' ZTV (**Figure 9-1h: Zone of Theoretical Visibility (Bare Earth)**), has also been produced, which does not include any screening effects from woodland, trees, hedges and buildings; and as such shows a worst-case scenario for theoretical visibility within the Energy Park Site.

9.2.5 The proposed location of other infrastructure such as BESS on the Energy Park Site has not yet been fixed. The ZTVs may be updated for the PEI Report and ES to include the BESS infrastructure within the Energy Park Site which could be of a slightly higher height (4.5m) or reflecting the use of the lower (4m) height of the Fixed Tilt option.

9.2.6 Additionally, some buildings may be lower than 8m and vegetation may later be removed or reduced in height. Further ZTVs, including 'bare earth' versions that do not include the effects of screening, will be produced once the final layouts and parameters have been confirmed. However, based on verification during site surveys, it is considered that these preliminary ZTVs nevertheless provide an appropriate indication of likely visibility of the Energy Park Site at the Scoping stage.

9.2.7 The LVIA Study Area for the Interconnecting Cable Corridors and the Grid Connection Route will reflect the temporary nature of impacts likely to arise for these elements, with no permanent above-ground structures. It is not anticipated that ZTVs will be provided for these elements and the Study Area, which will be refined once the extents are defined, will be proportionate to the expected effects.

9.2.8 The preliminary ZTVs for the Energy Park Site reflect the broad topographical division between the low-lying Romney Marsh and the Greensand ridge that lies to the north. Localised higher levels of visibility are identified along the rising scarp slope of the ridge, but these reduce rapidly further north due to topographic screening. Elsewhere, within Romney Marsh, theoretical visibility of PV modules within the indicative Scheme encompasses an area up to approximately 5 km, as result of the open and flat landscape. The presence of vegetation including trees, woodland hedgerows, alongside buildings, limits theoretical visibility with distance.

9.2.9 Based on the ZTVs, site observations and professional judgement based on other large-scale solar schemes, a 5km LVIA Study Area is considered to be proportionate and appropriate for the Energy Park Site. However, the extent of the full LVIA Study Area will be reviewed throughout the iterative design process, subsequent ZTV production and further fieldwork, including the

location and height of BESS; the locations of the Interconnecting Cable Corridors and the Grid Connection Route; and consideration of views in winter when deciduous vegetation is not in leaf.

9.2.10 Modifications may also arise so that all works (including temporary areas, highway modifications and vegetation removal required for construction access) are included. The maximum parameters of these, in terms of height, extent and location, will be determined as the Scheme design develops, taking into account environmental and technical factors. A reasonable worst case will be assessed and presented in the ES.

