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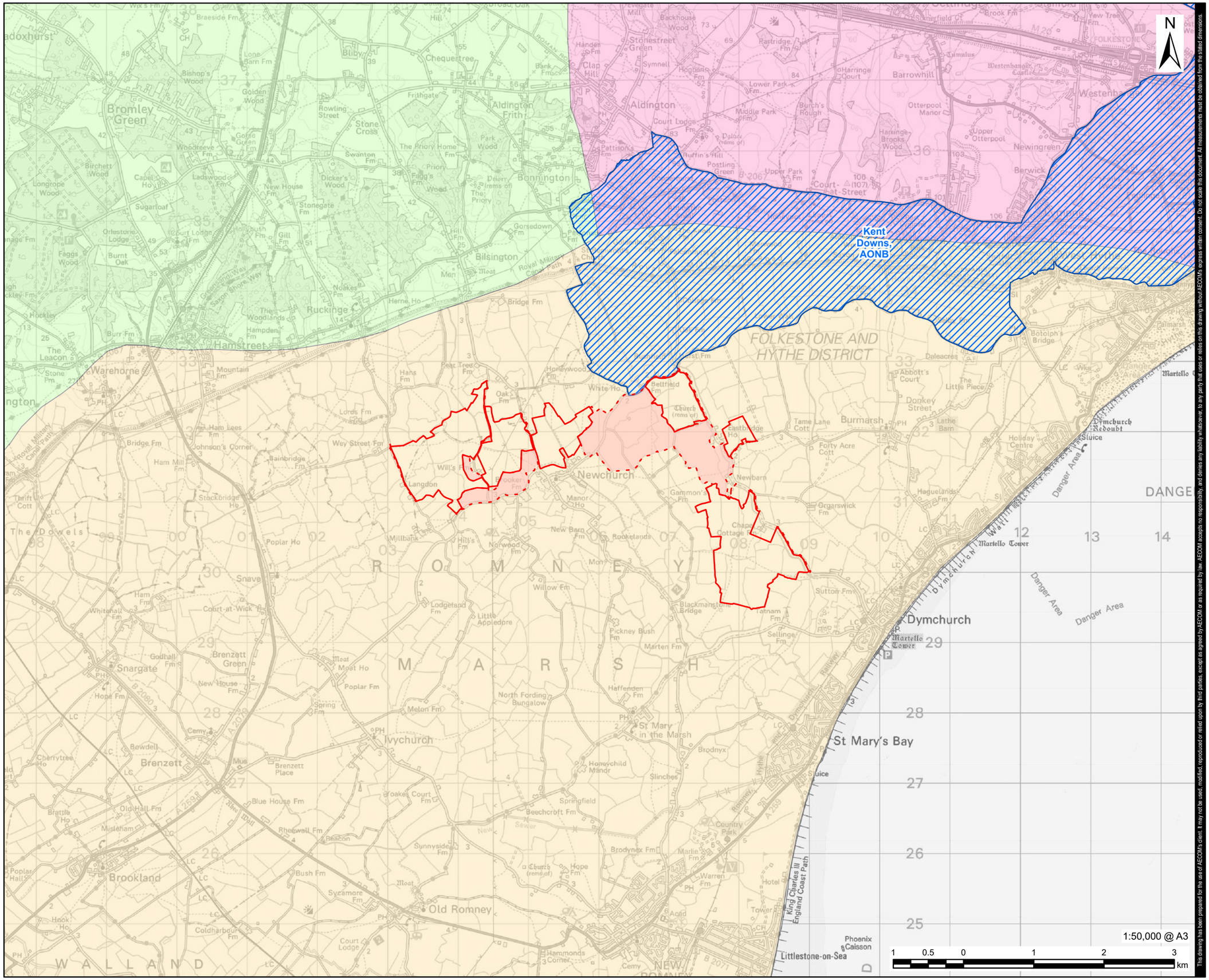

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Area of Outstanding Natural Beauty (AONB)

National Character Area

- Low Weald
- Romney Marshes
- Wealden Greensand

NOTES

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ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Landscape Designations

FIGURE NUMBER

Figure 9-3

9.3 Legislation, Planning Policy Context and Guidance

9.3.1 Legislation, planning policy and guidance relating to landscape and visual matters and pertinent to the Scheme are summarised below.

National Planning Statements

9.3.2 Overarching National Policy Statement (NPS) for Energy (EN-1) (Ref 9-3), with particular reference to section 4.7 in relation to good design for energy infrastructure and section 5.10 in relation to landscape and visual considerations, including National Landscapes, when assessing energy projects.

9.3.3 NPS for Renewable Energy Infrastructure (EN-3) (Ref 9-4), with particular reference to section 2.10, specifically paragraphs 2.10.93 to 2.10.101, in relation to landscape, visual and residential amenity considerations for solar photovoltaic generation.

9.3.4 NPS for Electricity Networks Infrastructure (EN-5) (Ref 9-5), including paragraphs 2.2.8 and 2.2.9 in relation to the placement of features in the landscape and the possibilities for screening as mitigation.

National Planning Policy Framework

9.3.5 National Planning Policy Framework (NPPF) (Ref 9-6), with particular reference to paragraph 135 in relation to developments that include appropriate and effective landscaping and are sympathetic to local character and the landscape setting; paragraph 187 in relation to contributing to and enhancing the natural and local environment; paragraphs 190 and 191 in relation to National Landscapes and their setting.

National Planning Practice Guidance

9.3.6 Planning Practice Guidance (PPG) (Ref 9-7) for ‘Natural Environment’, including reference to landscape character assessments, National Landscapes, green infrastructure, trees and woodlands.

9.3.7 PPG for ‘Light Pollution’; including reference to potential significant effects on sensitive receptors such as residents or ‘dark sky’ landscapes, good design and mitigation.

9.3.8 PPG for ‘Renewable and Low Carbon Energy’. with reference to the use of published county or district level landscape character assessments and factors the LPA should consider with respect to solar development, such as their temporary nature and the potential for mitigation through hedging.

Local Planning Policy

9.3.9 The Scheme and the majority of the LVIA Study Area are within the FHDC area. A small area of the northern part of the Scheme and the northwestern part of the LVIA Study Area is located within ABC area. Local Plans and key relevant policies are:

- Folkstone and Hythe Core Strategy Review 2022 (Ref 9-8) with particular reference to Policy CSD4 ‘Green Infrastructure of Natural Networks, Open Spaces and Recreation’;
- Folkstone and Hythe Places and Policies Local Plan 2020 (Ref 9-9) and the accompanying Interactive Polices Map (Ref 9-10) with particular reference to Policy NE3 ‘Protecting the District’s Landscapes and Countryside’ and Policy CC6 ‘Solar Farms’; and
- Ashford Borough Council Local Plan 2030, adopted 2019 (Ref 9-11) and accompanying Local Plan Policies Map (Ref 9-12) with particular reference to Policy ENV3a ‘Landscape Character and Design’. Policy ENV3b ‘Landscape Character and Design in the AONBs’, Policy ENV5 ‘Protecting Important Rural Features’ and Policy ENV10 ‘Renewable and Low Carbon Energy’.

9.3.10 These policies identify the requirement for good design and the need for mitigation to assist in integrating development into its landscape context. They also require the assessment of effects to consider local strategies, polices, national or local landscape designations and landscape character assessment.

9.3.11 Further to the above, Neighbourhood Plans also set out policies for development and use of land within parish or town council areas. These may include policies relating to views into and out of a plan area. Of relevance to the Scheme is the Aldington and Bonington Neighbourhood Plan (2022-2030) (Ref 9-13), within which Policy AB4 ‘Protection of locally significant views’ affords protection to identified views towards the Scheme from the two villages.

Other Relevant Guidance

9.3.12 The Kent County Council (KCC) Solar Position Statement (Ref 9-14) states that KCC will, in principle, be supportive of such technologies, but that large-scale solar PV arrays will not be supported in areas identified for their special character or other importance, including those which contribute to the setting of the Kent Downs National Landscape (KDNL).

9.3.13 Guidance prepared by the KDNL is outlined in Paragraphs 9.5.21 to 9.5.25.

9.4 Consultation

9.4.1 An online meeting took place with Natural England (NE) on 27th January 2025, where the Scheme was presented, outlining the Applicant’s understanding of relevant policies and guidance documents. Further to this, dated 12th February 2025, NE were provided with details of 15 draft representative viewpoints, including the rationale behind these choices.

9.4.2 NE provided a response dated 20th March 2025. This noted the close proximity of the KDNL and that consideration should be given to direct and indirect effects, particularly with respect to the purpose of the designation. It welcomed the Applicant’s consultation on viewpoints, noting satisfaction with 13 of the 15 viewpoints, subject to further information on the direction, field of view and those proposed for visualisations.

9.4.3 Specific comments were provided for two of the viewpoints, which are summarised in Paragraphs 9.5.44 and **Table 9-1** below.

9.4.4 An online meeting was held with KDNL on 6th March. The format reflected that described above for the meeting with NE. KDNL highlighted the long views to the south towards the Site from the escarpment and noted relevant guidance documents, as outlined in Paragraphs 9.5.21 to 9.5.25, including future updates. Baseline photography was subsequently forwarded to KDNL for the initial set of representative viewpoint locations.

9.4.5 KDNL provided a response to the viewpoint photography by email dated 1st May 2025. This noted that KDNL were 'broadly happy' but considered that two (Aldington Knoll and near Lympne Castle) were too obscured by trees to provide sufficient basis for analysis. One or more additional views along the escarpment looking south, unimpeded by trees or landform, were requested. The response also noted the hazy conditions for some of the views, which should be addressed through clearer images.

9.4.6 Comments relating to the two viewpoints noted by KDNL are included within Paragraphs 9.5.44 and **Table 9-1** below.

9.4.7 This Scoping Report will form the basis of continued consultation with stakeholders, including methodology, LVIA Study Area extent, scope, proposed mitigation and representative viewpoints.

9.5 Baseline Conditions

9.5.1 This section provides a review of the landscape and visual baseline, alongside key local guidance documents. It also identifies those landscape and visual receptors which will merit detailed consideration in the LVIA. In accordance with paragraph 3.19 of GLVIA3, it also identifies those which are 'scoped out' from further assessment as effects 'have been judged unlikely to occur or so insignificant that it is not essential to consider them further'.

Site and LVIA Study Area Summary

Study Area Summary

9.5.2 For the purposes of the summary below, which is based on a combination of site surveys and desktop review, it is assumed that areas within the Interconnecting Cable Corridors and the Grid Connection Route will be within the 5 km LVIA Study Area for the Energy Park Site, as described in Section 9.2.

9.5.3 The LVIA Study Area largely comprises the low-lying Romney Marsh, within which the Sites are located. Occupying the northern edge of the LVIA Study Area is the elevated Greensand escarpment. The boundary between the two runs roughly along the early 19th century Royal Military Canal, at the base of the escarpment.

9.5.4 Romney Marsh is a flat, expansive landscape of drained farmland. It has been shaped by a combination of dynamic natural coastal processes and human attempts to control the natural environment, with the reclamation of land from the sea dating back to Saxon times.

9.5.5 Much of the present landscape pattern reflects the effects of this historic drainage, including the winding freshwater ditches (sewers), sinuous rural lanes and nucleated villages. The flat landscape allows for long views across fields and characteristic 'big skies'. Hedges are present along sections of roads but largely absent along field or ditch boundaries. Views include prominent

churches which act as landmarks, whilst those towards the north are dominated by the backdrop of the Greensand escarpment.

9.5.6 Until the latter part of the 20th century (Ref 9-23) Romney Marsh was noted for sheep grazing but agricultural intensification and ploughing of pasture during World War II has resulted in a largely arable land use, including the amalgamation of smaller pastures into larger fields. Sheep farming is now limited.

9.5.7 Built form within the rural, inland Romney Marsh area largely comprises small villages, including Newchurch, Ivychurch and St. Mary in the Marsh. These villages are usually centred around a historic core and church. Farm buildings or detached properties, some of which are historic, are scattered along the winding lanes. Modern buildings are present around the edges of villages and adjacent many of the larger farms. A ribbon of largely 20th century development is located parallel to the coast, including numerous caravan parks, although evidence of older settlement is present in Dymchurch.

9.5.8 Overall, Romney Marsh is frequently described as a unique landscape with a strong sense of place, where landscape patterns are reflective of historic land reclamation.

9.5.9 North of Romney Marsh, the Greensand escarpment runs broadly east-west and occupies the northern part of the LVIA Study Area. It is characterised by a relatively steeply rising scarp slope that reflects a former cliff-line, with undulating land above. Woodland (some ancient) and scrub are much more dominant than within Romney Marsh, resulting in a patchwork of land uses that also includes pastoral and arable agriculture, with fields often bounded by dense hedgerows.

9.5.10 Settlement along the escarpment is also focused on historic churches such as in the villages of Ruckinge and Bilsington, although with greater modern infill and ribbon development compared to Romney Marsh, particularly around Aldington. The escarpment has a rich archaeological and cultural heritage, particularly relating to coastal defence and including Roman forts, Lympne Castle and the Royal Military Canal.

9.5.11 The Greensand escarpment allows expansive, long-range views across Romney Marsh, extending towards the sea and Dungeness, including the now decommissioned nuclear power station. Views of this nature are available from Port Lympe, a registered park and garden and a well-established wildlife conservation centre and tourist destination, located within the eastern edge of the LVIA Study Area.

9.5.12 The Greensand escarpment also forms a prominent backdrop to views from the Romney Marsh: the relationship between the two is a key characteristic of the LVIA Study Area.

9.5.13 The northeastern part of the LVIA Study Area, including both parts of the Greensand escarpment and Romney Marsh, are within the Kent Downs National Landscape (KDNL), for which further details are provided below.

Site (Scheme) Summary

9.5.14 The Energy Park Site comprises seven discrete parcels within Romney Marsh, alongside an area identified for interconnecting cables, the Interconnecting Cable Corridor Search Area. All are broadly similar in character and reflect

many of the key elements of the agricultural Romney Marsh, including flat, mainly arable fields; open field boundaries alongside sinuous drainage ditches; and an absence of built form.

9.5.15 A number of footpaths (PRoW) cross the Energy Park Site parcels. Rural lanes adjoin sections of the Site boundary, with open sections that allow long-range views, but often screened by dense, tall hedges, frequently dominated by elm. Isolated properties and farmsteads, some with older buildings and including Grade II listed heritage assets, are scattered along the rural lanes.

9.5.16 The parcels to the west lie north and west of the village of Newchurch, with a historic core that includes the Grade I Church of St Peter and Paul, reflected through the conservation area designation. Open views are available to and from the Energy Park Site, particularly along the northern edge of the village and notably from the Newchurch Heritage Hub. The Hub includes community assets and interpretative features, many of which relate to the site of the WWII advanced landing ground that lies immediately to the northwest, including a glass viewing panel.

9.5.17 Residential properties, many of which have open views, are located around the parcel boundaries. More functional commercial buildings include a horticultural nursery on Wills Lane and a small industrial estate on the edge of Newchurch. A 400kV overhead line runs through the parcel west of Newchurch, with steel lattice towers.

9.5.18 The parcel to the northeast of Newchurch is located adjacent to the ruined Eastridge Church, which is grade II listed and a scheduled monument accessible to the public. A waymarker to National Cycle Route 2 is located adjacent to the ruined church, with the route running alongside the eastern edge of the parcel and characterised by open views. The boundary to the KDNL runs along the northern boundary to this northeastern parcel.

9.5.19 The two southern parcels are located to the south of Eastbridge Road, with scattered adjoining properties, some of which include open gardens and modern outbuildings. A memorial associated with the ancient Orgaswick Church is Grade II listed and visible from the road.

9.5.20 The Interconnecting Cable Corridor Search Areas are almost exclusively agricultural, with occasional minor roads and Public Rights of Way (PRoW).

Landscape Designations

Kent Downs National Landscape

9.5.21 The LVIA Study Area includes part of the KDNL. The Scheme is not located within the KDNL, but the northern edge of Site 4 lies adjacent to the designation boundary. Within the LVIA Study Area, the KDNL encompasses the Greensand escarpment from Bonnington to Lympne, as well extending up to 1.5 km south into part of Romney Marsh, roughly parallel to the escarpment.

9.5.22 National Landscapes (NL) are designated on account of their scenic beauty and are afforded the highest levels of protection with respect to the conservation and enhancement of landscapes, reflected in the NPPF. The KDNL is managed by a Joint Advisory Committee (JAC) which is responsible for the Kent Downs National Landscape Management Plan (KDNLMP) (Ref 9-15), that identifies the special qualities and significance of the National Landscapes and sets out

polices. The KDNLMP references the long-distance views from the Greensand escarpment across the Romney Marsh.

9.5.23 Although the Scheme is not within the NL, it is expected that it would lie within the setting of the KDNL. Setting is referenced in the NPPF and the NPS for Energy (EN-1). The setting and a requirement to accord with the KDNL Management Plan are also stated in Policy NE3 of the Folkestone and Hythe Local Plan (Section 9.3).

9.5.24 The KDNL Setting Position Statement (Ref 9-16) states that the setting does not have a geographical border, but generally comprises land outside but visible from the designation, including Romney Marsh. Impacts on the setting are also noted in the Kent Downs AONB Renewable Energy Position Statement (Ref 9-17).

9.5.25 Further to the above, the NL—in conjunction with partners elsewhere in the UK and in France—is working to secure UNESCO Global Geopark status for the Kent Downs designated area. This would reflect the cross-Channel chalk landscapes of geological significance, with the status providing management with a holistic concept of protection, education, and sustainable development. The Kent Downs would join eight UNESCO Global Geoparks already established in the UK.

Local Landscape Designations

9.5.26 Policy NE3 of the Folkestone and Hythe Local Plan affords protection to areas identified on the Policies Map as 'Local Landscape Areas (LLA)'. All the Sites within the Scheme and the Folkstone and Hythe District Council area (aside from a small area within Ashford District) are included in the 'Romney Marsh' LLA.

9.5.27 With respect to LLA, Policy NE3 states:

'Proposals should protect or enhance the landscape character and functioning of Local Landscape Areas. The Council will not permit development proposals that are inconsistent with this objective, unless the need to secure economic and social wellbeing outweighs the need to protect the area's local landscape importance.'

Landscape Character

National Landscape Character

9.5.28 Natural England has mapped and described landscape character at the national level by identifying National Character Areas (NCAs) between 2013 and 2015 which are presented on **Figure 9-3: Landscape Designations**.

9.5.29 The Scheme and much of the LVIA Study Area are covered by **NCA 123 Romney Marshes** (Ref 9-17). The key characteristics of relevance include open skies, treeless low-lying reclaimed marshland, low woodland cover, localised high quality agricultural land (mainly grazed by sheep) and narrow, winding lanes;

9.5.30 The northeast of the LVIA Study Area is located within **NCA 120 Wealden Greensand**, (Ref 9-19) for which the published description includes references to views from the Lympne Escarpment over the Romney Marshes.

9.5.31 The northwest of the LVIA Study Area is located within **NCA 121 Low Weald**, (Ref 9-20) although no specific reference to views towards the Scheme is noted.

District and County Landscape Character

9.5.32 At the County level, the Scheme and the LVIA Study Area are covered by the Landscape Assessment of Kent (LAK) (Ref 9-21). Character Areas (CA) identified within the LAK of relevance to the Scheme are outlined below.

9.5.33 The Scheme is within the **Romney Marsh Mixed Farmlands CA**. Key characteristics of relevance include the wide seasonal variation in colour from crops, large agricultural buildings as the main detractors in the landscape, rare tree cover and short stretches of elm hedgerow. Visual sensitivity is stated being 'very high', resulting in an overall high landscape sensitivity. Landscape actions include conserving the isolation and infrequency of built form, the open landscape and restoring ecological networks and ditches. The overall action is 'Conserve and Restore'.

9.5.34 Beyond the Scheme, the CAs described in the LAK where indirect impacts may occur through perceptual changes such as development within views include:

- **Romney Marsh Lympne CA**, to the northeast, for which 'long views which permit the intrusion of large-scale elements such as pylons' is noted;
- **Romney Marsh Settlements CA**, where visibility is described as high;
- **Aldington Ridge CA**, to the north, for which *'fantastic'* and *'dramatic'* views towards Romney Marsh, including from the NL, are available; and
- **Hythe Escarpment: Lympne CA**, to the north-east, for which *'spectacular'* views towards Romney Marsh are noted.

9.5.35 The Scheme is located outside of the Kent Downs National Landscape (KDNL), however indirect impacts may occur through perceptual changes such as development within views. Reference in this instance will be made to the Kent Downs AONB Landscape Character Assessment (KDLCA) (Ref 9-22), which describes 13 Landscape Character Areas (LCA).

9.5.36 The area from which such perceptual changes would occur is **LCA 5B Lympne Greensand Escarpment**, which covers an area adjacent to the northern edge of the Scheme (northern edge of Site 4). The key characteristic of relevance is '*spectacular views across* Romney *Marsh*'. It notes that developments such as solar farms on the marsh will impact on views and that poor attempts to screen new buildings may exacerbate the problem.

9.5.37 Under Landscape Management Recommendations, the KDLCA states:

'Protect long views across Romney Marsh from the scarp, considering how developments on the Marsh will appear when viewed from above and avoid or mitigate impacts, for instance with careful advance planting.'

Local Landscape Character

9.5.38 The Scheme and the majority of the LVIA Study Area within the Folkestone and Hythe District are covered by the Romney Marsh Landscape Character Assessment (RMLCA) (Ref 9-23), almost exclusively within **LCA 1, Romney**

Proper Farmlands. Key characteristics of relevance described for LCA 1 include long views across open fields, few trees and hedgerows, sinuous lanes popular for cycling, an ancient landscape with a 'sense of timelessness', churches as prominent features and landmarks and elevated views across the LCA from the adjacent scarp.

9.5.39 Forces for change for LCA 1 in the RMLCA include the move from sheep pasture to intensive arable and prominent new agricultural and industrial buildings. Recommendations for management include enhancing biodiversity through unploughed field margins to act as wildlife corridors and combining effective drainage with wildlife habitats along watercourses.

9.5.40 Part of the Scheme and the LVIA Study Area is within Ashford District and included within the Ashford Landscape Character Assessment (ALCA) (Ref 9-24). The northernmost edges of the Scheme (Sites 1 and 2) are covered by **LCA 2** Romney **Marsh Mixed Farmlands.** Landscape sensitivity is described as 'high', with the flat landscape and intermittent tree cover providing high visibility. The overall landscape guideline is 'conserve and restore', including conservation of the undeveloped landscape and avoiding incongruous features.

Other Guidance Documents

9.5.41 The Shepway District High-Level Landscape Appraisal (2017) (Ref 9-25), whilst relating to residential development, considered the area equating to LCA 21 in the Romney Marsh Landscape Character Assessment (refer to Section 9.5 below) to be of 'high' landscape sensitivity.

Visual Receptors

9.5.42 The following visual receptors or receptor groups are most likely to be affected by the Scheme:

- Residential receptors, including isolated farms, rural properties and along the northern edge of the village of Newchurch;
- Recreational receptors using the local PRoW network, parts of which form sections of promoted long-distance trails including the Royal Military Canal Path and the Saxon Shore Way (the latter with elevated views from the Greensand Escarpment);
- Recreational receptors using the quiet rural lanes, which may be preferentially used for walking where PRoW across open fields are less well-used; or form publicised routes for leisure cycling, including the waymarked National Cycle Route 2;
- Road receptors, mainly along unclassified rural roads; and
- Receptors at viewpoints that display evidence of community value, including the Newchurch heritage hub which comprises features including interpretation and memorials relating to the WW2 Advanced Landing Ground, a beacon and community orchard; and
- Receptors at other tourism and leisure attractions including the Port Lympne Safari Park and Lympne Castle.

9.5.43 Further to the above, there will be a number of general locations of a sensitive nature that will also be given particular consideration through the selection of representative viewpoints, as follows:

- Views across Romney Marsh from the Greensand escarpment, including within the NL, are frequently cited in published baseline descriptions for landscape character assessments associated with the LVIA Study Area. These include from Lympne churchyard, Port Lympne Wildlife Park and locations around Aldington. Viewpoints from the escarpment are also noted in the Aldington and Bonnington Neighbourhood Plan, including from Aldington Knoll and Forge Hill in Aldington.
- Consideration will be given to views from the escarpment within the KDNL, including those that may be considered to represent the setting. This setting may also include views that look towards the NL and Greensand escarpment from within Romney Marsh.
- Views from St Peter and St Paul Church in Newchurch, St Mary Magdalene Church in Ruckinge and St Rumwold Church are potentially available towards the Scheme. The selection of representative views from heritage assets will be undertaken in conjunction with the preparation of the Cultural Heritage assessment and stakeholder input.

Representative Viewpoints

9.5.44 An initial selection of broad representative viewpoint locations or areas was informed by desktop analysis, a site survey in October 2024 and professional judgement. These have formed the basis of initial consultation NE and KDNL, as noted in Paragraphs 9.4.1 to 9.4.7. Responses from NE have been incorporated within this selection. These will form the basis of further consultation, including with the LPAs, with subsequent refinement of precise locations, to capture the most representative and/or worst-case views where appropriate. Consideration of comments by KDNL following provision of baseline photography is also noted. Further iteration and amendment may also follow changes in the arrangement of the Scheme.

9.5.45 These initial locations are listed below in **Table 9-1** and shown on **Figure 9-2: Proposed LVIA Viewpoint Locations.**

Table 9-1: Draft Representative Viewpoint Locations

Location ref. (Figure 9-2)	Description	Notes
1	Ruckinge St. Mary Magdalen Church	Slightly elevated views from Grade I listed St. Mary Magdalen Church
2	Cosway Monument, Bilsington	Elevate, open views from Grade II listed landmark.
3	St. Runwold's Church	View through trees from Grade I church and across Military Canal scheduled monument.
4	Aldington Knoll	Elevated views from footpaths around the scheduled monument. Views from the National Landscape which may inform the setting.
5	Saxon Shore Way near Postling Green	Elevated views from the escarpment and slopes, including long-distance trail and residential properties. Views from the National Landscape which inform the setting.
6	Millenium Wood, Lympne Castle	Views from historic estate and associated buildings, including heritage assets, PRoW and the wildlife park attraction. Views from the National Landscape which inform the setting.
7	The Old Oak	Open view for Grade II building towards ruined church (scheduled monument and Grade II). Views from the National Landscape which inform the setting.
8	Chapel Lane, east of Eastbridge Church	View from near ruined church (scheduled monument and Grade II) and national cycle route, including backdrop of National Landscape.
9	PRoW HM/195, Newchurch	Views from rear gardens and PRoW along northern edge of Newchurch.
10	Newchurch Heritage Hub	View along ProW leading northwest from the Heritage Hub and Spinney, representative of views from the village.

Location ref. (Figure 9-2)	Description	Notes
11	Honeywood Farm	View towards Newchurch and church from Grade II buildings
12	Wills Lane, north of The Chestnuts	Representative, relatively open view from minor road and near properties.
13	Langdon	Representative, relatively open view from minor road, PRoW and property.
14	PRoW HM200, Rosedale	Representative, relatively open view from minor road, PRoW and property; view towards NL.
15	PRoW HM55, Marshall's Bridge	Representative view of southern parcel from PRoW near scheduled monument
16	PRoW near Knoll Farm, south of Aldington Knoll	Viewpoint requested by NE to illustrate more open view than from Aldington Knoll (VP4). This view will also be proposed to KDNL as a suitable alternative escarpment view to VP 4 and VP 6.
17	Saxon Shore Way near Manor Farm, Court-at-Street	Viewpoint requested by NE to illustrate potential sequential views along promoted path and escarpment. This view will also be proposed to KDNL as a suitable alternative escarpment view to VP 4 and VP 6.

9.5.46 17 representative viewpoints will be taken forward as the basis for the visual assessment, which will be undertaken for the construction (winter), year 1 (winter), year 15 (summer), year 15 (winter) and decommissioning (winter) phases of the Scheme.

9.5.47 Visualisations will be provided for 15 viewpoints to illustrate the effects of the Scheme in year 1 (winter) only, to demonstrate worst-case effects without any established mitigation.

9.6 Potential Effects and Mitigation

Landscape and Visual Effects

9.6.1 Romney Marsh is frequently characterised as a unique landscape with a strong sense of place. All published landscape character assessments refer to the flat, expansive, open landscape and limited vegetation cover, allowing views to features such as church towers that form landmarks on the horizon. These characteristics, alongside Local Plan landscape designations, will result in higher landscape and visual baseline sensitivities.

9.6.2 The Energy Park Site will be visible from the Greensand escarpment. The proximity of these operational elements to the KDNL will locally increase the visual baseline sensitivity, as policy protection for this nationally designated landscape also applies to its setting. The setting is not defined, but the Energy Park Site is likely to be considered to be located within it; and the degree of impact or effect upon it that may arise will be informed by the scale of development, distance and appropriateness of mitigation.

9.6.3 The Scheme has the potential to result in temporary significant adverse landscape effects during the construction phase, due to alterations to surface vegetation, the presence of construction machinery and an associated reduction in tranquillity. These aspects of the construction phase also have the potential to result in significant adverse visual effects, due to changes to the composition of views within the often-open landscape. Effects will arise from construction traffic using the often narrow, rural lanes, alongside any vegetation removal or road improvements that may be required as a consequence of this.

9.6.4 The Energy Park Site has the potential to result in significant adverse landscape effects during operation (assessed at year 1 and year 15) due to the change in land use resulting from the presence and massing of the solar PV modules and associated structures, although the Scheme is largely considered to be reversible. Indirect landscape effects will arise, including from perceptual changes in views, such as those from the National Landscape which may be associated with the setting.

9.6.5 The Energy Park Site also has the potential to result in significant adverse visual effects during operation (assessed at year 1 and year 15) due to changes in the composition of views and a landscape that is generally rural and with expansive panoramas across open fields with few trees and hedgerows.

9.6.6 As with the construction phase, the decommissioning phase has the potential to result in significant adverse landscape and visual effects, due to the presence of machinery and general activity to remove the PV modules, substation, BESS and associated structures.

Future Baseline

9.6.7 The LVIA will take into consideration the 'future baseline': how the current baseline conditions may change going forward to the point of construction. This will be considered in descriptive terms highlighting where significant effects are likely to arise as far as can be reasonably predicted. This is anticipated to include developments in construction and consented developments (such as the decommissioning of Dungeness power station); changes arising from climate change; implications of tree diseases; and changes to land use and settlement patterns.

Lighting

9.6.8 Technical advice concerning the scope of EIA for Nationally Significant Infrastructure Projects (Ref 9-26) states that a separate chapter assessment is not expected for lighting, but this should be assessed within other relevant chapters including landscape and visual where there is potential for a likely significant effect.

9.6.9 During the construction and decommissioning phases, the construction works will be limited during darkness, and where it does occur, lighting will be produced by mobile structures that will be pointed at the area of works until 19:00 and between 07:00 and until daylight. Works requiring lighting will be transient, moving across the construction site over a few weeks or months as required. It is assumed that any lighting during the construction phase would be directional and temporary, and designed to minimise potential for light spillage beyond the Site, particularly towards residential properties, live traffic, and ecological habitats in so far as it is reasonably practicable.

9.6.10 During the operational phase, lighting may be installed on the CCTV columns, around the Site perimeter, and throughout the Site located near to critical equipment (MV stations, welfare buildings, etc.). Lighting is expected to be used only in emergency situations, security situations, or during critical maintenance activities. It is not expected that the Site will be continuously lit during the operational phase. As such, no significant effects are expected to arise from lighting with respect to landscape and visual matters, therefore a specific lighting assessment will be scoped out of this chapter.

Proposed Mitigation

9.6.11 The effects on landscape and visual receptors will be mitigated as far as possible to avoid, prevent, reduce, or offset effects through the integrated design and mitigation strategy for the Scheme. This will comprise primary and secondary measures. Primary measures are those developed through the iterative design process that will become integrated or embedded into the design, along with standard construction and operational management practices for avoiding and reducing environmental effects. Secondary measures are those, as noted in GLVIA3, that are *'designed to address any residual adverse effects remaining after primary measures and standard construction practices have been incorporated into the scheme'.*

9.6.12 An initial feasibility study has been undertaken to identify areas of higher risk, particularly with respect to landscape and visual and heritage matters. The outcomes of this study have guided the layout of certain elements of the Scheme, with the intention of reducing effects on more sensitive receptors. This

iterative process will continue through the Scheme design, with the objective of limiting significant effects as far as practically possible.

9.6.13 With respect to secondary mitigation, solar developments typically include hedgerow and tree planting as the main means of reducing visibility and significant effects. New planting also enhances landscape condition and biodiversity value, particularly where agricultural intensification has resulted in the loss of such elements.

9.6.14 The limited tree and hedgerow cover within the Romney Marshes is highlighted within published landscape character assessment documents. Trees are generally associated with farmsteads but sometimes considered a negative feature that unsuccessfully screen incongruous buildings. The presence of hedgerows in the baseline is generally restricted to sections alongside rural lanes and around properties.

9.6.15 Given that hedgerows along field or ditch boundaries are not considered to be a typical, contemporary feature of Romney Marsh, their wholesale introduction will compromise the key qualities of openness. The provision of screening will therefore be a challenge in terms of providing appropriate mitigation of visual effects in such an open landscape. New hedgerows will be proposed along sections of rural lanes, but for other field boundaries and along PRoW, consideration will be given as to how such features align with landscape character guidelines that are referenced in Local Plan policy. Further to this, new planting may not be appropriate within offsets along watercourses that are required for Internal Drainage Board maintenance.

9.6.16 As such, primary mitigation measures integrated into the design of the Scheme will consider the following principles:

- Offsets to the Scheme from the settlement fringe of Newchurch to protect key views to/ from the settlement, including the Heritage Hub;
- Offsets to the Scheme from isolated rural properties, particularly where there are key views from elevations or gardens;
- Consideration of the relationship between the Scheme from the rising ground to the north, within the KDNL designation; and areas that feature in views to or from sensitive receptors such as St Peter and St Paul Church, Eastbridge Church ruins (a scheduled monument) and other designated heritage assets;
- Provide improvement to ecological networks, green infrastructure and landscape condition, including as part of Biodiversity Net Gain;
- Reintroduce the traditional Romney Marsh sheep grazing where practicable;
- Provide hedgerow planting along rural lanes and around properties where appropriate within the landscape context, to screen local views of the Scheme; and
- Improved recreational access, within an area where PRoW run across intensive farmland and may be difficult for all users to use throughout the year.

9.6.17 Significant residual landscape or visual effects may remain during operation beyond year 15 despite mitigation. For example, the Scheme could have reversible long-term significant effects on the landscape character, given the spatially extensive nature of the Scheme; sensitivities associated with both local landscape character designations and the National Landscape setting (the latter due to perceptual, indirect changes) and where mitigation such as hedgerows or species-rich pasture is not practical or appropriate.

9.6.18 It should be noted with reference to the above that NPS –EN-1 states that:

"5.10.5 Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, but there may also be beneficial landscape character impacts arising from mitigation".

9.6.19 Significant, residual, reversible long-term visual effects may also arise beyond year 15 of operation for receptors with elevated views outside the Scheme where the development may appear spatially extensive from sensitive locations in the National Landscape. Such effects may also occur for users of PRoW through the Energy Park Site where there will be a change in the character of views through the introduction of hedging. However, the use of offsets to avoid a 'tunnel' appearance will be explored.

9.6.20 Although the above highlights relatively high risks for landscape and visual receptors, opportunities for mitigation and enhancement will be integrated into the Scheme. As noted above, these are most likely to relate to improving biodiversity and green infrastructure within a landscape that has been heavily improved and ecologically depleted through intensive agriculture.

9.6.21 Climate change and biosecurity are also major factors that are likely to bring about future change in the landscape. The need for climate mitigation and adaptation is now well established at policy level. Proposed planting will take account of the risks of biosecurity issues, such as the increased prevalence of pests and diseases, through a wider mix of species and genetic provenance. This may also include the preferential use of elm, which is a characteristic feature of hedgerows in the area.

9.6.22 Based on desktop analysis and observations on site, landscape and visual matters during construction, operation and decommissioning will be **scoped in** for further assessment in the EIA.

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

9.7 Assessment Methodology

9.7.1 The methodology for the LVIA will be based upon guidance within GLVIA3. This is the standard reference for undertaking landscape character and visual assessments/appraisals in the UK. Reference will also be made to the following:

- *Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment* (Third edition). Landscape Institute Technical Guidance Note LITGN-2024-01 (Ref 9-2);

- *Visual Representation of Development Proposals*. Landscape Institute Technical Guidance Note 06/19 (Ref 9-27);
- *An Approach to Landscape Character Assessment.* Natural England. (Ref 9-28);
- *Assessing landscape value outside national designations*. Landscape Institute Technical Guidance Note 02/21 (Ref 9-29);
- *Infrastructure*. Landscape Institute Technical Guidance Note 04/2020: (Ref 9-30);
- *Tranquillity*. Landscape Institute Technical Guidance Note 01/17 (Ref 9-31); and
- *Residential Visual Amenity Assessment*. Landscape Institute Technical Guidance Note 02/19: (Ref 9-32).

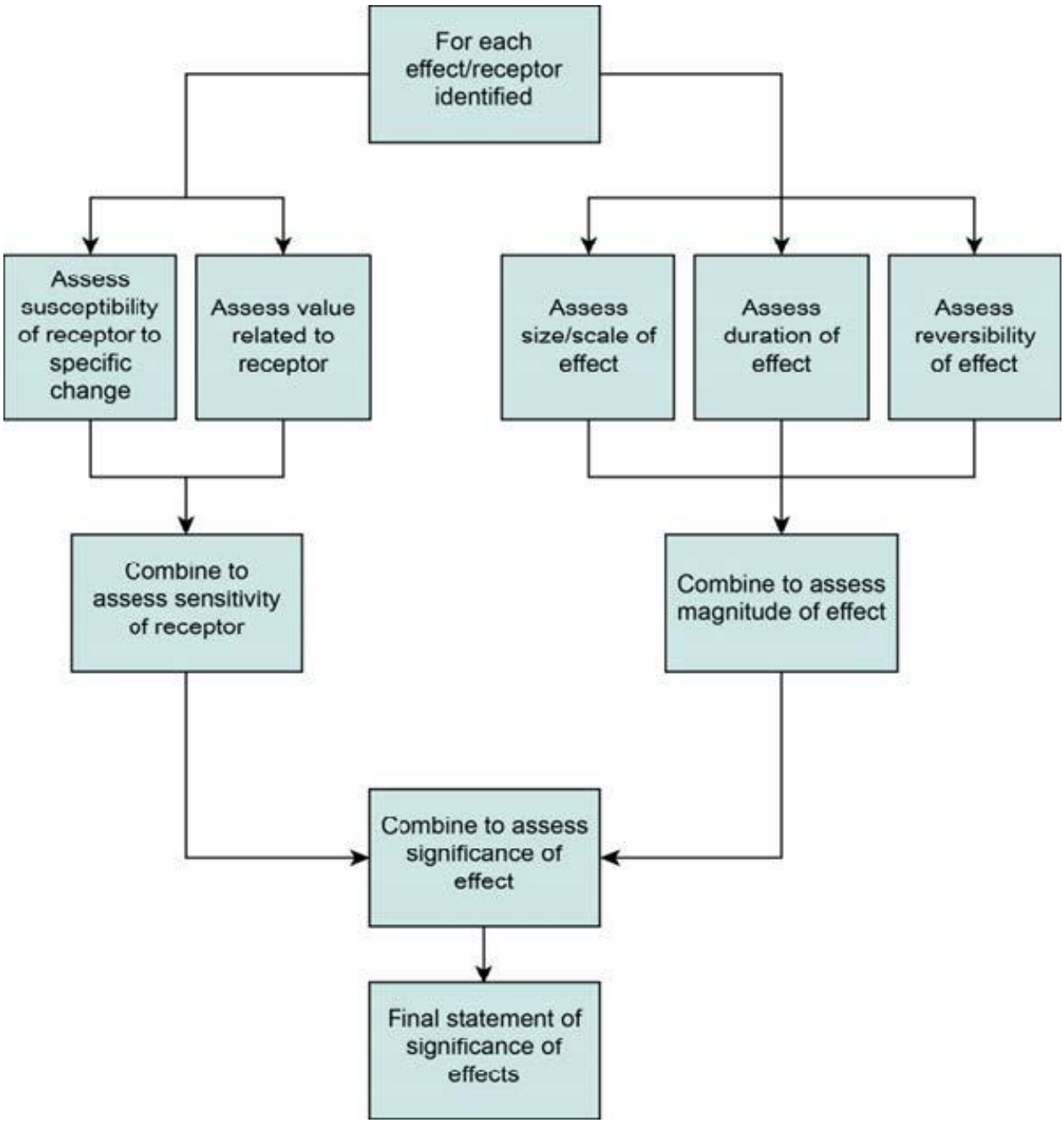
9.7.2 The following section summarises the methodology for the LVIA; a detailed methodology will be included in the PEIR and ES. For clarity and in accordance with good practice, the assessments of potential effects on landscape character and visual amenity, although closely related, will be undertaken separately.

9.7.3 GLVIA3 places a strong emphasis on the importance of professional judgement in Landscape and Visual Assessment (LVIA). Much of the assessment will rely on qualitative judgements, particularly with reference to the significance of effects; and whether effects are adverse or positive.

9.7.4 The approach outlined in GLVIA3 is a proportionate one therefore the methodology for each element of the Scheme will be adapted, where appropriate, to reflect the likely significant effects. For example, works related to the Grid Connection Route/Interconnecting Cable Corridor will differ from those for the Energy Park Site. The former will be of a temporary nature with no permanent built structures, therefore the study area, baseline and assessment of effects will be proportionate and it is proposed that no ZTVs will be produced.

9.7.5 The broad LVIA methodology will reflect the process set out in Figure 3.5 of GLVIA3 as shown below in **Plate 9-1**.

Plate 9-1: GLVIA3, Assessing the significance of effects



9.7.6 In accordance with the GLVIA3 process, the LVIA will include the following key stages:

- A baseline review of published landscape assessments, studies, relevant supporting evidence base documents, aerial photography, mapping and fieldwork to identify the landscape and visual baseline and the landscape and visual receptors;
- Following the identification of the landscape and visual receptors, these shall be presented to the Local Planning Authorities and subject to further consultation with KDNL and NE to seek agreement, along with the extent of the LVIA Study Area;

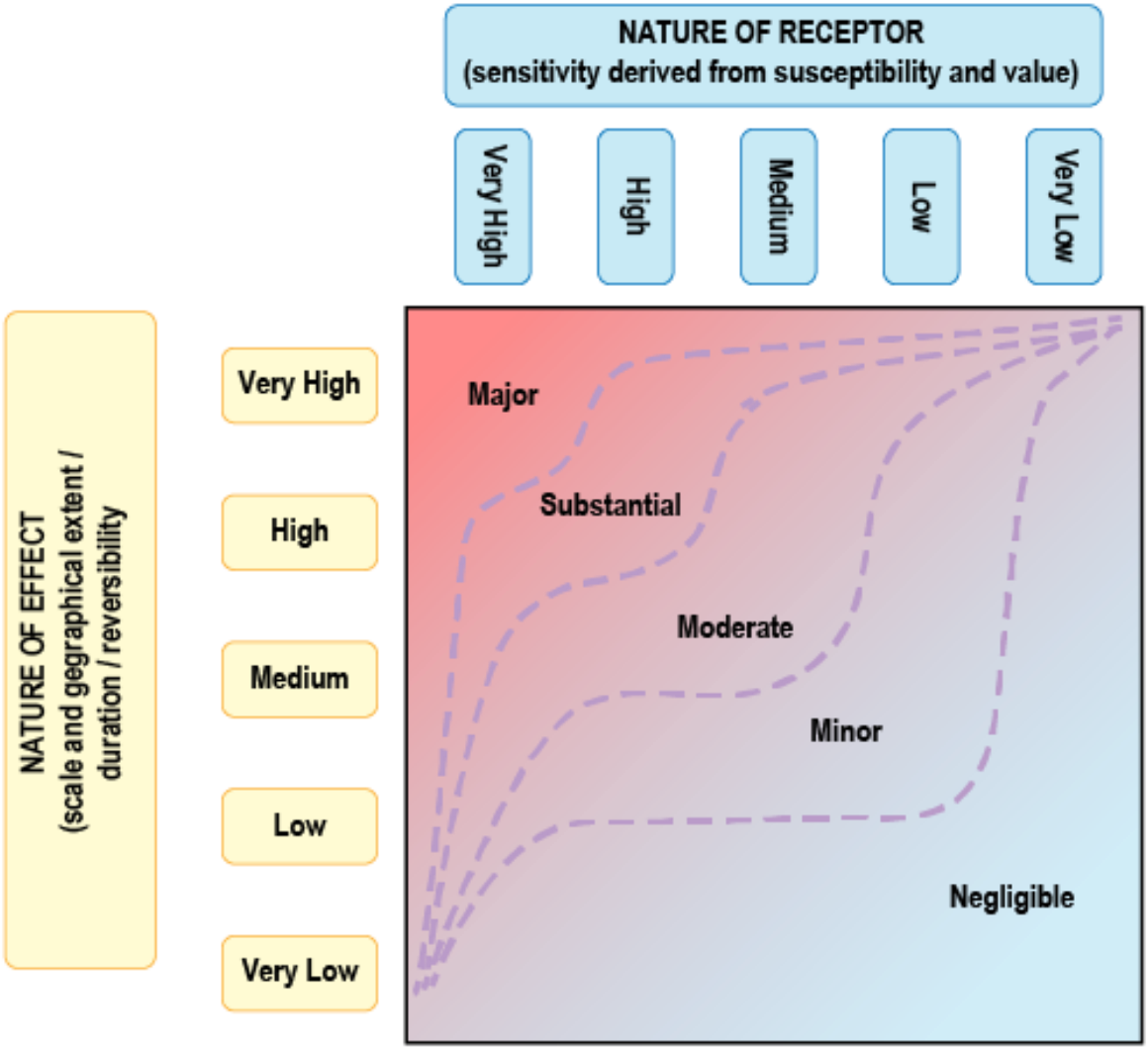
- An assessment of the sensitivity (nature of the receptor) of landscape and visual receptors, via an assessment of their value and susceptibility to change;
- An assessment of the magnitude of impact (nature of effect) of the Scheme for the phases of the Scheme stated below. The magnitude of impact will be assessed in relation to the size, scale, duration and reversibility of the effect; and
- An assessment of the significance of the effect on the landscape and visual receptors for the phases of the Scheme stated below.

9.7.7 The assessment of the Scheme will be undertaken for the:

- Construction activity, covering all elements of the Scheme and including any effects arising from access along highways, in winter as a worst-case visibility scenario;
- Year 1 of operation, which will assume the season is winter (as a worst-case visibility scenario); the Energy Park Site is fully built out; there will be no permanent above-ground structures within the Grid Connection and Interconnecting Cable Corridors; and any replacement planting or seeding is not yet established; and
- Year 15 of operation during summer when any replacement or proposed planting is fully in leaf and considered to be sufficiently established and providing functional mitigation;
- Year 15 of operation during winter when any replacement or proposed planting is considered to be sufficiently established and providing functional mitigation, but not in full leaf; and
- Decommissioning, in winter as a worst-case visibility scenario.

9.7.8 Indicative linkages between the sensitivity of the receptor and the magnitude or nature of effect in order to determine significance are set out below in **Plate 9-2**. GLVIA3 dictates that this is not a prescriptive process and is provided as a guide to how combinations of sensitivity and magnitude are typically combined. In the PEI Report and ES LVIA, reasoned explanation of judgements on significance will be based on consideration of the factors set within the detailed LVIA methodology as an indicative framework.

Plate 9-2: Classification of Landscape and Visual Effects



9.7.9 Effects predicted to be minor or negligible will be considered to be 'non-Significant'. Effects considered as moderate may be 'Significant' with reasoned justification. Substantial or major effects will be considered to be 'Significant' and be important or relevant to the decision-making process.