Figure 9-1: Zone of Theoretical Visibility

Revision: 0 Drawn: LP Checked: AK Approved: NA Date: 2025-05-06

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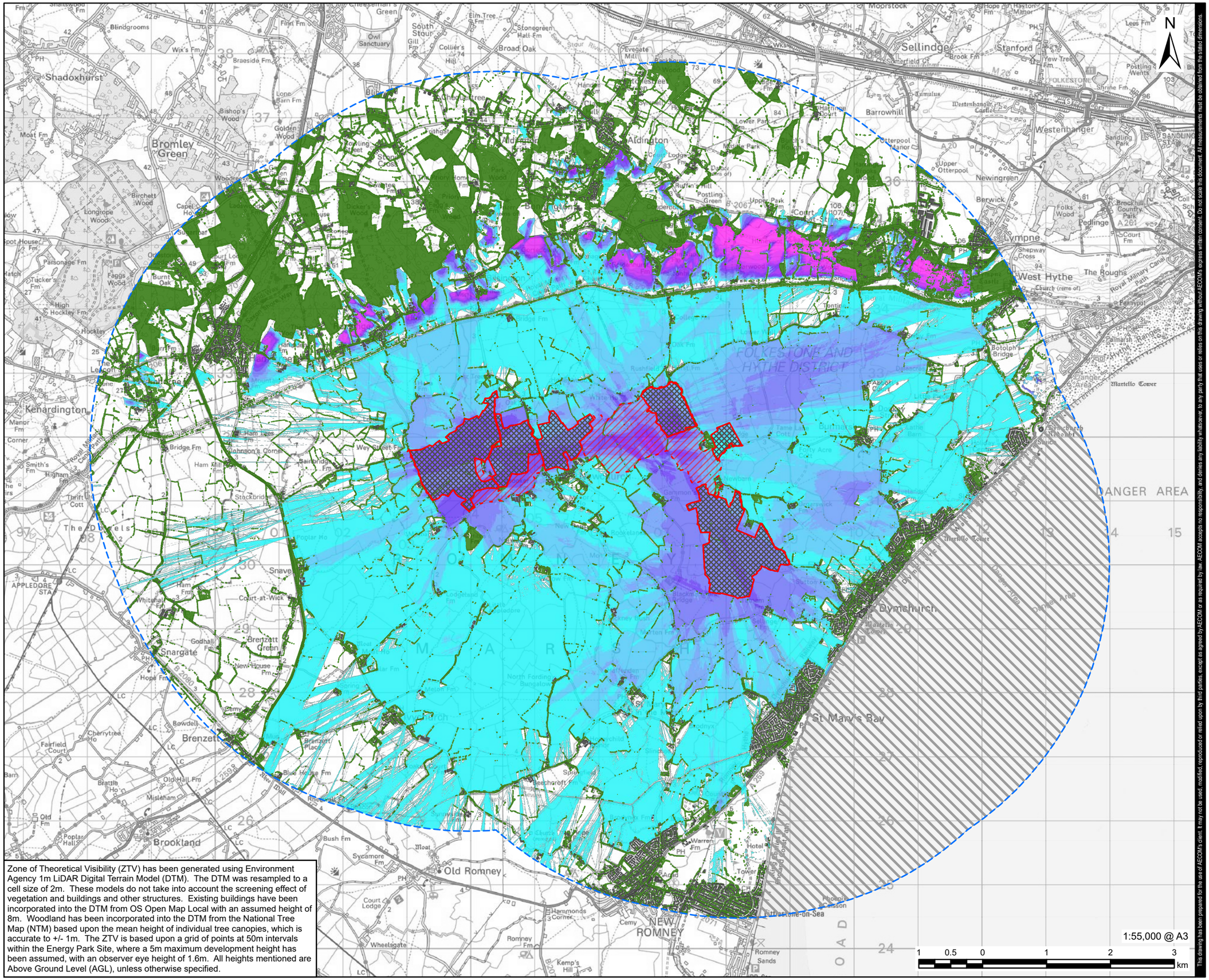


AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

AECOM Limited
Midpoint,
Alencon Link
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 5km Buffer of the Energy Park Site - Extent of ZTV Analysis
- Solar Farm Extent - Assumed Development Height of 5m
- Existing Building / Structure - Assumed Height 8m
- Existing Woodland - Mean Height taken from National Tree Map (NTM)
- Area not Included in ZTV Analysis

Zone of Theoretical Visibility (ZTV) - Degree of Maximum Visibility

- 1 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 40%
- 41 - 50%
- 51 - 60%
- 61 - 70%
- 71 - 80%
- 81 - 90%
- 91 - 100%