9.7.10 GLVIA3 notes (paras 3.35 and 3.36) that over reliance on matrices should be avoided; there should be more emphasis on narrative text and judgements about significance; and tables and matrices should be used to support and summarise descriptive text, not replace it.

9.7.11 The diagram is indicative of a continuum of effects which are assessed by professional judgement and justification. It gives an approximation as to how sensitivity and magnitude will be considered together to determine whether an effect is Significant or not. An indication of the type of effects which are likely within each category is listed in **Table 9-2** below.

Table 9-2: Significance of Effect Category.

Criteria level	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.
Substantial	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.
Moderate	These effects, if adverse, are likely to be important at a local scale and the cumulative effects of such issues may lead to an increase in the overall effects on a particular area or on a particular resource or receptor.
Minor	These effects may be raised as local issues and may be of relevance in the detailed design of the project.
Negligible	Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error. Effects which are unlikely to influence decision making, irrespective of other effects.

9.8 Relationship to the Glint and Glare Assessment

9.8.1 Glint and glare are defined as follows:

- Glint (specular reflection) may be produced as a direct reflection of the sun from the development; and
- Glare (diffuse reflection) is a continuous source of brightness in scattered lightwaves. Glare is significantly less intense than glint. (Source: based on '*The Development of Large Scale (>50kW) Solar PV Arrays in Cornwall*', Cornwall Council, March 2012) (Ref 9-33).

9.8.2 Section 2.10 - paragraphs 2.10.102-106 of NPS EN-3 (Ref 9-4) set out government policy with respect to the consideration of glint and glare in relation to solar photovoltaic generation impacts. This sets out policy advice on how to assess glint and glare and mitigation measures, should they be required. Paragraph 2.10.105 sets out specific advice in relation to the assessment of the potential impacts of 'tracking' PV mounting structure and general considerations to be adopted at the assessment stage stating that:

"…The extent of reflectivity analysis required to assess potential impacts will depend on the specific project site and design. This may need to account for 'tracking' panels if they are proposed as these may cause differential diurnal and/or seasonal impacts."

9.8.3 In setting out policy on mitigation, paragraphs 2.10.134-2.10.136 state that in some cases, the Secretary of State may require PV modules to be of an anti-reflective type and the front face of the modules to comprise of (or be covered) with an anti-reflective coating for the lifetime of the permission. Screening between potentially affected receptors and the angle of PV modules should be considered.

9.8.4 NPS EN-3 acknowledges that whilst solar PV modules are designed to absorb irradiation, the Secretary of State will assess the potential impact of glint and glare on nearby homes and motorists (paragraph 2.10.158). Paragraph 2.10.159 goes on to state that there is no evidence that glint or glare causes significant impacts upon aviation safety and as such, no more than limited weight is likely to be given to claims of aviation interference in considering proposed development.

9.8.5 With respect to Scoping, further guidance is provided in Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development (Ref 1-4) This states that a technical assessment should be included as an appendix to the ES and, where there is a potential for a likely significant effect, this should inform the assessment of effects within relevant chapters. The assessment should apply appropriate modelling and predictive techniques, charts/ diagrams and visual representations (such as GIS-based viewshed analyses) to indicate the likely extent and distance of potential glint and glare and should be informed by typical project description parameters.

9.8.6 Planning Practice Guidance (PPG) (Ref 9-35) also sets out specific planning considerations with respect to solar farms. This acknowledges that large-scale solar farms can have a negative impact on the landscape, but that visual impact if well-planned and well-screened can be addressed subject to the implementation of sensitive landscape design. This includes consideration of potential glint and glare and its effect on landscape.

9.8.7 A general consideration of the potential for glint and glare from the Scheme to cause significant effects to landscape and visual receptors will be provided as part of the landscape and visual assessment. It is proposed that a separate glint and glare assessment will be included as a technical appendix to the ES (see **Chapter 16: Other Environmental Topics**).

9.9 Relationship to Residential Visual Amenity

9.9.1 The LVIA will assess the potential visual effects on different types of visual receptor, including residential receptors, i.e. private views.

9.9.2 With reference to the Landscape Institute's Technical Guidance Note 2/19: 'Residential Visual Amenity Assessment' (Ref 9-32), the Residential Visual Amenity Threshold is considered as to whether:

"The effect of the development on Residential Visual Amenity of such nature and / or magnitude that it potentially affects 'living conditions' or Residential Amenity."

9.9.3 The guidance is based upon a four stage approach. Stages 1 to 3 accord with the above LVIA methodology whereby—in line with GLVIA3— visual receptors are identified, along with the magnitude of impact and the significance of effect.

9.9.4 The fourth step is a more detailed examination of residential properties, where appropriate, when the highest 'significance of effect' levels are identified via Stages 1 to 3. As stated by the guidance, there are no 'hard and fast rules' as to making a judgement on the Residential Visual Amenity Threshold (RVAT).

9.9.5 It is not anticipated that any assessment will be made from private residential properties, both inside residential buildings and from within the curtilage. It is not intended to undertake a residential amenity assessment, in line with Landscape Institute Technical Guidance Note 02/19 (Ref 9-32), unless requested during consultation and agreement with respect to access is made. It is the intention of the Scheme design, including the use of mitigation, to ensure that even where significant effects may arise for representative views that reflect the outlook for residential receptors, these will not reach a threshold where residential visual amenity will be a consideration.

9.10 Limitations and Assumptions

9.10.1 It is assumed that there will be access to all required land to undertake the landscape and visual surveys within the Site. Representative viewpoint photography will be obtained from publicly accessible locations. Should any surveys or photography be requested from private land outside the Scheme, this will be subject to access being granted. In the event that access is not available, professional judgement will be used, based on aerial photography and views from publicly accessible locations.

9.10.2 Short term durations are considered to be under one year; medium term durations are considered to be between one and five years, and long-term durations are considered to be more than five years.

9.10.3 For the construction phase assessment, the assumptions are that, as a worst case, construction activity will be undertaken across the Site at the same time; although as discussed in **Chapter 2: The Scheme and Scheme Location**, works will likely be undertaken sequentially, and construction in some plots is likely to be complete whilst others are on-going.

9.10.4 For the year 1 and year 15 operation assessments, the assumptions are the Scheme will be operational across all of the Site (although in reality a sequential build-out may mean that at year 1 some plots are still under construction while others are operational).

9.10.5 For the decommissioning assessment, the assumptions are the Scheme is no longer operational, and the solar modules, BESS, and associated structures and equipment are being removed in a manner similar to the construction phase, requiring machinery and localised excavation. It is currently expected that any green infrastructure would remain. However, the Applicant cannot control management by landowners of green infrastructure after completion of the decommissioning and once the land is handed back; any changes at or beyond this point would not be part of the Scheme.

9.10.6 Uncertainties at this stage are the layout, siting and heights of the PV modules, substations, and associated structures. The LVIA Study Area, landscape and visual receptors will be reviewed accordingly in relation to the heights of these features, informed by ZTVs.

9.10.7 For the reasons stated in Section 9.6 above, no significant effects are expected to arise from lighting with respect to landscape and visual matters, therefore a lighting assessment will be scoped out of this chapter.

9.11 Summary of Elements Scoped In and Scoped Out

9.11.1 A summary of the elements scoped into and out of the LVIA are presented in **Table 9-3**.

Table 9-3: Elements scoped in and scoped out of the assessment of Landscape and Visual amenity.

Element	Scoped In/ Scoped Out
Landscape Receptors	Scoped in: A landscape assessment will be undertaken, using the most appropriate scale of published landscape character areas within the LVIA Study Area. The selection of these LCA will be undertaken through consultation and following further baseline and field studies, but it is anticipated that they will include the KDLCA, RMLCA and ALCA.
Visual Receptors	Scoped in: A visual assessment will be undertaken, using representative viewpoints as a proportionate means of identifying effects for visual receptors.
Landscape Designations, including Setting	Scoped out: Landscape designations and any areas that are considered to form the setting will be reflected in the value and therefore sensitivity of relevant LCA, as part of the landscape assessment. Value and sensitivity will also be considered for any representative viewpoints within a designated landscape, or where these are considered to the reflect the setting.
Lighting	Scoped out: It is assumed that any lighting during the construction phase would be directional and temporary, and designed to minimise potential for light spillage beyond the Site, particularly towards residential properties, live traffic and ecological habitats in so far as it is reasonably practicable. During operation any lighting will be directed at infrastructure and only used for critical or essential purposes. As a result, no significant effects are expecting to arise from lighting with respect to landscape and visual matters.

10. Materials and Waste

10.1 Introduction

10.1.1 This chapter sets out the scope and methodology for the assessment of materials and waste. This chapter follows the methodology and checklist for action set out in the Institute of Environmental Management and Assessment (IEMA) guide to: Materials and Waste in Environmental Impact Assessment, Guidance for a Proportionate Approach (referred to from herein as the 'IEMA Guidance') (Ref 10-1).

10.1.2 This chapter does not have any supporting technical figures or appendices.

1.1.4 For this Scoping Report, materials and waste comprise:

- The consumption of materials (key construction materials only); and
- The generation and management of waste.

10.1.3 Materials are defined in the IEMA Guidance as "*physical resources that are used across the lifecycle of a development. Examples include key construction materials* such *as concrete, aggregate, asphalt and steel*."

10.1.4 Other material assets considered include built assets such as landfill void capacity and allocated/safeguarded mineral (e.g., quarries, wharves, depots) and waste sites.

10.1.5 Impacts on Mineral Safeguarding Areas (MSAs) are not assessed in a materials and waste assessment in accordance with the IEMA Guidance. MSAs are defined *"as an area designated by minerals planning authorities which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development"* (Ref 10-2). **Chapter 12: Socio-Economics and Land Use** scopes out socio-economic impacts to MSAs.

10.1.6 Waste is defined as per the European Waste Framework Directive (Ref 10-3) as "*any substance or object which the holder discards or intends or is required to discard*".

10.1.7 Effects on the availability of materials during construction, operation and decommissioning are scoped out of further assessment as outlined in section 10.9.

10.2 Study Area

10.2.1 There are two study areas for the assessment of impacts related to materials and waste are defined in line with the IEMA Guidance (Ref 10-1): a scheme study area and an expansive study area.

Scheme Study Area

10.2.2 The Scheme study area for construction, operational, and decommissioning waste generation and use of construction materials (key construction materials only) comprises the Scheme boundary (**Figure 1-1: Scheme Location Plan**). This study area is deemed to include the footprint of the works, together with any temporary land required during construction. This may include temporary

offices, compounds and storage areas. This will include a Grid Connection Route once defined later in the application process.

10.2.3 The Scheme study area for the impacts on allocated/safeguarded mineral and waste sites is defined by the Site boundary. Impacts on allocated/safeguarded waste sites are not included in the IEMA Guidance, however, they are included in this assessment for completeness.

10.2.4 The Scheme is located within the administrative areas of Ashford Borough Council (ABC) and Folkestone & Hythe District Council (FHDC). The Minerals Planning Authority and Waste Planning Authority (WPA) is Kent County Council.

Expansive Study Area

10.2.5 The expansive study area for non-hazardous and inert waste management is the South East of England (as defined by the Environment Agency). This is the region in which the Scheme is located. The expansive study area includes the following sub-regions as outlined in the Environment Agency's 2023 Waste Summary Tables for England – Version 1 (Ref 10-4):

- Kent;
- Berkshire;
- Buckinghamshire;
- East Sussex;
- West Sussex;
- Hampshire;
- Isle of Wight;
- Oxfordshire; and
- Surrey.

10.2.6 The expansive study area for non-hazardous and inert waste management is defined based on professional judgement and informed by consideration of the proximity principle and value for money.

10.2.7 The expansive study area for hazardous waste management is England. The study area is defined based on professional judgement and informed by consideration of the proximity principle and value for money.

10.2.8 The proximity principle for hazardous waste in England is outlined in Principle 2 – Infrastructure Provision in the Strategy for Hazardous Waste Management in *England* (Ref 10-5)*:*

"We look to the market for the development of hazardous waste infrastructure, which implements the hierarchy for the management of hazardous waste and meets the needs of the UK to ensure that the country as a whole is self-sufficient in hazardous waste disposal, facilities are put in place for hazardous waste recovery in England, and the proximity principle is met."

10.2.9 Planning for hazardous waste management is also undertaken at a national level.

10.2.10 The expansive study area for availability of key construction materials (aggregates, asphalt, concrete and steel) is national (United Kingdom (UK) or Great Britain (GB)) and the South East region (dependent on baseline information availability).

10.3 Legislation, Planning Policy Context and Guidance

Legislation

10.3.1 The following legislation is relevant to this topic:

European Waste Framework Directive (2008/98/EC)

10.3.2 Establishes the wider regulatory context for waste management across Europe. In addition to defining waste, it also introduces the concept of the waste hierarchy and establishes landfill diversion targets for Member States. Requirements of the Waste Framework Directive (Ref 10-3) are transposed into applicable national law through the Waste (England and Wales) Regulations 2011.

The Environmental Protection Act 1990

10.3.3 The duty of care for waste management is set out under section 34 of the Environmental Protection Act 1990 (Ref 10-6) and the Waste (England and Wales) Regulations 2011 (as amended) (Ref 10-8). It requires anyone who produces, imports, keeps, stores, transports, treats or disposes of waste to take all reasonable steps to ensure that waste is managed properly and places a duty on producers and holders of waste.

The Hazardous Waste (England and Wales) Regulations 2005 (as amended)

10.3.4 The Hazardous Waste Regulations (Ref 10-7) place a requirement on producers of hazardous waste to:

- Classify the waste;
- Separate hazardous waste from other general waste streams;
- Use authorised businesses to collect, recycle or dispose of waste; and
- Complete relevant hazardous waste consignment notes.

The Waste (England and Wales) Regulations 2011 (as amended)

10.3.5 The Waste Regulations (Ref 10-8) transpose the requirements of the European Waste Framework Directive.

10.3.6 The Regulations require businesses to apply the waste hierarchy when managing waste, and require that measures are taken to ensure that, by the year 2020 and beyond, at least 70% by weight of non-hazardous construction and demolition waste is subjected to material recovery. The target specifically excludes naturally occurring materials with European Waste Catalogue (EWC) Code 17 05 04 (17 05 04 soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)).

The Environmental Permitting (England and Wales) Regulations 2016 (as amended)

10.3.7 The Environmental Permitting Regulations (Ref 10-9) require sites where waste is processed, treated or disposed of to hold a valid Environmental Permit issued by the Environment Agency. The Regulations also include a schedule of activities that are exempt from the requirements of permitting. However, to comply with the Regulations, an exempt activity must generally be registered with the Environment Agency before commencing.

The Environment Act 2021

10.3.8 The Environment Act 2021 (Ref 10-10) makes provision about targets, plans and policies for improving target areas within the natural environment. Part 3 of the Act outlines the priority for waste reduction and resource efficiency.

National Planning Policy

10.3.9 The following national policies are relevant to the Scheme:

Overarching National Policy Statement (NPS) for Energy (EN-1)

10.3.10 Requirements for resource and waste management are outlined in section 5.15 of NPS EN-1 (Ref 10-11).

National Planning Policy Framework (NPPF)

10.3.11 Within the NPPF (Ref 10-2), paragraphs 8c (emphasis to minimise waste) and 223b (use of substitute, or secondary and recycled materials and minerals waste) are relevant to materials and waste.

National Planning Practice Guidance (NPPG) for Minerals (2014) and National Planning Practice Guidance for Waste (2015)

10.3.12 Both the NPPG for Minerals (Ref 10-12) and NPPG for Waste (Ref 10-13) was published to provide more in-depth guidance to the NPPF. The NPPG aims to make planning guidance more accessible and ensures that the guidance is kept up to date.

National Planning Policy for Waste (2014) (Ref 10-14)

10.3.13 Sets out the government's detailed waste planning policies.

The Waste Management Plan for England (2021)

10.3.14 The plan (Ref 10-15) provides an overview of waste management in England and reiterates the requirement for all waste producers and waste management providers to implement the waste hierarchy. It also highlights the need for waste to be managed using the proximity principle and confirms England's commitment to waste recovery.

A Green Future: Our 25 Year Plan to Improve the Environment (2018)

10.3.15 The Government's 25 Year Plan to Improve the Environment (Ref 10-16) "sets out goals for improving the environment within a generation and leaving it in a better state than we found it". It details how the Government will work with communities and businesses to do this. The following policies are relevant:

- Make sure that resources are used more efficiently and kept in use for longer to minimise waste and reduce its environmental impacts by promoting reuse, remanufacturing and recycling.
- Work towards eliminating all avoidable waste by 2050 and all avoidable plastic waste by end of 2042.
- Reducing food supply chain emissions and waste.
- Reducing litter and littering.
- Improving management of residual waste.

Our Waste, Our Resources, A Strategy for England (Resources and Waste Strategy for England) (2018)

10.3.16 The Strategy (Ref 10-17) will help the Government to meet the commitments outlined in the 25 Year Plan and *"sets out how we will preserve our stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. At the same time, we will minimise the damage caused to our natural environment by reducing and managing waste safely and carefully, and by tackling waste crime."*

10.3.17 The strategy combines actions to be taken now and commitments for the coming years, as well as key targets and milestones.

The Waste Prevention Programme for England: Maximising Resources, Minimising Waste (2023)

10.3.18 The new programme (Ref 10-18) builds on and embeds strategic principle 2 from the Our Waste, Our Resources Strategy, to prevent waste from occurring in the first place and manage it better when it does. The goal is for a circular economy approach which retains products and materials in circulation for as long as possible and at their highest value.

Local Planning Policy

10.3.19 The following local policies are relevant to the Scheme:

- **Kent Minerals and Waste Local Plan 2013-2030 as amended by Early partial Review - Adopted September 2020** (Ref 10-19) includes strategic policies for minerals and waste development, as well as development management policies which are used to determine planning applications;
- **Kent Minerals and Waste Local Plan 2013-2030 - Minerals Sites Plan - Adopted September 2020** (Ref 10-20) identifies the location of safeguarded mineral sites;
- **Emerging Local Plan – draft Kent Minerals and Waste Local Plan 2024-2039** (Ref 10-21) submitted to the Secretary of State for independent examination on 17 May 2024. The new local plan will guide minerals and waste management development decisions in Kent until at least 2039 and will be used for the determination of planning applications in the county;
- **Ashford Local Plan 2030 - Adopted February 2019** (Ref 10-22) key design qualities including efficient use of natural resources and incorporation of facilities to enable recycling of waste and resources; and

- **Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022** (Ref 10-23) Strategic Need B and D, Policy SS3 Place-Shaping and Sustainable Settlements Strategy.

Guidance

10.3.20 The following guidance is relevant to the Scheme:

- IEMA Guidance (Ref 10-1)
  - Offers guidance and recommendations for EIA practitioners and stakeholders concerned with the impacts and effects of materials and waste on the environment. The guidance provides considerations for screening, scoping, consultation, assessment and subsequent reporting and monitoring.
- Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice (DoWCoP), v2 (2011) (Ref 10-24)
  - Provides a clear, consistent and efficient process which enables the reuse of excavated materials on-site or their movement between sites.
- Waste and Resources Action Programme (WRAP) Designing Out Waste: A Design Team Guide for Civil Engineering (Ref 10-27)
  - Provides information on the key principles that designers can use during the design process and how these principles can be applied to projects to maximise opportunities to Design out Waste.

10.4 Consultation

10.4.1 No materials and waste specific consultation has been undertaken to date. Following receipt of the Scoping Opinion, discussions with the relevant officers at KCC, will be held as appropriate.

10.5 Baseline Conditions

Availability of Key Construction Materials

10.5.1 At the time of writing, the exact quantities of key construction materials required for the Scheme are unknown as the design is in development.

10.5.2 UK, GB and regional data has been used to establish a quantitative national baseline of the availability for key construction materials (production, sales and requirement are used as a proxy for availability). **Table 10-1** summarises national consumption in 2021 for aggregates, asphalt and concrete and national requirement in 2023 for steel (the most recent years for which data is available), which are the key construction materials expected to be used during the construction of the Scheme.

10.5.3 Regional data for 2022 is presented in **Table 10-1** (Ref 10-26). It is assumed that the majority of key construction materials would be sourced locally, taking into account the proximity principle and value for money.

Table 10-1: National Consumption and Demand for Key Construction Materials

Materials	National Production (million tonnes, year)	10% of National Availability* (million tonnes)	Baseline Data Year	Data Description
Steel	15	1.5	2023	UK total requirement (Ref 10-25)
Aggregates of which:	279.8	27.98	2021	Minerals and mineral product sales in Great Britain (Ref 10-26)
Crushed rock	148.2	14.82		
Sand and gravel – land won	47.7	4.77		
Sand and gravel - marine	14.3	1.43		
Recycled and secondary	69.6	6.96		
Asphalt	28.3	2.83		
Ready-mixed concrete	52.7	5.27		
Concrete products	24.8	2.48		

**10% of national availability noted as the point of significance for materials based on a sensitivity of low.*

Table 10-2: Construction Material Sales by Region (2022) (Ref 10-26)

Construction Material	South East Region (million tonnes, year)	10% of Regional Availability* (tonnes)
Crushed rock	0.0	n/a
Sand and gravel	9.2	920,000
Ready-mixed concrete (converted from m^3 above using a density of 2.4 tonnes/m^3)	5.5	550,000
Asphalt (million tonnes)	1.7	170,000
**10% of regional availability noted as the point of significance for materials based on a sensitivity of low.*		

10.5.4 Potential recycled contents for the main construction materials are outlined in **Table 10-3**. These "good practice" rates are derived from the Waste Resources Action Plan's (WRAP) Designing Out Waste Tool for Civil Engineering (Ref 10-27).

Table 10-3: Potential Recycled Content

Material Type	Potential Recycled Content (% by weight)
Concrete	16
Asphalt	25
Aggregates	50
Steel reinforcement	100
Structural steel	60

Allocated/Safeguarded Mineral and Waste Sites

10.5.5 There are no allocated/safeguarded mineral or waste sites within the Scheme boundary as shown on Figure 13 (page 40), Figure 14 (page 44), Figure 16A (page 49) and Figure 16B (page 51) of the Kent Minerals and Waste Local Plan (Ref 10-19).

Landfill Capacity

10.5.6 Baseline information consists of current landfill capacity in the South East for non-hazardous waste and England for hazardous waste, as outlined in the EA's 2023 Waste Summary Tables for England – Version 1 (Ref 10-4) and presented in **Table 10-4**.

10.5.7 Hazardous restricted sites are not included since that capacity may not be available to the Scheme. Restricted landfills only accept waste from a restricted set of sources and producers, commonly the site operator e.g. a manufacturing site.

Table 10-4: Landfill Capacity in the South East region (2023)

Landfill Type	South East Landfill Capacity (000s m^3)	England Landfill Capacity (000s m^3)
Hazardous merchant	Not applicable, hazardous waste assessed at the England level	9,680
Non-hazardous with Stable Non-reactive Hazardous Waste (SNRHW) cell	10,014	Not applicable, non-hazardous and inert waste assessed at the regional level
Non-hazardous	16,644	
Inert	19,321	
Total	45,979	

Waste Management Infrastructure

10.5.8 Capacity of other types of waste infrastructure is publicly available (e.g. Environmental Permitting Regulations – Waste Sites (Ref 10-28)), however the permitted capacity is not necessarily representative of the actual operational capacity of the infrastructure. Therefore, input data are collated for the expansive study areas from the EA's Waste Data Interrogator 2023 – Waste Received (Excel) – Version 2 (2024) (Ref 10-29) and presented in **Table 10-5**. Inputs are not totalled since the double counting of waste in the Waste Data Interrogator cannot be discounted.

Table 10-5: Summary of Waste Inputs by Facility Type (2023)

Facility Type	South East (tonnes received)
Landfill	8,850,149
Metal Recycling Site	888,659
On/In Land	1,971,458
Transfer	6,260,869
Treatment	12,569,986
Use of Waste	347
Combustion	325,262

Facility Type	South East (tonnes received)
Incineration	3,736,982
Storage	455,028
Processing	1,130,601

10.5.9 The IEMA Guidance (page 14) *"does not consider waste processing and recovery facilities as sensitive receptors, rather: they are part of a system that has the potential to reduce the magnitude of adverse impacts associated with waste generation and disposal. Waste processing and recovery facilities are, hence, different to landfills, in that the latter are finite resources."* Therefore, a full list of waste management infrastructure is not included in the baseline.

Historic and Permitted Landfills

10.5.10 There are no authorised landfills recorded within the Scheme boundary, as outlined in the EA's Permitted Waste Sites – Authorised Landfill Site Boundaries (Ref 10-30).

10.5.11 There are no historic landfill sites located within the Scheme boundary, as outlined in the EA's Permitted Waste Sites – Historic Landfill Site Boundaries (Ref 10-31).

Targets

10.5.12 The national target for recovery of construction and demolition waste is 70% by weight, as set out in the European Waste Framework Directive (Ref 10-3) and the Waste Management Plan for England (Ref 10-15). The target specifically excludes naturally occurring materials with European Waste Catalogue (EWC) Code 17 05 04 (17 05 04 soil and stones other than those mentioned in 17 05 03* (soils and stone containing dangerous substances)). Recovery is deemed to include reuse, recycling and other recovery e.g. energy recovery.

10.5.13 A good practice landfill diversion target of 90% has been achieved and exceeded by major UK developments as outlined in the IEMA Guidance (Ref 10-1). In 2020, the UK generated 63 million tonnes of non-hazardous C&D waste, of which 59.4 million tonnes was recovered. This represents a recovery rate of 94.3% (Ref 10-32).

10.5.14 Standard, good and best practice recovery rates by material are provided by WRAP (Ref 10-33). Recovery rates for key construction wastes relevant to the Scheme are provided in **Table 10-6**.

Table 10-6: Standard, Good and Best Practice Recovery Rates by Material

Material	Standard Practice Recovery (%)	Good Practice Recovery (%)	Best Practice Recovery (%)
Metals	95	100	100
Packaging	60	85	95

Material	Standard Practice Recovery (%)	Good Practice Recovery (%)	Best Practice Recovery (%)
Concrete	75	95	100
Inert	75	95	100
Plastics	60	80	95
Miscellaneous	12	50	75
Electrical equipment	Limited information	70	95
Cement	Limited information	75	95
Liquids and oils	100	100	100
Hazardous	50	Limited information, cannot be 100% since some hazardous waste e.g. asbestos must be landfilled.	

Future Baseline

10.5.15 There is no publicly available information on any potential changes to national or regional material availability by the anticipated time of the construction of the Scheme. Construction material demand, such as ready mixed concrete, is closely aligned to both the quantity of construction taking place and the general economy. It is deemed inappropriate to forecast future material availability as the demand is unlikely to be linear and it is not possible to set a future baseline for materials. As such, future material availability is assumed to remain the same as the current baseline as outlined in **Table 10-1** and **Table 10-2.**

10.5.16 There is no publicly available information regarding any potential changes to landfill capacity by the anticipated time of the Scheme's construction, operation and decommissioning.

10.5.17 Due to the cyclic nature of inert and hazardous landfill capacity (e.g. landfill capacity decreasing, and then new sites or landfill cells being opened with landfill capacity increasing), it is not realistic to forecast future landfill capacity. Therefore, inert and hazardous landfill capacity is assumed to remain the same as the current baseline as outlined in **Table 10-4**.

10.5.18 For non-hazardous waste, using the current rate of decline of landfill capacity and forecasting into the future would lead to the inevitable conclusion that there would be no void space remaining. However, this is not a credible scenario as if there is still a need for landfill, then the WPA will need to consent new landfill capacity to replace that which has been used up. Therefore, non-hazardous and hazardous landfill capacity is assumed to remain the same as the current baseline, as outlined in **Table 10-4**.

10.6 Potential Effects and Mitigation

Potential Effects

10.6.1 Mitigation measures being incorporated in the design and construction of the Scheme are set out below. Prior to the implementation of the mitigation, the Scheme has the potential to affect Materials and Waste, during construction, operation and decommissioning, in the following ways:

- Changes in availability of materials; and
- Changes in available landfill void capacity.

Embedded Mitigation

10.6.2 The following embedded measures have been and will be incorporated into the Scheme design, with detailed measures to be submitted with the DCO application.

10.6.3 The Scheme will aim to prioritise waste prevention, followed by preparing for reuse, recycling and recovery and lastly disposal to landfill as per the waste hierarchy, illustrated in **Plate 10-1.**

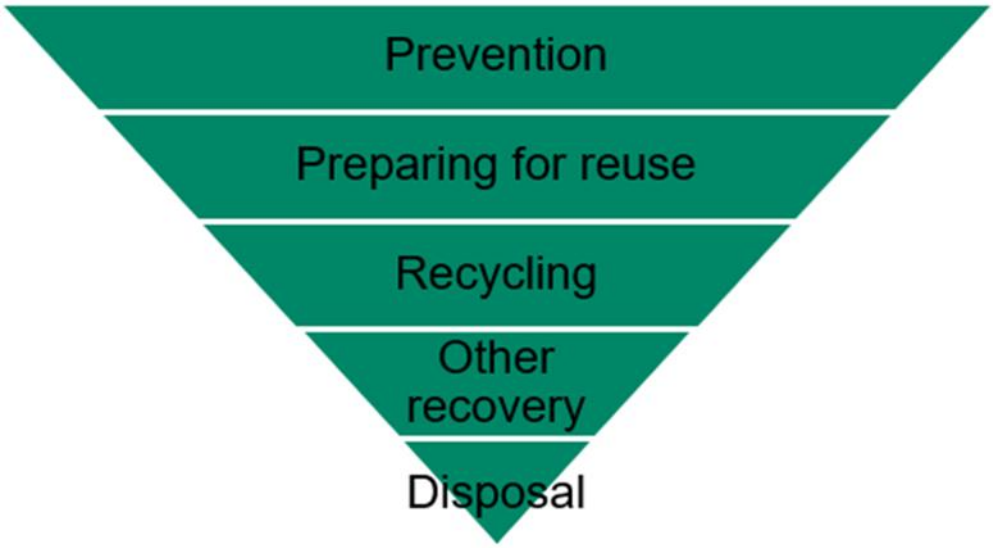


Plate 10-1: The Waste Hierarchy, from Defra's Guidance on Applying the Waste Hierarchy, recreated by AECOM

10.6.4 All management of waste will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them.

10.6.5 The construction of the Scheme will be subject to measures and procedures defined within a Construction Environmental Management Plan (CEMP) and Site Waste Management Plan (SWMP). The CEMP and SWMP will be secured by a Requirement in the DCO and include the implementation of industry standard practice and control measures for environmental impacts arising during construction, including the approach for material and waste management on-site. These measures will be set out in the Framework CEMP submitted with the DCO Application. The construction contractor will use the Framework CEMP

to produce their CEMP and a Site Waste Management Plan respectively, prior to works commencing on-site. Excavated material reuse would be via a Materials Management Plan in accordance with the CL:AIRE DoW CoP, Waste Framework Direction exclusion, exemption or environmental permit.

10.6.6 The operation of the Scheme will be subject to measures and procedures defined within an Operational Environmental Management Plan (OEMP) secured by a Requirement in the DCO. A Framework OEMP will be submitted as part of the DCO application which will include the approach for material and waste management on-site. The applicant will use the Framework OEMP to produce their OEMP prior to operation.

10.6.7 The decommissioning of the Scheme will be subject to measures and procedures defined within a Decommissioning Environmental Management Plan (DEMP) secured by a Requirement in the DCO. A Framework DEMP will be submitted as part of the DCO application which will include the approach for material and waste management on-site. The decommissioning contractor will use the Framework DEMP to produce their DEMP prior to decommissioning works on-site. The Applicant is committed to maximise recycling and reuse of the Scheme components e.g. solar panels at the end of their life.

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

10.7 Assessment Methodology

10.7.1 This section outlines the methodology for assessing the likely significant effects associated with materials and waste. The IEMA Guidance offers two methods for the assessment of waste. Method W1 – void capacity - has been selected as this is a more detailed methodology and is appropriate for larger and more complex projects.

10.7.2 The sensitive receptors for the assessment of the construction, operational and decommissioning phase materials and waste impacts are:

- Materials, national and regional availability of key construction materials – as outlined in the IEMA Guidance (Ref 10-1):

  "Materials are, in their own right, sensitive receptors. Consuming materials impacts upon their immediate and (in the case of primary material) long-term availability; this results in the depletion of natural resources and adversely impacts the environment"; and

- Landfill void capacity in the Expansive Study Area of the South East region (non-hazardous and inert landfill void capacity) – as defined in the IEMA Guidance (Ref 10-1):

  "Landfill is a finite resource, and hence – through the ongoing disposal of waste – there is a continued need to expand existing and develop new facilities, this requires the depletion of natural and other resources which, in turn, adversely impacts the environment."

10.7.3 The sensitivity of materials relates to the availability and type of construction materials to be consumed by the Scheme. The IEMA Guidance (Ref 10-1) criteria described within **Table 10-7** has been used to determine the sensitivity of materials.

10.7.4 Material receptor sensitivity is determined as "*low*". On balance, the key construction materials required for the construction of the Scheme are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. Key materials required for construction and operation are likely to be available comprising a high proportion of sustainable features and benefits (e.g. recycled content).

10.7.5 Potential recycled content for the main construction materials is outlined in **Table 10-3.**

10.7.6 The sensitivity of waste relates to availability of landfill capacity in the absence of the Scheme. This is outlined in the IEMA Guidance (Ref 10-1): "*landfill capacity is recognised as an unsustainable and increasingly scarce option for managing waste*." The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.

10.7.7 The criteria described within **Table 10-8** and **Table 10-9** have been used to determine the sensitivity of landfill capacity.

10.7.8 As stated in the IEMA Guidance: *"due to uncertainties relating to future technologies and infrastructure, this first edition of the guidance does not incorporate a proposed methodology to assess impacts and effects during decommissioning or end of first life"* (Ref 10-1). However, the criteria in the IEMA Guidance are applied to decommissioning for the Proposed Scheme.

10.7.9 The waste receptor sensitivity is determined as *"very high".* A scenario in which no landfill void space is available is deemed to be unrealistic as outlined in the Future Baseline section above, however, since there is no publicly available information on any potential changes to landfill capacity by the time of the construction and operation of the Scheme, a worst-case scenario is considered (e.g. landfill capacity is assumed to remain the same but a very considerable reduction in capacity cannot be excluded).

10.7.10 The assessment of materials and waste considers the following:

- Waste producers have a legal duty of care to manage their waste in accordance with regulations and to ensure that any waste leaving the site where it is generated is transferred to a suitably licensed facility for further treatment or disposal;
- Facilities transferring, treating or disposing of waste must be either licensed or apply for an exemption from a license, and impacts arising from the operation of waste management facilities are considered as part of the planning and permitting process for these facilities themselves;
- As part of their planning function, WPAs are required to ensure that sufficient land is available to accommodate facilities for the treatment of all waste arising in the area, either within the WPA's area, or through export to suitable facilities in other areas; and

- Minerals Planning Authorities are similarly required to ensure an adequate supply of minerals, sufficient to meet the needs of national and regional supply policies, and local development needs.

Methodology for Determining Construction, Operational, and Decommissioning Effects

Materials

10.7.11 Effects upon materials during construction, operation and decommissioning of the Scheme are assessed by:

- establishing the baseline for national and regional availability of key construction materials by weight;
- assessing the sensitivity of materials as related to the availability and types of materials to be consumed by the Scheme in construction, operation and decommissioning;
- establishing the quantities of key construction materials required for the construction of the Scheme; and
- comparing the total quantities of key construction materials with the most recent national and regional availability (utilising a percentage approach).

Waste

10.7.12 Effects upon waste during construction, operation and decommissioning of the Scheme is assessed by:

- establishing the baseline landfill void capacity in the expansive study areas;
- assessing the sensitivity of landfill void capacity;
- establishing the quantities of construction, operation and decommissioning waste to be generated during the construction, operation and decommissioning of the Scheme; and
- comparing the total waste arising from the construction, operation and decommissioning of the Scheme against the landfill void capacity (using a percentage approach).

Assessment Criteria

Sensitivity

10.7.13 The sensitivity of materials relates to the availability and type of construction material to be consumed by the Scheme. The IEMA Guidance criteria described within **Table 10-7** is used to determine the sensitivity of materials.

Table 10-7: Materials Receptor Sensitivity

Sensitivity	Criteria for Materials Receptor Sensitivity
Negligible	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to be free from known issues regarding supply and stock. And/or are available comprising a very high proportion of sustainable features and benefits compared to industry-standard materials*
Low	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to be generally free from known issues regarding supply and stock. And/or are available comprising a high proportion of sustainable features and benefits compared to industry-standard materials.
Medium	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to suffer from some potential issues regarding supply and stock. And/or are available comprising some sustainable features and benefits compared to industry-standard materials.
High	On balance, the key materials required for the construction of the Scheme are forecast (through trend analysis and other information) to suffer from known issues regarding supply and stock. And/or Comprise little or no sustainable features and benefits compared to industry-standard materials.
Very High	On balance, the key materials required for the construction of the Scheme are forecast are known to be insufficient in terms of production, supply and/or stock. And/or Comprise no sustainable features and benefits compared to industry-standard materials.

** Subject to supporting evidence, sustainable features and benefits could include, for example, materials or products that: comprise reused, secondary or recycled content (including excavated and other arisings); support the drive to a circular economy; or in some other way reduce lifetime environmental impacts.*

10.7.14 The sensitivity of waste relates to availability of landfill capacity in the absence of the Scheme. As outlined in the IEMA Guidance "*landfill capacity is recognised as an unsustainable and increasingly scarce option for managing*

waste". The sensitivity of landfill capacity is assessed based on a review of historic landfill void capacity trends where available and information from relevant policy documents.

10.7.15 The criteria described within **Table 10-8** and **Table 10-9** is used to determine the sensitivity of landfill capacity.

Table 10-8: Inert and Non-hazardous Landfill Capacity Sensitivity

Sensitivity	Criteria for Inert and Non-hazardous Landfill Capacity Sensitivity
Negligible	Across construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is expected to remain unchanged or is expected to increase through a committed change in capacity.
Low	Across construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce minimally by <1%.
Medium	Across construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce noticeably by 1-5%.
High	Across construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity is expected to reduce considerably by 6-10%.
Very High	Across construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional inert and non-hazardous landfill capacity: is expected to reduce very considerably (by >10%); is expected to end during construction or operation; is already known to be unavailable; or would require new capacity or infrastructure to be put in place to meet forecast demand.

Table 10-9: Hazardous Landfill Capacity Sensitivity

Sensitivity	Criteria for Hazardous Landfill Capacity Sensitivity
Negligible	Across the construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to remain unchanged, or is expected to increase through a committed change in capacity.

Sensitivity	Criteria for Hazardous Landfill Capacity Sensitivity
Low	Across the construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce minimally by <0.1%.
Medium	Across the construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce noticeably by 0.1-0.5%.
High	Across the construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional (or where justified, national) hazardous landfill capacity is expected to reduce considerably by 0.5-1%.
Very High	Across the construction and/or operation phases, the baseline/future baseline (i.e. without the Scheme) of regional (or where justified, national) hazardous landfill capacity: is expected to reduce very considerably (by >1%); is expected to end during construction or operation; is already known to be unavailable; or would require new capacity or infrastructure to be put in place to meet forecast demand.

Magnitude

10.7.16 The magnitude of impact describes the degree of variation from the baseline conditions as result of the Scheme. The methodology for assessing the magnitude of impact on materials comprises a percentage-based approach that determines the influence of construction materials use on the baseline national demand from the construction of the Scheme. The criteria used to assess the magnitude of impact for materials are provided within **Table 10-10**.

Table 10-10: Materials Magnitude of Impact

Magnitude of Impact	Criteria for Materials Magnitude of Impacts
No change	Consumption of no materials is required.
Negligible	Consumption of no individual material type is equal to or greater than 1% by volume of the baseline availability.
Minor	Consumption of one or more materials is between 1-5% by volume of the baseline availability.
Moderate	Consumption of one or more materials is between 6-10% by volume of the baseline availability.

Magnitude of Impact	Criteria for Materials Magnitude of Impacts
Major	Consumption of one or more materials is >10% by volume of the baseline availability.

10.7.17 The methodology for assessing the magnitude of impact for waste comprises a percentage-based approach that determines the influence of waste generation from the construction, operation and decommissioning of the Scheme on the baseline landfill capacity. The criteria used to assess the magnitude of impact for resources and waste are provided within **Table 10-11** and **Table 10-12**.

Table 10-11: Inert and Non-hazardous Waste Magnitude of Impact

Magnitude of Impact	Criteria for Inert and Non-hazardous Waste Magnitude of Impacts
No change	Zero waste generation and disposal from the development.
Negligible	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by <1%
Minor	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by 1-5%
Moderate	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by 6-10%.
Major	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by >10%.

Table 10-12: Hazardous Waste Management Magnitude of Impact

Magnitude of Impact	Criteria for Hazardous Waste Magnitude of Impacts
No change	Zero waste generation and disposal from the development.
Negligible	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by <0.1%
Minor	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by <0.1-0.-5%
Moderate	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by <0.5-1%.
Major	Waste generated by the development will reduce expansive Study Area landfill capacity baseline by >1%.

Significance

10.7.18 **Table 10-13** describes the effect thresholds used in determining the effects and **Table 10-14** shows the significance of the effect.

Table 10-13: Effect Thresholds

		Magnitude of Change				
		No Change	**Negligible**	**Minor**	**Moderate**	**Major**
Sensitivity of Receptor	**Very High**	Neutral	Slight	Moderate or large	Large or very large	Very large
	High	Neutral	Slight	Slight or moderate	Moderate or large	Large or very large
	Medium	Neutral	Neutral or slight	Slight	Moderate	Moderate or large
	Low	Neutral	Neutral or slight	Neutral or slight	Sight	Slight or moderate
	Negligible	Neutral	Neutral	Neutral or slight	Neutral or slight	Slight

Table 10-14: Significance of Effect

Magnitude of Impact	Materials	Waste
Neutral	Not significant	Not significant
Slight		
Moderate	Significant	Significant
Large		
Very Large		

10.8 Limitations and Assumptions

10.8.1 The material and waste scoping has been undertaken based on information available at the time of writing. Any assumptions made for scoping and the limitations this presents are reported including:

- The future baseline is assumed to be same as the current baseline as outlined in **Table 10-4**; and
- Construction material estimates at this stage are based on other similar Solar Nationally Significant Infrastructure Project (NSIP) schemes.

10.9 Summary of Elements Scoped In and Scoped Out

10.9.1 The following is scoped out of the assessment:

- Waste arising from extraction, processing and manufacture of construction components and products. This is based on the assumption that these products and materials are being developed in a manufacturing environment with their own waste management plans, facilities, and supply chain, which are potentially in different regions of the UK or the world and therefore outside of the geographical scope of this study. Such matters cannot be accurately predicted and assessed in the ES as they relate to procurement decisions that cannot be assured.
- Environmental impacts associated with the management of waste from the Scheme e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are addressed separately in other relevant chapters.
- Environmental impacts associated with the operation of offsite waste management facilities used by the Scheme in construction, operation and decommissioning. These environmental impacts are considered as part of the planning and permitting process for these facilities themselves.
- Direct impacts on safeguarded/allocated mineral and waste sites. There are no allocated/safeguarded mineral or waste sites within the Scheme boundary.
- Effects on the availability of materials during construction, operation and decommissioning. Material receptor sensitivity is determined as “low”. At “low” material receptor sensitivity, the point of significance is a major magnitude of impact as shown in **Table 10-10** as the *“consumption of one or more materials is >10% by volume of the baseline availability”*. Construction materials required to construct the Scheme are unlikely to be required in large quantities, i.e. more than 10% of regional or national construction material availability (**Table 10-1** and **Table 10-2**). Therefore, the magnitude of impact is anticipated to be negligible or minor, and the effect is slight, which is not significant. This assumption is based on the construction material requirements of similar sized solar farms which have anticipated construction material quantities to be <1% of national and regional availability.

10.9.2 Due to the limitation on information available at this stage, and the uncertainty about the nature of mitigation(s) and the method by which mitigation(s) would be secured, waste generation during the construction, operation and decommissioning (changes in available landfill void capacity) of the Scheme is scoped into the assessment.

10.9.3 A summary of the elements scoped into and out of the Materials and Waste chapter is presented in **Table 10-15**.

Table 10-15: Elements Scoped in and Scoped out of the Materials and Waste Assessment

Element	Scoped In/ Scoped Out
Changes in available landfill void capacity	Scoped in - Due to the limitation on design information available at this stage, and the uncertainty about the nature of mitigation(s) and the method by which mitigation(s) would be secured, waste generation during the construction, operation and decommissioning (changes in available landfill void capacity) of the Scheme is scoped into the assessment.
Changes in availability of materials	Scoped out - Construction materials required to construct the Scheme are unlikely to be required in large quantities, i.e. more than 10% of regional or national construction material availability.
Waste arising from extraction, processing, and manufacture of construction components and products.	Scoped out - Such matters cannot be accurately predicted and assessed in the ES as they relate to procurement decisions that cannot be assured.
Environmental impacts associated with the management of waste from the Scheme e.g., on water resources, air quality, noise, or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste.	Scoped out - Environmental impacts associated with the management of waste from the Scheme e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are addressed separately in other relevant sections.
Environmental impacts associated with the operation of offsite waste management facilities used by the Scheme in construction, operation and decommissioning.	Scoped out - Environmental impacts are considered as part of the planning and permitting process for these facilities themselves.
Changes to allocated/safeguarded mineral sites	Scoped out - There are no allocated/safeguarded waste sites within the Scheme boundary as presented on the Kent Minerals and Waste Local Plan.
Changes to allocated/safeguarded waste sites	

11. Noise and Vibration

11.1 Introduction

11.1.1 This chapter sets out the scope and methodology for the noise and vibration assessment of the Scheme.

11.1.2 Note that the scope of this chapter considers noise and vibration effects on human receptors and excludes assessment of noise and vibration on ecological or heritage receptors which are considered where applicable in **Chapter 7: Cultural Heritage** and **Chapter 8: Ecology and Nature Conservation.**

11.1.3 This chapter is supported **by Figure 11-1: Noise and Vibration Study Area, Sensitive Receptors and Noise Monitoring Locations**.

11.2 Study Area

11.2.1 The Study Area has been defined to include construction and operational noise and vibration receptors likely to be at risk from possible direct and indirect impacts that might arise from the Scheme.

11.2.2 For construction noise effects from the Energy Park Site, the area for which impacts are expected is considered to be 300 m, based on guidance in BS 5228-1:2009+A1:2014 (Ref 11-1), which states construction noise predictions are generally reliable up to 300 m. However, for the Energy Park Site, the Study Area is based on the extent of operational noise effects, which is set at 500 m. This distance of 500 m is based on previous experience of solar farm and BESS projects.

11.2.3 The wider 500 m operational Study Area has therefore been used for both the construction and operational noise and vibration assessment as it is considered that receptors further than 500 m will experience considerably lower levels of noise and vibration emissions as these will attenuate over distance, resulting in negligible noise and vibration effects from the Scheme. The Study Area for the Energy Park Site is illustrated in **Figure 11-1: Noise and Vibration Study Area, Sensitive Receptors and Noise Monitoring Locations**.

11.2.4 The Study Area for construction noise effects along the Interconnecting Cable Corridor and the Grid Connection Route will include receptors within 300 m, as per guidance in BS 5228-1:2009+A1:2014 (Ref 11-1). These receptors will be identified once a Grid Connection Route has been selected following disclosure of the proposed NGET substation location and definition of the Interconnecting Cable Corridor locations at the PEIR stage. Additionally, a Study Area of 50 m either side of construction traffic routes has been defined based on guidance in the Design Manual for Roads and Bridges LA111 (DMRB) (Ref 11-2).

11.2.5 The nearest sensitive receptors have been identified within the study area using Address base Plus data and are illustrated in **Figure 11-1**.

11.2.6 Public Rights of Way (ProW) potentially sensitive to noise will also be identified and considered within the noise assessment.

Figure 11-1: Noise and Vibration Study Area, Sensitive Receptors and Noise Monitoring Locations.

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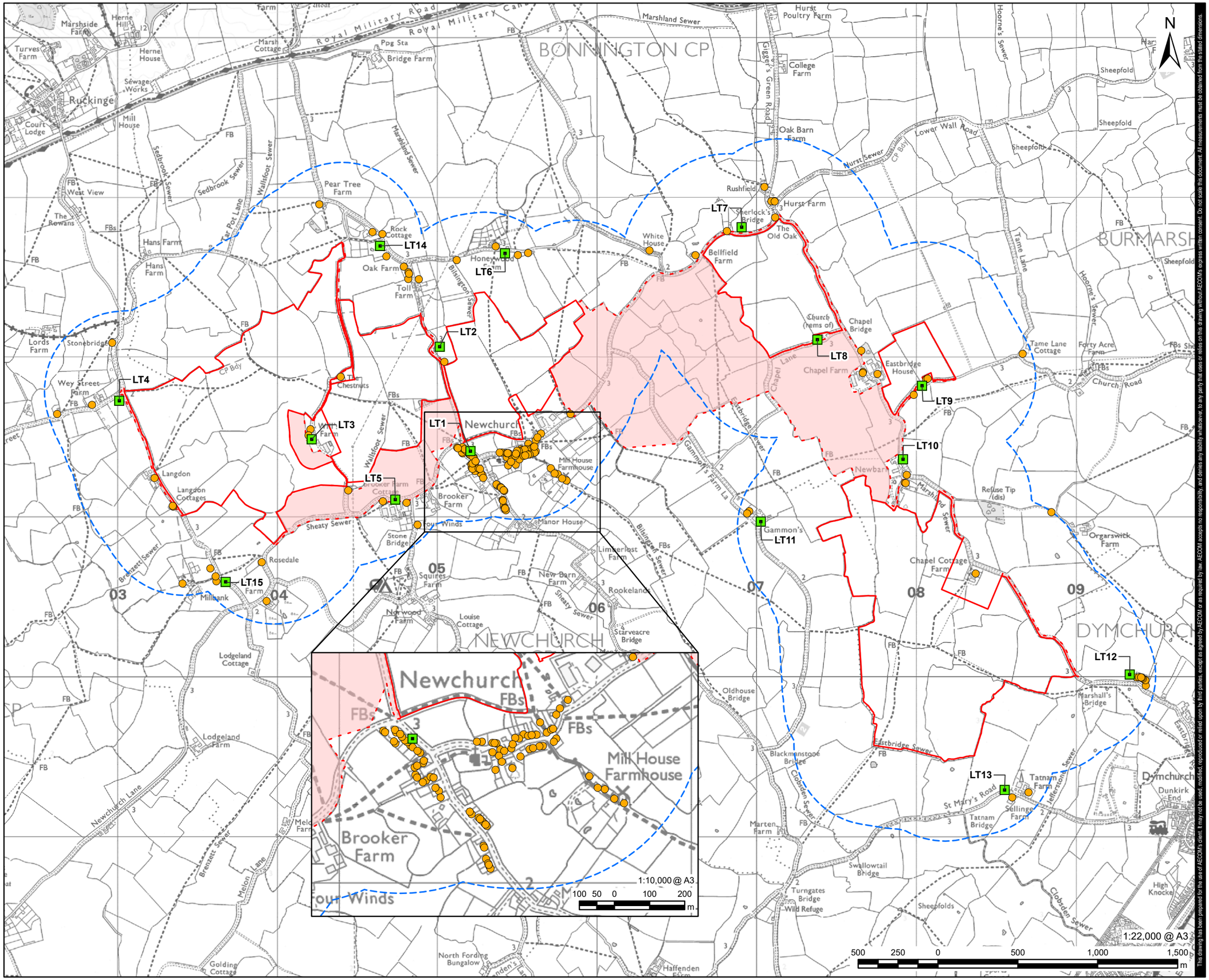

AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Study Area (500m Buffer of the Energy Park Site)
- Monitoring Location
- Sensitive Receptor Location

NOTES

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ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Noise and Vibration Study Area, Sensitive Receptors and Monitoring Locations

FIGURE NUMBER

Figure 11-1

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11.3 Legislation, Planning Policy Context and Guidance

11.3.1 Legislation, planning policy and guidance relating to noise and vibration and pertinent to the Scheme comprises:

Legislation

- Control of Pollution Act (CoPA) 1974 (Ref 11-3) – requires that Best Practicable Means (BPM) (as defined in section 72 of CoPA) are adopted to control construction noise on any given site as far as reasonably practicable.; and
- Environmental Protection Act 1990 (Ref 11-4) – prescribes noise and vibration emitted from premises (including land) so as to be prejudicial to health or a nuisance as a statutory nuisance.

National Planning Policy

11.3.2 The Overarching National Policy Statement (NPS) for Energy (EN-1) (Ref 11-5) sets out national policy for energy and will be an 'important and relevant consideration' (Paragraph 1.6.3) in the Secretary of State's ('SoS') determination of consent in respect of the Scheme. Reference will be made to Section 5.12 in relation to the assessment of noise.

11.3.3 The NPS for Electricity Networks Infrastructure (EN-5) (Ref 11-6) in conjunction with NPS EN-1 provides the primary policy basis for decisions taken by the SoS on applications he receives for the categories of nationally significant electricity networks infrastructure included within it. Reference within EN-5 is made to Section 2.9, paragraphs 2.9.37-2.9.39 (Noise and Vibration) relating to noise from substation equipment.

11.3.4 The National Planning Policy Framework (NPPF) (Ref 11-7) contains the government's planning policies relating to noise in Paragraph 187 and 198.

11.3.5 Paragraph 187 details that planning policies and decisions should prevent new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by noise pollution.

11.3.6 Paragraph 198 further describes how planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions, the natural environment and the potential sensitivity of the site or the wider area. Mitigation should also be considered to reduce potential adverse impacts resulting from noise from new development to a minimum to avoid noise giving rise to significant adverse impacts on health and quality of life in addition to Tranquil areas needing to be identified and protected.

11.3.7 The Noise Policy Statement for England (NPSE) (Ref 11-8) sets out the long-term vision of the government's noise policy.

11.3.8 This long-term vision is supported by three aims:

- *"Avoid significant adverse impacts on health and quality of life;*

- *Mitigate and minimise adverse impacts on health and quality of life; and*
- *Where possible, contribute to the improvements of health and quality of life."*

11.3.9 The NPSE sets definitions for 'significant adverse effects' and 'adverse effects' using the concepts:

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

National Guidance

11.3.10 Planning Practice Guidance Noise provides guidelines that are designed to assist with the implementation of the noise requirements set out in the NPPF (Ref 11-9).

Local Planning Policy

11.3.11 Ashford Local Plan 2030 - Adopted February 2019 Policy ENV10 – Renewable and Low Carbon Energy (Ref 11-10) states:

"Planning applications for proposals to generate energy from renewable and low carbon sources will be permitted provided that: b) The development does not generate an unacceptable level of traffic or loss of amenity to nearby residents (visual impact, noise, disturbance, odour)".

11.3.12 ABC's Renewable Energy Planning Guidance Note 2 – Adopted 2013 (Ref 11-11) identified that, if pile driven foundations are required, the noise impact at sensitive receptors should be considered.

11.3.13 The Folkestone and Hythe District Council Places and Policies Local Plan – Adopted September 2020 (Ref 11-12) Policy CC6 Solar Farms states:

"The development of new solar farms, or the extension of existing solar farms, will only be acceptable where:[…]

[…] 2. The proposal does not result in the direct loss of amenity to nearby residential properties by virtue of glare or other disturbance; "

11.3.14 Policy NE3 Protecting the District's Landscapes and Countryside states:

"Kent Downs Area of Outstanding Natural Beauty

The impact of individual proposals and their cumulative effect on the Kent Downs Area of Outstanding Natural Beauty (AONB) and its setting will be carefully assessed. Planning permission will be granted where it can be demonstrated that all the following criteria have been met: [...]

[….] 4. Development is appropriate to the economic, social and environmental well-being of the area or is desirable for the understanding and enjoyment of the area (where this is consistent with the primary purpose of conserving and enhancing natural beauty); and

5. Development meets the policy aims of the Kent Downs AONB Management Plan and AONB Unit produced supporting design guidance."

11.3.15 Consultation with Environmental Health Officers at ABC and FHDC will be carried out on the scope and methodology of baseline sound surveys.

11.4 Baseline Conditions

11.4.1 The existing land uses of the around the Energy Park Site are primarily agricultural. There are individual and clusters of residential properties located adjacent to the Energy Park Site boundary.

11.4.2 The main sources of sound in the area are considered to be:

- Traffic on the local road network and the A2070 which is the only main road in the area located to the west of the Energy Park Site;
- Light aircraft associated with Woodridge / Meadow Farm Airfield; and
- Agricultural activities associated with farms and fields in the vicinity of the Energy Park Site.

11.4.3 Baseline sound monitoring will be undertaken at selected locations to define representative baseline data at noise-sensitive receptors around the Energy Park Site. Fifteen monitoring locations have been identified with approximate locations illustrated in **Figure 11-1**.

11.4.4 The monitoring procedures will follow guidance from BS 7445-1:2003 *'Description and environment of environmental noise – Part 1: Guide to quantities and procedures'* (Ref 11-13) and BS 4142:2014+A1:2019 *'Methods for rating and assessing industrial and commercial sound'* (Ref 11-14).

11.4.5 A combination of long-term unattended (1 week minimum) and short-term attended (3 hours) measurements will be used. This will be dependent on the probability of the corresponding NSR's and if they could be subject to construction phase related noise or operational phase related noise. A weather station will also be installed for the duration of the sound surveys so any periods of adverse weather conditions can be identified and omitted from noise data.

11.4.6 It is not expected that there would be any material change in ambient sound levels during the lifespan of project, so measured sound data is considered to be suitably representative of future baseline ambient sound conditions.

11.4.7 Baseline road traffic data for construction traffic routes in the format 18-hour annual average weekday flows (AAWT) will be utilised in the assessment of construction traffic noise.

11.5 Potential Effects and Mitigation

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

Construction and decommissioning noise and vibration (temporary effects)

11.5.2 Potential noise and vibration effects during construction and decommissioning phases are likely to include works activities associated with site preparation, plant installation, substation construction, cable laying and construction-related vehicle movements within the Energy Park Site boundary and along access routes.

11.5.3 Construction traffic movements on public roads have the potential to cause temporary disturbance. It is therefore important that the routing and timing of vehicle movements is carefully managed. However, any increases in road traffic noise levels during works will be temporary, short term, and dependent on the actual number of traffic movements.

11.5.4 Road traffic can also cause vibration; however, DMRB (Ref 11-2) states: *"operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects".* Whilst, this quote relates to the assessment of a highway scheme, it is relevant as it provides information about how significant vibration effects may be generated by traffic movements on a road with an irregular surface. It is assumed that KCC will maintain good quality conditions for highways used to access the Scheme. Therefore, no significant construction traffic vibration effects are expected, and an assessment of construction traffic vibration has been scoped out.

11.5.5 Measures to control noise as defined in Annex B of BS 5228-1:2009+A1:2014 (Ref 11-1) and measures to control vibration as defined in Section 8 of BS 5228-2:2009+A1:2014 (Ref 11-15) will be adopted where reasonably practicable.

11.5.6 These measures represent 'Best Practicable Means' (BPM) (as defined by section 72 of CoPA1974) to manage noise and vibration emission from construction activities. Examples of BPM that may be implemented during construction works are presented below:

- Unnecessary revving of engines will be avoided, and equipment will be switched off when not in use;
- Appropriate routing of construction traffic on public roads and along access tracks;
- Drop heights of materials will be minimised;
- Plant and vehicles will be sequentially started up rather than all together;
- Plant will always be used in accordance with manufacturers' instructions. Care will be taken to site equipment away from noise-sensitive areas.

Where possible, loading and unloading will also be carried out away from such areas; and

- Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's specifications.

11.5.7 Embedded measures relevant to the construction phase will be described within a Framework CEMP, which will be developed into a detailed (or construction issue) CEMP prior to the start of construction and implemented.

Operational noise (reversible long-term effects)

11.5.8 The potential noise effects during operation of the Scheme are likely to include noise from Energy Park plant (e.g. inverters, transformers, and the motors for the tracking PV module mounting structure, should this option be taken forward), battery storage plant (e.g. cooling units, inverters, transformers), the on-site substations (e.g. transformers), and any associated vehicle movements.

11.5.9 Plant items such as solar PV modules, PV module mounting structures, and cabling (both on-site and via the cable route) will not produce any operational noise emissions.

11.5.10 No plant that would generate perceptible levels of vibration outside the Site boundary are part of the Scheme and, as such, there will be no associated operational vibration effects. It is proposed that operational vibration is scoped out of any further assessment.

11.5.11 At this stage no specific noise mitigation measures have been included for operational plant. Where practicable, plant will be designed to have no tonal, impulsive or intermittent features at the assessment locations.

11.5.12 As the Scheme design is progressed, the specification of plant and equipment with low noise emission and properly attenuated supply and extract terminations will help to minimise noise emissions. The use of enclosures, local screening, mufflers, and silencers will be considered as appropriate.

11.5.13 The anticipated maximum number of daily workers for the operation of the Scheme is 10, as such operational traffic flows would be minimal. This would be dependent on the nature of the O&M activity.

11.6 Assessment Methodology

Impact Assessment Methodology

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

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

noise refers to guidance within IEMA Guidelines for environmental noise impact assessment (Ref 11-16).

11.6.3 Government policy for noise is based on community exposure response relationships and noise insulation of a typical dwelling. Consequently, an assessment based on LOAELs and SOAELs cannot be applied to non-residential sensitive receptors (such as places of worship and Public Rights of Way). As such, the approach to the assessment of non-residential receptors differs from that adopted for residential receptors. Non-residential receptors are considered on a case-by-case basis by considering the applicable design criteria for good internal noise levels.

Construction and Decommissioning Noise and Vibration

11.6.4 Noise and vibration levels associated with construction and decommissioning works will be assessed at chosen sensitive receptors. Annex E of BS 5228-1:2009+A1:2014 (Ref 11-1) provides example methods for the assessment of the significance of construction noise effects. With reference to the NPSE, the LOAEL, and SOAEL thresholds have been set in **Table 11-1** below.

Table 11-1: Thresholds of Potential Effects of Construction and Decommissioning Noise at Residential Buildings

Time Period	Threshold Value (LAeq,T dB)	
	LOAEL	SOAEL
Day (07:00 – 19:00) Saturday (07:00 – 13:00)	65	75
Evening (19.00 – 23.00) Weekends (13.00–23.00 Saturdays and 07.00–23.00 Sundays)	55	65
Night (23.00 – 07.00)	45	55

11.6.5 **Table 11-2** details Peak Particle Velocity (PPV) levels (a standard measure of vibration effects) and their potential effect on humans based on guidance from BS 5228-2:2009+A1:2014 (Ref 11-15).

11.6.6 At receptors where vibrations levels above the SOAEL are predicted, further consideration of whether an effect is significant is undertaken using professional judgement, taking account of the duration and frequency of the effect, as well as the time of day that the effect would be experienced.

11.6.7 In addition to human annoyance, building structures may be damaged by high levels of vibration. The levels of vibration that may cause building damage (as set out in Annex B of BS 5228-2:2009+A1:2014 (Ref 11-15)) are far in excess of those that may cause annoyance. Consequently, if vibration levels are controlled to those specified by annoyance, then it is highly unlikely that buildings will be damaged by demolition and construction vibration.

Table 11-2: Thresholds of Potential Effects of Construction and Decommissioning Vibration (human response)

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

11.6.8 The temporary changes in road traffic noise levels along the local road network due to construction traffic will be assessed based on guidance from the IEMA Guidelines for environmental noise impact assessment (Ref 11-16). Assessment criteria are presented in **Table 11-3**.

Table 11-3: Construction Traffic Noise Assessment Criteria

Effect Level	Magnitude Criteria
Negligible	≥ 0 dB and < 1 dB
Minor	≥ 1 dB and < 3 dB
Moderate	≥ 3 dB and < 5 dB
Major	≥ 5 dB

Operational Noise

11.6.9 The impact of the proposed operational plant such as noise from the inverters, tracker PV module mounting structure (if this option is taken through to the ES), and BESS will be assessed following guidance from BS 4142:2014+A1:2019 (Ref 11-14). Reference is also made to the ANC Guide to BS 4142 (Ref 11-17), BS 8233:2014 Guidance on sound insulation and noise reduction for buildings. (Ref 11-18) and the World Health Organization (WHO) *'Guidelines for Community Noise'* (1999) (Ref 11-19) when defining minimum values for LOAEL and SOAEL.

11.6.10 The assessment criteria for noise from fixed plant installations are summarised in **Table 11-4**.The assessment will be based on available information on the operating conditions and the levels of noise generated by the plant.

Table 11-4: Operational Noise Assessment Criteria

Effect Level	Rating Level (External) at Receptor, LAr,Tr	
	Daytime (07:00-19:00) and Evening (19:00-23:00)	Night-time (23:00-07:00)
LOAEL	Less than or equal to the typical background level ($L_{A90,T}$) – minimum of 35 dB $L_{Ar,Tr}$	Less than or equal to the typical background level ($L_{A90,T}$) – minimum of 30 dB $L_{Ar,Tr}$
SOAEL	Greater than 10 dB above the background noise level – minimum of 45 dB $L_{Ar,Tr}$	Greater than 10 dB above the background noise level – minimum of 40 dB $L_{Ar,Tr}$

11.7 Limitations and Assumptions

11.7.1 Noise and vibration effects during the decommissioning phase of the Scheme will be similar to or less than noise and vibration effects during the construction phase. The noise assessment presented for the construction phase will therefore be considered representative, or an overestimate, of the decommissioning phase. As such a separate assessment for noise from the decommissioning phase is not proposed.

11.7.2 Predictions of sound levels have an associated degree of uncertainty. Modelling and measurement processes will be carried out in such a way to reduce such uncertainty; however, it is unavoidable that some degree of prediction uncertainty remains so a precautionary approach will be adopted in sound predictions.

11.7.3 Construction works noise levels will be predicted following guidance from BS 5228-1:2009+A1:2014 (Ref 11-1) which provides a realistic estimate of sound propagation from construction plant. The predictions will use representative noise levels, sourced from industry standard guidance documents such as BS 5228-1:2009+A1:2014 (Ref 11-1), for typical items of plant that are used in such developments.

11.7.4 The temporary changes in road traffic noise levels along the local road network due to construction traffic will be assessed based on guidance from the IEMA Guidelines for environmental noise impact assessment (Ref 11-16).

11.7.5 Construction phase vibration will be assessed based on historic vibration measurement data from relevant guidance documents including BS 5228-2:2009+A1:2014 (Ref 11-15) and Transport Research Laboratory (TRL) Report 429 (Ref 11-20).

11.7.6 Predictions of operational plant and activities sound pressure levels will be undertaken following guidance from the International Organisation for Standardisation (ISO) ISO 9613-2:2024 ‘Attenuation of sound during propagation outdoors’ (Ref 11-21), which are based on an assumption of moderate downwind propagation, and hence could be considered as a worst-case calculation. However, the standard also indicates an estimated accuracy of ±3 dB(A) in predicted levels.

11.7.7 Any measurement of existing ambient or background sound levels will be subject to a degree of uncertainty. Environmental sound levels vary between days, weeks, and throughout the year due to variations in source levels and conditions, meteorological effects on sound propagation, and other factors. Hence, any measurement survey can only provide a sample of the ambient levels, and a small degree of uncertainty will always remain in the values taken from such a measurement survey. The proposed unattended period of a minimum of seven days is considered appropriate for reducing uncertainties that may occur due to variations in diurnal noise levels.

11.7.8 Every effort will be made to ensure that measurements are undertaken in such a way as to provide a representative sample of conditions, such as avoiding periods of adverse weather conditions, and school holiday periods (which are often considered to result in atypical sound levels). Consequently, the level of uncertainty in measurements will be reduced as far as reasonably practicable.

11.8 Summary of Elements Scoped In and Scoped Out

11.8.1 A summary of the elements scoped into and out of the Noise and Vibration assessment are presented in **Table 11-5**.

Table 11-5: Elements scoped in and scoped out of the assessment of Noise and Vibration

Element	Scoped In/ Scoped Out
Noise and vibration levels associated with construction works	Scoped in: temporary noise and vibration emissions from construction works may adversely impact on sensitive receptors.
Noise and vibration levels associated with decommissioning works	Scoped in: temporary noise and vibration emissions from decommissioning works may adversely impact on sensitive receptors.
Construction traffic noise	Scoped in: temporary noise from construction traffic movements may adversely affect receptors near public roads that are part of construction traffic routes.
Decommissioning traffic noise	Scoped in: temporary noise from decommissioning traffic movements may adversely affect receptors near public roads that are part of decommissioning traffic routes.
Construction traffic vibration	Scoped out: road traffic can cause vibration; however, DMRB LA 111 states: "*operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects*." It is assumed that the County Council will maintain good quality conditions for highways used to access the Scheme. Therefore, an assessment of construction traffic vibration has been scoped out.
Decommissioning traffic vibration	Scoped out: road traffic can cause vibration; however, DMRB LA 111 states: "*operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to*

Element	Scoped In/ Scoped Out
	significant adverse effects." It is assumed that the County Council will maintain good quality conditions for highways used to access the Scheme. Therefore, an assessment of decommissioning traffic vibration has been scoped out.
Operational noise	Scoped in: permanent noise emissions from Scheme infrastructure may adversely affect nearby sensitive receptors.
Operational traffic noise	Scoped out: operational traffic flows would be minimal and not sufficient to result in a 1 dB increase in noise, which would require a 25% increase in traffic.
Vibration from the operation of the Scheme	Scoped out: no plant that would generate perceptible levels of vibration are part of the Scheme and, as such, there will be no associated operational vibration effects. It is proposed that operational ground-borne vibration is scoped out of any further assessment.

12. Socio-Economics and Land Use

12.1 Introduction

12.1.1 This chapter sets out the scope and methodology for the socio-economic and land use assessment of the Scheme. The purpose of this assessment is to identify and characterise any relevant socio-economic and land use receptors (except agricultural land quality, see **Chapter 13: Soils and Agricultural Land** and **Chapter 16: Other Environmental Topics** (Human Health, see Section 16.5)), to consider the nature and scale of potential impacts arising from the Scheme, and to assess the significance of any likely effects.

12.1.2 This chapter is supported by **Figure 12-1: Socio-economics and Land Use Study Area.**

12.2 Study Area

12.2.1 The potential economic and employment impacts of the Scheme, both temporary and permanent, will be considered in relation to a key economic area, defined by Local Planning Authority boundaries, typical travel time from the site, and relevant demographic and economic data.

12.2.2 The Study Area for land use receptors (residential properties, local businesses, visitor attractions relevant for tourism, farming businesses, community facilities, open space, recreational assets and development land) reflects receptors that could be directly or indirectly affected by the Scheme. The Study Area for direct effects is the area within the Scheme Boundary, comprising the Energy Park Site, Interconnecting Cable Corridors (once defined), and Grid Connection Route, including the extent of receptors beyond this boundary where they are contiguous. The Study Area for indirect effects is principally the area within 500 m of the Scheme boundary, noting that a 2 km radius is used for community, recreation and tourism receptors. The rationale for assessing potential indirect effects within 500 m and 2 km is based on professional judgement and location of sensitive receptors for impacts arising from the Scheme as informed by other assessments for solar projects in England. The Study Area's are presented on **Figure 12-1**.

Figure 12-1: Socioeconomics and Land-Use Study Area

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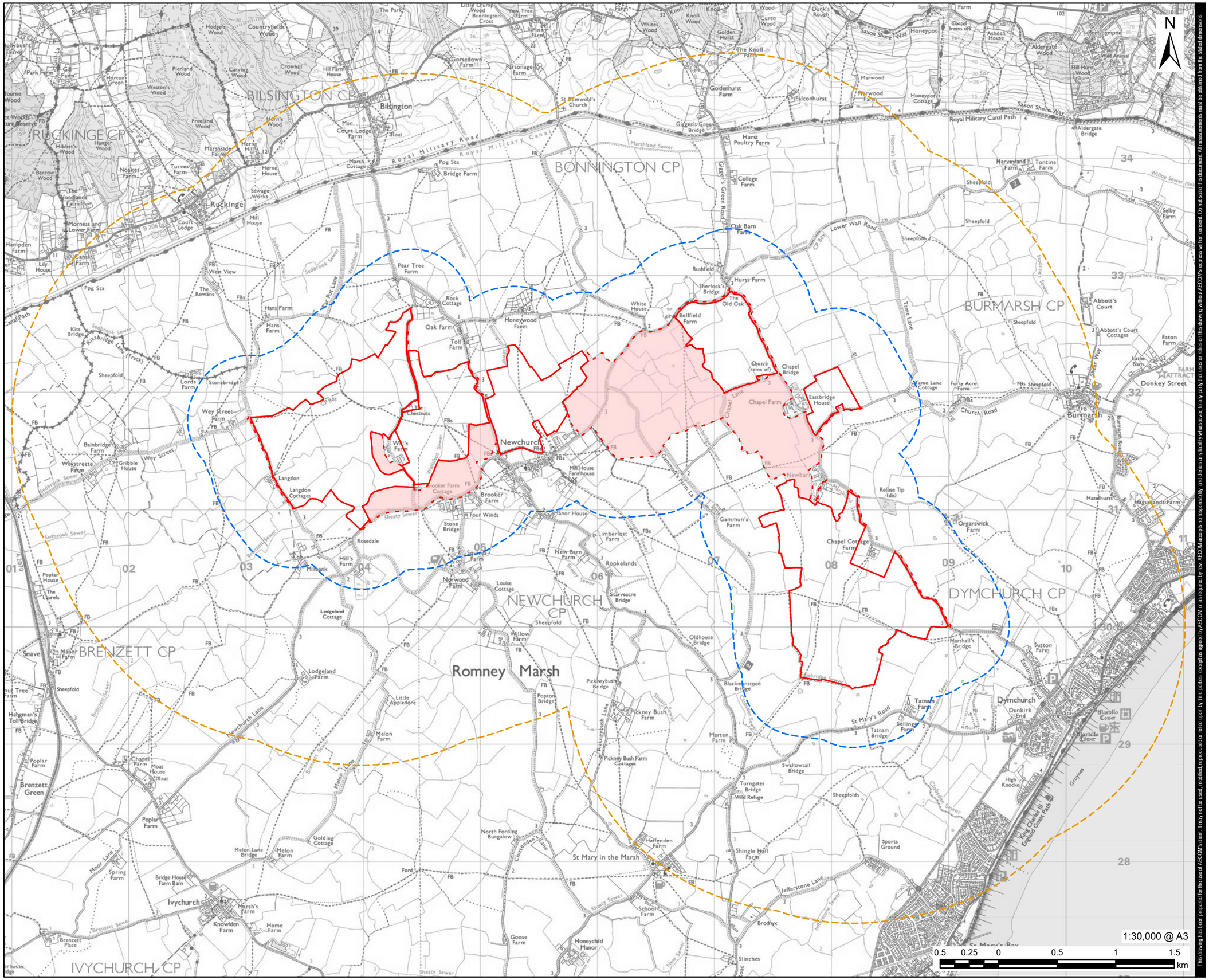

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PROJECT

Shepway Energy Park

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Indirect Effects Study Area (500m Buffer of the Energy Park Site and Interconnecting Cable Corridor Search Area)
- Community, Recreation and Tourism Receptor Study Area (2km Buffer of the Energy Park Site and Interconnecting Cable Corridor Search Area)

NOTES

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ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Socioeconomics and Land-Use Study Area

FIGURE NUMBER

Figure 12-1

12.3 Legislation, Planning Policy and Context Guidance

12.3.1 Legislation, planning policy and guidance relating to socio-economics and land use and pertinent to the Scheme are set out below.

Legislation

12.3.2 There is no applicable legislation specific to the assessment of socio-economics and land use.

National Planning Policy

12.3.3 Relevant national planning and other policy and guidance includes:

- NPS EN-1 (Ref 12-1) with particular reference to paragraphs 4.1.5 and 4.1.6 in relation to adverse effects and benefits, paragraph 4.3.1 in relation to requirements for the content of an Environmental Statement, paragraph 4.3.2 and section 5.13 in relation to socio-economics;
- NPS EN-3 (Ref 12-2), where applicable includes the additional consideration of socio-economic impacts associated specifically with solar photovoltaic generation schemes and highlights the need to consider effects on public rights of way (PRoW). Paragraph 2.10.69 references the socio-economic benefits of retaining site infrastructure after the operational life of a solar farm, such as retaining pathways through the site.;
- NPPF (Ref 12-3) with particular reference to Section 6: Building a strong, competitive economy (paragraphs 85-87), and Section 17 (Facilitating the sustainable use of minerals); National Economic Development Policy (Ref 12-4) with particular reference to the Government's Industrial Strategy White Paper which outlines ambitions to increase productivity and drive growth, one way this is highlighted is through Clean Growth; to lead the world in the development, manufacture and use of low carbon technologies; and
- PPG (Ref 12-5) with particular reference to guidance on planning and the economy and the potential future needs of the population in terms of economic development, jobs and employment opportunities.

Local Planning Policy

12.3.4 Relevant local planning and other policy and guidance includes:

- Kent Local Plan 2013-2030 as amended by Early partial Review (September 2020) (Ref 12-6);
- Kent Minerals Site Plan 2013-2030 (September 2020) (Ref 12-7). According to maps in this document, the Site area does not include mineral safeguarding areas or mineral consultation areas.

- Ashford Local Plan 2030 (Adopted February 2019) (Ref 12-8) with particular reference to Policy SP3 – Strategic Approach to Economic Development;
- Folkestone and Hythe Core Strategy Review to 2037 (adopted March 2022) (Ref 12-9) with particular reference to Policy SS1 (District Spatial Strategy – refers specifically to priorities for the Romney Marsh area); and
- Folkestone and Hythe Places and Policies Local Plan (adopted September 2020) (Ref 12-10) with particular reference to Policy E6 (Farm Diversification).

12.4 Consultation

12.4.1 Information gathered during the non-statutory and statutory consultation will be used as appropriate to help inform the scope of the assessment. Specific engagement with the Local Planning Authorities will be undertaken to discuss the scope building on this.

12.5 Baseline Conditions

12.5.1 The potential impacts arising from the Scheme will be assessed relative to the baseline conditions and benchmarked against regional and national standards where appropriate. The key indicators and measures of the Study Areas will be established for:

- Population and deprivation;
- An overview of the local economies;
- The local labour markets; and
- Land use (excluding agricultural land quality).

12.5.2 A high-level summary of baseline conditions has been presented in the following paragraphs, based upon review of the following documents:

- Office for National Statistics (ONS), 2011 Census (Ref 12-11) and 2021 Census data (Ref 12-12);
- Ministry of Housing, Communities and Local Government, (2019); English indices of deprivation (Ref 12-13);
- ONS, (2024); Business Register and Employment Survey (Ref 12-14);
- ONS, (2022); Gross Value Added (Income Approach) (2021) (Ref 12-15);
- ONS (2024); Claimant Count by sex and age (October 2024) (Ref 12-16);
- ONS (2024); Annual Population Survey (July 2023 to June 2024) (Ref 12-17);
- ONS (2024); Mid-Year Population Estimates (Ref 12-18); and
- ONS (2018); Population projections – local authority based by single year of age (Ref 12-19).

12.5.3 The Scheme is located within the areas administered by Ashford Borough Council and Folkestone & Hythe District Council (FHDC). This section will

therefore establish the baseline conditions relative to these areas in comparison to the wider South East region, and England and Wales.

Population and Deprivation

12.5.4 Based on Census data, the usual resident population of Ashford has grown from 117,956 in 2011 to 132,747 in 2021 representing an increase of 12.5%. In Folkestone & Hythe the usual resident population has grown from 107,969 to 109,758 over the time period, representing a notably smaller increase of 1.7%.The increase in Ashford is greater than that exhibited in the South East (7.5%) and England and Wales as a whole (6.3%), with the increase in Folkestone & Hythe being notably less than that exhibited in the same areas (Ref 12-11, Ref 12-12).

12.5.5 In terms of deprivation, Ashford is ranked 152nd out of 317 local authority areas, where 1st is most deprived. Of all Lower layer Super Output Areas (LSOAs) in Ashford, 12.8% are ranked amongst the 20% most deprived LSOAs nationally. Conversely, 25.6% of LSOAs in Ashford are ranked amongst the 30% least deprived. Folkestone & Hythe is ranked 84th most deprived out of England's 317 Local Authority areas, with 21.4% of LSOAs in Folkestone & Hythe ranking amongst the 20% most deprived nationally. Of all LSOAs in Folkestone & Hythe, 12.9% are ranked amongst the 30% least deprived.

Local Economy and Labour Market

12.5.6 Gross Value Added (GVA) per head in 2022 is lower in both Ashford and Folkestone & Hythe (£26,075 and £24,695 respectively, per head of population at current basic prices) than in Kent (£27,602). GVA per head in the South East region (£35,845) is higher than across England as a whole (£33,976). (Ref 12-15).

12.5.7 In 2022, the GVA of the construction industry in the United Kingdom was approximately £126.7 billion with GVA per head for workers being approximately £58,700. In 2022, the GVA of the construction industry in Kent was approximately £5.1 billion with GVA per head for workers being approximately £112,600.

12.5.8 In 2024, the Annual Population Survey (Ref 12-17) showed that 30.1% of usual residents aged 16 and over in Ashford hold degree-level qualifications (National Vocational Qualification (NVQ) Level 4 or above), which is higher than the rate recorded in Folkestone & Hythe (27.4%). Both Ashford and Folkestone & Hythe have a lower rate than in the South East region (35.8%), and across England (33.8%). In Ashford, 17.6% of the population hold no qualifications, compared with 19.4% in Folkestone & Hythe, 15.4% in the South East, and 18.2% across England and Wales.

12.5.9 In the same year, the Annual Population Survey recorded that the number of people of employment age (16- to 64-year-olds) was 132,747 in Ashford and 109,759 in Folkestone & Hythe. The economic activity rate (defined as the proportion of the population aged 16 to 64 who are economically active) was 71% in Ashford, lower than the rates in Folkestone & Hythe (82.8%), Kent (79.8%), the South East (82.3%) and England as a whole (78.7%).

12.5.10 The Annual Population Survey recorded the unemployment rate for working-age residents (16- to 64-year-olds) as 6.9% in Folkestone & Hythe – higher than the average rates across Ashford (5.9%), Kent (4.1%), the South East (3.3%) and

England (3.8%). The claimant count (as a proportion of residents aged 16 to 64 years), recorded in October 2024, was 4.3% in Folkestone & Hythe, higher than the rates across Ashford (3.3%), Kent (3.6%) and the South East (3.3%), however broadly in line with the rate across England as a whole (4.4%).

Employment

12.5.11 In 2024, the Business Register Employment Survey showed that the broad industrial groups that employ the most people in Ashford and Folkestone & Hythe are the health sector (15.8% and 15.5% respectively) and wholesale and retail trade (15.4% and 14.3% respectively) sectors. The health sector in both local authorities represent a larger proportion of employment than in Kent (14.3%), the South East (13.9%) or England (14.6%).

12.5.12 The mining, quarrying and utilities broad industrial group (which includes employment from the generation of energy) represents 2.4% of employment by number of jobs in Folkestone & Hythe which is higher than in Ashford (1.5%), Kent (1.5%), the South East (1.4%) and across England (1.5%) (Ref 12-14).

12.5.13 Employment in the construction industry is 11% in Ashford and 10.9% in Folkestone & Hythe, in line with the average in Kent (11%), but higher than the regional (9%) and national averages (8.7%).

Land use Receptors including farming businesses

12.5.14 The Energy Park Site area is mostly used for agricultural purposes, being characterised by large scale regular-shaped fields across a number of agricultural land-holdings. Businesses farming this land total four businesses all engaged in arable farming.

12.5.15 In respect of recreational routes, there is a network of PRoW which are found in and around the Energy Park Site area and provide pedestrian connectivity between adjacent settlements. There are also a number of PRoW which could be impacted by the Grid Connection Route and Interconnecting Cable Corridors once defined. More information on PRoWs is provided in **Chapter 14: Transport and Access.**

Residential Properties

12.5.16 No residential receptors are located within the Energy Park Site boundary.

12.5.17 Nearby residential receptors include (but are not limited to) isolated farms and rural properties, the village of Newchurch, and the village of Dymchurch in which two nursing homes are located, in addition to dwellinghouses.

Community Facilities

12.5.18 There are no community facilities within the Energy Park Site boundary.

12.5.19 The closest schools to the Site boundary are Dymchurch Village Hall Pre-School and Dymchurch Primary School.

12.5.20 The closest primary healthcare facility to the boundary is Martello Heath Centre in the village of Dymchurch.

Business Premises

12.5.21 Other than farm businesses, there are no business premises within the Energy Park Site boundary.

12.5.22 The business premises located within the search area include:

- Business premises located between Newchurch, Hamstreet and Ruckinge comprising of a cattery, a pet store, a motor vehicle dealer, a restaurant, a farm, a garden centre, a food processing equipment centre, a water pump supplier, a painting studio and a bakery; and
- Business premises located in Dymchurch comprising a car parts manufacturer, builders' merchants, a public house, a farm, a bakery, an amusement park, a reflexologist and supermarkets.

Development Land

12.5.23 There are no development land allocations within the Energy Park Site boundary. This includes mineral safeguarding areas, mineral consultation areas, waste safeguarding areas or transport safeguarding areas.

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

Visitor Accommodation

12.5.25 There is no visitor accommodation located within the Energy Park Site boundary. There are a number of accommodation facilities nearby including:

- The Ship Inn, Dymchurch;
- The Beach Sun Retreat (Holiday Apartment Rental), Dymchurch;
- Waterside Guesthouse, Dymchurch;
- Willow Cottage (Hotel), Dymchurch;
- Norwood Farm Caravan & Camping Park, Newchurch;
- Romney Marsh Shepherds Huts, Aldington; and
- The Star Inn, St. Mary in the Marsh.

Tourism

12.5.26 As noted in the Folkestone & Hythe Local Plan, tourism activities in the local area are centred around beaches and water-related sports. There are no tourism/visitor attractions within the Energy Park Site Boundary. Notable visitor attractions in the Study Area include Dymchurch Beach which is located within 2km of the Energy Park Site. Port Lympne Safari Park is located outside the Study Area approximately 5km from the Energy Park Site.

Future Baseline

12.5.27 The population projections for local authorities based by single year of age (Ref 12-19) forecast that the population of Ashford will grow from 132,747 in 2021 to 144,712 in 2030, representing an increase of 9.0%. In Folkestone & Hythe, the usual resident population is projected to grow from 109,758 to 121,705 over the same time period, representing a slightly higher increase of 10.9%. The projected increase exhibited in Folkestone & Hythe is greater than that projected in Kent (8.3%), the South East (3.4%) and England as a whole (7.4%), over the same time period.

12.5.28 There is a high level of uncertainty with respect to the future baseline of existing local land uses, other than where future planned uses are known (such as future developments, where planning applications, permissions and local plan allocations have been considered). Therefore, for the purposes of this

assessment, the future baseline with respect to local land uses (including residential properties, local businesses, farming businesses, open space, community facilities, visitor attractions, and development land) is expected to be in line with the existing baseline conditions set out above.

12.6 Potential Effects and Mitigation

12.6.1 The Scheme may generate a range of socio-economic effects, some of which would be temporary, whilst others would be permanent. For the purposes of the ES, due consideration will be given to the following:

- Temporary employment during the construction and decommissioning phases;
- Gross Value Added during the construction and decommissioning phases;
- Creation of long-term employment opportunities once the Scheme is operational including consideration of any existing employment uses on-site;
- Any indirect impacts for the region hosting the Scheme, in particular in relation to the use of local support services and supply chains, and construction of low-carbon industries at the local, regional and national level;
- Effects on the tourism industry in the local area, considering the effect on visitor attractions;
- Potential temporary and/or permanent adverse land take impacts on residential properties, local businesses, farming businesses, community facilities, open space, PRoW or recreational routes, or development land; and
- Potential temporary and/or permanent adverse changes to accessibility including severance of access to residential properties, local businesses, farming businesses, visitor attractions, community facilities, open space, PRoW or recreational routes, or development land.

12.6.2 Where appropriate, evaluation of job creation associated with the Scheme will include information related to the sustainability of the jobs creates including the extent to which they will help develop the skills needed for the UK's transition to Net Zero.

12.6.3 Embedded mitigation measures will be included in the design where practicable to help avoid, prevent or reduce effects on socio-economics and land use resources and receptors. Of relevance to amenity effects on private assets, further details of specific measures will be set out in relevant chapters of the ES, including the following of relevance to amenity effects: **Chapter 9: Landscape and Visual Amenity, Chapter 11: Noise and Vibration, Chapter 13: Soils and Agricultural Land, Chapter 14: Transport and Access, Chapter 16: Other Environmental Topics** (Section 16.1 Air Quality and 16.5 Human Health).

12.6.4 Dust emissions, transport-related noise, and noise emissions relating to design and selection of plant, and visual intrusion would be managed through the

implementation of a Framework Construction Environmental Management Plan (CEMP), Framework Operation Environmental Management Plan (OEMP) and a Framework Decommissioning Environmental Management Plan (DEMP).

12.6.5 To manage the impacts of construction traffic on the highway network, a Construction Traffic Management Plan (CTMP) will be in place (in accordance with the Framework CTMP which will be submitted at Application). It will set out management measures for traffic routing, timing and access to the Scheme. It is expected that any temporary diversions of PRoWs during the construction phase put in place will be monitored to ensure that they are suitable and well-maintained for use.

12.6.6 A Framework PRoW Management Plan (PRoWMP) will be produced, setting out measures for minimising impacts on the PRoW network (including existing and Claimed PRoW) during construction). All diversions would be sign-posted accordingly, and advertised in advance.

12.7 Assessment Methodology

Baseline

12.7.1 Relevant policy will be reviewed at the local, regional and national levels to identify the key issues of relevance to the Scheme. This will include Local Plans, any relevant Supplementary Planning Guidance, NPS and NPPF measures.

12.7.2 A baseline assessment will be undertaken using a range of sources to provide a description of the socio-economic conditions within the local area and at local authority level, including employment and the economy. This will be done using established statistical sources as presented in Section 12.5 above. Relevant land use receptors will be identified in relation to all potential impacts.

Assessment of effects (including significance)

12.7.3 An assessment of effects will be undertaken to consider the impact of the Scheme on the baseline socio-economic conditions. The methodology will entail:

- Assessment of the likely scale, permanence and significance of effects associated with socio-economic receptors; and
- An assessment of the potential cumulative effects with other schemes within the surrounding area.

12.7.4 The assessment of potential socio-economic effects will use policy thresholds and expert judgment to assess the scale and nature of the effects of the Scheme against baseline conditions. For socio-economics there is no accepted definition of what constitutes a significant (or not significant) socio-economic effect. It is however recognised that effects are categorised based on the relationship between the scale (or magnitude) of effect and the sensitivity (or value) of the affected resource or receptor.

12.7.5 As such, the socio-economic effects will be assessed on the basis of:

- Consideration of sensitivity to effects: the assessment takes account of the qualitative (rather than quantitative) 'sensitivity' of each receptor and, in particular, their ability to respond to change based on recent rates of change and turnover (if appropriate);
- Magnitude of impact: this entails consideration of the size of the impact on people or business within the context of the area in which the impacts would be experienced; and
- Scope for adjustment or mitigation: the socio-economic study is concerned in part with economies. These adjust themselves continually to changes in supply and demand, and the scope for the changes brought about by the Scheme to be accommodated by market adjustment will therefore be a criterion in assessing significance.

12.7.6 As part of the chapter in the ES, the likely effects on land-use that could result from the construction and operation of the Scheme will be considered.

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

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

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

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

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

12.7.10 Socio-economic and land use effects reflect the relationship between the sensitivity of the affected receptor and the magnitude of the impact, as set out in **Table 12-1**.

Table 12-1: Impact Assessment and Effect Significance

Magnitude of Impact	Sensitivity of Receptor			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

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

12.7.12 Duration of effect is also considered, with more weight given to reversible long-term or permanent changes than to temporary ones. Temporary effects are considered to be those associated with the construction works. Long-term reversible effects are generally those associated with the completed and operational development. For the purposes of this assessment, short term effects are considered to be of one year or less, medium term effects of one to four years, and long-term effects of five or more years.

12.7.13 Employment and GVA effects will consider the temporary and permanent impact on a principal economic area defined based on consideration of local authority area boundaries and a typical travel time from the Site. Homes and Communities Agency (now Homes England) guidance on additionality will be applied to assess direct, indirect and induced impacts (Ref 12-20).

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

12.8 Limitations and Assumptions

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

12.9 Summary of Elements Scoped In and Scoped Out

12.9.1 A summary of the elements scoped into and out of the assessment of socio-economics and land use are presented in **Table 12-2**.

Table 12-2: Elements scoped in and scoped out of the assessment

Element	Scoped In/ Scoped Out
Employment, economic growth and training (construction, operation and decommissioning)	Scoped in – there is potential for the creation of jobs as well as training and apprenticeship opportunities, including for local residents.
Recreation, open space (including PRoW), community facilities and local services (construction, operation and decommissioning)	Scoped in – there may be effects on the use of and the accessibility of recreational routes (including PRoW), open space, recreational activities, community facilities, and local services both within and beyond the Site boundary.
Private assets (construction, operation and decommissioning)	Scoped in – there is potential for the accessibility and amenity of receptors within and beyond the Site boundary, including businesses, community facilities and residential properties to be impacted.
Development land	Scoped in – there may be effects on delivery of any development sites (consented or under consideration) and allocated sites within the Site boundary, including consideration of access were these to be implemented Scoped out – there are no mineral safeguarding areas, mineral consultation areas, waste safeguarding areas, or transport safeguarding areas within or adjacent to the Site boundary and as such these will not experience significant effects arising from the Scheme.
Community identity, structure and way of life (construction, operation and decommissioning)	Scoped in – the influx of workers for temporary construction activities could impact upon availability of rooms within the visitor accommodation sector locally, both in terms of supply during busier months and increasing occupancy levels during quieter months. There is also the potential for

Element	Scoped In/ Scoped Out
	impact on community identity, structure and way of life through the alteration of the demand for services and facilities in settlements nearest to construction work, and effects on social cohesion.
Tourism (construction, operation, and decommissioning)	Scoped in – there are some visitor attractions within 2km of the Site, and as such the tourism economy and its receptors have the potential to experience significant effects arising from the Scheme.
Farming businesses	Scoped out – these receptors will be using the renting of their land on the Energy Park Site to support diversification of their businesses. Those businesses farming in the Interconnecting Cable Corridors and Grid Connection Route will only experience temporary loss of use of land when the works to lay cables are ongoing with business use being unchanged from baseline after construction. These receptors are therefore not likely to experience significant effects arising from the Scheme.

13. Soils and Agricultural Land

13.1 Introduction

13.1.1 This chapter presents an initial baseline for Soils and Agricultural Land relevant to the Scheme, identifies the need for additional surveys to ensure that there is appropriate information to accurately characterise the baseline, and sets out the Study Area. In addition, the chapter provides an overview of the assessment methodology to be followed for the environmental assessment and explains the potential effects provisionally identified.

13.1.2 This chapter should be read alongside the following:

- **Chapter 8: Ecology and Nature Conservation** in relation to the assessment of potential impacts to the habitats supported by the land and soils;
- **Chapter 12: Socio-Economics and Land Use** in relation to the assessment of the socio-economic impacts due to the change in land use;
- **Chapter 15: Water Environment** in relation to the assessment of potential impacts to the water environment from soil erosion; and
- **Chapter 16: Other Environmental Topics**, Section 16.4 Ground Conditions in relation to the assessment of potential impacts to ground conditions from land use change.