NOTES

ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

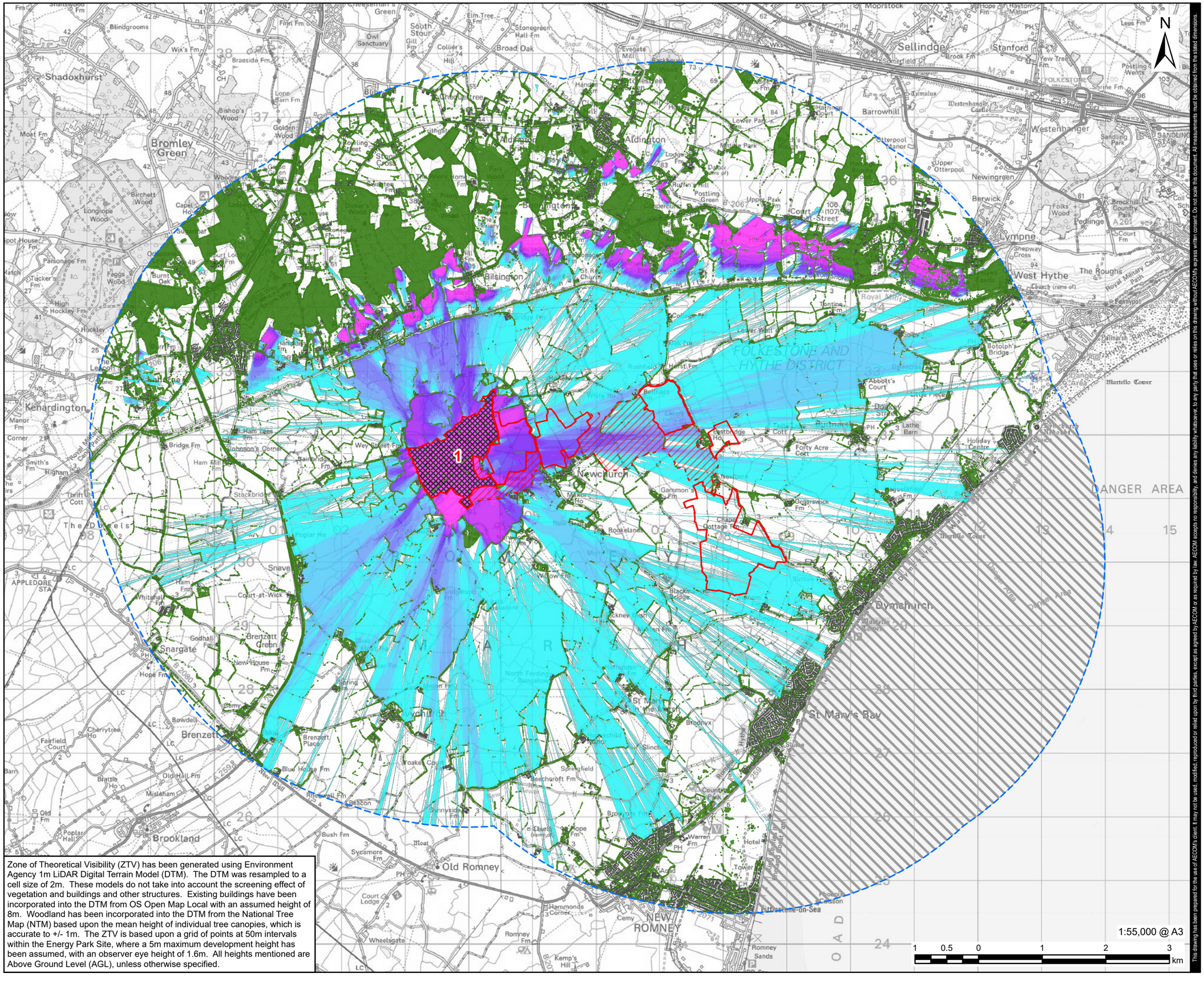
FIGURE TITLE

Zone of Theoretical Visibility (Screened): Sites 1 to 6

FIGURE NUMBER

Figure 9-1a

Revision: 0 Drawn: LP Checked: AK Approved: NA Date: 2025-05-06



Zone of Theoretical Visibility (ZTV) has been generated using Environment Agency 1m LiDAR Digital Terrain Model (DTM). The DTM was resampled to a cell size of 2m. These models do not take into account the screening effect of vegetation and buildings and other structures. Existing buildings have been incorporated into the DTM from OS Open Map Local with an assumed height of 8m. Woodland has been incorporated into the DTM from the National Tree Map (NTM) based upon the mean height of individual tree canopies, which is accurate to +/- 1m. The ZTV is based upon a grid of points at 50m intervals within the Energy Park Site, where a 5m maximum development height has been assumed, with an observer eye height of 1.6m. All heights mentioned are Above Ground Level (AGL), unless otherwise specified.

AECOM

PROJECT

Shepway Energy Park

CLIENT

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CONSULTANT

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 5km Buffer of the Energy Park Site - Extent of ZTV Analysis
- Solar Farm Extent - Assumed Development Height of 5m
- Existing Building / Structure - Assumed Height 8m
- Existing Woodland - Mean Height taken from National Tree Map (NTM)
- Area not Included in ZTV Analysis

Zone of Theoretical Visibility (ZTV) - Degree of Maximum Visibility

- 1 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 40%
- 41 - 50%
- 51 - 60%
- 61 - 70%
- 71 - 80%
- 81 - 90%
- 91 - 100%

NOTES

ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Zone of Theoretical Visibility (Screened): Site 1

FIGURE NUMBER

Figure 9-1b

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