13.1.3 This chapter is supported by **Figure 13-1: Natural England Provisional Agricultural Land Classification.**

13.2 Study Area

13.2.1 The Study Area for the Soils and Agricultural Land assessment is the boundary of the Scheme as shown on **Figure 1-1: Scheme Location Plan**. The Energy Park Site is characterised below and at ES stage the Study Area will include the Interconnecting Cable Corridors and Grid Connection Route (once these are defined) as these form part of the Scheme boundary. No buffer is applied when describing the Study Area as the impacts to soils and agricultural land only occur on the land that is directly impacted by the Scheme.

13.2.2 It is noted that through the iterative design process, the Study Area will become more refined over time, particularly as the alignment of the Interconnecting cable corridors are developed. The Study Area is therefore likely to change and evolve between scoping and final submission of the ES.

13.2.3 It is noted that to provide additional context to the discussion of agricultural land within the ES, the impacts (scale of loss of Best and Most Versatile (BMV) agricultural land) will also be considered in the wider (Regional) context of the administrative boundaries of KCC, ABC and FHDC.

13.3 Legislation, Planning Policy Context and Guidance

Legislation

13.3.1 Schedule 4, Part (y) of the Town and Country Planning (Development Management Procedure) (England) Order 2015 (Ref 13-1) requires that Natural England be consulted if the area of a proposed permanent development exceeds 20 ha of BMV land. Whilst Chapter 1 'New Financial Assistance Powers' of the Agriculture Act 2020 (Ref 13-2) states that the SoS "*may give financial assistance for, or in connection with, …protecting or improving the quality of soil*".

13.3.2 Currently there is no other legislation directly relevant to the assessment of soils and agricultural land.

National Policy

13.3.3 Paragraph 5.11.4. of NPS EN-1 (Ref 13-3) acknowledges that development presents a pathway to affecting soil resources through land contamination and structural damage.

13.3.4 Paragraph 5.11.34 of NPS EN-1 (Ref 13-3) asks the Secretary of State (SoS) to ensure applicants do not site their scheme on the best and most versatile (BMV) agricultural land without justification and development should be directed towards non-agricultural land or agricultural land of poorer quality. It goes on to state that if schemes are sites on BMV land, the potential benefits such as economic benefits, should be taken into account.

13.3.5 Paragraph 5.11.12 of NPS EN-1 (Ref 13-3) states that applicants should aim to ensure impacts on BMV land are minimised and the preference is to use land in areas of poorer quality.

13.3.6 Paragraph 5.11.13 of NPS EN-1 (Ref 13-3) goes on to state that effects should be identified, and applicants should seek to minimise impacts on soil quality taking into account any mitigation measures proposed. Paragraph 5.11.14 adds that applicants are encouraged to develop and implement a Soil Resources and Management Plan which could help minimise potential land contamination.

13.3.7 NPS EN-5 (Ref 13-4) Paragraph 2.9.25 states that potential disruptive effects of undergrounding on soil should be weighed up with the benefits, and that the applicant should mitigate any detrimental effects of undergrounding on agricultural land, with particular consideration for BMV land. Mitigation should include the provision of a Soil Resources and Management Plan to ensure the appropriate handling of soil, backfilling, and return of the land to the baseline condition (Agricultural Land Classification (ALC) grade) thus ensuring no loss or degradation of agricultural land. This should be based on soil and ALC surveys in line with the ALC guidelines (Ref 13-5) and due consideration of the Defra's Code of Practice for the Sustainable Use of Soils on Construction Sites (Ref 13-6).

13.3.8 Paragraphs 2.10.29 and 2.10.145 of NPS EN-3 (Ref 13-7) specifically relate to soils and agricultural land as factors influencing solar site selection. The policies mirror NPS EN-1 (Ref 13-3) stating that poor quality agricultural land should be preferred to BMV land, and that economic benefits of BMV land should be

considered. Mitigation measures should be proposed to minimise impacts on soils.

13.3.9 Paragraphs 2.10.28 - 2.10.34 of NPS EN-3 (Ref 13-7) directs the developer to use ALC grading criteria to identify ALC classifications and soil types through field surveys where necessary, to inform management in line with the Defra Construction Code (Ref 13-6). NPS EN-3 acknowledges that solar arrays are not prohibited on BMV land, but their impacts should be considered. Applicants should justify their site and the opportunities for co-function with agriculture. As with NPS EN-1 and EN-5, applicants are encouraged to develop a Soil Resources and Management Plan following the Environmental Improvement Plan to bring 60% of England's agricultural soils into sustainable management by 2030.

13.3.10 Paragraph 2.10.81 of NPS EN-3 (Ref 13-7) clarifies the need to carefully remove, separate and replace soils for minimal disturbance. Advice regarding soil mitigation is outlined in Defra's Code of Practice (Ref 13-5) in paragraph 2.10.127.

13.3.11 The footnote to Paragraph 188 of the NPPF published in December 2024 (Ref 13-8) states that *"where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality".*

13.3.12 A Green Future: Our 25 Year Plan to Improve the Environment (Ref 13-9) sets out the Government's 25-year plan to improve the health of the environment by using natural resources more sustainably and efficiently.

Local Policy

13.3.13 Ashford Borough Council published guidance on the development of large scale (>50kW) solar PV arrays in 2013 (Ref 13-10). It should be noted that as this guidance was published 12 years ago, referenced national guidance is in some cases outdated. The guidance states that large scale solar PV arrays should avoid AONBs (which are now known as National Landscapes), meaning that agricultural land outside of AONBs may be required. The guidance notes that if development sites are proposed on BMV land, there would need to be justification for the benefits of removing that land from full agricultural use. The developer should also ensure the careful removal, storage and replacement of soil.

13.3.14 Aldington & Bonnington Neighbourhood Plan 2022–2030s Policy AB10 (Ref 13-11) sets out expectations for support of solar PV development. The policy states that applicants should follow Ashford Borough Council's ENV10 (Ref 13-11) policy and demonstrate how land beneath PV modules will be managed, as well as how BMV land has been avoided.

13.3.15 Policy CC6 of the Folkestone & Hythe Places and Policies Local Plan (Ref 13-12)supports the development of solar that will not result in the loss of BMV land.

Guidance

13.3.16 Planning Practice Guidance for the Natural Environment 2019 (PPGNE) under the heading Agricultural Land, Soil and Brownfield Land of Environmental Value (Ref 13-13) advises that the ALC be used to assess the quality of farmland to

enable informed choices to be made about its future use within the planning system.

13.3.17 It recommends Defra's Code of Practice (Ref 13-6) as a useful tool when setting planning conditions for development sites, as it provides advice on the use and protection of soil in construction projects, including the movement and management of soil resources.

13.3.18 Natural England's Guide to Assessing Development Proposals on Agricultural Land (Ref 13-14) sets out the government policies and legislation to refer to when considering development proposals that affect agricultural land and guidance on when Natural England should be consulted on development proposals. It also provides a detailed explanation of the ALC, information on published ALC resources and explains circumstances in which new detailed surveys may be required. The guidance also summarises the required survey methodology (also presented in Natural England's 2012 Technical Information Note 049 (Ref 13-15)).

13.3.19 As referred to above, Defra's Construction Code of Practice for the Sustainable Use of Soil on Construction Sites (Ref 13-6) provides Technical Guidance on the handling, storage and (re)use of soil within construction projects.

13.3.20 The Institute of Quarrying (2021) Good Practice Guide for Handling Soils in Mineral Workings (Ref 13-16) provides advice on the details stripping, handling, storage, reinstatement and management of soil resources, including advice on stockpile design.

13.3.21 The Ministry of Agriculture, Fisheries and Food's (MAFF) (now Defra's) Agricultural Land Classification of England and Wales Revised guidelines and criteria for grading the quality of agricultural land (Ref 13-5) provides the current guidelines and criteria for grading the quality of agricultural land in England and Wales.

13.3.22 IEMA guidance document *'A New Perspective on Land and Soil in Environmental Impact Assessment'* (Ref 13-17) seeks to advocate a new and wider approach to assessing the soil functions, ecosystem services and natural capital provided by land and soils. It does not include a definitive methodology for how such assessment should be undertaken but provides examples for how a methodology should be developed.

13.4 Consultation

13.4.1 Consultation between the Applicant's land agent and landowners regarding survey access to the Energy Park Site is ongoing. The Applicant's land agent will maintain communications with farmers and landowners throughout the planning and construction phases of the Scheme. Engagement with landowners and tenants will be ongoing during project design.

13.4.2 The Applicant has met with Natural England and presented the general approach which will be undertaken for the assessment and survey of soils across the Energy Park Site. Where required, consultations with Natural England will take place during the EIA process. No other key stakeholder consultations are expected to take place specifically relating to soils and agriculture.

13.5 Baseline Conditions

13.5.1 The following sources of published information will be used to establish the baseline environment for soils and agricultural land within the ES:

- The Soil Survey of England and Wales: South East England (1984) (Ref 13-18);
- Soils of England and Wales, Map Sheet 6: South East England 1:250,000 Map (1984) (Ref 13-18);
- Provisional ALC 1:250,000 mapping of the London and South East Region (MAFF, 1993) (Ref 13-19);
- Likelihood of Best and Most Versatile Agricultural Land - Strategic scale map, London and the South East (Natural England, 2017) (Ref 13-20);
- Multi-Agency Geographical Information for the Countryside (MAGIC). (DEFRA) (Ref 13-21);
- Cranfield University (2015). 'Research to develop the evidence base on soil erosion and water use in agriculture: Final Technical Report (Ref 13-22) and
- Met Office (1989) Climatological Data for Agricultural Land Classification (ALC) (Ref 13-23).

13.5.2 A preliminary review of the available baseline data has been undertaken and is summarised below.

Agricultural Land Classification

13.5.3 The ALC grade (Ref 13-24) is the only standard method for classifying the quality of agricultural land in England and Wales. Land is assessed according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage. These factors form the basis for classifying agricultural land into one of five grades (with Grade 3 land divided into Subgrades 3a and 3b), ranked from excellent (Grade 1) to very poor (Grade 5).

13.5.4 The 1:250,000 scale Provisional ALC mapping (Ref 13-24), which is also available via the Government's geographic information website, Magic.gov.uk (Ref 13-21), is the most current and detailed published ALC grade data covering the whole of the Study Area. However, it is important to note that this data pre-dates the revised ALC methodology issued in 1988 (Ref 13-25) and as a result, the data do not provide a distinction between ALC Subgrades 3a (BMV) and 3b (non-BMV). Additionally, the scale of the mapping is such that it does not pick up variations in ALC grade for areas less than approximately 80 ha. The Provisional ALC mapping therefore provides an indication of the land quality in the Region, but the extent and distribution of BMV agricultural land within the Study Area cannot be defined from the Provisional mapping alone.

13.5.5 ALC survey data collated after the revised ALC methodology (Ref 13-5) is available for certain discrete areas (Ref 13-25), usually in relation to data collated in advanced of proposed development or to inform Local Plan decisions. These datasets, known as Post-1988 surveys, do provide a

distinction between Subgrades 3a and 3b and are available on the Government's geographic information website, Magic.gov.uk (Ref 13-21). However, there is no Grade 3a or 3b land within the Energy Park Site or Interconnecting Cable Corridor Search Area, with the closest data covering New Romney.

13.5.6 As shown on **Figure 13-1: Natural England Provisional Agricultural Land Classification**, the Provisional ALC data indicates that the Energy Park Site is located within areas predominantly classified as Grade 2, potentially incorporating small areas classified as Grade 1.

13.5.7 Provisional ALC grade data suggests that the Interconnecting Cable Corridor Search Area is situated within Grade 1 and 2 land, with the majority of the search area Grade 1. Search areas connecting Sites 1 & 2, Sites 2 & 3, and Sites 5 & 6 show the possibility of avoiding Grade 1 land. However, due to the east-west and southeast-northwest orientation of Sites 1-3 with Sites 4-6, and the extent of Grade 1 land within the connecting area between Sites 1-3 with Sites 4-6, it may not be possible for the Interconnecting Cable Corridor (with an approximate east-west orientation) to avoid these once they are defined. Connections between Site 4-5 and 4-6 also fall within Grade 1 land, and may not be possible to avoid due to the southeast-northwest orientation of the Sites.

13.5.8 To accurately define the ALC grading within the Energy Park Site, and therefore help inform Scheme design from an early stage, detailed soil and ALC survey to standard Natural England guidelines (Ref 13-14, Ref 13-15 and Ref 13-20) will be undertaken in 2025. The detailed ALC survey will be undertaken by suitably qualified and experienced soil scientists at an approximate density of one inspection per ha, including one soil pit per 10 ha. Additionally, to inform the soil assessment composite samples (at a minimum sampling density of 1 per 10 ha depending upon the homogeneity of the land and based upon surveyor experience and professional judgement) will be taken for laboratory analysis of Particle Size Distribution (PSD), soil organic matter (SOM), pH, and macronutrients (P, N, K, Mg). The sampling will be taken for different horizons. These data are required to help describe the sensitivity of the soil resource (as described in IEMA's guidance document (Ref 13-17)) and will also feed into the design of the proposed habitat enhancement and BNG by ensuring that the proposed planting / seeding is suitable / can be supported by the soil types present.

13.5.9 Topsoil texture is a key component of ALC grading and often the determining factor in ALC classification. The PSD will therefore also be used in the ALC assessment to confirm the field determination of soil texture (which gives a valid, but an approximate result), with greater precision.

13.5.10 ALC grading for the Interconnecting Cable Corridors and Grid Connection Route will be calculated using the Provisional ALC Mapping (Ref 13-19) to directly determine the proportions of ALC Grades 1 and 2 within the corridors once they are defined.

13.5.11 It is proposed that the soil and ALC survey excludes the Interconnecting Cable Corridors and Grid Connection Route (once they are defined). The IEMA guidance (Ref 13-17) explains that there would only be negligible effects to ALC grade if soil is properly handled and reinstated following construction activities. This area would incur temporary impacts but would be available for farming in

the same way as currently following reinstatement of the soils. Given that the effects on soils are known based on the IEMA guidance to be not significant, ALC surveys of the land within the Interconnecting Cable Corridors and Grid Connection Route will be undertaken post DCO consent, to inform soil handling in these areas during construction. The surveys are not required to determine the significance of effect, which is already known.

13.5.12 The ALC grade for the land within the Interconnecting Cable Corridors and Grid Connection Route would be unaffected following construction works (the laying of cables). The top and subsoils would be stripped and stored separately adjacent to the cable trench and the soil profile would be reinstated upon completion. The Framework SMP which will be submitted with the application will include soil management and handling in line with Defra's code of Practice (Ref 13-6) allowing the original agricultural land use to resume and land quality (ALC grade) to be maintained.

13.5.13 In summary, the ALC grade of the soils within the Interconnecting Cable Corridors and Grid Connection Route will not be impacted beyond a temporary extent and in the long term would experience negligible effects. Specific ALC grade determined through surveys would not therefore influence the reporting of impacts in the ES or any mitigation thereafter.

Figure 13-1: Natural England Provisional Agricultural Land Classification

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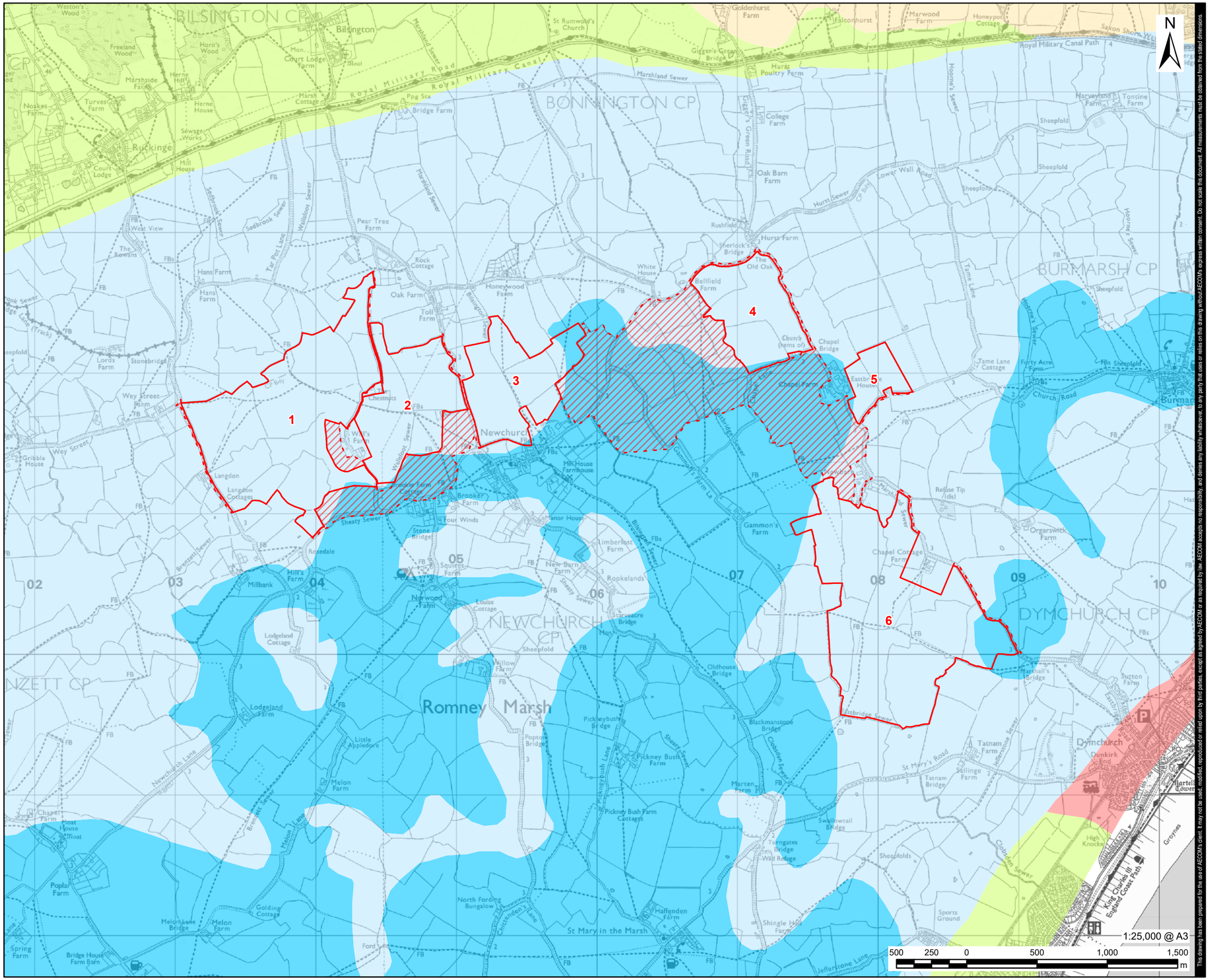

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AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area

Provisional Agricultural Land Classification (ALC)

- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Urban

NOTES

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ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Provisional Agricultural Land Classification

FIGURE NUMBER

Figure 13-1

Soil Resource

13.5.14 The published soils data for the Study Area is taken from Soil Survey of England and Wales (Ref 13-18) 1:250,000 mapping. As for the ALC data, the scale of the data/mapping is such that it is not accurate to the field level and does not pick up small-scale local variations in soil type. It does however provide a general indication of the soil types within the Study Area which can be utilised for the assessment.

13.5.15 Soil series are the lowest category in the soil classification system and are precisely defined based upon particle-size distribution, parent material (substrate) type, colour and mineralogical characteristics. The Soil Survey of England and Wales mapping shows soil associations which are groupings of related soil series. The likely soils across the Energy Park Site and Interconnecting Cable Corridor Search Area are as follows.

13.5.16 In the Romney Marsh area the principal soil is the Romney series and is mapped as 0532 Romney association (Ref 13-26), these soils are naturally wet and permeable with deep stoneless, permeable, calcareous, coarse and fine silty soils. These soils generally occur on flat land and groundwater is controlled by ditches and pumps.

13.5.17 Newchurch 1 association (0814b) (Ref 13-27) is characterised by deep stoneless calcareous clayey and fine silty soils. Groundwater levels are controlled by ditches and pumps. The clayey subsoils are variably permeable, and waterlogging is mainly the result of high groundwater levels. However, compaction of surface and subsurface horizons is common under arable farming systems and leads to surface ponding. Land is flat with low ridges giving a complex soil pattern.

13.5.18 Newchurch 2 association (0814c) (Ref 13-28) is characterised by deep stoneless mainly calcareous clayey soils. Groundwater is controlled by ditches and pumps. These soils are low-lying on flat land and are often water logged with a risk of flooding in places.

13.5.19 The soils within the Study Area can be collectively characterised as Soilscape 21 (Ref 13-29), which are 'loamy and clayey soils of coastal flats with naturally high groundwater'. The soil is moderately fertile to a wide range of crops due to its well-drained nature.

13.5.20 The proposals for soil survey are described in the agricultural land classification section above.

13.6 Potential Effects and Mitigation

13.6.1 The assessment will consider the following receptors within the Study Area:

- Agricultural land quality and the potential temporary loss of BMV land;
- Quality of soil resources in terms of potential for disturbance/damage or improvement through changes in land management; and
- Loss of soil resources (including biosecurity).

Agricultural Land Use

13.6.2 The Scheme would result in a short-term temporary land-use change from agricultural to non-agricultural for the duration of the construction period of the Energy Park Site; and could potentially result in a long-term temporary land-use change from agricultural to non-agricultural for developed sections of the Energy Park Site depending upon whether sheep grazing (see Section 13.7.8) is to be undertaken during the Scheme's operational lifetime. Permanent loss of agricultural land within the Energy Park Site will likely be limited to any areas of ecological enhancement / habitat creation which are expected to remain after the Scheme has been decommissioned and in the location of the proposed substation (once identified).

13.6.3 BMV land is present within the Energy Park Site (Provisional Grades 1 and 2) and therefore there is the potential for short and long-term temporary and permanent loss of BMV agricultural land to occur, depending upon land use.

Soil Resource

13.6.4 The disturbance of soil resources may occur *in situ*, for example through trafficking by vehicles or through soil removal, handling, storage, and subsequent reinstatement. For both the construction phase and decommissioning phase (to a lesser degree), activities that will cause disturbance to and potentially impact upon soil resources include the following:

- Stripping and stockpiling of topsoil and subsoil, storage and reinstatement;
- Ground excavation;
- Trenchless drilling (HDD);
- Stockpiling materials;
- Levelling ground;
- Cable trenching;
- Haul road construction; and
- Vehicle movements onsite.

13.6.5 This disturbance may result in the impairment of soil function, quality and resilience. This effect comprises such changes as:

- Compaction and smearing (damage to soil structure);
- Conditions within the soil profile conducive to excessive drying or wetness;
- Mixing of distinct soil horizons (e.g. topsoil with subsoil) reducing their potential reuse;
- Damage or removal of vegetation layer;
- Changes in the soil profile stone content;
- Loss of nutrients (e.g. nitrogen), biota (e.g. bacteria, fungi, earthworms) and reduction in soil fertility; and
- Loss of ecosystem services, such as the ability of the soil to support food production and habitat creation.

13.6.6 The solar PV mounting structure is typically piled directly into the ground without prior soil removal, with limited potential to damage soil in terms of soil structure, nutrient content, and soil biological activity.

13.6.7 Other infrastructure onsite including the BESS compound and onsite substation will require some excavation to establish foundations.

13.6.8 The majority of disturbance of soil resources will occur within the construction phase. This will be largely restricted to the BESS compound, on-site substation, Interconnecting Cable Corridor, and Grid Connection Route. There will be some further small-scale disturbance associated with accesses and access tracks, and other infrastructure.

13.6.9 During the operational phase, the removal of areas of the Energy Park Site from arable rotation for at least 40 years has the potential to deliver environmental benefits, the most important being increase in soil resource and land quality. This would occur through an increase soil organic matter (SOM) content due to the lack of regular disturbance by cultivation, and potential inputs from the presence of livestock (sheep manure). Increase in SOM content equals carbon sequestration (SOM contains 58 % carbon dioxide), which would contribute to removing carbon dioxide from the atmosphere and mitigation of climate change. Increase in SOM content would also result in positive effects on other soil properties, such as water infiltration rates and water holding capacity (which contributes to flood alleviation), nutrient content, microbial diversity and activity. Increased SOM would also increase the soil buffering capacity, reducing the frequency of liming. It is also likely that the subsoil structure would be improved owing to deep root systems of the permanent grassland vegetation and increased earthworm activity (promoted by lack of disturbance and ample plant food source) stimulating the aggregation of soil particles.

Loss of Soil Resource

13.6.10 Good practice soil resource management will be delivered through a Framework Soil Management Plan (SMP), which will be a key document for maintaining soil resource quantity and quality.

13.6.11 It is assumed that as development is temporary, all soil resources will be retained onsite and not exported for reuse elsewhere. There is unlikely to be surplus soil from the proposed permanent development, if this is to occur all soil will be retained for reuse on site.

13.6.12 The inappropriate removal, handling and storage of soil resources during construction activities may also render them unsuitable for reuse in site restoration and, therefore, also constitutes a loss of soil resource (e.g., the mixing of topsoil and subsoil; the mixing of soils of differing textures, or the mixing of soils with non-soil substrate or other unsuitable materials) as this mixing cannot be reversed nor the constituent materials returned to their original state. Incorrect handling leading to mixing and loss of suitability is considered the greatest risk to soil retention.

13.6.13 The loss of soil resource may result in the impairment of the remaining soils' function, quality and resilience. This also comprises such changes as reduction of topsoil depth.

13.6.14 During large-scale projects such as the Scheme, there is the potential for disease and pathogen transfer between different areas of agricultural land (i.e., a biosecurity risk). This is considered in the loss of soil resource as the main cause of potential disease and pathogen transfer and is the transfer of soil from infected to uninfected areas via vehicles, plant and machinery.

Mitigation

13.6.15 The short-term temporary loss of agricultural land during construction of the Scheme and any maintenance works during operation cannot be avoided, however through ongoing consultation with landowners measures will be taken to minimise impacts to the surrounding land and farming operations as described in Section 13.4.

13.6.16 The permanent loss of agricultural land due to the Scheme will likely be limited to the areas of ecological enhancement / habitat creation within the Energy Park Site which are expected to remain after the Scheme has been decommissioned. The loss of this land cannot be mitigated however, where practicable and depending upon the habitats to be created, these will be located on non-BMV land.

13.6.17 The installation of cabling would be with a minimum 0.9 m restored backfilled soils, which is sufficient to allow ploughing and arable farming after reinstatement.

13.6.18 The potential for continued agricultural use within the Energy Park Site during operation by using the land as permanent pasture for sheep grazing is being explored by the Applicant. As set out in paragraph 2.5.4, this is subject to confirmation of the absence of any restrictions (such as any restrictive covenants) that would prevent such use and the ES will demonstrate whether grazing is secured in respect of the operation of the Scheme. Where this can be established the loss of agricultural land would be avoided (see also Section 13.7.8). It is noted that the density of grazing would be managed; and grazing restricted to drier periods when the land is less prone to poaching and compaction to mitigate damage to soil resources.

13.6.19 Where possible, mitigation measures to avoid or reduce soil damage and loss will be incorporated into the design of the Scheme (embedded mitigation) such as the layout (Energy Park Site) and/or how it shall be constructed. Through iterative assessment, potential impacts will be predicted and opportunities to mitigate them identified with the aim of preventing or reducing impacts as much as possible. This approach provides the opportunity to prevent or reduce potential adverse impacts from the outset.

13.6.20 Industry standard guidance/current best working practice (for example measures set out in Ref 13-6 and Ref 13-16) will be followed in relation to soil workings throughout the construction and operational phases of the Scheme and, as such, is considered to provide embedded mitigation. This mitigation will be set out in a Framework Soil Management Plan (SMP) to be submitted with the DCO application; this will form the basis of a detailed SMP to be produced pre-construction. The SMP will also draw upon the soil survey data collected for the Scheme referenced in Section 13.5 to ensure that the mitigation measures are tailored to the soils encountered, as well as the specific soil survey

requirement for the Grid Connection Route and Interconnecting Cable Corridors to inform appropriate soil handling during construction and decommissioning.

13.6.21 To minimise risk of soil erosion within the Energy Park Site, existing grass cover would be maintained, and new permanent grassland mix cover created (grassland mix dependent upon any habitat creation requirements). This cover would be maintained for the lifetime of the Scheme and would protect the soil surface from the effects of surface run-off. Any areas where vegetation cover was damaged and/or bare soil surface was visible, would be re-seeded. Additionally, individual angled solar modules would be installed with rain gaps to allow water to disperse more evenly.

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

13.7 Assessment Methodology

13.7.1 The assessment will be undertaken in consideration of IEMA's guidance document 'A New Perspective on Land and Soil in Environmental Impact Assessment' (Ref 13-17), with particular reference to Section 9: Assessing Impacts on Land and Soil.

13.7.2 The impacts on soils and agricultural land would be assessed for the construction and operational phases of the development. The sensitivity of the Site is determined by the ALC conditions on-site, with ALC grades 1 and 2 recognised as high sensitivity. The IEMA guidelines provide threshold areas for the permanent sealing of land or land quality downgrading. Long term temporary development, such as that of the Proposed Development, presents a low impact magnitude, following the IEMA guidance.

13.7.3 As set out in **Chapter 2: The Scheme and Scheme Location** decommissioning impacts are expected to be similar to, or of a lesser magnitude than, construction effects. Therefore, decommissioning effects will be considered to be the same as construction phase effects and will be scoped out of specific assessment within the ES.

Significance Criteria

Agricultural Land Classification

13.7.4 IEMA guidance (Ref 13-17) provides guidance on receptor sensitivity for both soil resource and soil functions, with agricultural land quality being included referred to as the soil function of 'biomass production' (the growing of food, fibre and fuel). **Table 13-1** and **Table 13-2** below summarise the IEMA suggested sensitivity of receptor and magnitude of change for agricultural land.

Table 13-1: Sensitivity of Receptor: Agricultural Land Resource

Sensitivity/Value of Receptor	IEMA Criteria
Very High	ALC Grades 1 and 2
High	ALC Grade 3a
Medium	ALC Grade 3b
Low	ALC Grades 4 and 5

Table 13-2: Magnitude of Change: Agricultural Land Resource

Magnitude of Change	IEMA Criteria
Major	Permanent Loss of over 20ha
Moderate	Permanent Loss of 5 to 20ha
Minor	Permanent Loss of less than 5ha
No Change / Negligible	No Discernible Loss of Agricultural Land

13.7.5 The permanent loss of 20ha threshold is an arbitrary area but has been in use by IEMA for several decades. MAFF guidance (Ref 13-19) used the threshold of 20ha of BMV land to inform interventions in planning including use of independent call-in powers. It should be noted that use of a fixed area as a threshold may not be applicable to all scales of development, and for very large applications, the proportion of BMV land should be considered.

13.7.6 The IEMA guidance on assessing land and soil in EIA clarifies that the guidance on assessing magnitude of impact applies to 'hard development' which includes permanent sealing or sterilisation of agricultural land. For instance, the change of agricultural land to woodland does not fall under these definitions and is therefore not subject to this assessment criteria. This aligns with current Government initiatives to encourage farmers to convert arable land to woodland in England and Wales.

Soil Resources

13.7.7 The IEMA guidance (Ref 13-17) provides suggested sensitivity and magnitude criteria for a range of other soil functions such as ecological habitat and archaeology, that are not covered by this chapter. Development of agricultural land can impact the soil resource beyond loss of the agricultural resource. The soil resources sensitivity and magnitude criteria given in **Table 13-3** and **Table 13-4** below relate to soil disturbances from development such as the stripping, storage and respreading of soil, and structural degradation from the passage of

plant. These are the activities that present the greatest risk of soil degradation in the construction, operation and decommissioning of a solar farm.

Table 13-3: Sensitivity of Receptor: Soil Resources

Sensitive/Value of Receptor	Example Criteria
Very High	Disturbing heavy textured soil in plastic condition
High	Disturbing medium textured soil in plastic condition
Medium	Disturbing heavy to medium textured soil in friable condition
Low	Disturbing light textured soil in friable condition

Table 13-4: Magnitude of Change Criteria: Soil Resources

Magnitude of Change	Example Criteria
Major	Disposal of topsoil or loss of productive functional capacity e.g. land contamination (Adverse). or Permanent improvement in productive functional capacity > 20ha (Beneficial)
Moderate	Loss of topsoil for agricultural production but retained for beneficial reuse, or degradation of productive capacity e.g. puddled topsoil (Adverse). or Permanent improvement in productive functional capacity 5 to 20ha (Beneficial)
Minor	Loss of subsoil for agricultural production but retained for beneficial reuse (Adverse). or Permanent improvement in productive functional capacity < 5ha (Beneficial)
No Change / Negligible	Marginal loss of soil material e.g. light erosion from construction easement (Adverse).

13.7.8 **Table 13-5** provides the Significance of Effects Matrix, taking account of the magnitude of impact and the sensitivity of the receptors detailed above and is applicable for both the Agricultural Land Resource and Soil Resource assessments. Only effects classified as Moderate or Major are considered significant.

Table 13-5: Significance Effects Matrix

Sensitivity/Value of Receptor	Magnitude of Change			
	Major	Moderate	Minor	Negligible
Very High	Major	Major	Moderate	Minor
High	Major	Moderate	Minor	Negligible
Medium	Moderate	Minor	Negligible	Negligible
Low	Minor	Negligible	Negligible	Negligible

13.8 Limitations and Assumptions

13.8.1 A limitation is the requirement for field survey derived ALC data. This does not limit the adoption of interconnecting cables or the Grid Connection Route however, as cable installation will be to a minimum 0.9m and soil restoration, following measures within the SMP will not restrict agricultural use post-construction.

13.8.2 It is not currently confirmed how the land will be managed under and around the solar PV modules, however it is assumed that sheep grazing will be undertaken on at least some of the solar PV areas, thereby mitigating the temporary loss of land to agricultural use during the operation of the Scheme. This is currently being explored by the Applicant through landowner discussions.

13.8.3 There is the potential for new development to have resulted in the loss of areas of agricultural land and soil resource since the soils and ALC mapping referred to in the assessment were produced. Although it would be proposed for the mapping to be reviewed against current aerial imaging and larger / obvious areas of change to be excluded from any calculation of areas presented in the ES, there would be some limited (due to the scale of the mapping) uncertainty as it would not be possible to capture all these changes accurately.

13.9 Summary of Elements Scoped In and Scoped Out

13.9.1 A summary of the elements scoped into the assessment of soils and agricultural land are presented in **Table 13-6**.

Table 13-6: Elements scoped in and out of the assessment of soils and agricultural land

Element	Scoped in / Scoped Out
Construction and Operation.	Scoped in: The Scheme has the potential to impact agricultural land. ALC survey is required for the Energy Park to inform layout. Whilst the temporary disruption created by the installation of the interconnecting cables and grid connection cable does not require ALC survey the potential effect on soils and agricultural land remains scoped in. The retention of soil resources and effects on soil resource quality are scoped in.
Decommissioning.	Scoped out: The decommissioning phase would be outlined in the Framework DEMP. The effects of decommissioning of the Energy Park on soils and agricultural land are expected to be similar to, or of a lesser magnitude than, construction effects with good practice specified in a detailed SMP.

14. Transport and Access

14.1 Introduction

14.1.1 This chapter sets out the approach to the assessment of impacts arising from the Scheme in relation to Transport and Access.

14.1.2 A Framework Construction Traffic Management Plan (CTMP), Transport Assessment Note and a Framework Public Rights of Way Management Plan (PRoWMP) will be prepared to inform the DCO application submission. This chapter is supported by **Figure 14-1: Existing Highway Network and Proposed Access Points.**

14.2 Study Area

14.2.1 The study area includes the extents of the highway network and PRoW network in the vicinity of the Scheme as shown in **Figure 14-1: Existing Highway Network and Proposed Access Points**. The Study Area has been defined based on professional judgement and experience of other Solar Farm DCO submissions, and includes receptors considered to be potentially at risk from possible direct and indirect impacts arising from the Scheme.

14.2.2 Due to the nature of the Scheme and the Sites which comprise the Energy Park Site, consideration will be given to a number of locations within the surrounding highway network which could potentially be impacted. The extent of the Study Area for assessment in terms of highway impact will be subject to discussions, and consultation with Kent County Council (KCC) as the Highway Authority for the Local Road Network (LRN), as well as National Highways which is responsible for the Strategic Road Network (SRN).

14.2.3 However, at this stage it is assumed that the key roads likely to require consideration are as set out in Section 14.5.11 and 14.5.12 of this chapter.

Figure 14-1: Existing Highway Network and Proposed Access Points

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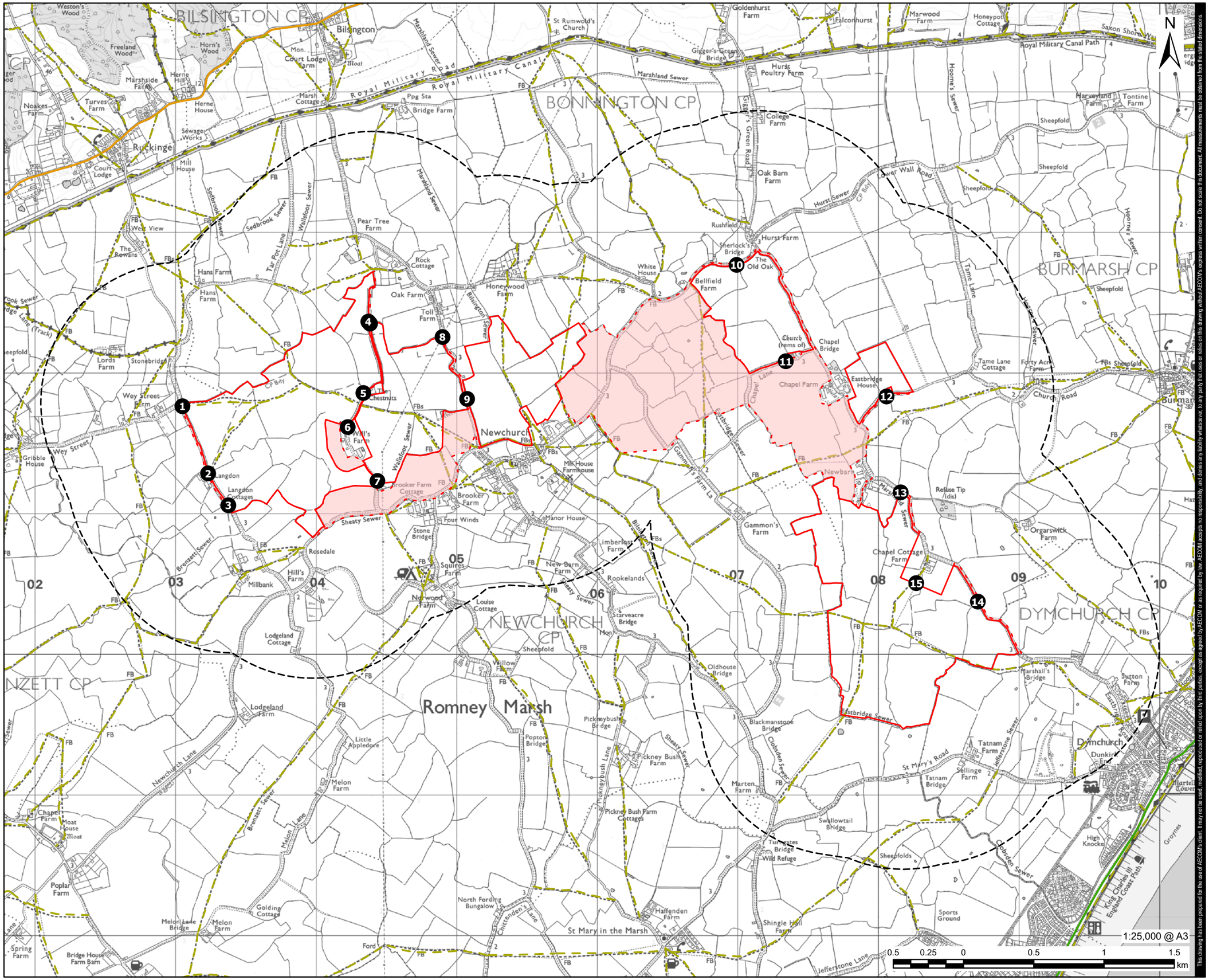
BILSINGTON CP
BONNINGTON CP
BURMARSH CP
NEWCHURCH CP
DYMCHURCH CP
Romney Marsh
Bilsington
Ruckinge
Newchurch
St Mary in the Marsh
Dymchurch
Royal Military Road
Royal Military Canal
Royal Military Canal Path
Marshland Sewer
Sedbrook Sewer
Wallfoot Sewer
Bilsington Sewer
Sheaty Sewer
Brenzett Sewer
Hurst Sewer
Eastbridge Sewer
Clobsden Sewer
Jefferstone Sewer
Tar Pot Lane
Wey Street
Chapel Lane
Tame Lane
Church Road
Lower Wall Road
Sheepfold
Pickneybush Lane
Melon Lane
Newchurch Lane
St Mary's Road
Jefferstone Lane
Chapel Farm
Bellfield Farm
Hurst Farm
Oak Barn Farm
College Farm
Pear Tree Farm
Hans Farm
Oak Farm
Toll Farm
Honeywood Farm
Rock Cottage
Eastbridge House
Tame Lane Cottage
Forty Acre Farm
Harveyland Farm
Tontine Farm
Orgarswick Farm
Chapel Cottage Farm
Gammon's Farm
Marten Farm
Pickney Bush Farm
Pickney Bush Farm Cottages
Brooker Farm
Brooker Farm Cottage
Milk House Farmhouse
Manor House
Four Winds
Stone Bridge
Squires Farm
New Barn Farm
Rookelands
Norwood Farm
Louise Cottage
Starveacre Bridge
Willow Farm
Oldhouse Bridge
Blackmanstone Bridge
Pickneybush Bridge
Popton Bridge
Tutgates Bridge
Swallowtail Bridge
Sellinge Farm
Tatnam Farm
Tatnam Bridge
Marshall's Bridge
Sutton Farm
Shingle Hall Farm
Haffenden Farm
North Fording Bungalow
Golding Cottage
Melon Farm
Little Appledore
Lodgeland Farm
Lodgeland Cottage
Millbank
Hill's Farm
Rosedale
Langdon
Langdon Cottages
Gribble House
Lords Farm
Stonebridge
Wey Street Farm
Hans Farm
The Rewans
West View
Court Lodge
Mill House
Noakes Farm
Turves Farm
Marshside Farm
Herne Hill
Herne House
Sewage Works
Court Lodge Farm
Marsh Cottage
Bridge Farm
Ppg Sta
Gigger's Green Bridge
Gigger's Green Road
Hurst Poultry Farm
Falconhurst
Goldenhurst Farm
Marwood Farm
Honeypot Cottage
St Rumwold's Church
Sherlock's Bridge
The Old Oak
White House
Rushfield
Chapel Bridge
Church (rems of)
Newbarn
Refuse Tip (disi)
Orgarswick Farm
Sheepfolds
Wild Refuge
Sports Ground
High Knocke
Groynes
King Charles III England Coast Path
Dunkirk
Freeland Wood
Horn's Wood
Weston's Wood
Mon. Court Lodge Farm
Moat
Chapel Farm
Moat House
Poplar Farm
Spring Farm
Bridge House Farm Barn
Melon Lane Bridge
Ford
Mon
Hoorne's Sewer
Hoorne Sewer
Gammon's Farm La
Bilsington Sewer
Brenzett Sewer
Sheaty Sewer
Wallfoot Sewer
Sedbrook Sewer
Eastbridge Sewer
Clobsden Sewer
Jefferstone Sewer
Hurst Sewer
Tame Lane
Lower Wall Road
Royal Military Canal Path
Saxon Shore Way
Gigger's Green Road
Pickneybush Lane
Melon Lane
Newchurch Lane
St Mary's Road
Jefferstone Lane
Chapel Lane
Church Road
Tar Pot Lane
Wey Street
Lane (Track)
Brook Sewer
Hoorne's Sewer
Hoorne Sewer
Sheepfold
Lower Wall Road
Royal Military Canal Path
Saxon Shore Way
Tame Lane
Church Road
Chapel

14.3 Legislation, Planning Policy Context and Guidance

Legislation

14.3.1 There is no Transport specific legislation relevant to the Scheme.

National Planning Policy

National Policy Statements

14.3.2 The NPSs set out the Government's energy policy, including specific criteria and issues which should be covered by applicants in their assessments of the effects of their scheme, and how the decision maker should consider these impacts and mitigation measures.

14.3.3 NPS EN-1 (Ref 14-1) provides the basis for decisions regarding nationally significant energy infrastructure. Section 5.14 outlines the Planning Policy for Traffic and Transport, including guidance on undertaking relevant parts of the EIA. The most relevant paragraphs are 5.14.5 to 5.14.21 (excluding 5.14.11, 5.14.12, 5.14.15, 5.14.17 and 5.14.20).

14.3.4 NPS EN-3 (Ref 14-2) sets out the policies relating to electricity generation from renewable sources of energy, to be considered in conjunction with NPS EN-1. Section 2.10 is titled ‘Solar Photovoltaic Generation’ and includes a subsection on both ‘Construction including traffic and transport noise and vibration’ and ‘mitigations as a result of Construction including traffic and transport noise and vibration’. The most relevant paragraphs of the NPS EN-3 are as follows: Paragraph 2.10.9 – 2.10.17, 2.10.21 – 2.10.26, 2.10.35 – 2.10.45, 2.10.120 – 2.10.126, and 2.10.139 – 2.10.144.

14.3.5 NPS EN-5 (Ref 14-3) sets out the policies relating to electricity generation and its infrastructure, for consideration in conjunction with NPS EN-1, however, provides no further guidance on Transport and Access considerations.

National Planning Policy Framework (December 2024)

14.3.6 The National Planning Policy Framework (NPPF) (Ref 14-4) sets out the primary policy tests against which the DCO submission for the Scheme will be considered.

14.3.7 Relevant NPPF requirements relating to Transport and Access are set out in paragraphs 109 - 114, and 115 – 118. This policy will be discussed in more depth in the PEIR and ES.

Local Planning Policy

Local Transport Plan 5: Striking the Balance, (2024 - 2037)

14.3.8 The Local Transport Plan 5 (Ref 14-5) was published in December 2024 by Kent County Council, with an aim to provide a clear vision for the future of transport across the county up to 2037.

14.3.9 The document outlines the key challenges faced by the area, and provides a clear ambition, with detailed outcomes and proposals. The Plan to manage and enhance the local transport network includes the following key ambitions :

- Delivery of safe, reliable, and affordable transport network to support health, wellbeing, and economic prosperity;
- Plan for sustainable growth while protecting Kent's environment and tackling climate change;
- Invest in infrastructure to enable emission-free travel, including electric vehicles, public transport, walking, and cycling;
- Maintain and improve the highway network while delivering the Vision Zero road safety strategy; and
- Ensure a resilient, future-proof transport system that meets the needs of all users.

14.3.10 The document includes district specific proposals for the area of Folkestone & Hythe, where existing high traffic flows are acknowledged, and an intention to create more capacity to meet this growing demand on the network is set out.

14.3.11 Additionally, the Plan focuses on freight management and international haulage traffic. As part of this there are strategic aims to improve the resilience of the M20/A20 road corridors, and to provide sustained support for local road freight management.

Freight Action Plan Kent (2017)

14.3.12 The Freight Action Plan Kent (Ref 14-6) has been developed by KCC with the aim of effectively addressing concerns related to the movement of freight both through and within Kent. The document highlights a number of actions that KCC is looking to achieve in relation to freight movement across the county, these include:

- Tackling the problem of overnight lorry parking in Kent;
- Finding a long-term solution to Operation Stack;
- Effectively managing the routing of HGV traffic to ensure that such movements remain on the strategic road network for as much of the journey as possible;
- Taking steps to address problems caused by freight traffic to communities; and
- Ensuring that KCC continues to make effective use of planning and development control powers to reduce the impact of freight traffic.

Kent Minerals and Waste Local Plan 2013-2030 as amended by Early Partial Review - Adopted September 2020

14.3.13 The Kent Minerals and Waste Local Plan (Ref 14-7) is a document produced by Kent County Council (KCC) to plan and provide the infrastructure to supply minerals and manage waste sustainably within the wider county. The document aims to "*encourage the use of sustainable modes of transport for moving minerals and waste long distances and minimise road miles*."

14.3.14 One key area of concern set out within the document is the aim to address the "*development(s) in proximity to a mineral transportation facility could prejudice or constrain current or future operations*." To this end, the Plan includes policies

that "*ensures that wharves and rail depots are safeguarded and are not put at risk by non-minerals developments*."

Kent County Council's Rights of Way Improvement Plan 2018- 2028

14.3.15 The Kent Rights of Way Improvement Plan (ROWIP) (Ref 14-8) sets out valuable insight into the needs and priorities of Kent's PRoW network users, what they would like from the Service and what opportunities there are to improve walking, equestrian and cycling opportunities across the County. The document highlights a number of actions that KCC is looking to achieve in relation to transport and access, these include;

- Active Lifestyles - Active travel (AL02);
- Evolution of the network – Modal shift to cycling and walking to reduce road air pollution (EN01), Improve Green Infrastructure (EN02), Safe Travel (EN03); and,
- Efficient delivery – PRoW network links to encourage sustainable travel (ED05).

Ashford Local Plan 2030 - Adopted February 2019

14.3.16 The Ashford Local Plan 2030 (adopted February 2019) (Ref 14-9) sets out a policy framework to provide clear guidance on the Council's aims for the Borough regarding issues of planning and land use. This includes policies on transport provision and traffic impacts for new developments.

14.3.17 Policies include:

- Policy TRA6 : "Developments should, where opportunities arise, include safe, convenient and attractively designed cycle routes, including, where possible, connection to the Borough-wide cycle network."
- Policy TRA7 : "Developments that would generate significant traffic movements must be well related to the primary and secondary road network. New accesses and intensified use of existing accesses onto the road network will not be permitted if a clear risk of road traffic accidents or significant traffic delays would be likely to result."
- Policy TRA7 : "Proposals which would generate levels and types of traffic movements, including heavy goods vehicle traffic, beyond that which local roads could reasonably accommodate in terms of capacity and road safety will not be permitted. "
- Policies on parking standards for non-residential developments are also included (page 342).

14.3.18 The Plan also provides the policy framework for the enhancement and protection of the natural environment and heritage of the borough, including policies on renewable and low carbon energy.

14.3.19 Policy ENV10 clauses b and c state:

- "Planning applications for proposals to generate energy from renewable and low carbon sources will be permitted provided that:

- b) The development does not generate an unacceptable level of traffic or loss of amenity to nearby residents (visual impact, noise, disturbance, odour);
- c) Provision is made for the decommissioning of the infrastructure once operation has ceased, including the restoration of the site to its previous use.

Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022

14.3.20 The Folkestone and Hythe District Council (FHDC) Core Strategy (Ref 14-10) has been developed by FHDC to provide strategic policies to guide potential developments in the district.

14.3.21 Section 3 of the document sets out the strategic needs for the sustainable development of the district. Aims arising from these strategic needs include:

- Improving accessibility and transport infrastructure;
- Promoting choice in means of transport through improving opportunities for walking and cycling, public transport networks and information; and
- Integrating public transport with strategic development, providing local links and strategic connections;

14.3.22 District Infrastructure Planning Strategy sets out the approach to overseeing the delivery of significant infrastructure, including major topics such as transport. Policy SS5 states that: "*Planning permissions will only be granted where suitable developer contributions are secured or are accompanied by a Community Infrastructure Levy liability notice, and where: … The location, design or management of development provides a choice of means of transport and allows sustainable travel patterns or pedestrians, cyclists and/or public transport*."

Places and Policies Local Plan, Folkestone and Hythe District Council (2020)

14.3.23 The Places and Policies Local Plan (Ref 14-11) was adopted in September 2020. The plan is cross referenced in the Folkestone and Hythe Core Strategy Review. It provides a framework for small and medium-sized site development across the district, aligning with the Core Strategy.

14.3.24 The plan consists of two parts. Part One – Places identifies development locations within three areas—The Urban Area (Folkestone and Hythe), The Romney Marsh Area, and The North Downs Area. Policies in this section guide planning applications for allocated sites. Part Two – Development Management Policies outlines general policies applicable to all proposals and contains a Transport specific chapter.

14.3.25 The Plan outlines that given the district's strategic location between London and continental Europe, there is a significant volume of Heavy Goods Vehicle (HGV) traffic passing through the area.

14.3.26 Therefore, the plan contains reference to HGV parking needs and sets out requirements to ensure noise and air quality impacts are addressed. It also mandates appropriate access, turning space, and minimum parking bay dimensions.

Policy T4 states that:

14.3.27 “Applications for the provision of Heavy Goods Vehicle parking and service facilities will be approved subject to the following (amongst other) criteria:

- Proposals for the mitigation of noise and air quality impacts from lorry movements and any associated commercial operations will need to be specifically addressed as part of any application;
- Adequate space for access, sight lines, turning and manoeuvring must be provided in addition to the required parking spaces. These spaces should not be used for any other purpose than parking; and
- The minimum dimensions of a lorry parking space should be 16m by 3.5m (56sqm)."

Industry Guidance

National Planning Practice Guidance

14.3.28 *'Travel Plans, Transport Assessments and Statements'* (2014) (Ref 14-12) provides advice on when TAs and Transport Statements are required, and what they should contain. The most relevant paragraphs are 002, 004–007, 014–015.

Institute of Environmental Management and Assessment Guidelines (2023)

14.3.29 The Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Traffic and Movement (2023) (Ref 14-13), provides guidance on examining the environmental impacts of developments in terms of traffic and transportation. This guidance has been used to outline the scope of the assessment.

Construction Logistics and Community Safety (CLOCS, Version 5, November 2024)

14.3.30 The CLOCS guidance (Ref 14-14) draws upon evolving best practice, standards, policies and codes of practice, providing a standard which planning authorities, developers and contractors can implement and provides a coherent set of guidelines which can be adhered to, with the primary goals of achieving:

- Reduce risk to vulnerable road users of collisions with construction vehicles through greater industry engagement with CLOCS;
- Improve efficiencies through greater implementation of Construction Logistics Plans;
- Improve air quality by reducing emissions from construction vehicle journeys; and
- Provide an environment that improves public confidence in the construction industry and encourages active travel.

Summary

14.3.31 The Applicant will seek to adhere to the relevant policies and document requirements set out above which are deemed applicable to the Scheme. The

DCO submission will be supported by several transport documents which will be discussed and consulted upon with the relevant consultees (this may include a Transport Assessment Note, Framework PRoWMP, Framework CTMP, and/or other relevant documents in support of the ES Transport and Access Chapter).

14.4 Consultation

14.4.1 Discussions will be held with the respective Highway Authorities (KCC and National Highways) to consider the approach and scope of the assessment set out within the PEI Report and ES. Specific information will be sought during consultation on the following:

- The extent of the Study Area and potential impact on any roads on the local network and SRN;
- Transport Assessment (TA) Note - this will either be a standalone document or within an appendix of the PEI Report and ES Transport and Access chapters to minimise duplication across multiple reports given the assessment focus on the construction phase. In line with good practice on other solar DCOs and in order to minimise duplication, the TA Note will signpost information from the PEI Report or ES Transport and Access chapters to the general structure and content of a typical full Transport Assessment - approach and scope to involve consultation with the Local Highway Authority;
- Framework CTMP - proposed as a standalone report which will form an appendix to the PEI Report and ES Transport and Access chapters which will identify key mitigations and management measures to be implemented during the construction phase of the Scheme - scope to be consulted upon with the Local Highway Authority;
- Travel Plan - at this stage, it is not proposed for a standalone Travel Plan to be produced as part of the DCO application submission based on previous experience of working of this type of project. The construction phase will be expected to be limited to approximately 24-36 months and the operational phase would not justify significant number of trips to require the development and implementation of a Travel Plan (therefore it has been scoped out). However, aspects of a Travel Plan related to mitigation measures related to the movements of construction staff during the peak of the construction phase will be included and implemented as part of the Framework CTMP - approach to be consulted upon with the Local Highway Authority; and
- Framework PRoW Management Plan (Framework PRoWMP) - is proposed to be incorporated within the DCO submission to set out the details on how Public Rights of Way would be managed during the construction phase (as per NPS EN-3, paragraph 3.10.30) - scope to be consulted upon with the Local Highway Authority.

14.5 Baseline Conditions

14.5.1 Baseline conditions for the land within the study area will be described in detail in the PEI Report, however for the purposes of this Scoping Report, they have been summarised in the following sections.

14.5.2 The Transport and Access Study Area will include the anticipated construction routes serving the Scheme. As a minimum, it is anticipated that the links mentioned in the Section below will likely be used by construction vehicles to access the Scheme.

14.5.3 It has been assumed that transport of materials by rail or water is not feasible due to the distance to appropriate infrastructure and these modes have not been considered further.

14.5.4 Further to the above, although not defined at this stage, the baseline conditions and study area within the PEI Report, will also include the details related to the Interconnecting Cable Corridors and the Grid Connection Route.

14.5.5 At this stage it is considered that the Grid Connection Route will connect the Scheme to the proposed NGET Substation which National Grid are proposing along the Sellindge to Dungeness OHL. It is noted that the location of the new NGET Substation is currently unknown and could be anywhere along this OHL, including where the OHL passes through the Scheme (Site 1). The Grid Connection Route will be defined following disclosure of the proposed NGET substation location, and if this is a route extending out of the Energy Park Site then it will be assessed in the same way as the assessment proposed for the Interconnecting Cable Corridors.

Existing Local Highway Network

14.5.6 The Scheme encompasses a large area of predominantly agricultural land located within Romney Marsh, a rural area in the county of Kent.

14.5.7 The Energy Park Site is located approximately 7.5 km south-west of the M20, a strategic link in the area providing connection to the M25 in the west and access to the Channel Tunnel and the ports at Dover in the east. The Energy Park Site is also located in proximity to the A2070 (located 4 km to the west of the Site), an A-road of regional significance in Kent, linking Brenzett with Ashford and the M20, and the A259 (located 7 km to the east and south of the Energy Park Site), an A-road linking Folkestone with Brighton.

14.5.8 Within the vicinity of the Energy Park Site, the highways are mostly local rural roads and there are also other minor roads which run through, alongside or in the vicinity of the Energy Park Site, including the following:

- Marsh Road (western extent of the Energy Park Site, west of Site 1) – a narrow rural road, connecting with Ruckinge in the north and Newchurch Lane in the south. The road links with the A2070 (in the west) via Wey Street;
- Wills Lane (western extent of the Energy Park Site, between Site 1 and 2) – a narrow rural road, connecting with Newchurch Road in the north and Newchurch Lane in the south;

- Newchurch Lane (western extent of the Energy Park Site, south of Sites 1 and 2) - local road connecting Newchurch in in the east with Ivychurch in the southwest;
- Newchurch Road (western extent of the Energy Park Site, between Sites 2 and 3) - local road connecting Bilsington in the north with Newchurch in the south.
- The Street (eastern extent of the Energy Park Site, north-west of Site 4, and south of Site 3) - local road connecting Newchurch in the west with Gigger's Green Road in the east;
- Gigger's Green Road (eastern extent of the Energy Park Site, north of Site 4) - a narrow rural road, connecting with Bonnington in the north and Newchurch to the south via The Street;
- Lower Wall Road (eastern extent of the Energy Park Site, east of Site 4) - a narrow rural road, connecting with West Hythe via Botolph's Bridge in the east and Newchurch to the west via The Street;
- Chapel Lane (eastern extent of the Energy Park Site, south of Site 4) – a very narrow rural road to the east of Newchurch, connecting with Gammon's Farm Lane in the west;
- Gammon's Farm Lane (eastern extent of the Energy Park Site, west of Site 4 and 6) – a very narrow rural road to the east of Newchurch, connecting with The Street in the north;
- Church Road (eastern extent of the Energy Park Site, south of Site 5) - a narrow rural road, connecting with Burmarsh in the east and Eastbridge Road in the west;
- Eastbridge Road (eastern extent of the Energy Park Site, east of Site 6) - local road connecting with Gigger's Green Road in the north and providing direct access to Dymchurch in the south.

14.5.9 It is worth noting that some of the roads set out above are also located within the Interconnecting Cable Corridor Search Area, these include;

- Wills Lane;
- Newchurch Road;
- Newchurch Lane;
- The Street;
- Chapel Lane;
- Gammon's Farm Lane:
- Church Road; and,
- Eastbridge Road.

14.5.10 All of the above-mentioned rural routes are single-carriageway roads. Speed limits on the routes vary from between derestricted (60mph) to 30mph when they pass through settlements (Newchurch), with limited lighting and footway provision.

14.5.11 At the stage of writing, the details related to the sourcing and origin of the relevant materials for the Energy Park Site (such as PV modules) have not yet been confirmed. However, based on our experience it is considered likely that these would be transported from one of the local ports. As part of the PEI Report Stage, an initial access feasibility assessment will be undertaken to determine the potential access route(s) for delivering these components to the Scheme via the Strategic Road Network (SRN) and local roads.

14.5.12 It is acknowledged that due to the rural nature of the area within the vicinity of the Site, some of the local roads may be subject to restrictions (such as weight restrictions of below 7.5 tonnes or width of the vehicle restrictions as noted along Gigger's Green Road and Chapel Lane, etc). These factors will be considered when reviewing potential routes to minimise the impact of the Scheme on local roads.

Existing Walking Facilities

14.5.13 Due to the location of the Energy Park Site in Romney Marsh, a sparsely populated wetland area, there is limited footway provision in the surrounding area. Footways are limited to the local settlements that surround the Energy Park Site.

14.5.14 There are a number of Public Rights of Way (PRoW) within, or in close proximity to, the Energy Park Site. These PRoW are presented on **Figure 2-2: Public Rights of Way** and described below:

- **AE632** – A footpath which runs through the field to the east of Marsh Road within the northwest corner of the Energy Park Site boundary. The footpath is approximately 435 m in length running in an east-west direction, in the east connecting with footpath HM198 and in the west connecting with Marsh Road near to the junction with Wey Street (through Site 1);
- **HM198** - A footpath which runs through the field to the east of Marsh Road within the northern extent of the Energy Park Site boundary. The footpath is approximately 450 m in length running in an east-west direction, in the east connecting with footpath HM196 and in the west connecting with footpaths AE632 and HM199 (through Site 1);
- **HM199** – A footpath which runs through the field to the east of Marsh Road within the western extent of the Energy Park Site boundary. The footpath is approximately 650 m in length running in an east-west direction, in the east connecting with footpath HM198 and in the west connecting with Marsh Road near to Langdon (residential property) (through Site 1);
- **HM196** – A footpath which runs through the field to the east-west of Wills Lane within the northern extent of the Energy Park Site boundary. The footpath is approximately 1.5 km in length running in a northwest-southeast direction, in the north connecting with footpath AE544 and in the

south connecting with footpaths HM195 and HM197 to the north of Newchurch (through Sites 1 and 2);

- **AE544** - A footpath which runs through the field to the west of Wills Lane within the northern extent of the Energy Park Site boundary. The footpath is approximately 840 m in length running in north-south direction, in the north connecting with Tar Pot Lane outside of the Energy Park Site boundary extents and in the south connecting with footpath HM196 (through Site 1);
- **HM197** - A footpath which runs through the field to the north of Newchurch Lane within the southwestern extent of the Energy Park Site boundary. The footpath is approximately 570 m in length running in north-south direction, in the north connecting with footpath HM196 and in the south connecting with Newchurch Lane outside of the Energy Park Site boundary extents (through Site 2);
- **HM195** - A footpath which runs through the field to the east of Newchurch Road within the western extent of the Energy Park Site boundary. The footpath is approximately 410 m in length running in east-west direction, in the east connecting with footpath HM194 and in the west connecting with Newchurch Road (through Site 3);
- **HM185** - A footpath which runs through the field to the east of Newchurch Road within the western extent of the Energy Park Site boundary. The footpath is approximately 1 km in length running in north-south direction, in the north connecting with Honeywood Lane outside of the Site boundary extents and in the south connecting with The Street and footpath HM194 outside of the Energy Park Site boundary extents (through Site 3);
- **HM183** - A footpath which runs through the field to the north of The Street within the western extent of the Energy Park Site boundary. The footpath is approximately 1.1 km in length running in north-south direction, in the north connecting with footpath HM181 outside of the Energy Park Site boundary extents and in the south connecting with The Street outside of the Energy Park Site boundary extents (through Site 3);
- **HM155** - A footpath which runs through the field to the east of Gammon's Farm Lane within the eastern extent of the Energy Park Site boundary. The footpath is approximately 2.0 km in length running in east-west direction, in the east connecting with Eastbridge Road and footpath HM144 outside of the Energy Park Site boundary extents and in the west connecting with Gammon's Farm Lane outside of the Energy Park Site boundary extents (through Site 6);
- **HM175** - A footpath which runs through the field to the south of Eastbridge Road within the eastern extent of the Energy Park Site boundary. The footpath is approximately 600 m in length running in north-south direction, in the north connecting with Eastbridge Road outside of the Energy Park

Site boundary extents and in the south connecting with footpath HM155 within the Energy Park Site boundary extents (through Site 6);

- **HM154** - A footpath which runs through the field to the north of Saint Mary's Road within the eastern extent of the Energy Park Site boundary. The footpath is approximately 1.3 km in length running in north-south direction, in the north connecting with footpath HM155 within the Energy Park Site boundary extents and in the south connecting with unnamed road to the north of Saint Mary's Road outside of the Energy Park Site boundary extents (through Site 6).

14.5.15 There are no PRoW within Sites 4 and 5.

14.5.16 It is worth noting that some of the PRoW set out above are also located within the Interconnecting Cable Corridor Search Area, these include HM197 and HM183.

14.5.17 PRoW only located within the Interconnecting Cable Corridor Search Area, include HM176 and HM172.

14.5.18 PRoW which run within close proximity to the Energy Park Site boundary and the Interconnecting Cable Corridor Search Area are as follows:

- HM179, HM 186, AE510, AE511B, HM181, HM153, HM189, HM193, HM192, HM191, HM194, HM196 HM200, HM201, AE542, AE543, AE539, HM204, HM202 HM178A.

Existing Cycling Facilities

14.5.19 There are no on- or off-road dedicated / marked cycling facilities within the immediate vicinity of the Energy Park Site. However, the surrounding rural local roads may be attractive to some cyclists as they are understood to be relatively lightly trafficked. The Energy Park Site could potentially be accessed by cyclists from local settlements within a 2.5km cycle distance, including Newchurch, Bilsinton and Ruckinge areas.

14.5.20 The nearest National Cycle Network (NCN) route to the Site is NCN Route 2 (between Dover and Hastings) which runs along the boundary of Energy Park Site, Site 4 as well as through the Interconnecting Cable Corridor Search Area along Eastbridge Road and Chapel Lane.

Existing Equestrian Facilities

14.5.21 There are no formal equestrian facilities (i.e. Bridleways) within the Energy Park Site other than HM178A which is approximately 500 m in length to the south of The Street, Newchurch. However, some of the surrounding roads are generally lightly trafficked due to their rural nature which may encourage equestrian use.

Existing Public Transport Facilities

Bus

14.5.22 Within the vicinity of the Energy Park Site there is limited access to public transport facilities. There is only one bus route in the vicinity which is bus route

11A between Ashford and Old Romney, providing a connection between Newchurch and Ashford International Railway station.

Rail

14.5.23 The nearest railway station is located approximately 8 km north west of the Site in Hamstreet.

Future Baseline Conditions

14.5.24 The traffic flows on the surrounding highway network are be expected to increase as a result of housing and employment growth. Therefore, projected background traffic growth will be applied to the traffic flows derived from the traffic surveys (baseline) to represent conditions during the future baseline (and construction peak assessment year). Projected background traffic growth will be applied to the surveyed traffic flows to represent conditions during the future construction peak assessment year.

14.6 Potential Effects and Mitigation

14.6.1 The nature of the Scheme is such that the greatest impact is likely to occur during the construction phase and this will therefore form the focus of the assessment of transport effects presented in the PEI Report and ES.

14.6.2 The main considerations and potential effects as a result of the Scheme during the construction and decommissioning phases are:

- Increase in HGV movements;
- Abnormal Indivisible Loads (AILs);
- Travel to and from the Site by construction workers;
- Increase in delay to vehicles, pedestrians, cyclists, and equestrians due to increase in construction traffic movements; and
- Change in route connections and amenity for pedestrians, cyclists, and equestrians due to construction of the Scheme.

14.6.3 In terms of construction staff, whilst some workers residing within larger settlements nearby (such as Hythe and Dungeness) may travel by public transport (the distance is considered too far to walk or cycle), these modes are not expected to constitute a significant proportion of trips to the Site.

Vehicle Access

14.6.4 The main points of vehicular access for the Energy Park Site are currently anticipated to be taken via the following locations, as set out within **Figure 14-1**. The proposed vehicle access points to the Energy Park Site will be subject to review as the access strategy work is developed further and following scoping discussions with the local highway authority:

- Access 1 – Marsh Road (northern access, from the junction with Wey Street, Site 1);
- Access 2 – Marsh Road (access opposite Langdon, Site 1);

- Access 3 – Marsh Road (southern access, opposite Langdon Cottages, Site 1);
- Access 4 – Wills Lane crossover (northern access, west into Site 1 and east into Site 2);
- Access 5 – Wills Lane (access west from The Chestnuts, Site 1);
- Access 6 –Wills Lane (access north from Oak Barn, Site 1);
- Access 7 – Wills Lane (southern access, north from Farm Bungalow, Site 2);
- Access 8 – Newchurch Road (northern access, south from Toll Farm, Site 2);
- Access 9 – Newchurch Road crossover (southern access, west into Site 2 and east into Site 3);
- Access 10 – The Street (Site 4);
- Access 11 – Chapel Lane (Site 4);
- Access 12 – Church Road (Site 5);
- Access 13 – Eastbridge Road (northern access, Site 6);
- Access 14 - Eastbridge Road (southern access, Site 6); and,
- Access 15 - Eastbridge Road (access via Chapel Cottage Farm, Site 6).

14.6.5 At this stage, it is expected that the above access points will be used during the construction, operation, and decommissioning phases of the Scheme, although this will be confirmed when the PEI Report is prepared.

14.6.6 Further to the above, at this stage, it is anticipated that accesses will also be required to provide construction vehicle access to the Interconnecting Cable Corridors once they are defined and the Grid Connection Route between the Energy Park Site and the Point of Connection, however this has not been confirmed at this stage and will only be included within the assessment when the Grid Connection Route and Point of Connection has been confirmed in order to fully assess all access points to the whole extent of the Scheme as part of the Transport and Access chapter of the ES. Any additional access points will be subject to review as the access strategy work is developed further and be under consideration in discussions with the local highway authority.

14.6.7 Further detail on proposed access points to the Energy Park Site will be included within the PEI Report and the ES.

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

Construction and Decommissioning

14.6.9 The shortest expected construction programme will be 24 months, which will offer a worst-case approach in terms of monthly (and therefore daily) construction vehicle trips.

14.6.10 At this stage it is anticipated that, as a worst-case during the peak construction period (currently assumed to be 2031), there could be up to 400 construction staff on site per day. Peak numbers for Light Goods Vehicles (LGVs) and Heavy

Goods Vehicles (HGVs) are not known at the current time. Therefore, traffic forecasts associated with the above will be provided in the PEI Report and ES for the peak Construction phase.

14.6.11 The proposed numbers of movements of construction vehicles and construction staff during the peak of the Construction phase will be reviewed and confirmed during the PEI Report and ES stage once the worst-case, peak phase of Construction is determined.

14.6.12 The potential mitigation measures, which could be implemented during the Construction and Decommissioning phases, include:

- Restriction of HGV movements to certain routes, days of the week and times of the day;
- Where possible, restricting the working hours to not coincide with the network peak hours;
- Upgrading of routes where considered necessary to cater for the additional and / or larger vehicles;
- Positioning of suitably qualified banksmen and / or other temporary traffic management at the Site access points, to allow all vehicle arrivals and departures to be safely controlled during the Construction period;
- Providing road signs and / or markings to increase awareness of the Site access points during the Construction phase and undertaking vegetation clearance in the vicinity of the Site access points to improve visibility;
- Encouraging local construction staff to car share, to reduce single occupancy car trips, by promoting the benefits of car sharing such as reduced fuel costs and by providing dedicated parking spaces for those who car share, nearer to the compound;
- Consider implementing a shuttlebus service to transfer non-local staff to / from local worker accommodation, to reduce vehicle trips on the surrounding highway network;
- Implementing a Delivery Management System to control the bookings of HGV deliveries from the start of the Construction period i.e. to regulate the arrival times of HGVs via timed delivery slots, as well as to monitor compliance of HGV routing;
- Maintaining access to PRoW during the Construction phase, or otherwise providing temporary diversion routes if required.

14.6.13 Potential impacts during the construction phase are typically considered as medium-term, as defined in **Chapter 5: Environmental Impact Assessment Methodology.** Potential impacts during the decommissioning phase are typically considered as short-term, as these activities are expected to continue for around 24 months.

14.6.14 The PEI Report will consider the impact of any other committed developments and / or highways improvement schemes in the vicinity which may be considered to have a cumulative impact during the Construction of the Site.

Operation

14.6.15 During the Operational phase, the Energy Park Site will be manned by a nominal number of staff across the Scheme (at this stage, assumed to be up to 10 permanent staff per week), predominantly undertaking day-to-day maintenance tasks and repairs. Staff vehicles and those used for maintenance will primarily be four wheeled drive vehicles and vans, with HGVs rarely accessing the Energy Park Site during this phase (and if so in low numbers, for example sporadic HGV maintenance delivery).

14.6.16 Due to the low level of trips likely to be generated within this phase, and specifically within the network peak hours of this phase, it is proposed to exclude operational phase transport effects from the EIA. Further details of the operational stage transport arrangements will be set out in the PEI Report and ES to support this approach.

14.7 Assessment Methodology

14.7.1 The assessment of potential effects as a result of the Scheme on Transport and Access will be undertaken using the methodology set out below.

Source of Baseline Information, Scenarios and Consultation

14.7.2 To inform the assessment of the Scheme, information from several sources will be collected. The sources which will be used are set out as follows:

- Local travel and network information from various sources including local rail and bus operators;
- Personal Injury Collison (PIC - Crash and Collision) data from KCC;
- Ordnance Survey (OS) Base Mapping to obtain an accurate geographical representation of the areas in the vicinity of the Site;
- Highway boundary information from KCC;
- Mode share data from the 2011 Census (or 2021 data if available and considered appropriate given the context of COVID-19);
- Industry information from the 2021 Census to identify the number of existing residents who work in the construction industry and live within a defined catchment area of the Site, to inform the construction worker trip distribution;
- Various traffic count and speed survey data where required (see further below);
- Traffic growth factors by applying National Transport Model (NTM) adjustments to National Road Traffic Forecast (NRTF) growth factors within the Trip Ends Model Program (TEMPRO), utilising the latest National Trip Ends Model (NTEM) dataset; and
- Route planning software, such as Google Maps, will be used to inform the review of the most direct and functional routes to the Scheme (in combination with the above).

14.7.3 Peak hour traffic flows will be identified from historic data held by the Local Highway Authority or traffic survey company databases if available. In addition, traffic counts will be undertaken, if considered necessary at locations in the vicinity of the Site to determine the baseline traffic conditions of the surrounding highway network. The extent of the traffic data and scope for any traffic surveys that may be required will be agreed with the Highways Authorities.

14.7.4 It has been assumed that network modelling and junction capacity assessments will not be required as construction staff will travel outside the usual network peak hours.

14.7.5 To determine the impact of the Site, the following scenarios will be considered to inform the assessment of the peak Construction phase;

- Baseline (2025) - AM, PM and Daily traffic flows; and
- Peak Construction Year (2031) With and Without Development - AM, PM and Daily traffic flows.

14.7.6 The peak Construction year of 2031 is considered appropriate at this stage as it corresponds with the anticipated peak Construction year for the purpose of the EIA, as described in **Chapter 2: The Scheme and Scheme Location** and **Chapter 5: Environmental Impact Assessment Methodology**, of this Scoping Report.

14.7.7 For the purposes of the EIA, the Decommissioning assessment year is considered to be 2073 (40 years from the connection date). This year will not be considered in the PEIR or ES in terms of the highway impact assessment or any junction assessments as it is considered too far into the future to be able to accurately forecast traffic flows or junction forms. Therefore, it is proposed to adopt the assessment of the Construction phase to determine the anticipated worst-case impact of the Scheme during its Decommissioning phase.

Impact Assessment Methodology

14.7.8 In accordance with the 2023 IEMA Guidance for assessing the environmental impacts of traffic and movements (Ref 14-13), the following criteria will be considered in this assessment:

- Severance of communities (Severance);
- Pedestrian delay (incorporating delay to all non-motorised users);
- Non-motorised user amenity;
- Fear and intimidation on and by road users (Fear and Intimidation);
- Road vehicle driver and passenger delay (Driver Delay);
- Road user and pedestrian safety (Road Safety); and
- Hazardous/large loads.

14.7.9 In addition, the following criteria will be considered in this assessment:

- PRoW diversions and closures.

14.7.10 Typically, when assessing the impacts of traffic effects, there are a range of particular groups and locations which may be sensitive to changes in traffic conditions compliant with the criteria previously outlined.

14.7.11 These are outlined in the 2023 IEMA Guidance as 'Affected Parties', as follows:

- People at home;
- People at work;
- Sensitive and/or vulnerable groups (including young age, older age, income, health status, social disadvantage and access and geographic factors);
- Locations with concentrations of vulnerable users (e.g. hospitals, places of worship and schools);
- Retail areas;
- Recreational areas;
- Tourist attractions;
- Collisions clusters and routes with road safety concerns; and
- Junctions and highway links at (or over) capacity.

14.7.12 As a rule of thumb, the forecast changes to baseline (magnitude of change), the relative value/sensitivity/importance of the affected receptor and the scale, nature and significance of the effect (consequence) should be considered. In addition, the anticipated effect should be classified as short-term, medium-term or long-term, as well as permanent or temporary.

Sensitivity

14.7.13 The 2023 IEMA guidelines set out two rules in identifying potential links for analysis to be used as a screening process to identify the appropriate extent of the assessment area and the likelihood of impacts;

- Rule 1: include highway links where traffic flows will increase by 30% or more (or the number of HGVs will increase by 30% or more); and
- Rule 2: include any other specifically sensitive areas (e.g. accident black spots, conservation areas, hospitals, links with high pedestrian flows etc.) where traffic flows will increase by 10% or more.

14.7.14 Based on this, links and junctions will be assessed where traffic flows are expected to increase by 30% or more as a result of the Scheme. Links and junctions will not be assessed where there is expected to be a less than 30% increase in traffic flows as a result of the Scheme, unless any specifically sensitive areas are identified. In addition, a negligible magnitude of change has been assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Scheme, irrespective of the proportional increase in traffic flows.

14.7.15 The general criteria for defining the importance or sensitivity of receptors are set out in **Table 14-1** below, which applies to the assessment of Severance, Pedestrian Delay, Non-Motorised User Amenity, and Fear and Intimidation. Key factors influencing this include:

- The value of the receptor or resource based upon empirical and/or intrinsic factors, for example considering any legal or policy protection afforded which is indicative of the receptor or resources' value internationally, nationally or locally; and
- The sensitivity of the receptor or resource to change, for example is the receptor likely to acclimatise to the change. This will consider legal and policy thresholds which are indicative of the ability of the resources to absorb change.

Table 14-1: Sensitivity / Value Criteria for Severance, Pedestrian Delay, Non-Motorised User Amenity, and Fear and Intimidation

Sensitivity/ Value	Sensitivity / Value Criteria
High	**Road Links and Junctions**: More than two sensitive uses present (e.g. schools, play areas, care/retirement homes, hospitals, places of worship, historic building) and/or a primarily residential street with properties on both sides of the carriageway. **Walk/Cycle Links including PRoW**: Heavily trafficked highway with on-road pedestrian /cycle route
Medium	**Road Links and Junctions**: Two sensitive uses present (e.g. schools, play areas, care/retirement homes, hospitals, places of worship, historic building) and/or a large number of residential properties present **Walk/Cycle Links including PRoW**: Lightly trafficked highway with on-road pedestrian/cycle route
Low	**Road Links and Junctions** (no more than one of the following): • One sensitive use present (e.g. schools, play areas, care/retirement homes, hospitals, places of worship, historic building) • Many residential properties with direct frontage to highway link being used as construction route • Pedestrians using footways, PRoW and/or crossings on highway link • Cyclists using on-road designated cycle routes along highway link **Walk/Cycle Links including PRoW**: Heavily trafficked highway with off-road pedestrian/cycle route
Very Low	**Road Links and Junctions**: No sensitive users or receptors along link, or no more than one of the following:

Sensitivity/ Value	Sensitivity / Value Criteria
	• Few residential properties with direct frontage to the highway link being used as a construction route • Workplaces with direct frontage to highway link being used as construction route • Cyclists using off-road designated cycle routes along highway link **Walk/Cycle Links including PRoW**: Pedestrian/cycle route not running alongside highway, or lightly trafficked highway with off-road pedestrian/cycle route

14.7.16 The general criteria for defining the importance or sensitivity of receptors for the assessment of Driver Delay are set out in **Table 14-2** below.

Table 14-2 Sensitivity/ Value Criteria for Driver Delay

Sensitivity/ Value	Sensitivity / Value Criteria
High	**Road Links**: Not applicable (captured by assessment of road junctions where applicable). **Road Junctions**: High queuing (10+ vehicles) on 3+ arms of the junction during the weekday peak hours. For example, a busy roundabout or signalised junction within a built-up area.
Medium	**Road Links:** High queuing (10+ vehicles) on this link, on the approach to junction(s) within the study area. **Road Junctions**: High queuing (10+ vehicles) on 1-2 arms of the junction OR moderate queuing (5-9 vehicles) on 3+ arms of the junction during the weekday peak hours. For example, a busy roundabout or signalised junction outside of a built-up area.
Low	**Road Links**: Moderate queuing (5-9 vehicles) on this link, on the approach to junction(s) within the study area. **Road Junctions**: Moderate queuing (5-9 vehicles) on 1-2 arms of the junction OR low queuing (3-4 vehicles) on 3+ arms of the junction. For example, a roundabout or signalised junction outside of a built-up area or a busy priority junction within a built-up area.
Very Low	**Road Links**: Low queuing (3-4 vehicles) on this link, on the approach to junction(s) within the study area. **Road Junctions**: Low queuing (3-4 vehicles) on 1-2 arms of the junction. For example, a priority junction outside of a built-up area.

14.7.17 The preliminary criteria for defining the importance or sensitivity of road link and road junction receptors for the assessment of Road Safety and Hazardous/ Large Loads are set out in **Table 14-3** below.

Table 14-3: Sensitivity/ Value Criteria for Road Safety and Hazardous/ Large Loads

Sensitivity/ Value	Road Safety	Hazardous/ Large Loads
High	Road Links and Road Junctions: 10+ collisions in five years, or more than three serious and/ or one fatal collision in five years	Road Links and Road Junctions: 5+ serious/ fatal collisions (or more than one fatal collision) involving a goods vehicle (>3.5 tonnes) in five years
Medium	Road Links and Road Junctions: 5-9 collisions (with up to three serious collisions and/ or one fatal collision) in five years	Road Links and Road Junctions: 3-4 serious/ fatal collisions (with up to one fatal collision) involving a goods vehicle (>3.5 tonnes) in five years
Low	Road Links and Road Junctions: 3-4 collisions in five years (with up to one serious collision and no fatal collisions) in five years	Road Links and Road Junctions: 1-2 serious collisions (with no fatal collisions) involving a goods vehicle (>3.5 tonnes) in five years
Very Low	Road Links and Road Junctions: Fewer than three collisions (with no serious or fatal collisions) in five years	Road Links and Road Junctions: No serious or fatal collisions involving a goods vehicle (>3.5 tonnes) in five years

14.7.18 The collision rate for road links will be calculated and compared with national road safety statistics provided within Road Casualties for Great Britain (Ref 14-15). Receptors which recorded collision rates much higher than the national average would be subjected to a manual review to determine whether their sensitivity value requires adjustment.

Magnitude

14.7.19 As identified within the 2023 IEMA guidelines, the magnitude of each impact represents the level of change from the baseline conditions.

14.7.20 The overall effect will be determined by measuring the magnitude of the impact following implementation of embedded and additional mitigation measures (where applicable) against criteria including the type and sensitivity of the

receptor and the type of impact. Effects are defined as beneficial or adverse, with effects further defined using the following classifications:

- **Very Slight** - very little change approximating to a no change situation;
- **Slight** - slight, very short, or highly localised impact of no significant consequence;
- **Moderate** - limited impact (by extent, duration or magnitude) which may be considered significant; and
- **Substantial** - considerable impact (by extent, duration or magnitude) of more than local significance, or in breach of recognised acceptability, legislation, policy or standards.

14.7.21 IEMA (Ref 14-13) sets out a number of criteria by which the magnitude of each impact represents the level of change from the baseline conditions. Many of the criteria do not provide specific thresholds by which such impacts can be assessed, and as a result will be measured qualitatively where necessary. These are described in the following paragraphs.

14.7.22 **Severance** is defined in the IEMA guidelines as the *"perceived division that can occur within a community when it becomes separated by major traffic infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure"*. Severance can also be caused by a full closure of a highway, leading to a requirement for road users to take alternative routes to their destinations. The guidelines state that changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. However, caution should be observed when applying these thresholds to very low baseline flows which are unlikely to experience severance impacts even with high percentage changes in traffic.

14.7.23 **Pedestrian Delay** (incorporating delay to all non-motorised users) is considered to be affected by the changes in volume, composition or speed of traffic, in terms of their respective impacts on the ability of pedestrians to cross roads. The assessment of pedestrian delay serves as a proxy for the delay that other modes of non-motorised users may experience when crossing roads. In general, increases in traffic levels and/or traffic speeds are likely to lead to greater increases in pedestrian delay.

14.7.24 **Non-Motorised User Amenity** is broadly defined *as "the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic".* The guidance suggests that a tentative threshold for judging the significance of changes in non-motorised user amenity would be where the traffic flow (or HGV component) is halved or doubled.

14.7.25 **Fear and Intimidation** occurs through a combination of traffic flow, speed, proportion of HGVs and the proximity of traffic to people. These indicators are often heightened by a perceived lack of protection or buffers from the highway or through narrow or non-existent footways. The assessment considers each road on a case-by-case basis, however there are thresholds provided in the 2023 IEMA guidelines which is further summarised in **Table 14-5**.

14.7.26 **Driver Delay** is an effect cited in the 2023 IEMA guidance and relates to incremental increases in traffic (as outlined in **Table 14-4**). However, traffic delays are only likely to be significant when the traffic on the network surrounding the Scheme is already at, or close to, the capacity of the system. As a further consideration, where any temporary road closures or traffic management is likely to be in place to enable the construction of the Scheme, any additional potential delay caused by these resultant diversion routes will be reported.

14.7.27 **Road Safety** considers Personal Injury Collision (PIC) data obtained for the most recent five-year period available at junctions and links along the proposed construction traffic routes. The sensitivity of discrete areas of the highway network can then be determined following a detailed review of the baseline characteristics including the collision rate and any collision clusters. This has been used to assess whether the additional traffic during construction of the Scheme would be likely to have a detrimental effect on road safety.

14.7.28 With regard to **Hazardous/Large Loads**, the guidance states that the transportation of dangerous or hazardous loads by road should be recognised including specialist loads that might be involved in the construction phase of the Scheme. Where the number of movements is considered to be significant, risk or catastrophe analysis should be carried out to illustrate the potential for an accident and the likely effect of such an effect. Appropriate routes for abnormal load movements should be considered, with mitigation strategies to secure safe passage. As part of the Scheme, there will be the requirement for abnormal loads which are categorised as Large Loads.

14.7.29 In view of the above, the impacts of Hazardous/Large Loads will be considered, in the form of a qualitative risk assessment to establish the likelihood and extent of such effects. The projected impacts of the Scheme will be measured separately, dependent upon the receptor, for the construction period. The Outline CTMP, which will be prepared at ES stage, will include details of measures that will be employed to support the safe transport of components to and from the Scheme.

14.7.30 **PRoW Diversions and Closures** will be considered on the basis of the type of impact i.e. whether a temporary PRoW closure or diversion is proposed, as well as any increases in pedestrian journey length following a closure/diversion and how long any potential disruption to an existing route would occur for. The assessment will consider indicative thresholds derived based on professional experience.

14.7.31 The following magnitude of change with respect to severance, pedestrian delay and non-motorised user amenity across PRoW receptors, which are not affected by changes in traffic flows but may be impacted during the construction phase, has been applied:

- **Very Low**: Up to one temporary localised diversion/ crossing points and/ or one proposed management;
- **Low**: One temporary localised diversion/ crossing points and/ or up to two proposed managements;
- **Medium**: Two temporary localised diversion/ crossing points and/or two or more proposed managements; and

- **High**: Three or more temporary localised diversions/ crossing points and/ or three or more proposed managements. Temporary closure of any PRoW without diversion provided.

14.7.32 **Table 14-4** and **Table 14-5** summarise the criteria that will be considered to assess the magnitude of effect (based on increases i.e. 'adverse' effects), along with the thresholds that will be used to determine whether effects are considered high, medium, low or very low. Depending on the baseline information available, the various thresholds identified for the proportional increases in traffic flow relate to daily flows. Within these tables, neither the sensitivity of receptors, nor the duration of effects, is taken into consideration. These tables have been formed using the 2023 IEMA Guidelines and professional experience in order to build on the information presented by the guidelines to allow a more thorough assessment to be carried out.

14.7.33 In terms of magnitude of change for receptors, a very low magnitude of change has been assigned where there is expected to be fewer than 30 additional vehicle trips per hour during each of the development peak hours as a result of the Scheme, irrespective of the proportional increase in traffic flows. This is designed to avoid over-reporting impacts in areas where baseline traffic flows are very low and is in line with the IEMA Guidelines which states that caution should be observed when applying thresholds to very low baseline flows given that these are unlikely to experience impacts even with high percentage changes in traffic.

Table 14-4: Magnitude Criteria for Transport and Access (All Assessment Criteria)

Impact	Very Low	Low	Medium	High
Severance	Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).	Increase in total traffic flows of 30-59% (or increase in HGV flows of 10-39%).	Increase in total traffic flows of 60-89% (or increase in HGV flows of 40-89%).	Increase in total traffic flows or HGV flows of 90% and above.
Pedestrian Delay	The severity of the impact will be determined based on the thresholds identified above for severance.			
Non-Motorised User Amenity	Increase in total traffic flows of below 50%.	Increase in total traffic flows of 50-69%.	Increase in total traffic flows of 70-99%.	Increase in total traffic flows of 100% or above.
Fear and Intimidation	No change in degree of hazard level for daily traffic flows, HGV flows and vehicle speeds (see **Table 14-5** below).	One step change in degree of hazard level (see **Table 14-5** below), but with <400 daily vehicle increase or <500 daily HGV increase.	One step change in degree of hazard level (see **Table 14-5** below), but with >400 daily vehicle increase or >500 daily HGV increase.	Two step changes in degree of hazard level based on the degree of hazard scores for daily traffic flows, HGV flows and vehicle speeds (see **Table 14-5** below).
Driver Delay	Increase in total traffic flows of below 30%.	Increase in total traffic flows of 30-59%.	Increase in total traffic flows of 60-89%.	Increase in total traffic flows of 90% and above.
Road Safety	Increase in total traffic flows of below 30% (or increase in HGV flows of below 10%).	All links estimated to experience increases in total traffic flows of at least 30% or increases in HGV flows of at least 10% are analysed further on a case-by-case basis.		
Hazardous/Large Loads	Based on the probability of a personal injury accident, categorised as fatal or serious, involving a hazardous/large load, occurring.			

14.7.34 Additional details relating to Fear and Intimidation, in terms of calculating magnitude of impact based on the 2023 IEMA guidelines, are provided in **Table 14-5** below.

Table 14-5: Additional Magnitude Criteria for Fear and Intimidation

Criteria	Degree of Hazard			
	Small	Moderate	Great	Extreme
A) Average Hourly Traffic Flow	<600 (0)	600-1,200 (10)	1,200-1,800 (20)	>1,800 (30)
B) Daily HGV Flow	<1,000 (0)	1,000-2,000 (10)	2,000-3,000 (20)	>3,000 (30)
C) Average Speed	<20mph (0)	20-30mph (10)	30-40mph (20)	>40mph (30)
Total Score (A+B+C)	0-20	21-40	41-70	71+

14.7.35 **Table 14-4** and **Table 14-5** above set out the proposed magnitude thresholds for the respective environmental effects that will be considered in the assessment undertaken as part of the PEIR/ ES stage. All effects have a proposed magnitude that does not, initially, consider the duration over which an effect is likely to be experienced.

14.7.36 Duration is considered when assessing the overall significance of residual effects, noting that the Design Manual for Roads and Bridges (DMRB) Volume 11 Section 2 Part 5 states in Paragraph 1.47:

"Recognition should be made that permanent impacts will be more significant than those of a temporary nature. For example, the impact may only occur during a single phase of the project construction and may be temporary. Alternatively, the impact may be long-term or irreversible and hence permanent. It is, therefore, important that the assessment distinguishes between permanent and temporary impacts".

14.7.37 All the Transport and Access effects associated with the construction phase of the Scheme would be temporary effects.

Significance of Effects

14.7.38 The general approach adopted for evaluating the significance of effects considering the sensitivity of the receptor and the magnitude of change is outlined in **Table 14-6** below. Effects predicted to be 'major' or 'moderate' are considered significant whilst effects predicted to be 'minor' or 'negligible' are considered not significant. Effects which are classified as major or moderate are considered to be significant (shown in bold).

Table 14-6: Significance of Effects Matrix (Transport and Access)

Sensitivity or Value of Resource/ Receptor	Magnitude of Change			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Very Low	Minor	Negligible	Negligible	Negligible

14.8 Limitations and Assumptions

14.8.1 At this stage the exact extent of the Study Area cannot be confirmed in terms of traffic and transport, as detailed discussions have not yet taken place with the respective Highway Authorities. The area proposed as part of this EIA Scoping Report is determined by AECOM's understanding of the highway network and where the likely impacts will be. However, it is anticipated that this will be formally agreed with KCC and NH. Any additional assessment scope required will be assessed as part of both the PEIR and the ES.

14.9 Summary of Elements Scoped In and Scoped Out

14.9.1 A summary of the elements scoped into and out of the Transport and Access are presented in **Table 14-7**.

Table 14-7: Elements scoped in and scoped out of the assessment of Transport and Access

Element	Scoped In/ Scoped Out
Impact of the Construction phase of the Site	Scoped In: Assessing the total traffic increase during the Construction phase. The temporary increase in traffic could have potentially significant impacts.
Severance (Construction phase)	Scoped In: The temporary increase in traffic could generate potentially significant impacts on severance.
Driver Delay (Construction phase)	Scoped In: The temporary increase in traffic could have potentially significant impacts on driver delay.
Pedestrian Delay (Construction phase)	Scoped In: The temporary increase in traffic could have potentially significant impacts on pedestrian delay.
Non-motorised users amenity (Construction phase)	Scoped In: The temporary increase in traffic could have potentially significant impacts on pedestrian and cyclist amenities.
Fear and Intimidation (Construction phase)	Scoped In: The temporary increase in traffic could have potentially significant impacts on fear and intimidation.
Road Safety (Construction phase)	Scoped In: The temporary increase in traffic could have potentially significant impacts on road safety.
Assessment of AILs (Abnormal Indivisible Loads)	Scoped In: An assessment of the AIL routing to/ from the Site will be undertaken to review the suitability of the network in the vicinity of the Scheme.
Impact of the Decommissioning phase of the Site	Scoped Out: Future traffic flows are uncertain, and the impacts of the decommissioning phase are expected to be no greater than those during the construction phase. It can therefore be confidently concluded that the magnitude of effects will be the same or less than those already determined for

Element	Scoped In/ Scoped Out
	the construction phase. The conclusions of effects will be presented in the PEIR and ES and will state that the significant of effect will be the same or less than the construction phase.
Hazardous/Large Loads (during the Construction, Operation and Decommissioning Phase)	Scoped Out: There are no nearby road features which suggest that the transfer of materials poses a risk beyond that which would be expected on the general highway network.
Impact of the Operational phase of the Site	Scoped Out: The trips associated with the Operational phase of the Scheme are expected to be nominal and therefore not result in significant impact.
Assessment of the Interconnecting Cable Corridors and Grid Connection Route	Scoped In: These will be proportionately assessed when the exact routes for the Scheme are identified.

15. Water Environment

15.1 Introduction

15.1.1 This chapter relates to the potential effects of the Scheme on the water environment, which includes surface water features (e.g. rivers, streams, lakes, ponds, ditches and canals) and groundwater bodies. Impacts considered cover water quality, water resources, physical changes to hydromorphology and the function of water environment systems, flood risk and drainage. This scoping chapter considers the scope for mitigation, and how it is proposed to assess the significance of any identified potential effects.

15.1.2 Where designated ecological sites are sensitive to changes in hydrology or water quality (i.e. where they are 'water dependent') an assessment of the risks to them is considered in this chapter. However, potential impacts from contaminated land on any controlled water (surface or groundwater) is covered in **Chapter 16: Other Environmental Topics** (Ground Conditions) of this EIA Scoping Report.

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

- **Figure 15-1: Surface Water Features and their Attributes;**
- **Figure 15-2: Groundwater Features and their Attributes;**
- **Figure 15-3: Fluvial Flood Risk;**
- **Figure 15-4: Surface Water Flood Risk;** and
- **Appendix H: Water Framework Directive Screening Assessment.**

15.2 Study Area

15.2.1 A Study Area of 1 km from the Site boundary (including the Energy Park Site, Interconnecting Cable Corridor Search Area and Grid Connection Route) has been considered in order to identify water features that could reasonably be affected by the Scheme. This Study Area is illustrated on **Figure 15-1: Surface Water Features and their Attributes, Figure 15-2: Groundwater Features and their Attributes, Figure 15-3: Fluvial Flood Risk,** and **Figure 15-4: Surface Water Flood Risk.**

15.2.2 The 1 km Study Area is based on professional judgment and is an accepted distance for a Water Environment and Flood Risk Study Area for schemes of this type. However, given that water quality and flood impacts may propagate downstream, where relevant the assessment also considers a wider Study Area to as far downstream as a potential impact may influence the quality or quantity of the water body (which in this case is typically for a few kilometres). Professional judgement has been applied to identify the extent to which such features are considered. In this case the final receptor would be the English Channel (i.e. the Water Framework Directive (WFD) designated Kent South coastal water body), which is located approximately 1.6 km downstream of the Energy Park Site boundary (via Marshland Sewer).

15.2.3 It should be noted that the Grid Connection Route and Interconnecting Cable Corridors will only contain temporary construction works and then permanent buried cables during operation of the Scheme.

15.3 Legislation, Planning Policy Context and Guidance

Legislation

15.3.1 The main legislation which is relevant to this assessment includes:

- Environment Act 2021 (Ref 15-1): enables better environmental protection to be included into law, includes new binding targets for water, which when set will need to be considered by a new development that may affect the water environment. Specifically, Section 5, titled "Water," outlines requirements for water resources, drought management, and drainage. It also includes provisions for storm overflow reporting and water quality monitoring, the regulation of water and sewerage undertakers, requirements related to water abstractions, chemical water quality status for both surface water and groundwater, and land drainage.
- Water Act 2014 (Ref 15-2): enables better environmental protection to be included into law, and includes binding targets for water. This includes, but not limited to, water supply and sewerage licensing; regulation of the water industry; flood insurance; and environmental regulation.
- Floods and Water Management Act 2010 (Ref 15-3): requires flood management authorities to manage risks in connection with flooding and to prepare Strategic Flood Risk Assessments, which new development must take into account;
- Marine and Coastal Access Act 2009 (Ref 15-4): introduces a revised system of marine management. Includes requirements for new development to obtain a Marine Licence from the Marine Management Organisation for works below Mean High Water Spring Tide;
- Land Drainage Act 1991 (as amended) (Ref 15-5) sets out the functions of internal drainage boards and local authorities (as Lead Local Flood Authority) in relation to land drainage of ordinary watercourses. New development wanting to do works that may affect the flow in ordinary watercourse may require a consent from the relevant authority);
- Environmental Protection Act 1990 (Ref 15-6): brings together pollution prevention and disposal regulations, imposes a duty of care on those involved with any waste stream;
- Water Resources Act 1991 (as amended) (Ref 15-7): regulates water resources, water quality and pollution and flood defences, which new developments may need to take into account;

- Salmon and Freshwater Fisheries Act 1975 (as amended) (Ref 15-8): sets out protection for migration routes of salmon and trout;
- Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 15-9): implements the EU Water Framework Directive (WFD) in England and Wales requiring new development to not cause deterioration or prevent the improvement of WFD water bodies;
- Environmental Damage (Prevention and Remediation) Regulations 2017 (as amended) (Ref 15-10): aims to prevent and remediate damage to the environment;
- Environmental Permitting (England and Wales) Regulations 2016, as amended 2018 (Ref 15-11): aims to streamline the legislative system for activities in England and Wales including those for construction activities which may pose an alteration of flood risk. New developments that may need to undertake works to a Main River or discharge unclean water, trade or process effluent into a controlled water may need to apply for a permit;
- Building Regulations 2010 (Ref 15-12), Document Part H: Drainage and Waste Disposal (2010): includes details of foul water drainage requirements both above and below ground;
- Eels (England and Wales) Regulation 2009 (Ref 15-13): gives powers to the regulators to implement recovery measures in all freshwater and estuarine waters in England and Wales and for which new developments that could impact eels should take into account;
- Control of Pollution (Oil Storage) (England) Regulations 2001 (Ref 15-14): sets out the requirements for the storage of oil for quantities over 200 litres, which is relevant to any development that may involve the storage of oil during construction or operation;
- The Water Resources Act (Amendment) (England and Wales) Regulations 2009 (Ref 15-15): regulates water resources, water quality and pollution and flood defence and should be taken into account where necessary by any new development;
- The Control of Substances Hazardous to Health (Amendment) Regulations 2004 (Ref 15-16): requirements to control and manage risks from hazardous substances, such as may be used on construction sites or as part of the operation of new developments;
- The Anti-Pollution Works Regulations 1999 (Ref 15-17): outlines the contents of any-pollution works notices served under the Water Resources Act 1991; and
- The Water Framework Directive (WFD) (Standards and Classification) Directions 2015 (Ref 15-18): includes directions for classification of surface water and groundwater bodies for which new developments must consider as part of any WFD Assessment.

National Planning Policy and Other Policies

15.3.2 The following planning policies have been considered as part of defining the water environment, drainage and flood risk assessment methodology, receptor selection, receptor importance and sensitivity, potential significant environmental effects, and scope for mitigation:

- Overarching National Policy Statement (NPS) for Energy EN-1 (Ref 15-19) with particular reference to Section 5.8 Flood Risk and Section 5.16 Water Quality and Resources. The Secretary of State needs to satisfy themselves that a development proposal has regard to the River Basin Management Plans and meets the requirement of Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (including regulation 19).
- Section 5.8 of NPS EN-1 (Ref 15-19) states that a site-specific flood risk assessment should be provided for all energy projects in Flood Zones 2 and 3. For Flood Zone 1, an assessment is required where the site is greater than 1 ha, as is the case with regard to the Scheme. Details of the contents required within the flood risk assessment are detailed in paragraph 5.8.15. The use of mitigation for surface water runoff should include the use of Sustainable Drainage Systems (SuDS) as detailed in paragraph 5.8.25. NPS EN-1 (Ref 15-19) also includes a section on water quality and resources, namely Section 5.16. This states that applications need to undertake assessment of the existing status of water quality/ resources/ physical characteristics of the water environment;
- The NPS for Renewable Energy Infrastructure EN-3 (Ref 15-20) highlights the importance of considering potential impacts on water quality, water resources and flood risk, considering climate change. Of particular note are paragraphs 2.10.84 to 2.10.88 which contain the requirement that where access tracks are needed, permeable tracks should be used, and localised SuDS should be used to control runoff. In addition, it states that culverting existing watercourses/ drainage ditches should be avoided. When this is unavoidable, it should be demonstrated that no reasonable alternatives exist and where necessary it will only be for the construction period;
- The NPS for Electricity Networks EN-5 (Ref 15-21) sets out the generic considerations that applications and the Secretary of State should take into account in order the ensure that electricity networks infrastructure is resilient to the effects of climate change, particularly with regard to flood risk. The NPS reiterates that major developments should incorporate SuDS unless there is clear evidence that this would not be appropriate; and
- The National Planning Policy Framework (NPPF) (Ref 15-22) sets out the Government's planning policies for England and how these are expected

to be applied. Paragraph 5 outlines that while the Framework does not contain specific policies for Nationally Significant Infrastructure Projects (NSIPs), the NPPF is still relevant when considering the determination of DCOs. As a result, the EIA is taking the NPPF into account. Of particular relevance is Section 14 Meeting the challenge of climate change, flooding and coastal change, and Section 15 Conserving and enhancing the natural environment.

15.3.3 Consideration will also be given to:

- UK Government Environmental Improvement Plan 2023 (Ref 15-23) – this is the first revision of the 25 Year Improvement Plan. Ten goals were set out by the original plan and the 2023 iteration reviewed the progress made against each goal, specific targets and commitments and the plan to continue to deliver these goals. One of these specific goals is improving water environmental quality. Defra's goals for the forthcoming period include to tackle nutrient pollution, including by upgrading 160 wastewater treatment works by 2027 and providing increased advice and incentives to support a shift to sustainable agricultural techniques, restore 400 miles of river through the first round of Landscape Recovery projects, establish 3,000 hectares of new woodlands along England's rivers, roll out water efficiency labelling across appliances and ensure water companies deliver a 50% reduction in leakages by 2050;
- UK Government's Plan for Water: Our Integrated Approach to Delivery Clean and Plentiful Water 2023 (Ref 15-24) – the plan includes for more investments, tighter regulation and effective enforcement in order to transform and integrate the water system, address sources of pollution and boost water supply. As well as setting new legally binding targets to significantly reduce pollution from farming, wastewater, and abandoned metal mines, the UK Government has also initiated a significant investment in water infrastructure improvements. Further actions are listed within the plan to address multiple sources of pollution impacting water bodies.
- UK Government's 25 Year Environment Plan (Ref 15-25) - with regards to the water environment, the Plan includes specific goals to reduce the environmental impact of water abstraction, meet the objectives of River Basin Management Plans under the WFD, reduce leakage from water mains, improve the quality of bathing waters, restore protected freshwater sites to a favourable condition, and do more to protect communities and businesses from the impact of flooding, coastal erosion and drought;
- The UK Government's Future Water Strategy (2011) (Ref 15-26) – this strategy set out the Government's long-term vision for water and the framework for water management in England. It aims to permit the supply of secured water supplies whilst ensuring an improved and protected

water environment. Future Water brings together the issues of water demand, water supply, water quality in the natural environment, surface water drainage and river/coastal flooding into a single coherent long-term strategy, in the context of the need to reduce greenhouse gas emissions.

- Non-statutory technical standards for SuDS[1] (Ref 15-27) - includes information on volume and peak flow control in relation to mitigation of flood risk; and
- Building Research Establishment (BRE) Digest 365: Soakaway Design and Sewers for Adoption (7th Edition, 2012) (Ref 15-28) - design and construction procedures for soakaways.

National Guidance

15.3.4 The National Planning Policy Guidance (NPPG) (Ref 15-29) provides guidance for local planning authorities on assessing the significance of water environment effects of proposed developments. The NPPG was updated in 2023. The NPPG for Flood Risk advises on how to take account of and address the risks associated with flooding and costal change in the planning process.

15.3.5 It outlines several key steps to be followed which are designed to ensure that if there are better sites in terms of flood risk, or if a proposed development cannot be made safe, it should not be permitted. These steps include: assess flood risk; avoid flood risk; and manage and mitigate flood risk. The guidance states that developers and applicants need to consider flood risk to and from the development site and it is likely to be in their own best interests to do this as early as possible. In addition, the guidance provides detail on the application of the Sequential Test and the Exception Test.

15.3.6 The Environment Agency (EA) provides its current guidance/ position statements on the approach to protection of groundwater. This includes: Position Statement A (Risk Based Approach); Position Statement B (Protection of Water Intended for Human Consumption), Position Statement G (Discharge of Liquid Effluents into the Ground); and Position Statement N (Groundwater Resources and Abstraction) (Ref 15-31).

Local Planning Policy

15.3.7 At a regional level, water management is coordinated through 10 River Basin Management Plans (RBMPs). Each RBMP is prepared by the Environment Agency for six-year cycles and set out how organisations, stakeholders and communities will work together to improve the water environment.

15.3.8 The water bodies within the Study Area fall within the South East RBMP (Ref 15-32). The most recent plan was published in December 2022 and will be reviewed and updated again by December 2027. These set legally binding locally specific environmental objectives and contain the current WFD status of

[1] Note that these standards are in the process of being updated by the Department for Environment, Farming and Rural Affairs (DEFRA).

the water bodies in the area. More information on these is included in the baseline conditions section of this chapter.

15.3.9 The Scheme lies within the administrative areas of Ashford Borough Council and Folkestone and Hythe District Council. The following local planning documents are of relevance to the water environment, drainage and flood risk:

- Ashford Local Plan 2030 - Adopted February 2019 (Ref 15-33). Relevant policies includes:

  - ENV6 Flood Risk – this policy indicates that proposals for new development should contribute to an overall flood risk reduction and that sequential and exception tests established by the NPPF will be adhered to across the Borough. Flood Risk Assessments (FRA) appropriate to the scale and nature of the development will be required and development that would harm the effectiveness of existing flood defences or prejudice their maintenance or management will not be permitted;
  - ENV8 Water Quality, Supply and Treatment – new development must be able to demonstrate that there are, or will be, adequate water supply and wastewater treatment facilities in place to serve the whole development. Schemes that would be likely to result in a reduction in the quality or quantity of groundwater resources will not be permitted. Where a site overlies a Groundwater Protection Zone an appropriate site investigation and risk assessment may be required to be undertaken in consultation with the Environment Agency prior to any grant of planning permission;
  - ENV9 Sustainable Drainage - All development should include appropriate sustainable drainage systems (SuDS) for the disposal of surface water, in order to avoid any increase in flood risk or adverse impact on water quality, and to mimic the drainage from the pre-developed site. On greenfield sites, development should discharge at a maximum of 4l/s/ha, or 10% below current greenfield rates for the existing 1:100 storm event, whichever is lower. There must be no increase in discharge rate from less severe rainfall events. In addition, appropriate pollution control measures should be included to ensure there are no adverse impacts on the water quality of receiving waters, both during construction and in operation;

- Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022 (Ref 15-34). Relevant policies include CSD5 Water and Coastal Environmental Management. This policy indicates that development should contribute to sustainable water resource management which maintains or improves the quality and quantity of surface and ground

water bodies, and where applicable, the quality of the coastal environment and bathing waters.

- Folkestone and Hythe District Council (2020) Places and Policies Local Plan (Ref 15-35). Relevant policy includes Policy CC3 Sustainable Drainage Systems (SuDS). This policy outlines requirements for development with regard to SuDS, including management of surface water close to its source, prioritising ecosystem services and multifunctional surface water management features, ensuring no discharge for rainfall up to 5mm, with appropriate treatment for run-off. Developments should align with Kent County Council's Drainage Policy and enhance nearby water bodies' hydromorphology and biodiversity. Additionally, hard surfaces should be permeable, and systems must be resilient to climate change impacts.
- Folkestone and Hythe District Green and Blue Infrastructure Strategy (2023) (Ref 15-36) which includes for protection of water resources, supporting actions to reduce water consumption; incorporating SuDS into developments and achieving good status for watercourses. The latter would include for improving fish passage, naturalising hard engineering of riverbanks, reducing silt and enrichment from agriculture and improving highway runoff.
- Ashford Borough Council Sustainable Drainage Supplementary Planning Document (SPD) adopted 2010 - sets out how developers can meet the requirement of the Local Plan 2030 Policy ENV9. Guidance is provided on the provision of sustainable drainage systems for the disposal of surface water and rainwater, so that it is retained either on-site or within the immediate area (Ref 15-37).
- Flood Risk to Communities – Shepway, produced by Kent County Council in 2017 (Ref 15-38) which provides information on the nature and magnitude of flood risk across the district, as well as the existing and proposed approaches to manage the risk identified.
- Rother and Romney Catchment Flood Management Plan (Ref 15-39) considers all types of flooding and sets policies for managing flood risk within the catchment. The policy that covers the Study Area is Policy 3: '*Areas of low to moderate flood risk where we are generally managing existing flood risk effectively.'*
- Shepway District Council Phase II Strategic Flood Risk Assessment (SFRA) (July 2015) (Ref 15-40) is available for the Study Area, and will be reviewed in full in the ES. The Shepway District Council SFRA (Ref 15-40) states that due to the presence of existing sea defences, flooding from the sea will generally result from a breach in defences or from wave overtopping. The latter being the mechanism that has caused localised flooding in the district in the past. It should be noted that the Flood Zone

mapping in the SFRA does not differentiate between Flood Zone 3a and Flood Zone 3b (functional floodplain).

15.3.10 The adopted local plan for Ashford Borough Council is being revised to provide guidance for development up to 2042. Statutory consultation on Ashford'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 expected Q3 2026.

15.3.11 Kent County Council adopted the Kent Minerals and Waste Local Plan 2024-2039 in March 2025 (Ref 15-41).

15.3.12 Revisions to these documents will be taken into account as the Scheme progresses.

15.4 Consultation

15.4.1 An initial consultation meeting was undertaken with the Environment Agency on 19th December 2024.This provided an introductory project overview and outlined the assessments to be undertaken with regard to the water environment and flood risk. Further consultation will be undertaken as the Scheme progresses.

15.4.2 A Freedom of Information Request will be submitted to the Environment Agency to obtain baseline information to inform the water environment, drainage and flood risk assessment. The request will include water quality, resources (pollution incidents), licenced and unlicenced (private) water abstractions, and water activity permits (i.e. consented discharges), hydrogeology (e.g. groundwater levels), WFD data and flooding data. The Local Planning Authorities will also be contacted for details of any private water supplies (PWS).

15.4.3 Consultation will be held with the Internal Drainage Board and LLFAs as the Scheme design progresses to ensure the ongoing water environment assessment has a robust scope and methodology.

15.5 Baseline Conditions

15.5.1 Baseline information has been reviewed in the context of the Scheme to identify the potential for significant water environment effects based on a source-pathway-receptor model and where relevant, consideration has been given to the scope for mitigation.

15.5.2 The water environment baseline conditions have been determined by a desk study of available information, and various online data sources including:

- British Geological Survey (BGS) Geoindex website (Ref 15-42);
- BGS Geology Viewer; BGS Geology Viewer (BETA) (Ref 15-43)
- DEFRA hydrology data explorer website (Ref 15-44)
- Environment Agency Public Registers website – Environmental Permitting Regulations – Discharges to water and groundwater (Ref 15-45);
- Environment Agency Catchment Data Explorer website (Ref 15-46);
- Environment Agency Water Quality Archive (Ref 15-47Ref 15-47);
- Environment Agency Online Interactive Maps:

- Flood map for planning (rivers and sea) (Ref 15-48, Ref 15-48);
- Risk of flooding from surface water (Ref 15-49, Ref 15-49);
- Risk of flooding from reservoirs (Ref 15-49, Ref 15-49); and
- Flood warning areas and risk (Ref 15-49, Ref 15-49);
- Statutory Main River Map (Ref 15-50, Ref 15-50).

- Internal Drainage Board Map (Ref 15-51, Ref 15-51);
- Multi Agency Geographical Information for the Countryside (MAGIC) map website (Ref 15-52, Ref 15-52);
- Meteorological Office website, UK Climate Averages (Ref 15-53, Ref 15-53);
- National Soil Resources Institute Soilscapes (1:250,000) website (Ref 15-54, Ref 15-54);
- National Library of Scotland Historical Imagery (Ref 15-55, Ref 15-55);
- Online Ordnance Survey (OS) online maps (Ref 15-56, Ref 15-56);
- OSM Landuse Landcover maps (Ref 15-57, Ref 15-57);
- South East RBMP (Ref 15-32, Ref 15-32); and
- United Kingdom Topographic map (Ref 15-58, Ref 15-58).

15.5.3 Where relevant, water features and their attributes have been presented in a series of figures that support this chapter. **Figure 15-1: Surface Water Features and their Attributes** presents details of the surface water environment, **Figure 15-2: Groundwater Features and their Attributes** the groundwater environment, **Figure 15-3: Fluvial Flood Risk** presents the Environment Agency flood zones (including the location of flood defences and areas benefitting from flood defences), whilst **Figure 15-4: Surface Water Flood Risk** presents surface water flood risk.

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

Topography, Land Use, Climate and Geology

15.5.5 This section sets out the topography, land use, climate and geology for the Study Area.

15.5.6 The topography across the Energy Park Site and the wider Study Area is relatively flat and consistent throughout, being below 10 m above ordnance datum (AOD) given its location wholly within Romney Marsh on the coastal fringe of the English Channel (Ref 15-58).

15.5.7 The Study Area is contained within land that is predominantly used for agriculture, mainly of an arable nature, with small patches of woodland,

grassland and isolated residences located across the area (Ref 15-57). The village of Newchurch is located within the Study Area, as well as the outskirts of the village of Dymchurch to the southeast of the Study Area.

15.5.8 Romney Marsh is partly below sea level and consists of reclaimed land which requires a complex drainage system to ensure suitability for agricultural use and prevention of flooding. There is a dense network of drains across the area, many known as 'sewers'. These drains are managed by the Romney Marsh Area Internal Drainage Board and Environment Agency. The drains can receive water for irrigation purposes from the Royal Military Canal when rainfall is low, with the canal being located immediately to the north of the Study Area (see **Figure 15-1**), or when water levels across the marsh are high, water can be discharged from the drains within the marsh via pumping stations back to the Royal Military Canal, or via a number of sluices and outfalls to the sea at St Mary's Bay.

15.5.9 Based on the Meteorological Office website (Ref 15-53), the nearest rainfall station is Dungeness B (NGR: TR0815116831; 5 mAOD) which is positioned approximately 15 km to the south of the Study Area. Using data from this weather station, for the period 1981 to 2010, it is estimated that the Study Area experiences approximately 705 mm of rainfall per year, with it raining more than 1 mm on approximately 115 days per year, which are both low in the UK context. This is relevant to the whole Study Area.

15.5.10 The bedrock and superficial geology for the Study Area is identified by the BGS GeoIndex online mapping (Ref 15-43). The Study Area is wholly underlain by the Tunbridge Wells Sand Formation, which comprises of sandstone, siltstone and silty sand rhythms with finely-bedded mudstones and thin limestones formed during the cretaceous period. The bedrock geology is overlain by Tidal Flat Deposits formed during the Quaternary period and comprised of unconsolidated sediment, mainly mud and/or sand, due to proximity to the sea and the tidal influence.

15.5.11 A review of the Study Area on the Soilscapes website (Ref 15-54) shows the area is underlain by loamy and clayey soils of coastal flats with naturally high groundwater.

Flood Risk from all Sources

15.5.12 Section 14 of the 2024 updated NPPF (Ref 15-22) and the 2022 Flood Risk and Coastal Change PPG (Ref 15-29) both advise how the planning process can take account of the risks associated with flooding. The main sources of flooding that are used to steer development at the planning stage are Main Rivers and the sea. The predicted flood risk from these sources is shown on the Environment Agency's Fluvial and Coastal Flood Map, also known as the Flood Map for Planning which outlines three main zones of risk as follows:

- **Flood Zone 1 'low probability of flooding':** This zone comprises land assessed as having a less than 1 in 1,000 chance of river or tidal flooding in any year (<0.1% annual exceedance probability (AEP);
- **Flood Zone 2 'medium probability of flooding':** This zone comprises land assessed as having between a 1 in 100 and 1 in 1,000 chance of

river flooding in any year (1% - 0.1% AEP), or between a 1 in 200 and 1 in 1,000 chance of tidal flooding in any year (0.5% - 0.1% AEP);

- **Flood Zone 3a 'high probability of flooding':** This zone comprises land assessed as having a 1 in 100 year or greater chance of river flooding in any year (>1% AEP), or a 1 in 200 year or greater chance of flooding from the sea in any year (0.5% AEP); and
- **Flood Zone 3b 'functional floodplain':** A sub-part of Flood Zone 3, this zone comprises of land having an annual probability of 1 in 30 (greater than 3.3% AEP) of flooding, with existing flood risk management features and structures operating effectively, or land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding). This zone is not usually included within the Environment Agency Flood Map for Planning (Ref 15-48) and is calculated where necessary during detailed hydraulic modelling.

15.5.13 The NPPF and Flood Risk and Coastal Change NPPG indicate what development is suitable within each Flood Zone based upon the level of vulnerability of the development which is shown in **Table 15-1**. The vulnerability classifications suggest the Scheme is considered to be 'Essential Infrastructure'.

Table 15-1: Flood Risk Vulnerability and Flood Zone Compatibility

Flood Risk Vulnerability Classification	Essential Infrastructure	Water Compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	✓	Exception Test Required	✓	✓
Zone 3a	Exception Test Required	✓	✗	Exception Test Required	✓
Zone 3b	Exception Test Required	✓	✗	✗	✗

15.5.14 In accordance with **Table 15-1**, the construction of Essential Infrastructure i.e. solar schemes, are permitted in Flood Zones 1, 2 and an Exception Test is required for Flood Zones 3a and 3b. As well as fluvial and tidal flooding, it is also necessary to consider flood risk from all other sources, including surface water, groundwater, Ordinary Watercourses, artificial drainage systems and infrastructure failure.

15.5.15 The flood risk for the Scheme from all sources is summarised in **Table 15-2**. **Figure 15-3: Fluvial Flood Risk** shows the flood zones associated with fluvial and tidal sources while **Figure 15-4: Surface Water Flood Risk** shows the risk from surface water.

Table 15-2: Baseline flood risk from all sources

Flood Risk Sources	Comments
Tidal	From a review of the Environment Agency's Flood Map for Planning, all areas of the Energy Park Site, as well as the Interconnecting Cable Corridor Search Area, are situated within Flood Zone 3 which is associated with flooding from the sea. It should be noted that all areas of the Site are situated within the Environment Agency's 'Reduction in Risk of Flooding from Rivers and Sea due to Defences' dataset, a spatial dataset that indicates where areas have reduced flood risk from river and sea due to the presence of flood defences. According to the Environment Agency's Asset Information and Management dataset (Ref 15-59), these consist of a series of flood walls situated along the coast. These flood defences were constructed as part of the High Knock Frontage Scheme, as well as the St Mary's Bay Sea Defence Scheme. The impact of flood defences is not considered within the Flood Map for Planning, and as a result data will be requested from the Environment Agency to confirm the tidal flood risk, including the relevant climate change allowances. This will be detailed within a site-specific Flood Risk Assessment (FRA).
Tidal – Residual Risk	There is a residual risk of tidal flooding to the Energy Park Site if the flood defences are breached. The Environment Agency will be contacted to request modelled breach results as part of a site-specific FRA.
Fluvial	The Energy Park Site is located within close proximity to 4 Main Rivers, namely Bilsington Sewer, Marshland Sewer, Clobsden Sewer, and Hoorne's Sewer, as well as 7 Ordinary Watercourses. A number of land drains are also located through the Site, which are regulated by the Romney Marshes Area internal drainage board (IDB). According to the Flood Map for Planning, all areas of the Site are situated within Flood Zone 3. The Flood Map for Planning does not specify whether the flood risk arises from tidal or fluvial sources, and instead shows a combined risk from both sources. As a result, the fluvial flood risk at this Site is currently unknown. Data will be requested from the Environment Agency, Kent County Council (as LLFA) and Romney Marshes Area IDB to confirm the fluvial risk from surrounding watercourses, which will be detailed within a site-specific FRA.
Surface Water	From a review of the Environment Agency's Long Term Flood Risk Map (Ref 15-49), the risk of surface water flooding within the 6 Sites, as well as the Interconnecting Cable Corridor Search Area, is generally very low to low. There are isolated areas at low, medium and high risk of flooding, however, these areas are likely associated with areas of low topography where surface water sits and pools rather than draining away, or show areas at risk of

Flood Risk Sources	Comments
	flooding from smaller Ordinary Watercourses and/or local land drains. High risk means that the area has a chance of flooding of greater than 3.3% each year, and medium risk means that the area has a chance of flooding of between 1% and 3.3% each year. Low risk means that the area has a chance of flooding of between 0.1% and 1% each year, and very low risk means that the area has a chance of flooding of less than 0.1% each year.
Groundwater	With regards to groundwater flood risk, the Shepway Phase II SFRA states that the whole of the Shepway district is located within a low risk area. It should be noted that the high level mapping used for this assessment does not take into account the more localised causes of groundwater flooding that can be associated with low-lying land.
Sewers	All areas of the Energy Park Site are located in rural areas, however where a plot is located adjacent to a highway/settlement there is potential for flooding from sewer sources. Southern Water and Kent County Council will be contacted for sewer flooding records at the ES stage.
Reservoirs	From a review of the Environment Agency's Long Term Flood Risk Map (Ref 15-49), the Energy Park Site is not located in an area expected to flood from reservoirs when river levels are normal, or when there is also flooding from rivers.

Surface Water Features

15.5.16 Surface Water Features in the Study Area are outlined in **Table 15-3**.

15.5.17 Main Rivers are defined according to criteria set under the Water Resources Act 1991 (Ref 15-15) as usually larger rivers and streams with a potentially significant flood risk associated with them. There are three Main Rivers within the Study Area (see **Figure 15-1**), for which the Environment Agency is the regulating authority for flood risk (Ref 15-56). All other watercourses are 'ordinary watercourses' managed by the Lead Local Flood Authority (LLFA) or Internal Drainage Boards (IDB).

Table 15-3: Surface Water Features within the Study Area or potentially impacted by the Scheme

Surface Water Feature	Description	Considered for Assessment?
Marshland Sewer	Main River: Marshland Sewer rises north of the Study Area at Aldington Frith (NGR TR 04153 36869), initially as an ordinary watercourse, and flows in a southerly direction. It is a designated Main River south of the Royal Military Canal. From here is flows initially in an easterly direction towards Gigger's Green Road, and then in a southeasterly direction, mainly alongside Eastbridge Road (partly within the Interconnecting Cable Corridor Search Area and partly adjacent to the Energy Park Site boundary) to discharge to Hoorne's Sewer at Dymchurch, which then discharges to St Mary's Bay. The ordinary watercourse and Main River sections of Marshland Sewer are approximately 12.5 km length overall.	**Yes** – flows alongside the Energy Park Site boundary and within the Interconnecting Cable Corridor Search Area, with pathways to potential impacts (hydrological connectivity)
Clobsden Sewer	Main River: Clobsden Sewer flows from the confluence of Bilsington Sewer and Sheaty Sewer at NGR TR 06702 29916 near Blackmanstone Bridge (southeast of Newchurch) in a southeasterly direction for approximately 4 km to flow into Hoorne's Sewer in High Knocke, and from there to the sea at St Mary's Bay	**Yes** – within Study Area with hydrological connectivity to the Scheme via drainage ditches / tributaries
Hoorne's Sewer	Main River: Hoorne's Sewer is a Main River from NGR TR 09494 31001 in the eastern extent of the Study Area to the south of Church Road. It flows in a southeasterly direction initially within the periphery of the Study Area, before changing course when it reaches the A259 at Dymchurch. From here it flows to the southwest, and ultimately to the sea at St Mary's Bay.	**Yes** – within Study Area with hydrological connectivity to the Scheme via drainage ditches / tributaries
Royal Military Canal	Main River: The Royal Military Canal lies just north of the Study Area. It is a WFD designated artificial water body (the 'Romney Marsh between Appledore and West Hythe Water Body', WFD ID GB107040019700) and flows from west to east for 21.8 km with a catchment of 51.9 km^2. It terminates at NGR TR 18828 34895 within the coastal town of Seabrook (Ref 15-50). There is also a Canal Cutting, which is part of the WFD designation, which flows south from West Hythe through Botolph's Bridge to	**Yes** – despite being slightly north of the Study Area, there is potential hydrological connectivity to the Scheme via drainage ditches / tributaries

Surface Water Feature	Description	Considered for Assessment?
	meet the sea at the eastern extent of Dymchurch. Further details regarding WFD classifications are provided later in the baseline.	
English Channel / St Mary's Bay	All watercourses in the Study Area ultimately flow to the English Channel. The coastal water body at St Mary's Bay is WFD designated as the Kent South Water Body (WFD ID GB640704540001), and this spans the Kent coast from Dungeness to Deal. Under the WFD, this coastal water body is classified as heavily modified and has a surface area of 247.95 km^2.	**No** – despite having potential hydrological connectivity to the Scheme, the distance downstream and its large scale (with significant dilution and dispersal potential) would rule out any significant impacts from the Scheme
Sedbrook Sewer	Ordinary Watercourse: Sedbrook Sewer is located between Snargate at NGR TQ 98695 29044, and the Royal Military Canal just south of Ruckinge, and has a generally southwest to northeast orientation and length of approximately 7 km. It passes through the northwest part of the Study Area but not within the Site boundary	**Yes** – within Study Area with hydrological connectivity to the Scheme via drainage ditches / tributaries
Wallsfoot Sewer	Ordinary Watercourse: Wallsfoot Sewer flows between the Royal Military Canal at NGR TR 03869 33813 and Sheaty Sewer, northwest of Newchurch. It is approximately 3.3 km in length and passes through the Energy Park Site boundary west of Newchurch;	**Yes** – within Energy Park Site boundary with pathways to potential impacts (hydrological connectivity)
Bilsington Sewer	Ordinary Watercourse: Bilsington Sewer appears to flow between Marshland Sewer (and Clobsden Sewer (both described above), passing through the Energy Park Site boundary to the east of Newchurch in a northwest-southeast direction, and has a length of approximately 2 km;	**Yes** – within Energy Park Site boundary with pathways to potential

Surface Water Feature	Description	Considered for Assessment?
		impacts (hydrological connectivity)
Eastbridge Sewer	Ordinary Watercourse: Eastbridge Sewer is mapped from approximate NGR TR 05870 33364 to the south of Marshland Sewer and 2 km northeast of Newchurch, and is orientated northwest to southeast for approximately 5.5 km where it meets Jefferstone Sewer and becomes Clobsden Sewer (NGR TR 08287 29150). It passes through the Interconnecting Cable Corridor Search Area boundary east of Newchurch	**Yes** – within the Interconnecting Cable Corridor Search Area with pathways to potential impacts (hydrological connectivity)
Jefferstone Sewer	Ordinary Watercourse: Jefferstone Sewer is mapped between NGR TR 08882 29878 at Marshall's Bridge and flows northeast to southwest to meet with New Sewer to the north of New Romney. It is located within the southern extent of study area but does not cross in the Site boundary	**Yes** – within Study Area with hydrological connectivity to the Scheme via drainage ditches / tributaries
Brenzett Sewer	Ordinary Watercourse: Brenzett Sewer flows from Abbatridge Sewer at Brenzett Green, outside of the Study Area to the west, and continues east for approximately 3.6 km east towards Milbank (west of Newchurch) where it meets Sheaty Sewer. It is located within the western extent of the Study Area but does not appear to cross into the Site boundary	**Yes** – within Study Area with hydrological connectivity to the Scheme via drainage ditches / tributaries
Sheaty Sewer	Ordinary Watercourse: Sheaty Sewer is mapped from two locations, firstly to the east of Newchurch where it flows from NGR TR 04066 30900 for approximately 2.8 km before joining Clobsden Sewer, and secondly from NGR TR 05629 29523 near Norwood Lane, from where it also flows towards Clobsden Sewer. Sheaty Sewer appears to flow along the southern Energy Park Site boundary to the southwest of Newchurch.	**Yes** – adjacent to Energy Park Site boundary with pathways to potential impacts (hydrological connectivity)

15.5.18 In addition to those water features listed in **Table 15-3**, there are numerous unnamed Ordinary Watercourses located throughout the Energy Park Site and the Study Area (see **Figure 15-1**).

15.5.19 From the desk study, there are no notable ponds, lakes or other lentic habitats identified within the Study Area, other than small agricultural ponds.

Hydromorphology

15.5.20 Across the Study Area and as described above, there is a network of drainage channels known as 'sewers' (see **Figure 15-1**). Based on aerial imagery, the watercourses appear artificial and heavily modified and are unlikely to have much hydromorphological value. This will be reviewed and confirmed based on a site walkover survey.

15.5.21 The Study Area is in the catchment of the WFD Water Body: Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) (Ref 15-46). The WFD designated watercourse is the Royal Military Canal that flows west to east for 21.8 km, terminating at NGR TR 18828 34895 within the coastal town of Seabrook and has a hydromorphological designation of artificial. The watercourse itself does not intersect the Study Area at any point (see **Figure 15-1**). However, given that the drains across the Study Area are subject to level management, when necessary, with water being discharged via pumping stations into the Royal Military Canal, the WFD water body should be considered as a potential receptor.

15.5.22 Superficial geology deposits show tidal flat deposits to be present across the entire WFD catchment where it is within the Study Area. The lack of alluvium deposits suggests watercourses across the Study Area are somewhat passive and unlikely to re-work or produce much coarse sediment (Ref 15-43).

15.5.23 Soils within the water body are loamy and clayey soils of coastal flats with naturally high groundwater and so are naturally wet and boggy and consistent with wet brackish coastal flood meadows. As such, the abundance of drains is to improve suitability for agriculture, and again suggests they are of limited hydromorphological variation or value.

15.5.24 Aside from the Royal Military Canal, there is also a pathway to the coastal WFD water body, Kent South (GB640704540001), from the Study Area via drainage ditches. This is a heavily modified coastal water body. Any potential impacts to the water body would be indirect, and given the distance downstream and its scale (with significant dilution and dispersal potential) it is considered that this water body can be scoped out of further assessment in terms of water quality. Furthermore, there would be no impact in terms of coastal dynamics, processes and morphological features.

15.5.25 A more thorough evaluation of the watercourses across the Study Area will be undertaken at the Preliminary Environmental Information (PEI) Report stage, with support from site walkover observations.

WFD Classification

15.5.26 The present (Cycle 3, 2019) WFD classifications of the potentially impacted WFD water bodies are given in **Table 15-4**, as identified within **Appendix H: Water Framework Directive Screening Assessment.**

15.5.27 There is also one WFD groundwater body, Kent Romney Marsh Water Body (GB40702G503900), which is discussed further under Hydrogeology and Groundwater.

Table 15-4: WFD Classification (2022 data) for WFD Surface Water Bodies Underlying the Study Area and Coastal Water Bodies Downstream.

Classification Item	Romney Marsh between Appledore and West Hythe Water Body	Kent South Water Body
Water Body ID	GB107040019700	GB640704540001
Hydromorphological designation	Artificial	Heavily Modified
Ecological	Moderate	Moderate
Biological quality elements	Good	Good
Physico-chemical quality elements	Moderate	Good
Hydromorphological Supporting Elements	Supports good	Not assessed
Hydrological Regime	Supports good	Not assessed
Supporting elements (Surface Water)	Moderate	Moderate
Mitigation Measures Assessment	Moderate or less	Moderate or less
Specific pollutants	High	High
Chemical	Does not require assessment	Does not require assessment
Priority hazardous substances	Does not require assessment	Does not require assessment
Priority substances	Does not require assessment	Does not require assessment
Other pollutants	Does not require assessment	Does not require assessment

15.5.28 The Catchment Data Explorer website (Ref 15-46) indicates that the reasons for the Romney Marsh between Appledore and West Hythe water body not

achieving Good status include physical modification, diffuse agricultural pollution (and rural land management issues), poor nutrient management, continuous sewage discharges and private sewage treatment.

15.5.29 The reasons for the Kent South coastal water body not achieving good status include physical modification and pollution by mercury and its compounds and Polybrominated diphenyl ethers (PBDE).

Water Quality

15.5.30 This section sets out the baseline water quality monitoring data that is publicly available pertaining to the Study Area.

15.5.31 Baseline water quality is accessible via the Environment Agency's Water Quality Archive website (Ref 15-47). There are no water quality monitoring stations within the Energy Park Site boundary and only one within the Study Area. However, there are several monitoring stations situated within 2 km of the Site. These are detailed within **Table 15-5**. Further analysis of the data would be undertaken to support the impact assessment at the PEI Report stage.

Table 15-5: Available water quality data within, and immediately, outside of the Study Area (Ref 15-47).

Watercourse	Sampling Point	ID	Comment	Summary
Marshland Sewer	Footbridge At Eastbridge Road	SO-E0007367	Within the Study Area, shortly north-west of Dymchurch at NGR TR 09785 29441.	Relatively new sampling point, 29 samples taken during 2024, testing for 19 determinands overall. testing for 19 microbial determinands. Intestinal *Enterococci* and *Escherichia coli* both fall within the Poor Bathing Water Quality standard (for inland or coastal waters).
Royal Military Canal	Bilsington	SO-E0001479	Outside of the Study Area but within 2 km of the Energy Park Site. Located south of Bilsington at NGR TR 04100 33900.	102 samples taken between 2000 and 2024, testing for 24 determinands overall. In 2024, pH averaged 7.7 indicating circum-neutral water and 10th percentile dissolved oxygen was 53.4% indicating Poor status against WFD standards (Ref 15-60). There is evidence of elevated nitrate and orthophosphate values, indicating probable pressure from agricultural pollution.
Royal Military Canal	Rmc At Bonnington	SO-RSN0857	Outside of the Study Area but within 2 km of the Energy Park Site. Located north-east of the Site at NGR TR 05730 34338.	12 samples taken during 2022, testing for 17 determinands overall. In 2024, pH averaged 8.03 indicating circum-neutral to slightly alkaline water and 10th percentile dissolved oxygen was 48.9% indicating Poor status against WFD standards (Ref 15-60). There is evidence of elevated nitrate and orthophosphate values, indicating probable pressure from agricultural pollution.
Hoorne's Sewer	Footbridge At Lyndhurst Road	SO-E0007368	Outside of the Study Area but within the 2 km of the Energy Park Site. Located north of Dymchurch at NGR TR 10076 29639.	Relatively new sampling point, 29 samples taken during 2024, testing for five microbial determinands overall. Intestinal *Enterococci* and *Escherichia coli* both fall within the Poor Bathing Water Quality standard (for inland or coastal waters).

Watercourse	Sampling Point	ID	Comment	Summary
Sluice at Dymchurch Road (the point in which flow from Marshland Sewer, Hoorne's Sewer and Clobsden Sewer meet, before flowing via a culvert under the A259 and through a sluice, into the Kent South coastal water body)	Sluice At Dymchurch Road	SO-E0007366	Outside of the Study Area but within the 2 km of the Energy Park Site and is the point that the above listed main rivers and several ordinary watercourses across the Study Area meet, before discharging to the sea. Located at Dymchurch at NGR TR 10021 29148.	Relatively new sampling point, 29 samples taken during 2024, testing for 19 microbial determinands. Intestinal *Enterococci* and *Escherichia coli* both fall within the Poor Bathing Water Quality standard (for inland or coastal waters).

15.5.32 Dymchurch is a designated Bathing Water (NGR TR 10262 28787). The most recent classification for Bathing Water Quality is Poor, based on samples taken from 2021 through to 2024, and so bathing is not advised. This is a reduction from Sufficient in 2023. The Study Area overlaps significantly with the surface water catchment for this Bathing Water, and the Romney Marsh river drainage, which includes sewage effluent and diffuse agricultural runoff, is considered the probable reason for water quality of a lower standard than required (Ref 15-61).

Water Resources

15.5.33 MAGIC Maps (Ref 15-52) indicates that there are no Drinking Water Protected Areas or Safeguard Areas for surface and groundwater within the Study Area. Similarly, there are no Nitrate Vulnerable Zones within the Study Area.

15.5.34 Groundwater Source Protection Zones (SPZs) are defined zones centred on groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution to the source and surrounding area. The closer the activity to the source, the greater the risk. The SPZs are subdivided into 3 Zones; where Zone 1 is the Inner Protection Zone, Zone 2 is the Outer Protection Zone and Zone 3 is the Total catchment. The Study site is not located within or near any SPZs (Ref 15-52).

15.5.35 Details of groundwater abstractions, licensed discharges and private water supplies within the Study Area are not known at this stage. This data will be requested from the Environment Agency and local authorities in order to support the impact assessment.

Internal Drainage Boards

15.5.36 The Study Area is contained wholly within one IDB, the Romney Marshes Area IDB. The IDB District covers the area in Kent and East Sussex broadly situated between Hythe to the east, Cliff End near Pett to the south, Heathfield to the west and Tenterden to the north (Ref 15-51).

Nature Conservation Sites

15.5.37 This section describes the statutory sites designated for nature conservation that are relevant to the water environment assessment. For further information relating to ecology, refer to **Chapter 8: Ecology and Nature Conservation.**

15.5.38 There are no water dependent designated sites for nature conservation sites identified through a review of MAGIC (Ref 15-52) within the Study Area.

15.5.39 The nearest sites designated for nature conservation are located approximately 2- 2.6 km south of the Energy Park Site boundary, and these are:

- Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI) - nationally important site due to diverse range of biological and geological features, specifically the coastal geomorphology of Dungeness and Rye Harbour and the following nationally important habitats: saltmarsh, sand dunes, vegetated shingle, saline lagoons, standing waters, lowland ditch systems, and basin fens (Ref 15-52);

- Dungeness Special Area of Conservation (SAC) – designated for its Annex I habitats (annual vegetation of drift lines and perennial vegetation of stony banks) and Annex II species (Great crested newt *Triturus cristatus*) (Ref 15-52);
- Dungeness, Romney Marsh and Rye Bay Ramsar site – designated because it contains representative, rare and/or unique examples of natural and near-natural wetland types. This includes annual vegetation of drift lines and the coastal fringes of perennial vegetation of stony banks, and natural shingle wetlands (saline lagoons, freshwater pits and basin fens) (Ref 15-52). They support rich and diverse assemblages of bryophytes, vascular plants and invertebrates that are rare, threatened, listed as priority species in the UK Biodiversity Action Plan (BAP) or specially protected under the Wildlife and Countryside Act 1981 (Ref 15-62).

15.5.40 The only hydrological pathway to these receptors would be via drainage from the Scheme to the sea (through the Kent South WFD coastal water body) and onward migration through the water body. However, given their distance from the Scheme and the dilution and dispersal potential in the coastal water body, it is considered that further assessment of these designated sites can be scoped out from a water environment perspective.

Hydrogeology and Groundwater

15.5.41 MAGIC Map (Ref 15-52) enables identification of aquifers associated with the bedrock and superficial deposits in the area as well as their vulnerability level. The Tunbridge Wells Sand Formation is classified by the Environment Agency as a Secondary A aquifer.

15.5.42 The overlying Tidal Flat Deposits are mostly classified as unproductive, however, there are small pockets surrounding the Study Area which are designated as Secondary A aquifer.

15.5.43 Secondary A aquifers comprise permeable layers that can support local water supplies and may form an important source of baseflow to rivers.

15.5.44 Groundwater vulnerability for the Study Area is generally low, however, there are small areas of medium to high vulnerability where the Tidal Flat Deposits are mapped as Secondary A aquifers in the Study Area.

15.5.45 The Environment Agency catchment data explorer (Ref 15-46) gives information of the WFD designated groundwater bodies associated with the Study Area. The Study Area lies within the South East (WFD groundwater) Management Catchment. The Kent Romney Marsh Water Body (WFD ID: GB40702G503900) which is within the South East Management Catchment underlies the entirety of the Study Area.

15.5.46 The Kent Romney Marsh Water Body (WFD ID: GB40702G503900) has an overall classification of Poor (Cycle 3, 2019), with all quantitative elements being Good. The overall chemical elements are Poor, with the chemical dependant water body status and chemical drinking water protected area classified as Poor, and chemical groundwater dependent terrestrial ecosystem (GWDTEs) test, chemical saline intrusion, and general chemical test classified

as Good. The reasons for not achieving good status are due to private sewage treatment from the domestic general public and poor nutrient, livestock and soil management from agriculture and rural land management. The water body has an overall objective of Good by 2040.

15.5.47 No site-specific ground investigation information is currently available at this stage, however a review of selected BGS borehole records (Ref 15-42) was undertaken. There are very few boreholes within and around the Study Area. Three BGS boreholes were mapped within the Study Area around Newchurch (TR03SE1, TR03SW1 and SW2) with further boreholes in the southeastern edge of the Study Area. No groundwater information was recorded in the boreholes in the central area. The shallow exploratory holes in the south eastern edge of the Study Area indicates the presence of shallow groundwater within the superficial deposits at 1.2m below ground level. High groundwater is therefore likely to be present particularly in the southeastern part of the Study Area.

Future Baseline

Surface Water

15.5.48 Two WFD surface water body catchments have been identified as potential downstream receptors. Romney Marsh between Appledore and West Hythe water body has an overall objective of maintaining Moderate Ecological Potential, while the Kent South coastal water body has an objective of achieving Good Status by 2027.

15.5.49 It is likely that through the action of new legislative requirements and ever more stringent planning policy and regulation, that the health of the water environment will improve post-2027. There are, however, significant challenges such as adapting to a changing climate and pressures of population growth that could have a retarding impact. It is also difficult to forecast these changes with any certainty.

15.5.50 Nonetheless, the methodology for determining receptor importance presented in Section 15.7 is largely based on the presence or absence of various attributes (e.g. Drinking Water Protected Area, designated nature conservation site or WFD designation) and flow (i.e. the size of the watercourse). The application of these criteria is therefore not sensitive to more subtle changes or improvements in water quality as may be experienced over time. Thus, no significant changes to current baseline conditions are predicted for the future baseline (for operation and decommissioning) in the absence of the Scheme, as the principal reasons for differences in water body importance are unlikely to change.

Groundwater

15.5.51 The Study Area is underlain by the Kent Romney Marsh groundwater water body. This water body has an objective of Good status by 2040. The importance level of the groundwater feature for the impact assessment would be based on SPZs, abstractions, and the aquifer status. Thus, an increase in WFD designation from Poor to Good would not change the importance attributed to the groundwater feature at this stage.

15.5.52 No significant changes to current baseline conditions (for operation and decommissioning) are predicted for the future baseline for the same reasons as outlined above for surface water.

Flood Risk

15.5.53 Climate change is predicted to alter both future fluvial and pluvial flood risk with changing rainfall intensity, and this will be accounted for within the Flood Risk Assessment for the Scheme. Climate change resilience will also be accounted for within the Surface Water Drainage Strategy, accommodating current government climate change projections.

Figure 15-1: Surface Water Features and their Attributes

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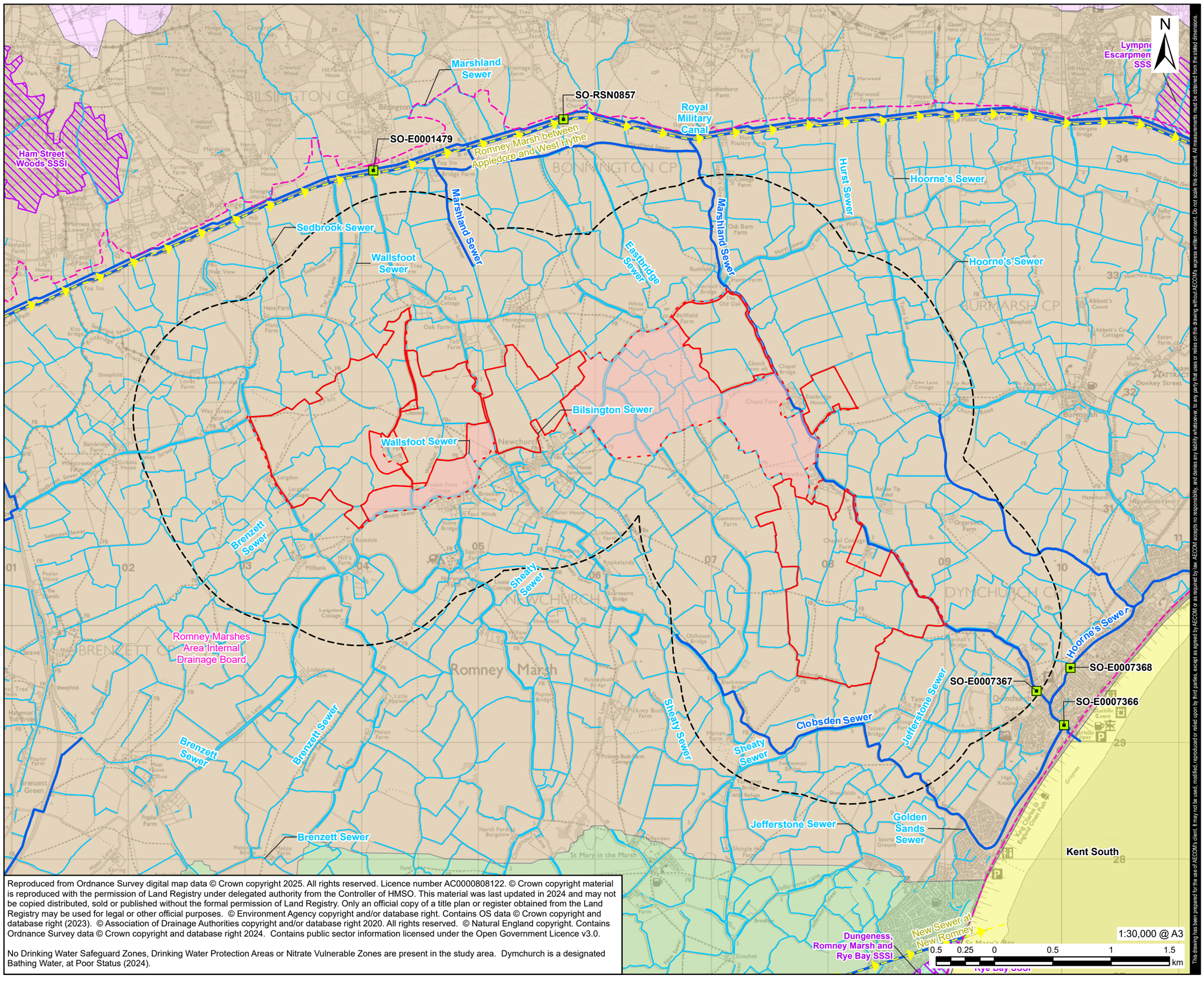

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No Drinking Water Safeguard Zones, Drinking Water Protection Areas or Nitrate Vulnerable Zones are present in the study area. Dymchurch is a designated Bathing Water, at Poor Status (2024).

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PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

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Midpoint,
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Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 1km Buffer of the Energy Park Site
- EA Water Quality Monitoring Station
- Main River
- Ordinary Watercourse
- Internal Drainage District
- Site of Special Scientific Interest (SSSI)

Water Framework Directive Surface Waterbody

- Moderate Ecological Status

Water Framework Directive Coastal Waterbody

- Moderate Ecological Status

Water Framework Directive River Waterbody Catchment

- Dengemarsh Sewer
- East Stour
- New Sewer at New Romney
- Romney Marsh between Appledore and West Hythe

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FIGURE TITLE

Surface Water Features and their Attributes

FIGURE NUMBER

Figure 15-1

Figure 15-2: Groundwater Features and their Attributes

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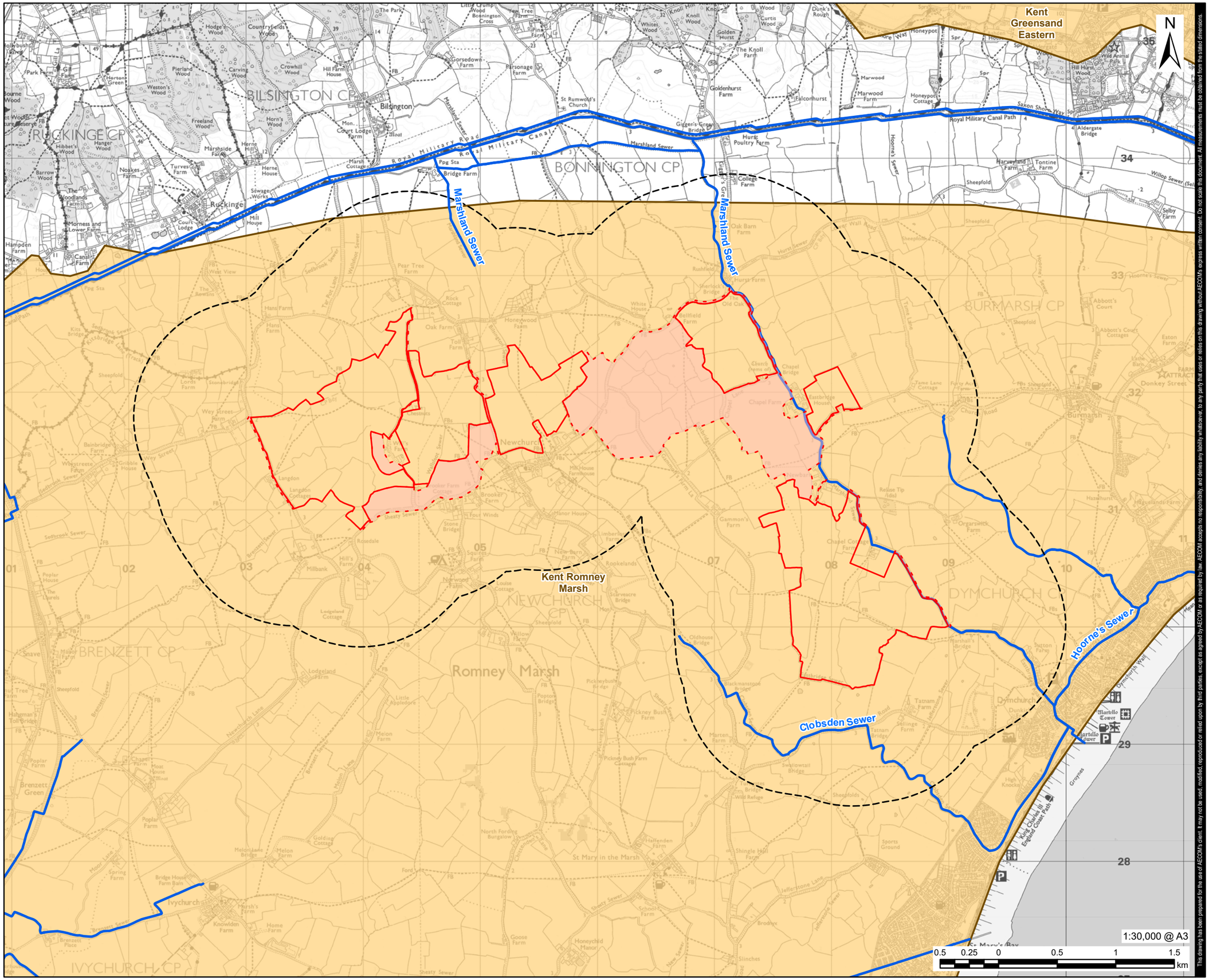

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 1km Buffer of the Energy Park Site
- Main River

Water Framework Directive Ground Waterbody

- Poor Overall Condition

NOTES

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There are no Source Protection Zones present in the study area.

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FIGURE TITLE

Groundwater Features and their Attributes

FIGURE NUMBER

Figure 15-2

Figure 15-3: Fluvial Flood Risk

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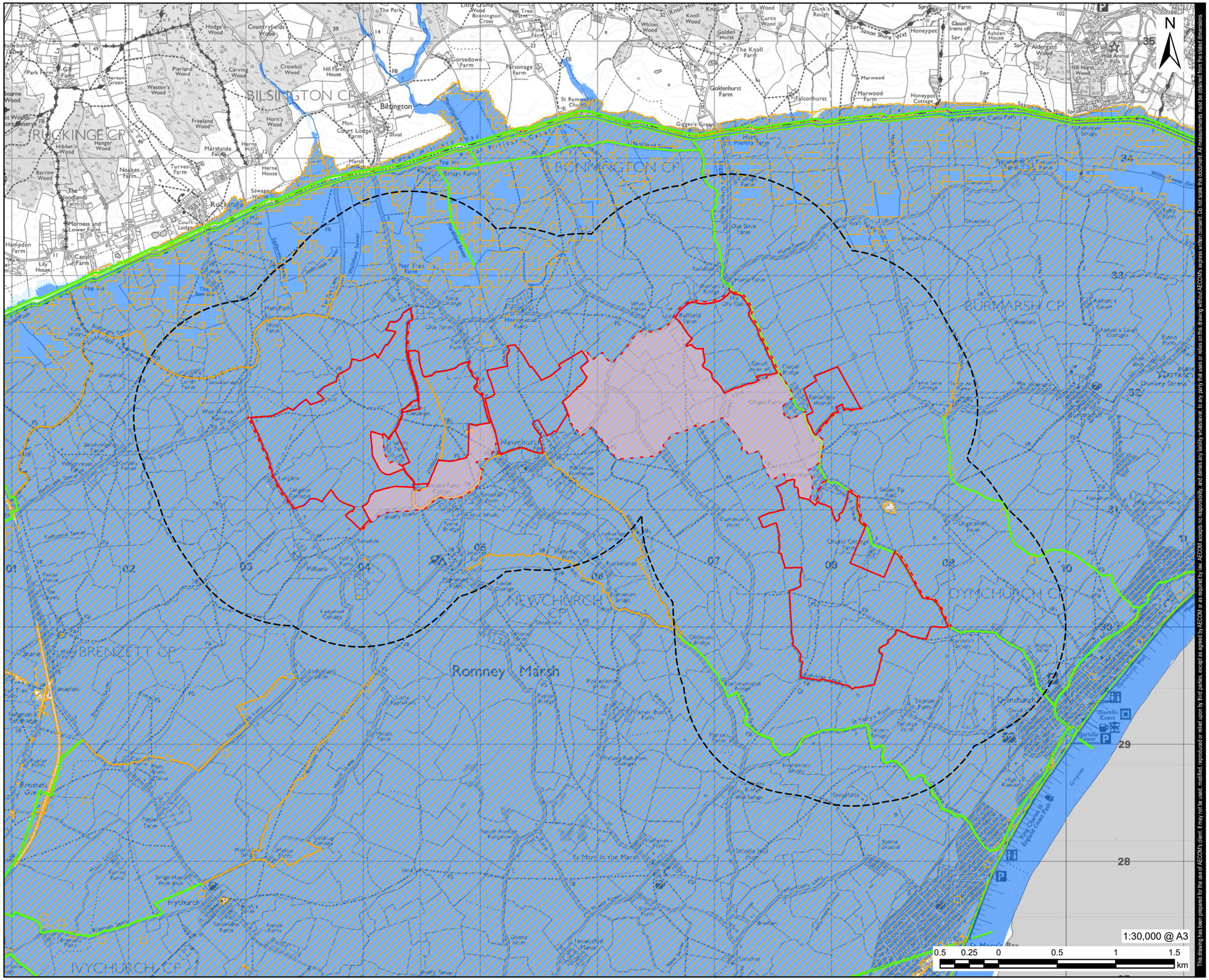

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 1km Buffer of the Energy Park Site
- Flood Defence
- Reduction in Risk of Flooding from Rivers and Sea due to Defences
- Flood Zone 3
- Flood Zone 2

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FIGURE TITLE

Fluvial Flood Risk

FIGURE NUMBER

Figure 15-3

Figure 15-4: Surface Water Flood Risk

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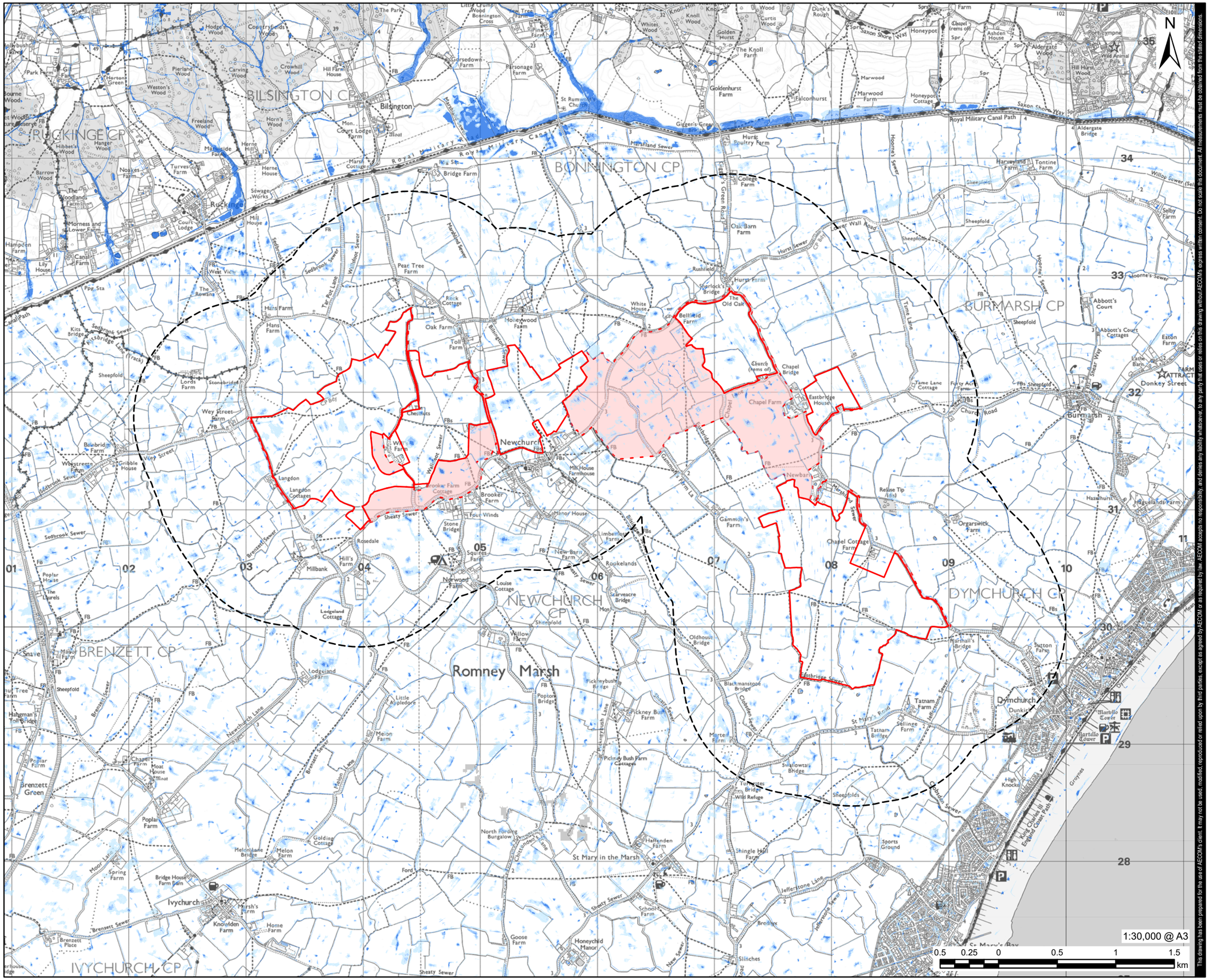

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 1km Buffer of the Energy Park Site

Risk of Flooding from Surface Watercourses

- High (3.3% Annual Exceedance Probability)
- Medium (1% Annual Exceedance Probability)
- Low (0.1% Annual Exceedance Probability)

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FIGURE TITLE

Surface Water Flood Risk

FIGURE NUMBER

Figure 15-4

15.6 Potential Effects and Mitigation

15.6.1 This section sets out the potential effects of the Scheme on the water environment.

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

Construction and Decommissioning

15.6.3 A number of activities which would be undertaken during the Scheme construction and decommissioning phases that are likely to generate impacts which have the potential to affect the water environment, drainage and flood risk, if unmitigated.

15.6.4 The greatest risk of adverse water environment impacts during construction and decommissioning are likely to occur within the WFD catchments of the Romney Marsh between Appledore and West Hythe water body (GB107040019700) and Kent South water body (GB640704540001), within which watercourses may be directly affected by the Scheme and impacts could propagate to the downstream receptors.

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

- Pollution of surface water or groundwater due to deposition or spillage of soils, sediments, oils, fuels, or other construction chemicals, or through uncontrolled site run-off including dewatering of excavations or piling;
- Temporary impacts on the hydromorphology of watercourses from open-cut watercourse crossings or temporary vehicle access crossings as may be required;
- Temporary changes in flood risk from changes in surface water runoff (e.g. disruption of stream flows during any potential culvert construction works), and exacerbation of localised flooding, due to deposition of silt, sediment in drains, ditches;
- Potential impact on flood conveyance routes if materials are stored within the floodplain;
- Potential change in flood risk as a result of cables crossing any watercourses, depending on the crossing method;
- Potential impact on groundwater flood risk whilst laying any underground cables; and
- Potential impacts on groundwater resources and local water supplies (licenced and unlicenced abstractions) and potentially the baseflow to watercourses from temporary dewatering of excavations or changes in hydrology.

15.6.6 The nature of the Scheme means there would be limited physical disturbance of aquifers and groundwater. The main disturbance would relate to driving the

solar PV module mounting structure piles to a depth of circa 2 m (with tracker systems having a pile depth of circa 3 m), and shallow cable trenches for cable routes. There would also be shallow excavations related to new permanent infrastructure such as the battery energy storage system (BESS), onsite substations, the control building and storage buildings. The need for piling or non-intrusive techniques has yet to be determined but will be confirmed in the ES.

15.6.7 The infrastructure within the Scheme Boundary is expected to necessitate the crossing of watercourses and drainage ditches. The construction of cable routes crossing watercourses has the potential to result in modifications to water features. Some of these may be temporary such as to provide field access across watercourses or for an open-cut excavation of the channel for the installation of the new cables. However, scheme specific information is yet to be fully determined at this stage of the assessment.

15.6.8 There may be crossings of more significant water features, such as main rivers (e.g. Marshland Sewer), by non-intrusive trenchless techniques (e.g. HDD) at a suitable depth beneath the bed level to avoid the risk of future exposure by scour of the bed (typically cables would be at least 1.5 m below the bed of a watercourse). It is also possible that watercourse crossings (or modifications to existing crossings) are required as part of works to above ground installations. For any other crossings it is likely that an open cut method would be used. It would be a requirement that the watercourses are reinstated as found based on a pre-works Riparian and Hydromorphological Survey. Water quality monitoring will also be undertaken prior to, during, and following on from the construction activity, as well as monitoring of measures to prevent excess fine sediment washing into the channel before vegetation has stabilised any disturbed river banks. Crossings of other drainage features would be risk assessed on a case-by-case basis as the assessment progresses and relevant stakeholders consulted.

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

15.6.10 Mitigation measures applicable to the Scheme construction phase will be included in a Framework Construction Environmental Management Plan (CEMP) which will be prepared as part of the DCO application. The Framework CEMP would be developed into a detailed (or construction issue) CEMP by the appointed construction Contractor prior to the start of construction. Similarly, 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 during the decommissioning of the Scheme. A detailed DEMP would be prepared and agreed with the relevant authorities at that time of Scheme decommissioning.

Operation and Maintenance

15.6.11 During the Scheme operational phase, the following water environment, drainage, and flood risk impacts may occur:

- Impacts on water quality in watercourses and groundwater from run-off and the potential for accidental spillages from new permanent hardstanding and maintenance activities, assuming surface water run-off ultimately drains to a surface watercourse rather than simply to ground;
- Potential for impact on groundwater or surface water from firewater runoff in the event of a fire in the battery storage areas;
- Potential impacts on surface water hydrology as a result of the Scheme. This may also have a subsequent effect on aquatic habitats and water-dependent nature conservation sites;
- Potential for permanent physical impacts to watercourses if crossings are required for access and depending on the design of the structure used;
- Potential impacts on the rate and volumes of surface water run-off entering local watercourses and increasing the risk of flooding;
- As the Scheme is located in Flood Zone 3, there may be potential for displacement of floodwater. This could require the construction of flood compensation or mitigation measures to ensure no increase in flooding from the development. This is likely to be dependent on the sources of flood risk and will be confirmed as part of the FRA.
- Potential for impact of foul drainage/ water supply in the Study Area due to the offices/ maintenance facilities required as part of the Scheme and/ or requirement for regular PV module cleaning;
- The current arable fields are likely treated with fertiliser and pesticides. During the life of the Scheme the use of such chemicals would be ceased or reduced which would lead to potential beneficial impacts on the water environment; and
- Potential impacts on groundwater resources and local water supplies, which may include reduced irrigation demand which might lead to improvements in flow regime, especially during the summer.

15.6.12 Due to the potential for impacts and effects on water receptors and resources by the Scheme, a full water environment impact assessment will be included in the ES. This will also be supported by an FRA and an Outline Surface Water Drainage Strategy and a WFD Assessment. The scope for these assessments and how the significance of effects will be determined is described in the following section.

15.6.13 Mitigation measures applicable to the Scheme's operation will be included in a Framework Operational Environmental Management Plan (OEMP) prepared as part of the DCO application. The Framework OEMP will form the basis of the detailed OEMP which is expected to be secured as a Requirement of the DCO. Details of mitigation already confirmed is provided within **Appendix D: Environmental Mitigation and Commitments Register**.

15.7 Assessment Methodology

15.7.1 This section describes the methodology proposed for the assessment of effects on the water environment, drainage and flood risk as a result of the Scheme, including the criteria for the determination of the importance of the receptor and the magnitude of change from baseline conditions. The assessment methodology would be the same for the Energy Park Site, Interconnecting Cable Corridor Search Area and Grid Connection Route.

15.7.2 Potential impacts of the Scheme on the water environment, drainage, and flood risk will be assessed by:

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

Source-Pathway-Receptor Approach

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

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

15.7.4 The first stage in applying the Source-Pathway-Receptor model is to identify the causes or ‘sources’ of potential impact from a development. The impact sources will be identified through a review of the details of the Scheme, including the size and nature of the Scheme, potential construction, operation and decommissioning methodologies and timescales. The next step is to undertake a review of the potential receptors, that is, the water environment receptors that have the potential to be affected. Water features including their attributes will be identified through desk study and Site surveys, building on the baseline information provided in this chapter. The last stage of the model is, therefore, to determine if there is a viable exposure pathway or a ‘mechanism’ linking the

source to the receptor. This will be undertaken in the context of local conditions relative to the water receptors within the Study Area, such as topography, geology, climatic conditions and the nature of the impact (e.g. the mobility of a liquid pollutant or the proximity to works that may physically impact a water body).

15.7.5 The assessment of the likely significant effects is qualitative, and will consider the construction, operational and decommissioning phases, as well as cumulative effects with other developments.

15.7.6 To support the assessment of effects on the water environment some sub-topic specific assessments will be undertaken. These are described in more detail in the following sections.

Water Quality and Resource Assessment

15.7.7 Relevant data will be requested from the Environment Agency at the PEI report stage of the assessment to supplement the publicly available online data sources described in Section 14.5. A Site walkover survey will be undertaken by a hydromorphologist and a water resources specialist. This will be to observe surface water features in the Study Area and to make observations about their current condition and character, the presence of existing risks and any potential pathways for construction, operation and decommissioning impacts as a result of the Scheme. Further site surveys may be required as the Scheme develops.

15.7.8 Water quality data for the more important watercourses in the area will be drawn from Environment Agency monitoring (see locations in **Figure 15-1**). The importance of water features will be determined from a holistic review of water body features and does not rely on water quality due to the principle that no controlled water may be polluted. Water quality impacts will be based on a risk assessment basis that does not require input of raw background water quality data. Water quality monitoring is also only effective when there is a clear purpose for it and may require monitoring over a long period of time to ensure reliable and robust results. Therefore, no water quality sampling is proposed to support the water environment assessment.

15.7.9 A qualitative assessment of potential effects on surface water quality from construction, operation and decommissioning of the Scheme will be undertaken. This will consider the risk to surface water features resulting from construction, decommissioning works or future operation activity using the source-pathway-receptor approach. Where there is a risk of pollution, mitigation measures will be described with reference to best practice guidance (e.g. Guidance on Pollution Prevention Notes and Construction Industry Research and Information Association (CIRIA) guidance, Ref 15-63).

15.7.10 The appropriateness of the surface water drainage measures in terms of providing adequate treatment of diffuse pollutants will be assessed with reference to the Simple Index Assessment method described in the SuDS Manual (Ref 15-64). The Simple Index Approach follows three steps:

- Step 1 – Determine suitable pollution hazard indices for the land use(s);
- Step 2 – Select SuDS with a total pollution mitigation index that equals or exceeds the pollution hazard index (for three key types of pollutants: total

suspended solids, heavy metals and hydrocarbons). Only 50% efficiency should be applied to second, third etc. treatment train components; and

- Step 3 – If the discharge is to a water body protected for drinking water, consider a more precautionary approach.

15.7.11 The SuDS Manual (Ref 15-64) only provides a limited number of land use types and so those selected will be the most suitable for the components of the Scheme, based on professional judgement. Where more than one pollution hazard category applies to a component of the Scheme, the worst pollution hazard will be selected.

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

Hydromorphology and Water Framework Directive (WFD) Assessment

15.7.13 Due to the potential for impacts upon WFD designated water bodies, initially a WFD Screening Assessment has been undertaken in keeping with PINS Advice on the Water Framework Directive (Ref 15-60). This assessment has been undertaken, and is included as **Appendix H: Water Framework Directive Screening Assessment**. At the ES stage, when more construction and design information is available, the assessment will be extended in order to determine the potential for any non-compliance of the Scheme with WFD objectives for affected water bodies, using readily available information and Site observations. This will include a qualitative examination of the potential construction, operation and decommissioning phase impacts of the Scheme on relevant WFD hydromorphological, biological and physio-chemical parameters. Depending on the outcomes of the assessment, more detailed investigations may be required, which will be determined in consultation with the Environment Agency.

Surface Water Drainage Strategy

15.7.14 The design of drainage systems aims to ensure that there would be no significant increases in flood risk downstream, during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance for climate change.

15.7.15 An Outline Surface Water Drainage Strategy will be prepared with the FRA to ensure the risk of surface water flooding is not increased as a result of the Scheme, including any increased land take for foundations and any access roads.

15.7.16 Careful consideration of the SuDS features, in keeping with local planning policy and through liaison with the LLFA, the Romney Marshes IDB and Environment Agency, will be undertaken to ensure that the Surface Water Drainage Strategy adequately attenuates and treats runoff from the Scheme, whilst minimising flood risk to the Site and surrounding areas.

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

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

Flood Risk Assessment

15.7.19 An FRA will be prepared for the Scheme which will be a technical appendix to the ES. The FRA will include a review of the current and future flood risk to the Study Area from all sources (including surface water, groundwater, tidal and fluvial sources and residual flood risks), in keeping with NPPF guidance, to inform the Scheme design and set out any proposed mitigation requirements that are to be addressed within the Surface Water Drainage Strategy.

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

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

15.7.22 All of the Energy Park Site is located in Flood Zone 3. Where development is to take place within areas at risk of flooding (Flood Zones 2 and 3), there may be a requirement for the construction of flood compensation or mitigation measures to ensure no detrimental effect to flooding potential within or from the affected watercourse in the catchment once the Scheme is operational. The conclusions of this will be referred to within the water environment assessment presented in the ES.

15.7.23 As the Scheme is classified as “Essential Infrastructure” and the Energy Park Site is located in Flood Zone 3, an Exception Test is required to be undertaken as part of the FRA. For the Exception Test to be passed allowing development in Flood Zone 3 the FRA will be required to demonstrate that the development would be safe for its lifetime, taking into account the effects of climate change. This requirement will influence positioning of infrastructure within the Energy Park Site and the heights of PV modules.

15.7.24 The Energy Park Site benefits from coastal flood defences, however, may still be at risk from a defence breach. This residual risk will need to be considered during both construction, operation and decommissioning, with PV modules and sensitive equipment being designed accordingly.

Nutrient Neutrality

15.7.25 ABC and FHDC are the local planning authorities which cover the Scheme and the wider Study Area, and both of these council areas have significant portions of land within which nutrient neutrality has to be demonstrated in order to allow certain development to proceed due to the unfavourable status of designated habitats site within their areas. However, the Natural England Nutrient Neutrality Catchments (England) viewer confirms that none of the Study Area falls within the area affected by nutrient neutrality, and on this basis this will not be considered further (Ref 15-66).

Determining the Significance of Effects

15.7.26 The significance of effects will be determined using the principles of the guidance and criteria set out in the Design Manual for Roads and Bridges LA113 Road Drainage and the Water Environment (Ref 15-67) adapted to take account of hydromorphology. This can be applied to all development types and represents the most robust and nationally accepted criteria for the determination of potential effects on the water environment.

15.7.27 The criteria that will be used to determine receptors importance are presented in **Table 15-6**.

15.7.28 In accordance with the stages of the methodology, there are three stages to the assessment of effects on water environment, drainage, and flood risk as follows:

- A level of importance (low to very high) is assigned to the water resources receptor from **Table 15-6** and is based on a combination of attributes (such as water supply, biodiversity, recreation) and on receptors to flood risk based on the vulnerability of the receptor to flooding (i.e. as shown in **Table 15-6**, essential infrastructure would be very high importance, to water compatible development which would be of low importance);
- The magnitude of potential and residual impact (classed as negligible, minor, moderate or major adverse/ beneficial) is determined based on the criteria listed in **Table 15-7** and the assessor's knowledge of the Scheme. Embedded or standard mitigation measures are considered in the initial assessment, but any other mitigation is not considered until the assessment of residual effects. The magnitude of impact will be determined considering the likelihood of the effect occurring. The likelihood of an effect occurring is based on a scale of certain, likely or unlikely. Likelihood has been considered in the case of water resources only, as likelihood is inherently included within the flood risk assessment; and
- A comparison of the importance of the resource and magnitude of the impact (for both potential and residual impacts) results in an assessment of the overall significance of the effect on the receptor using the matrix presented in **Table 15-8**. The significance of each identified effect (both

potential and residual) will be classed as very large, large, moderate, slight or neutral and either beneficial or adverse significance.

Table 15-6: Criteria to Determine Receptor Importance (adapted from DMRB LA 113 (Ref 15-67))

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology[2]	Flood Risk
Very High	The receptor has little or no ability to absorb change without fundamentally altering its present character, is of very high environmental value, or of international importance.	Watercourse having a WFD classification as shown in a River Basin Management Plan (RBMP) and Q95 ≥ 1.0 m^3/s. Site protected / designated under UK habitat legislation (SAC, SPA, SSSI, Water Protection Zones, Ramsar site). Species protected by UK legislation. Critical social or economic uses (e.g. public water supply and navigation).	Source Protection Zone (SPZ) 1. Principal aquifer providing a regionally important resource and/or supporting a site protected under UK legislation. Groundwater locally supports GWDTE. Water abstraction: >1,000 m^3/day.	Unmodified, near to or pristine conditions, with well-developed and diverse geomorphic forms and processes characteristic of river and lake type.	Essential Infrastructure or highly vulnerable development.

[2] Based on the water body 'Reach Conservation Status' presently being adopted for a major infrastructure project (and developed originally by Atkins) and developed from Environment Agency conservation status guidance (Environment Agency, 1998a; 1998b as LA113 (Ref 15-67) does not provide any criteria for morphology.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology[2]	Flood Risk
High	The receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of national importance.	Watercourse having a WFD classification as shown in a RBMP and Q95 < 1.0 m^3/s; Species protected under UK habitat legislation. Critical social or economic uses (e.g. water supply and navigation). Important social or economic uses such as water supply, navigation or mineral extraction.	Principal Aquifer providing locally important source supporting rover ecosystem; SPZ 2; Groundwater supports GWDTE; Water abstraction: 500-1,000m^3/day.	Conforms closely to natural, unaltered state and will often exhibit well-developed and diverse geomorphic forms and processes characteristic of river and lake type. Deviates from natural conditions due to direct and/or indirect channel, floodplain, bank modifications and/or catchment development pressures.	More vulnerable development.
Medium	The receptor has moderate capacity to absorb change without significantly altering its present character, has some environmental value or is of regional importance.	Watercourses not having a WFD classification shown in a RBMP and Q95 >0.001m^3/s. May be designated as a local wildlife site and support a small/ limited population of protected species. Limited social or economic uses.	Secondary Aquifer providing water for agricultural or industrial use with limited connection to surface water SPZ 3. Water abstraction: 50-499 m^3/day.	Shows signs of previous alteration and/or minor flow/ water level regulation but still retains some natural features, or may be recovering towards conditions indicative of the higher category.	Less vulnerable development.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology[2]	Flood Risk
Low	The receptor is tolerant of change without detriment to its character, is low environmental value, or local importance.	Watercourses not having a WFD classification shown in a RBMP and Q95 <0.001m^3/s. Low aquatic fauna and flora biodiversity and no protected species. Minimal economic or social uses.	Generally Unproductive strata. Water abstraction: <50m^3/day.	Substantially modified by past land use, previous engineering works or flow/ water level regulation. Watercourses likely to possess an artificial cross-section (e.g. trapezoidal) and will probably be deficient in bedforms and bankside vegetation. Watercourses may also be realigned or channelized with hard bank protection, or culverted and enclosed. May be significantly impounded or abstracted for water resources use. Could be impacted by navigation, with associated high degree of flow regulation and bank protection, and probable strategic need for maintenance dredging. Artificial and minor drains and ditches will fall into this category.	Water compatible development.

Importance	General Criteria	Surface Water	Groundwater	Hydromorphology[2]	Flood Risk
Negligible	The receptor is resistant to change and is of little environmental value	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Table 15-7: Magnitude of Impact Criteria (adapted from DMRB LA 113 (Ref 15-67))

Magnitude of Impact	Description
High Adverse	Results in a loss of attribute and/or quality and integrity of the attribute.
Medium Adverse	Results in impact on integrity of attribute, or loss of part of attribute.
Low Adverse	Results in some measurable change in attribute's quality or vulnerability.
Very Low	Results in impact on attribute, but of insufficient magnitude to affect the use or integrity.
Low Beneficial	Results in some beneficial impact on attribute or a reduced risk of negative impact occurring.
Medium Beneficial	Results in moderate improvement of attribute quality.
Major Beneficial	Creation of new attribute or major improvement of attribute quality.
No change	No loss or alteration of characteristic, features of elements; no observable impact in either direction.

15.7.29 The importance of the receptor (**Table 15-6**) and the magnitude of impact (**Table 15-7**) are determined independently from each other and are then used to determine the overall significance of effects (**Table 15-8**). Options for mitigation will be considered and secured where possible to avoid, minimise and reduce adverse impacts, particularly where significant effects may have otherwise occurred. The residual effects of the Scheme with identified mitigation in place will then be reported. Effects of moderate or major are considered significant in planning terms (i.e. the shaded cells in **Table 15-9**).

Table 15-8: Matrix for Assessment of Significance (DMRB LA 104 (Ref 15-68))

Importance of Receptor (Table)	Magnitude of Impact (Table 15-7)				
	High	**Medium**	**Low**	**Very Low**	**No Change**
Very High	Major	Major	Major	Minor	Neutral
High	Major	Major	Moderate	Minor	Neutral
Medium	Major	Moderate	Minor	Negligible	Neutral
Low	Moderate	Minor	Negligible	Negligible	Neutral
Very Low	Minor	Negligible	Negligible	Neutral	Neutral

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

- **Negligible**: An imperceptible effect or no effect to a water resources receptor;
- **Beneficial**: A beneficial/ positive effect on the quality of a water resources receptor; or
- **Adverse**: A detrimental/ negative effect on the quality of a water resources receptor.

15.7.31 At spatial level, 'local' effects are those affecting the Site and neighbouring receptors, while effects upon receptors beyond the vicinity of the Site are at a 'regional' level. Effects which affect different parts of the country, or England as a whole, are considered being at a 'national' level.

15.8 Limitations and Assumptions

15.8.1 The location and layout of certain elements of infrastructure (including cable routes, construction methodologies and mitigation), have not yet been determined. This is of particular importance when considering impacts associated with watercourse crossings, the quality of surface water runoff, impacts to hydromorphology and channel hydraulics. It is assumed that the protection of water environment receptors would be taken into account within the iterative design process, including the choice of crossing methodology and use of best practice methodologies for construction.

15.8.2 The locations of private water supplies and licensed water abstractions have not yet been obtained, and so these are not included as receptors at this time. Water activity permits (i.e. permitted discharges) are also not yet known in detail and have not been considered in the current baseline. These receptors and water feature attributes will be considered as part of the assessment at PEIR and ES stage.

15.8.3 Hydraulic modelling data will be requested from the Environment Agency to understand fluvial and tidal flood risk (including breach scenarios) at the site. Where this is not available, hydraulic modelling may need to be undertaken as part of the FRA. This will be discussed and agreed with the Environment Agency and KCC as required.

15.8.4 Visual surveys will be undertaken of accessible water/ drainage features to inform the Surface Water Drainage Strategy, impact assessment and WFD assessment. However, it may not be possible to survey all significant locations (such as crossing locations) or structures due to access constraints or visibility issues (e.g. dense vegetation). Where this is the case, a survey close to the area of interest will be attempted and this data used as a proxy. In addition, some watercourses may be small, ephemeral and flow only intermittently, and these may not be identified in the field or observed when flowing.

15.8.5 Other than the site walkover survey, the FRA and Outline Surface Water Drainage Strategy will be based on desktop surveys and best available site layout proposals in line with best practice. Where available, topographical data will be used to support the FRA. In the absence of topographical data, LiDAR data will be used to inform the FRA and the Outline Surface Water Drainage Strategy.

15.8.6 Temporary works will not be assessed unless they are of a potentially significant scale and have the potential to adversely affect flood risk or impact the quality or form of water features. The temporary works where such risks are considered significant (for example, excavations for the cable routes) will be identified and assessed within the FRA, Screening and Scoping WFD Assessment and impact assessment reported in the ES.

15.8.7 As part of the EIA, the risk from surface water drainage to surface or groundwater features from new above ground development will be assessed according to the Simple Index Approach presented in the C753 The SuDS Manual (Ref 15-60). Given the very low risk the need for treatment measures is expected to be minimal. Furthermore, given the availability of space it is not anticipated that there would be any issues providing any treatment of diffuse pollutants, should the Simple Index Approach assessment identify such a need.

15.8.8 Groundwater level data for the Study Area is limited. Further understanding of groundwater levels across the site will be ascertained from information requests to the Environment Agency and from future Ground Investigation.

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

15.9 Summary of Elements Scoped In and Scoped Out

15.9.1 A summary of the elements scoped into and out of the water environment, drainage and flood risk assessment are presented in **Table 15-9**. Further details on matters scoped out are given in **Table 18-1**.

Table 15-9: Elements Scoped In and Out of the Water Environment Assessment (for the entire Site including Grid Connection Route, Interconnecting Cable Corridor and Energy Park Site)

Element	Scoped In/ Scoped Out
Groundwater (construction, operation and decommissioning)	Scoped in - potential for impacts due to construction, operation and decommissioning of the Scheme.
Hydromorphology and WFD (construction, operation and decommissioning)	Scoped in - potential for impacts due to watercourse crossings by structures, and cable crossings.
Surface water (construction, operation and decommissioning)	Scoped in - potential for impacts to land-based surface water features due to construction, operation, and decommissioning of the Scheme. Scoped Out – potential impacts to the Kent South coastal WFD water body can be scoped out given distance downstream (beyond the Study Area) and its scale (offering significant dilution and dispersal potential).
Flood risk, including drainage (construction, operation and decommissioning)	Scoped in - potential for impacts on flood risk from all sources within the Site, downstream on watercourses and on surface water runoff.
Nutrient neutrality assessment (construction, operation and decommissioning)	Scoped out - no hydrologic connectivity between the Site and the designated sites identified by Natural England as requiring assessment. Change of land use will reduce use of fertilisers noting that there may be a small volume of foul waste generated on site during operation.

16. Other Environmental Topics

16.1 Air Quality

Introduction

16.1.1 Air Quality will be included in the Other Environmental Topics chapter of the ES and will include a brief assessment of the effects of the Scheme on air quality at the Energy Park Site, Interconnecting Cable Corridor Search Area and surrounding area. For clarity, air quality is not scoped out of the EIA but is addressed proportionately within the ES in relation to the likelihood for significant effects based on the work undertaken to date.

Legislation

16.1.2 The applicable legislation includes:

- The Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulation 2017 (Ref 16-1);
- The Environmental Protection Act 1990 (Ref 16-2);
- National Air Quality Legislation Originating from the European Union (EU) (Ref 16-3);
- The Environment Act 1995 (Ref 16-4); and
- The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (Ref 16-5).

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

16.1.3 Regulation 5(2)(c) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 16-1) requires that the EIA must identify, describe and assess in an appropriate manner, in light of each individual case, the likely significant direct and indirect effects of the Scheme on air quality.

The Environmental Protection Act 1990

16.1.4 Part III of the Environmental Protection Act 1990 (Ref 16-2) defines matters that could be a private and public statutory nuisance. The prescribed matters of relevance to this assessment being any smoke, fumes, gases, steam or smell being prejudicial to health or a nuisance.

National Air Quality Legislation Originating from the European Union (EU)

16.1.5 The principal air quality legislation within the United Kingdom is the Air Quality Standards Regulations (as amended 2016) (Ref 16-6), including amendments, such as 'The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020' (Ref 16-7).

16.1.6 Although the UK is no longer a member of the EU, some types of EU legislation such as Regulations and Decisions, have been retained in UK law. This legislation is now published on legislation.gov.uk as 'legislation originating from the EU' (Ref 16-3). The Air Quality Standards Regulations 2010 (as amended 2016) (Ref 16-6), including amendments, define 'Limit Value' concentrations to

protect human health and ‘Target values’ to protect the wider environment. These air quality standards are retained through 'The Environment (Miscellaneous Amendments) (EU Exit) Regulations 2020’ (Ref 16-7).

The Environment Act 1995

16.1.7 The Environment Act 1995 (Ref 16-4) as amended in 2021 (Ref 16-8) requires the UK Government to produce a national Air Quality Strategy (AQS) for England, Scotland, Wales and Northern Ireland containing standards, objectives and measures for improving ambient air quality and to keep the policies identified under review. The air quality objective values are a tool to help local authorities manage local air quality improvements, with the aim of avoiding, preventing or reducing harmful effects on human health and on the environment as a whole.

16.1.8 The national air quality objectives of relevance to this assessment, as well as to the local air quality management regime, were defined in The Air Quality (England) Regulations 2000 (Ref 16-9) and the Air Quality (England) (Amendment) Regulations 2002 (Ref 16-10).

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

16.1.9 The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 (Ref 16-5) introduced two targets under the Environment Act 2021 (Ref 16-8). These are a target level for annual mean concentrations of $PM_{2.5}$ to be achieved at relevant monitoring stations by 31 December 2040 and an exposure reduction target for the Secretary of State to report on by 15 July 2041. For the purposes of these regulations, relevant monitoring locations are fixed monitoring stations within the national monitoring network. There are no such monitoring locations within the air quality Study Area for the Scheme.

16.1.10 How target values should be considered in development control and local air quality control is a matter that the Department for Environment, Food and Rural Affairs (Defra) are currently undertaking a stakeholder engagement exercise on prior to bringing forward guidance for local authorities in England.

National Planning Policy

16.1.11 The relevant national policies, plans and strategies for Air Quality are:

- National Planning Policy Framework (NPPF) (Ref 16-11);
- National Policy Statements (NPSs);
- Air Quality Strategy 2023 (Ref 16-12);

National Planning Policy Framework

16.1.12 The NPPF (Ref 16-12) sets out the Government’s planning policies for England and how these should be applied. Paragraph 5 of the NPPF goes on to confirm that the NPPF may be a matter that is both important and relevant for the purposes of assessing DCO applications. The EIA for the Scheme therefore has regard to the relevant policies of the NPPF as part of the overall framework of national policy.

National Policy Statements

16.1.13 The EIA takes account of the following NPSs, which are considered to be matters that will be important and relevant to the Secretary of State's decision as to whether to grant a DCO for the Scheme:

- Overarching National Policy Statement for Energy (EN-1) –November 2023 (Ref 16-13);
- National Policy Statement for Renewable Energy Infrastructure (EN-3) – November 2023 (Ref 16-14); and
- National Policy Statement for Electricity Networks Infrastructure (EN-5) – November 2023 (Ref 16-15).

16.1.14 The NPSs set out the Government's energy policy, the need for new infrastructure and guidance for determining an application for a Development Consent Order (DCO). The NPSs include specific criteria and issues which should be covered by applicants' assessments of the effects of their scheme, and how the decision maker should consider these impacts.

Air Quality Strategy 2023

16.1.15 The Air Quality Strategy: framework for local authority delivery was revised in 2023 (Ref 16-12) and supersedes the Air Quality Strategy: Volume 1 (Ref 16-28) in England only. The AQS (Ref 16-12) sets out the actions that Defra expects local authorities to take in support of its long-term air quality goals. It provides a framework to enable local authorities to make best use of their powers and make improvements for their communities.

16.1.16 Local authorities have a duty to address exceedances of air quality objectives in their area, including declaring Air Quality Management Plans Areas (AQMAs) and publishing Air Quality Action Plans (AQAP) setting out the measures that they will take with the aim of achieving ongoing compliance. The AQS summarises current objectives and targets but does not define them.

16.1.17 The Air Quality Objectives for England, for the pollutants of relevance to this assessment are displayed in **Table 16-1**.

Table 16-1: Key Air Quality Strategy

Pollutant	Objective	Averaging Period	Maximum Permitted exceedances
Nitrogen Dioxide (NO_2)	200 µg/m³	1 hour	18 times per year (i.e. 99.79th percentile)
	40 µg/m³	Annual	-

Pollutant	Objective	Averaging Period	Maximum Permitted exceedances
Particulate Matter (PM^{10})	50 µg/m³	24 - hour	35 times per year (i.e. 90.4th percentile)
	40 µg/m³	Annual	-
Particulate Matter ($PM^{2.5}$)	20 µg/m³	Annual	-

Local Planning Policy

16.1.18 Applicable local planning policies are:

- Ashford Local Plan 2030 - Adopted February 2019 (Ref 16-16);
- Ashford Local Plan Supplementary Planning Documents (Ref 16-17); and
- Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022 (Ref 16-18).

Ashford Local Plan 2030

16.1.19 The Ashford local Plan Policy Env12 – Air Quality, outlines the requirements of Air Quality Assessments for developments which *'might lead to a significant deterioration in air quality or national air quality objectives being exceeded'*.

Folkestone and Hythe Core Strategy Review to 2037

16.1.20 The Folkestone and Hythe Core Strategy Review Strategic Need B outlines the need to monitor and manage air quality *'particularly nitrogen emission from vehicles and their potential impacts on protected habitats'*.

Guidance

16.1.21 This assessment draws on guidance set out in the following documents:

- National Planning Practice Guidance (Ref 16-19);
- Institute of Air Quality Management (IAQM) Land-Use Planning & Development Control 2017 (Ref 16-20);
- IAQM Guidance on the assessment of dust from demolition and construction 2024 (Ref 16-21); and
- Defra Local Air Quality Management Technical Guidance (Ref 16-22).

Planning Practice Guidance

16.1.22 The most recent update to the Air Quality Planning Practice Guidance (NPPG) (Ref 16-19) was published on the1 November 2019 to provide more in-depth guidance to the NPPF.

16.1.23 When deciding whether air quality is relevant to a planning application the PPG states that the following criteria may be required to be taken into consideration:

- "the 'baseline' local air quality, including what would happen to air quality in the absence of the development;
- whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and
- whether occupiers or users of the development could experience poor living conditions or health due to poor air quality."

16.1.24 On how detailed an air quality assessment needs to be, the PPG states:

"Assessments should be proportionate to the nature and scale of the development proposed and the level of concern about air quality... Mitigation options where necessary will be locationally specific, will depend on the proposed development and should be proportionate to the likely impact. It is important therefore that local planning authorities work with applicants to consider appropriate mitigation so as to ensure the new development is appropriate for its location and unacceptable risks are prevented."

IAQM Land-Use Planning & Development Control 2017

16.1.25 When determining the significance of the air quality assessment results with the Scheme, the assessment follows the non-statutory good practice guidance published by the IAQM (Ref 16-20). In the absence of statutory technical guidance for air quality impact assessments in England, the guidance provides developers with a means of reaching sound decisions, having regard to the air quality implications of development proposals.

16.1.26 The guidance states that *"development is not inherently negative for air quality. Whilst a new development at a particular site may have its own emissions, it may also bring an opportunity to reduce overall emissions in an area over time by installing new, cleaner technologies and applying policies that promote sustainability".*

IAQM Guidance on the assessment of dust from demolition and construction 2024

16.1.27 Additional guidance on the assessment of dust from demolition and construction published by the IAQM (Ref 16-21) is adopted for the assessment of dust impacts and the selection of appropriate good practice control measures. This guidance addresses the potential for statutory nuisance by using a more demanding test based on the risk of significant adverse effects on amenity.

Defra Local Air Quality Management Technical Guidance (TG22)

16.1.28 Defra publishes technical and policy guidance documents to assist local authorities to discharge their local air quality management duties. Although not statutory guidance for EIA purposes, this assessment adopts the use of calculation methods and MS Excel based tools from this guidance as good practice methods to enable the assessment of concentrations of local air pollutants. (Ref 16-22);

Study Area

16.1.29 Based on the IAQM's Guidance on the Assessment of dust from demolition and construction (Ref 16-21), the study area for dust considers sensitive receptors:

- Within 250 m of the Energy Park Site;
- Within the Interconnecting Cable Corridors and Grid Connection Route (once defined); and
- Within 50 m of the routes expected to be affected by the construction phase traffic on road links that are within 250 m of the Energy Park Site and the Interconnecting Cable Corridors and Grid Connection Route access points.

16.1.30 For road traffic emission assessments, the study area includes the consideration of sensitive receptors within 200 m of the affected road links expected to be impacted by the construction phase traffic. Affected road links are determined using criteria outlined in the IAQM's guidance on land-use planning and development control: Planning for Air Quality (Ref 16-20).

Baseline Conditions

16.1.31 The Scheme is located in Romney Marsh, Kent, a predominantly rural area within the Folkestone and Hythe district council and Ashford Borough Council administrative areas. There are no Air Quality Management Areas (AQMAs) declared within either of the administrative areas.

16.1.32 The local authorities undertake ongoing monitoring of ambient air quality monitoring as part of their Local Air Quality Management Plan (LAQM) responsibilities under Part IV of the Environmental Act 1995, as amended by the Environment Act 2021 (Ref 16-8).

16.1.33 Folkestone and Hythe District Council has focused its measurements on air quality within Folkestone and other urban locations that are outside of the study area for the Scheme. Measurement location DT3 reports annual mean nitrogen dioxide concentrations at a rural location to the east of the study area as being 13 µg/m³ in 2023 (Ref 16-23).

16.1.34 The Scheme is predominantly based in Folkestone and Hythe District Council's administrative area however part of the Scheme, being the access routes and affected road network fall within Ashford Borough Council administrative area. Ashford Borough Council's measured annual mean nitrogen dioxide concentrations at 27 sites within the wider urban area of Ashford but not along the corridor from the Scheme to the M20 (Ref 16-24). In the unlikely event that traffic flows during the construction phase are above the IAQM (Ref 16-20) screening criteria, an air quality assessment will be undertaken supported by a baseline air quality survey.

16.1.35 Defra background maps report values at less than 50% of the relevant objective value for nitrogen dioxide and particulate matter (PM_{10} and $PM_{2.5}$ size fraction) (Ref 16-25). Overall, the current baseline standard of air quality within the Study Area is considered to be very good and there is no evidence that the future baseline conditions would be any different.

Sensitive Receptors

16.1.36 Sensitive receptors for air quality are generally public exposure receptors (sensitive locations where relevant exposure for the air quality criteria being assessed could occur, e.g. residential properties or schools) and ecological sites sensitive to dust deposition and nitrogen deposition.

16.1.37 As a preliminary review aerial photography, Defra's Magic Map Application (Ref 16-25) and Ordnance Survey (OS) mapping have been used to identify sensitive receptors. These include residential receptors in Newchurch and the surrounding area.

16.1.38 The sites within the Study Area that are potentially close enough (within 250m) to the Scheme Boundary will be considered as receptors for air quality. Based on a preliminary review, there are no sensitive ecological sites within 250 m of the Site. Potentially sensitive ecological receptors have been identified within 200m of the affected road network in the vicinity of the site. These include but are not limited to Dungeness, Romney Marsh and Rye Bay Ramsar and Special Site of Scientific Interest (SSSI), Ham Street Wood SSSI and National Nature Reserve (NNR), Ashford Green Corridor Local Nature Reserve (LNR).

16.1.39 Potential sensitive receptors will be identified for the construction and decommissioning of the Scheme based upon a review of aerial photography, Defra's Magic Map Application (Ref 16-25), the Air Pollution Information System (APIS) database (Ref 16-26), construction and decommissioning phasing plans and Ordnance Survey (OS) mapping.

16.1.40 The AQS objectives (as set out in the Air Quality Standards Regulations 2010) have been set at concentrations that provide protection to all members of society, including more vulnerable groups such as the very young, elderly or unwell. As such the sensitivity of receptors was considered when setting the objectives and therefore no additional subdivision of human health receptors on the basis of building or location type is necessary. All locations members of the public can reasonably be expected to be present for more than 1 hour are considered to be high sensitivity receptors.

Potential Impacts

16.1.41 The potential air quality impacts of the Scheme are considered to be:

- Impacts of dust arising during the construction and decommissioning phases of the Scheme;
- Impacts of vehicle and plant emissions during the construction and decommissioning phases of the Scheme; and
- Impacts during the operation of the Scheme due to changes in vehicle emissions.

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

Assessment Methodology

16.1.43 The potential impacts from dust emissions arising from activities during the construction and decommissioning phases of the Scheme will be considered as part of the ES using an approach based on the IAQM guidance (2024) (Ref 16-1) for assessing impacts from such activities. This is a screening assessment and a risk-based qualitative assessment approach and is applied for air quality assessments throughout the UK. Mitigation measures will be identified and incorporated into the Framework CEMP.

16.1.44 As part of this assessment, potential sensitive receptors (with regard to both human health and those of ecological sensitivity) will be identified for the construction and decommissioning of the Scheme. For the purposes of the dust risk assessment, potentially affected air quality sensitive receptors will be identified for the assessment through a review of aerial photography, Defra's Magic Map Application (Ref 16-25), the Air Pollution Information System (APIS) database (Ref 16-26), construction and decommissioning phasing plans and Ordnance Survey (OS) mapping.

16.1.45 Construction and decommissioning related plant emissions are likely to represent a small source of emissions relative to ambient local conditions in the vicinity of the Site boundary based on the scale of construction that will occur and the number of plant vehicles that will be required. An assessment of plant related emission is therefore scoped out. Suitable mitigation measures for plant and motorised equipment will be recommended based on advice prescribed in the IAQM (2024) (Ref 16-21) guidance and incorporated into the Framework CEMP.

16.1.46 The number of vehicles that will be in operation during the construction and decommissioning phases of the Scheme have been considered in the context of the guidance published by IAQM (2017) (Ref 16-20) for human health receptors, which states that an air quality assessment is required if the development will "cause a significant change in Light Duty Vehicle (LDV) traffic flows on local roads with relevant receptors" or if the development will generate "a significant change in Heavy Duty Vehicle (HDV) flows on local roads with relevant receptors". If the only effected receptors are ecological receptors, then the guidance from Natural England (NAE001) (Ref 16-27) would be adopted. It is considered likely that construction flows will be well below the criteria stated in IAQM (2017) (Ref 16-20) or NAE001(Ref 16-27) for all roads except the A2070 between the junctions with Wey Street and Chapel Road. The need to assess impacts from the A2070 will be confirmed at PIER.

16.1.47 During operation, no effects are likely due to the low number of vehicle movements required for maintenance. Due to the nature of the Scheme, no emissions of local air quality pollutants are likely from any on site infrastructure. National Policy Statement EN-3 (Ref 16-14) paragraph 2.10.161 states that:

"Once solar farms are in operation, traffic movements to and from the site are generally very light, in some instances as little as a few visits each month by a light commercial vehicle or car. Should there be a need to replace machine components, this may generate heavier commercial vehicle movements, but these are likely to be infrequent. The Secretary of State is unlikely to give any

more than limited weight to traffic and transport noise and vibration impacts from the operational phase of a project."

16.1.48 Further assessment of air quality impacts during operation of the Scheme is proposed to be scoped out of the EIA.

16.1.49 Incorporating air quality mitigation measures into the Framework CEMP, Framework OEMP and Framework DEMP will negate the need for a specific air quality chapter in the ES.

16.2 Electromagnetic Fields

16.2.1 Electromagnetic Fields (EMF) are areas of energy generated by electrical current, which is exhibited by electrical devices and transmission cables. There are two types of EMF, high frequency and low frequency. High frequency is typically generated by devices such as mobile phones and televisions, and low frequency which is generated by the flow of electricity in infrastructure such as power cables, transformers, and inverters (Ref 16-29) which are the impacts of interest for the Scheme.

16.2.2 The recent advice published by PINS 'Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development' (Ref 16-30) states the following:

"*Where proposed cables are over 132kV, an EMF assessment should be provided in an appendix to the Environmental Statement. This should include the location, routing and voltages of any cables over 132kV and a risk assessment to any human and ecological sensitive receptors within the ZoI*."

16.2.3 There is no evidence that EMF from buried cables affects or disturbs ecology, and the Scheme design does not currently include high voltage cables that cross river habitats for migratory species. If this changes as the Scheme design evolves, in reference to the Grid Connection Route, then an assessment of EMF on ecology will be considered within the technical appendix to the ES as is described within **Chapter 8: Ecology and Nature Conservation.** As such this section focusses on the impact to human health.

16.2.4 The scope of the technical appendix which will be appended to the ES as part of the DCO application is identified below. As electricity will only flow through the cabling and infrastructure during the operational phase, this assessment will only consider operational phase effects.

16.2.5 No overhead electricity cables will be used or constructed as part of the Scheme. With the exception of relatively short lengths of onsite electrical cabling connecting the PV modules and the inverters (which is typically above ground level and fixed to the mounting structure, or to other parts of nearby components), all cables will be buried underground. Onsite electrical cabling is required to connect the PV modules and BESS to inverters (typically via 1.5 kV cables), and the inverters to the nearby transformers (typically via 0.6/1 kV cables). The dimension of the trenches for burial will vary depending on the number of ducts they contain but would typically be around 4m in width and around 1.5m in depth.

16.2.6 The DECC guidance document (Ref 16-31) states that underground cables at voltages up to and including 400 kV are considered not capable of exceeding the International Commission on Non-Ionizing Radiation Protection (ICNIRP) exposure guidelines for EMF (Ref 16-32) and that compliance with exposure guidelines for such equipment can be assumed unless evidence is brought to the contrary in specific cases. There is potential for exceedances of 400 kV where infrastructure overlaps with other projects' infrastructure, but this is not the case for the Scheme.

16.2.7 The onsite electrical cabling will not be considered in the assessment as it would not significantly contribute to any increase in electromagnetic fields should it overlap with other infrastructure. Underground cables at voltages up to and including 400 kV are considered not to exceed the ICNIRP exposure guidelines (Ref 16-32).

16.2.8 The Control of Electromagnetic Fields at Work Regulations 2016 (Ref 16-33) sets out the duties of employers in relation to controlling the risks of electro-magnetic fields to employees. This includes a requirement to assess employees' potential exposure to electro-magnetic fields with reference to action levels (ALs) and exposure limit values (ELVs). As the effects of EMFs on workers for the Scheme will be controlled and mitigated to acceptable levels through the legislative framework, impacts to workers will not be considered within the assessment.

16.2.9 Similarly, as noted in the National Policy Statement for Electricity Networks Infrastructure (NPS EN-5) (Ref 16-34), electromagnetic fields have the potential to have adverse impacts on aviation. NPS EN-5 (paragraph 2.11.14) states that the Secretary of State should take account of statutory technical aviation safeguarding zones when assessing DCO applications. These safeguarding zones are defined in Planning Circular 01/0318: Safeguarding Aerodromes, Technical Sites and Military Explosive Storage Areas (Ref 16-35). The Scheme is in proximity to the Shepway safeguarding zone as listed on Annex 3 of the planning circular: Officially safeguarded civil aerodromes. However, at the distances of separation between the underground cables and potential aviation receptors, the levels of EMFs experienced by potential aviation receptors is considered to be negligible and therefore aviation receptors will not be included in the assessment.

16.2.10 Additionally, EN-5 (paragraph 2.9.58) (Ref 16-34) recognises that there is little evidence that exposure of crops and farm animals to transmission line electromagnetic fields has any agriculturally significant consequences. Therefore, consideration of the impacts to agriculture will not be included within the technical appendix.

16.2.11 There are no residential properties within the Scheme boundary. There are properties which are in proximity to the Scheme however it is unlikely that cables will be installed within 10m of any property due to the need for construction vehicles to manoeuvre both sides of the trench within the working width. The Applicant is expected to commit to a minimum 10m offset between the 400kV cables and any residential properties in the DCO application, therefore providing sufficient protection. Therefore, no significant effects to residential receptors are predicted to occur and this will not be assessed within the technical appendix.

16.2.12 The presence of the public either directly above or adjacent to underground cables associated with the Scheme would be transient, with the individuals using the PRoW exposed to electro-magnetic fields from the cables for only very short periods of time. It is considered that the level of exposure to users of PRoW would be similar to (and a lot less than some) that associated with general household appliances (and noticeably less than associated with the exposure when using a vacuum cleaner) and as such will not be assessed within the technical appendix.

16.2.13 As the design develops, consideration will be given to the potential for EMF to impact on sensitive receptors. This will include undertaking calculations to determine whether EMF will be experienced by sensitive receptors and to what intensity. If it is likely to be a nuisance or hazard, mitigation will be proposed.

16.2.14 As appropriate, the results and recommendations of any EMF assessment will be incorporated into the Scheme design and an EMF assessment presented as a technical appendix to the ES. Given the industry knowledge of exposure levels and the Applicant's commitment to a 10m spacing between the high voltage cabling and residential receptors, it is therefore proposed that EMF does not warrant standalone ES chapter. It will be summarised within the Other Environmental Topics chapter, with the technical appendix and summary demonstrating the effects, which are very unlikely to be significant.

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

16.3 Glint and Glare

16.3.1 Glint and glare effects in this context are the potential effect of reflected sunlight causing harm or discomfort to a sensitive receptor. A glint can be defined as the momentary receipt of a bright light and a glare can be defined as the receipt of a bright light over an extended or continuous period of time (Ref 16-36). Glint and Glare effects could only be produced by PV modules, as such the assessment of effects is limited to the Energy Park Site only.

16.3.2 Glint and glare assessments are sometimes required to accompany planning applications for solar developments, depending on the determining authority's judgement of their need. There are no guidelines setting out a particular methodological approach, but the receptors of interest are specified in guidance issued by the Ministry of Housing, Communities and Local Government (MHCLG) (Ref 16-38) which states:

"Particular factors a local planning authority will need to consider include… the effect on landscape of glint and glare and on neighbouring uses and aircraft safety."

16.3.3 NPS EN-3 (Ref 16-39) sets out specific policy in relation to glint and glare from solar development. Paragraphs 2.10.102 - 2.10.106 state that potential glint and glare receptors should be mapped to determine if assessment is necessary and assessments should determine the extent to which receptors will be impacted, including tracking PV module mounting structure and the combined reflection from PV modules, frames and supports. Paragraphs 2.10.134 - 2.10.136 detail potential mitigation from glint and glare effects, including anti-glare coating,

screening and angles. Paragraph 2.10.159 slightly conflicts with the MHCLG guidance above stating that *"there is no evidence that glint and glare from solar farms results in significant impairment on aircraft safety"*. The requirement to consider the impacts to nearby homes, rights of way and motorists is also referenced in paragraphs 2.10.158 – 2.10.159.

16.3.4 The Planning Inspectorate has published technical advice for the scoping of solar NSIPs (Ref 16-40). The technical advice requires that should there be potential for glint and glare impacts to receptors, a glint and glare assessment should be included within an ES, and where significant effects are likely – the results should inform other relevant technical assessments.

16.3.5 Policy CC6 of the Folkstone and Hythe Places and Policies Local Plan (Ref 16-40) requires new solar farms not to have a direct loss of amenity to nearby residential properties by virtue of glare or other disturbance.

16.3.6 As described in **Chapter 9: Landscape and Visual Amenity**, the effect of glint and glare on landscape will be considered in the EIA and presented within the LVIA chapter of the ES.

16.3.7 Several potential aviation receptors were identified in the wider area. Lydd Airport (London Ashford Airport) is a larger private airport located between Lydd, New Romney and Lydd-on-Sea, approximately 9 km from the Site. Several other small airfields were identified nearby:

- Hamilton Farm Airfield (4.4km from Site);
- Harringe Court Airstrip (8.2km from Site); and
- Woodridge /Meadow Farm Field Airfield (2.2km from Site).

16.3.8 Other potential receptors include motorists using the local road networks (The Street, Marsh Road, Newchurch Lane, Wills Lane, Newchurch Road, Gigger's Green Road, Lower Wall Road, Chapel Lane, Gammon's Farm Lane, Church Road and Eastbridge Road), the A2070, A2259 and B2067, and ground-based receptors including neighbouring residential properties and farms, and recreational receptors including users of Public Rights of Way (PRoW). Full details of road networks and PRoWs are presented in **Chapter 14: Transport and Access.**

16.3.9 Construction and decommissioning activities will be undertaken in accordance with a Framework Construction Environmental Management Plan (CEMP) and Framework Decommissioning Environmental Management Plan (DEMP) submitted with the DCO application. This will include information on how reflective surfaces are to be treated during construction and decommissioning phases with a view toward their final placement across the Energy Park Site. It is expected that avoidance of the effects of glint and glare will be considered as part of construction and decommissioning planning. Based on the nature of the activities, the distances to receptors and the use of a CEMP, construction and decommissioning effects are proposed to be scoped out of the assessment.

16.3.10 Operational effects are considered to be fixed and will last for the duration of the Scheme. The interaction of PV modules with sensitive locations, such as vehicular junctions or pedestrian crossings on roads, is primarily influenced by their siting, as PV modules require orientation toward the sun path and the

choice of materials, where more reflective, or specular surfaces create a higher chance of creating distraction through discomfort or disability glare.

16.3.11 As the design develops, consideration will be given to the potential for solar reflections to impact on sensitive receptors. This will include undertaking calculations to determine whether the solar PV modules will be visible from sensitive locations and if a solar reflection could occur, whether it is likely to be a significant nuisance or hazard. If it is likely to be a nuisance or hazard, mitigation will be proposed.

16.3.12 As appropriate, the results and recommendations of any glint and glare calculations will be incorporated into the Scheme design and a glint and glare assessment presented as a technical appendix to the ES. It is therefore proposed to be scoped out as a standalone ES chapter, it will be summarised within the Other Environmental Topics chapter.

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

16.4 Ground Conditions

Introduction

16.4.1 Ground conditions will be included in the Other Environmental Topics chapter of the ES and will include a brief assessment of the effects of the Scheme on ground conditions at the Site and surrounding area.

16.4.2 This assessment is supported by **Appendix I: Land Contamination Preliminary Risk Assessment** which covers the Energy Park Site and Interconnecting Cable Corridor Search Area as well as **Figure 16-1: Ground Conditions Study Area**. The ES will be supported with another PRA once the Grid Connection Route has been defined.

16.4.3 Throughout this chapter, ‘Site’ refers to the Energy Park Site and the Interconnecting Cable Corridor Search Area.

Study Area

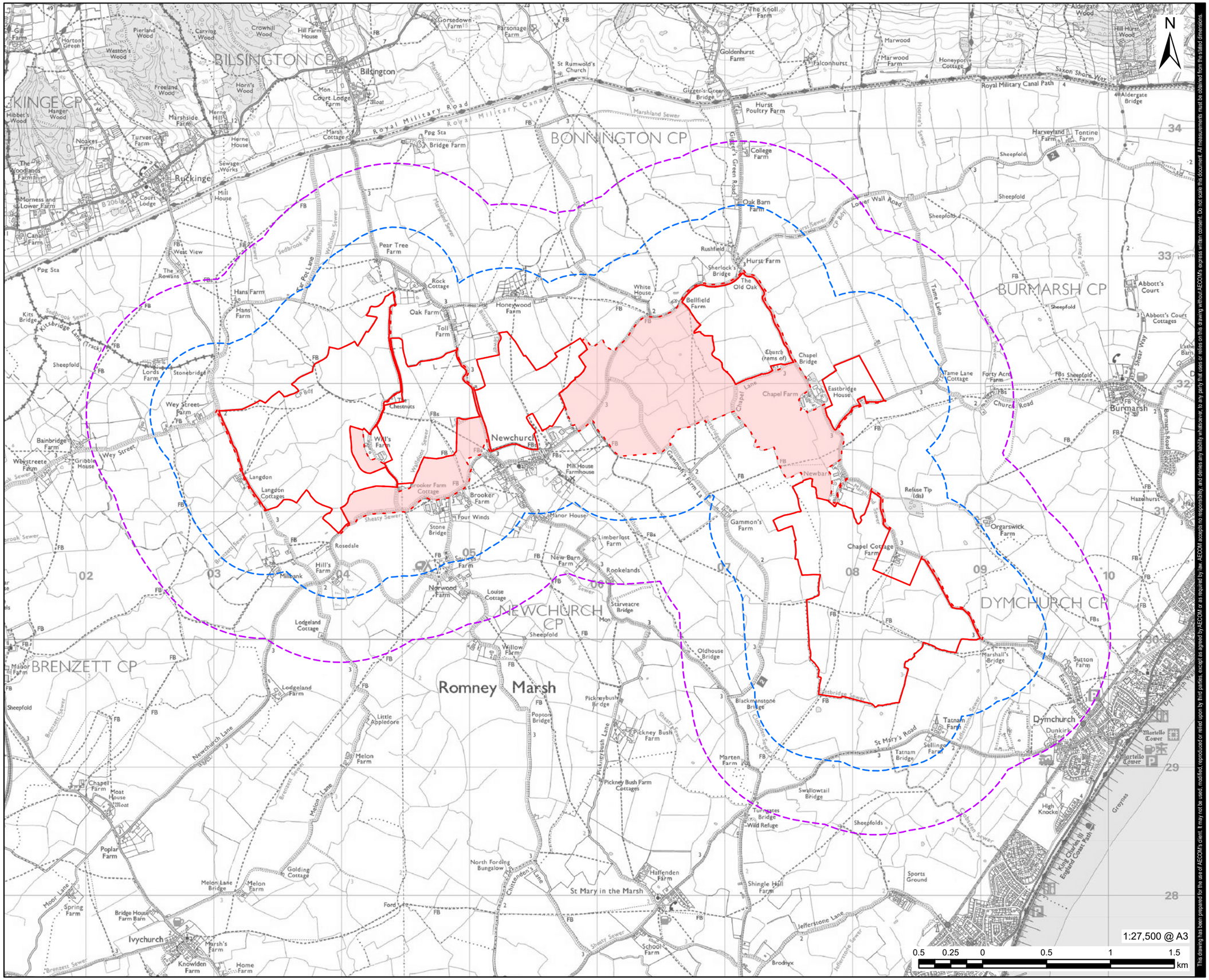
16.4.4 The study area for ground conditions assessment includes the Site plus a 500m buffer. In the case of groundwater abstractions, this buffer is increased to 1km, as is often standard practice for contaminated land desk-based assessments. Similarly, the zone of influence to inform the identification of cumulative effects is up to 1km from the Site boundary. This is shown on **Figure 16-1: Ground Conditions Study Area**.

16.4.5 Once the Grid Connection Route is defined, the Study Area for the ground conditions assessment will be the Grid Connection Route boundary plus a 500m buffer, with a 1km buffer reviewed for groundwater abstractions and cumulative effects.

Figure 16-1: Ground Conditions Study Area

Revision: 0 Drawn: LP Checked: AK Approved: MK Date: 2025-05-01

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



AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

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Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area

Buffers of the Energy Park Site and Interconnecting Cable Corridor Search Area

- 500m
- 1km

NOTES

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ISSUE PURPOSE

Scoping Report

PROJECT NUMBER

60736659

FIGURE TITLE

Ground Conditions Study Area

FIGURE NUMBER

Figure 16-1

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Legislation, Planning Policy Context and Guidance

Legislation

16.4.6 There are five key legislative drivers for dealing with risks to human health and the environment from ground conditions, namely:

- Part 2A of the Environmental Protection Act (EPA) 1990 (the Contaminated Land Regime) (Ref 16-42) provides the legislative framework within which site data is to be assessed and defined as 'contaminated land';
- The Water Resources Act 1991 (Ref 16-43) and the Water Resources Act 1991 (Amendment) (England and Wales) Regulations 2009 (Ref 16-44) provide statutory protection to controlled waters and make unwarranted discharge an offence;
- The Water Act 2003 (Ref 16-45) added the pollution of controlled waters as a determinant of contaminated land, and necessitated the remediation of contamination;
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref 16-47) provides protection to water bodies to prevent groundwater pollution; and
- The Building Act 1984 (Ref 16-46), the Building Regulations 2010 (Ref 16-48) and The Building Regulations & c (Amendment) Regulations 2015 (Ref 16-49) provide legislative direction on structural and design aspects of development based on the geotechnical properties of the ground.

16.4.7 Other legislation of relevance to this topic includes:

- Environmental Permitting (England and Wales) Regulations 2016 (Ref 16-50) (as amended);
- Hazardous Waste (England and Wales) (Amendment) Regulations 2016 (Ref 16-51);
- Contaminated Land (England) (Amendment) Regulations 2012 (Ref 16-52
- Environmental Damage (Prevention and Remediation) Regulations 2015 (Ref 16-53);
- Anti-Pollution Works Regulations 1999 (Ref 16-54); and
- The Control of Asbestos Regulations 2012 (Ref 16-55).

National Planning Policy

16.4.8 The following national planning policy has been considered in relation to ground conditions:

- Overarching NPS for Energy (EN-1)
- NPS for Renewable Energy Infrastructure (EN-3);

- NPS for Electricity Networks Infrastructure (EN-5);
- National Planning Policy Framework (NPPF) (Ref 16-56);
- The Planning Practice Guidance (PPG) (Ref 16-57);
- A Green Future: Our 25 Year Plan to Improve the Environment (Ref 16-58); and
- DEFRA's Environmental Improvement Plan published in 2023 (Ref 16-59).

Local Planning Policy

16.4.9 The following local planning policy has been considered in relation to ground conditions:

- Kent Minerals and Waste Local Plan 2024-2039 - Adopted March 2025 (Ref 16-60);
- Kent Minerals and Waste Local Plan 2013-2030 - Minerals Sites Plan - Adopted September 2020 (Ref 16-61);
- Ashford Local Plan 2030 - Adopted February 2019 (Ref 16-62);
- Folkestone and Hythe Core Strategy Review to 2037 - adopted March 2022 (Ref 16-63); and
- Folkestone and Hythe Places and Policies Local Plan – adopted September 2020 (Ref 16-64).

Consultation

16.4.10 The EIA Scoping Report will undergo consultation with statutory authorities which will be included in the ground conditions assessment. Consultation with local authorities on ground conditions issues will be undertaken if pertinent to the comments received.

Baseline Conditions

16.4.11 The following sources of information have been used to inform the baseline conditions within the study area:

- Defra's Multi-Agency Geographic Information for the Countryside (Magic) Map online search tool (Ref 16-66);
- Environmental Agency Catchment Data Explorer (Ref 16-65);
- Folkstone and Hythe District Mineral Safeguarding Map (Ref 16-67); and
- BGS Geoindex Onshore online geological mapping (Ref 16-69).

Site Setting

16.4.12 The Site is situated within Romney Marsh, a sparsely populated wetland in Kent primarily used for arable agriculture.

Geology and Hydrogeology

16.4.13 According to the BGS Geoindex online mapping, there is no artificial ground mapped across the Site. The entire Site is underlain by tidal flat superficial deposits, including mud flat and sand flat deposits.

16.4.14 The bedrock geology underlying the entire Site consists of the Tunbridge Wells Sand Formation, a predominantly fine- to medium-grained sandstone, siltstone and silty sand rhythms with finely bedded mudstones and thin limestones.

16.4.15 The Tunbridge Wells Sand Formation are classified as a Secondary A aquifer. Small portions of the superficial deposits underlying the Site, specifically in the north, are classified as a Secondary A aquifer. Secondary A aquifers are described as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to river.

16.4.16 No Mineral Safeguarding Areas, or Geodiversity Parks or Geological SSSI are identified within the Site boundary.

Hydrology

16.4.17 The Site is situated in the Romney Marsh between Appledore and West Hythe Water Body catchment, which had Moderate ecological status in 2022 (EA Catchment Data (Ref 16-68)). There are various surface waterbodies on-site associated with the Romney Marsh wetland.

Sensitive Receptors

16.4.18 Sensitive receptors for different potential impacts of the Scheme have been identified as follows:

- Human Health:
  - Contractors carrying out construction works; and
  - Neighbouring uses, occupiers and the general public.
- Controlled Waters:
  - Secondary A Aquifers (Tunbridge Wells Sand Formation and sections of the tidal flats deposits); and
  - Surface waterbodies.

Potential Effects and Mitigation

16.4.19 A number of environmental design and management measures will be employed as standard best practice to minimise impacts to both human health and controlled waters during the construction and decommissioning phases of the Scheme. These will be incorporated into the Framework Construction Environmental Management Plan (CEMP) which will be provided alongside the ES as part of the DCO application. This will be developed into a detailed CEMP prior to construction and implemented in accordance with the Framework CEMP.

16.4.20 **Appendix D: Environmental Mitigation and Commitments Register** lists the standard mitigation measures which are anticipated to be implemented in order to avoid, prevent, reduce or offset the following potential impacts:

- Human exposure through direct contact / inhalation / dermal uptake of contaminants;
- Creation of preferential pathways and mobilisation of contamination;
- Contamination of natural soils, driving of contamination into an aquifer during piling, contamination of groundwater with concrete, paste, or grout;
- Pollution and degradation of water quality of any underlying aquifer;
- Infiltration and / or runoff into the local drainage / sewerage network - pollution of drainage and sewerage network and any adjacent surface water features;
- Run-off and infiltration of contaminants from material stockpiles;
- Contamination of drainage and sewerage network and/or groundwater; and
- Spread of nuisance dusts and soils to the wider environment and local roads.

16.4.21 On-site activities when the Scheme is complete and operational will be limited to the maintenance of the Energy Park Site infrastructure. During maintenance activities there may be the need to use oils, grease, fuels, lubricants or cleaning agents on-site. There is a limited risk of chemical pollution arising from accidental spillages during these operations. A Framework Operational Environmental Management Plan (OEMP) will be prepared following grant of DCO to address all operational related issues. This will include a spillage Emergency Response Plan (ERP), which maintenance staff will be required to have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of booms, bunding and absorbent material.

16.4.22 Maintenance activities during the operational phase will be managed through an OEMP (to be prepared will be prepared following grant of DCO) which will be in accordance with the Framework OEMP submitted with the DCO application and as such operational and maintenance activities are scoped out of the assessment.

16.4.23 Additional mitigation measures may also be developed to address specific identified impacts. At this stage, the requirement for specific mitigation measures in respect of soils and geology could include for example remedial works if a risk were to be identified from land contamination. The requirement for remedial works is usually informed by ground investigations and detailed risk assessment. Ground investigations and detailed risk assessment (if required) will be conducted following grant of the DCO.

Preliminary Risk Assessment Methodology

16.4.24 The guidance on Land Contamination Risk Management (LCRM) (Ref 16-65) indicates that the first step in evaluating land contamination risks is a PRA.

16.4.25 The objective of the PRA is to identify and evaluate potential land quality risks and development constraints associated with the Scheme and to construct an initial Conceptual Site Model (CSM) that can be used to inform future decision making and the design future ground investigation.

16.4.26 A Land Contamination PRA report has been prepared covering the land within the Site (**Appendix I: Land Contamination Preliminary Risk Assessment**).

16.4.27 The Phase 1 PRA includes the following:

- Details of land within the Site and surrounding land including development history, geology, hydrogeology, hydrology, soil and groundwater quality, and environmental setting;
- Details of any available site investigation, risk assessment, remediation, validation reports for land within the Site or asbestos surveys for any properties within the site;
- Details from a site walkover documenting:
  - The existing layout, current operations and condition of land within the Site, the property boundaries and immediately surrounding land;
  - The visual inspection of any accessible site storm-water, foul, and offsite effluent discharges; and
  - A visual inspection (non-intrusive) of the external building fabric of potential structures and inspection of any asbestos registers (if available).
- A CSM and an evaluation of potential contamination linkages; and
- Conclusions and recommendations based on the findings.

16.4.28 The conclusions and recommendations of the Phase 1 PRA have identified the additional mitigation measures to be followed which are presented in **Appendix D: Environmental Mitigation and Commitments Register**.

Limitations and Assumptions

16.4.29 The assessment uses baseline data available at the time of assessment and assumes accuracy of third-party data.

Summary of Elements Scoped Out

16.4.30 A separate ground conditions chapter is proposed to be scoped out of the ES. The PRA provides information on potential source, pathway, receptor linkages and provides recommendations for mitigation measures and further works.

16.4.31 Following these mitigation measures and recommendations, any residual effects on ground conditions are considered not significant.

16.4.32 A summary of the elements scoped out of the ground conditions are presented in **Table 16-2.**

Table 16-2: Elements scoped out of the assessment of Ground Conditions

Element	Scoped Out
Construction Phase Impacts	Scoped out – A PRA is included in the Scoping Report and the results and recommendations of this will be incorporated into the Framework CEMP and Framework DEMP.
Operational Phase Impacts	Scoped out – Maintenance activities during the operational phase will be managed through an OEMP which will be based on the Framework OEMP prepared for the DCO application and are proposed to be scoped out of the assessment.

16.5 Human Health

16.5.1 The World Health Organisation (WHO) Europe defines health as *"…a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"*. Consequently, public health encompasses general well-being, not just the absence of illness. Health is affected by a range of factors, termed the 'wider determinants of health', which span bio-physical, social, behavioural, economic and institutional factors.

16.5.2 The Infrastructure Planning (EIA) Regulations 2017 (Ref 16-75) require the consideration of the likely significant direct or indirect effects of projects on 'population and human health'. The purpose of assessing effects on human health would be to identify and characterise relevant health receptors (the population, including vulnerable groups), to consider the nature and scale of potential impacts arising from the Scheme, and to assess the significance of any likely effects.

16.5.3 At a national policy level, NPS EN-1 (Ref 16-76), with specific reference to Section 4.4, acknowledges that access to energy is beneficial to society as a whole and that the production, distribution, and use of energy may have negative impacts on some people's health. Also, the NPPF (Ref 16-77Ref 16-77) with specific reference to Section 8, 'Promoting healthy and safe communities' sets out the need for planning policies to promote healthy, inclusive and safe places.

16.5.4 At a local level, the Ashford Local Plan 2030 (Ref 16-62) with specific reference to Policy COM1 'Meeting the Community's Needs' sets out the requirement for infrastructure and facilities to meet generated by new development, including health provision. Also, the Folkestone & Hythe

District Places and Policies Local Plan (Ref 16-81) with specific reference to Policy HW3 'Development That Supports Healthy, Fulfilling and Active Lifestyles' sets out the requirement of increasing, creating and safeguarding opportunities for healthy lifestyles and reduce the environmental impact of development proposals.

16.5.5 Kent County Council's Health and Wellbeing Board has agreed the strategic direction and principles of the Joint Health & Wellbeing Strategy (Ref 16-80). The strategy aims to improve health outcomes and reduce health inequalities through four key priorities:

- Tackle key health issues where Kent is performing worse than the England average;
- Tackle health inequalities;
- Tackle the gaps in provision; and
- Transform services to improve outcomes, patient experience and value for money.

16.5.6 Further, the County Council's Joint Strategic Needs Assessment (JSNA) (Ref 16-82) identifies the health and social care needs of the local population in order to support local organisations to plan, commission and deliver the best possible services. The JSNA supports and underpins implementation of Kent County Council's strategic statement "Our Vision" which states:

- Children and young people in Kent to get the best start in life;
- Kent communities feel the benefits of economic growth by being in work, healthy, and enjoying a good quality of life; and
- Older and vulnerable residents are safe and supported with choices to live independently.

16.5.7 Guidance on the assessment of human health is provided by The Institute of Environmental Management and Assessment (IEMA). This includes guidance on Determining Significance for Human Health in Environmental Impact Assessment (Ref 16-78) which presents a framework for EIA practitioners to identify significant effects of a proposed development on human health. The guidance highlights the need to consider the significance of human health effects in relation to vulnerable groups.

16.5.8 A summary of the human health profile of the population currently residing in proximity to the Scheme is set out below, drawing on Public Health England and Census data (Ref 16-83; Ref 16-84). Data is presented for the wards of Romney Marsh and Saxon Shore in which the Energy Park Site is proposed to be located. Where data is not available at the ward level, district level data is provided for Folkestone & Hythe, and Ashford districts. Data is also presented at a county (Kent), regional (South East) and national (England) level in order to provide geographical comparators for the local population.

16.5.9 The human health profile shows that:

- Romney Marsh has a considerably older population, with 38.1% aged 65+ which is higher than Folkestone & Hythe at 20.6% and England

(18.3%). Saxon Shore also has a higher proportion of elderly people (26.6%) compared to Ashford (19.7%), and other comparators.

- Romney Marsh reports worse health, with 8.9% of people describing their health as “bad” or “very bad” (higher than Folkestone & Hythe at 6.5%, and England at 5.2%). Saxon Shore (4.2%) is lower than other comparator areas.
- In Romney Marsh, 26.2% of people have a long-term illness or disability, considerably higher than Folkestone & Hythe (21.8%), and national levels (17.3%). Saxon Shore (16.6%) is lower than Ashford (17.1%), and other comparator areas.
- Unemployment in Romney Marsh is 4.5%, which is lower than Folkestone & Hythe (5.6%) and national levels (5%). Saxon Shore has a lower unemployment rate at 2.8% which is better than recorded for Ashford (4.4%), and all other comparators.

16.5.10 A standalone assessment of Human Health is proposed to be scoped out of the ES. This is because other chapters in the ES will comprehensively assess potential effects of the scheme which could be relevant to health effects, and given the nature of the development and its potential impacts this is a proportionate approach.

16.5.11 The following ES technical chapters will cover potential effects during the construction, operation, and decommissioning phases that could be relevant for health:

- Chapter 6: Climate Change;
- Chapter 9: Landscape and Visual Amenity;
- Chapter 11: Noise and Vibration;
- Chapter 12: Socio-Economics and Land Use;
- Chapter 14: Transport and Access;
- Chapter 15: Water Environment; and
- Chapter 16: Other Environmental Topics (including Air Quality, Ground Conditions, Electromagnetic Fields and Major Accidents and Disasters).

16.5.12 A critical assumption underpinning the scoping out of the Human Health topic is that a wide range of environmental design and management measures will be employed as standard best practice to minimise impacts to human health during the construction and decommissioning phases of the Scheme. These will be incorporated into the Framework CEMP, Framework OEMP and Framework DEMP which will be provided alongside the ES as part of the DCO application. These will be developed into Detailed Plans prior to construction and then implemented.

16.6 Major Accidents and Disasters

1.1.6 This chapter describes the potential vulnerability of the Scheme to major accidents and disasters (MA&Ds) during construction and operation.

1.1.7 Major accidents and disasters are by nature very infrequent and low probability events, as such it would not be appropriate to consider the cumulative impacts associated with similar simultaneous events occurring at other nearby facilities where there is no direct connection. The method proposed would be for risk identification to be implemented which would identify, classify and evaluate risk and assessment guidance based on professional judgement.

National Planning Policy

16.6.1 The Environmental Impact Assessment (EIA) Regulations (Ref 16-85) has introduced a requirement to consider major accidents or disasters. It is considered likely that the original changes to the EIA Directive (Ref 16-85) to consider major accidents or disasters were made in order to bring certain other statutory requirements, mainly other European Union (EU) Directives, within the overall 'wrapper' of EIA and the ES. The Directive and domestic Regulations cite two specific directives as examples of risk assessments to be brought within EIA, these are Directive 2012/18/EU of the European Parliament and of the European Council (which deals with major accident hazard registered sites) (Ref 16-86) and Council Directive 2009/71/Euratom (which deals with nuclear sites) (Ref 16-88). Neither of these Directives are relevant to the Scheme.

16.6.2 Schedule 4, Part 5d of the EIA Regulations (Ref 16-85) requires that the EIA contain *"a description of the likely significant effects of the development on the environment resulting from the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)"* and Schedule 4, Part 8 requires that the EIA contain *"a description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned".*

Assessment Methodology

16.6.3 The following methodology from the *Major Accidents and Disasters in EIA: A Primer document* (Ref 16-93) has been adopted where 'accidents' are considered to be an occurrence that happens by chance or without expectation in the course of construction and operation of a development (e.g., major emission, fire or explosion), and 'disasters' are considered to be a sudden accident or naturally occurring catastrophe that causes great damage or loss of life. These could include: extreme weather events or ground related hazard events (e.g., subsidence, landslide, earthquake). In general, major accidents or disasters, as they relate to the Scheme, fall into three categories:

- Events that could not realistically occur, due to the nature of the Scheme or its location;

- Events that could realistically occur, but for which the Scheme, and associated receptors, are no more vulnerable than any other development; and
- Events that could occur, and to which the Scheme is particularly vulnerable, or which the Scheme has a particular capacity to exacerbate.

16.6.4 An initial scoping exercise has been undertaken to identify all possible major accidents or disasters that could be relevant to the Scheme. This list was drawn from a number of sources, including the National Risk Register 2020 (Ref 16-87). Major accidents or disasters with little relevance in the UK were not included. The long list of major accidents or disasters is presented in **Appendix J: Long List of Major Accidents and Disasters**. The long list was then reduced to form the short list presented in **Table 16-3**. This initial scoping exercise shows the potential vulnerability of the Scheme to the risk of a major accident and/or disaster associated with a variety of different events. **Table 16-4** also provides further clarity on the topics and events which have been scoped into the EIA, and those which have been scoped out, with suitable justification provided.

16.6.5 It is considered reasonable and proportionate to exclude certain receptor groups from the outset. Construction workers, as a receptor, can be excluded from the assessment, because existing legal protection is considered to be sufficient to minimise any risk from major accidents or disasters to a reasonable level. Legislation in force to ensure the protection of workers in the workplace includes:

- Health and Safety at Work etc. Act 1974 (Ref 16-89);
- The Management of Health and Safety at Work Regulations 1999 (Ref 16-90);
- The Workplace (Health, Safety and Welfare) Regulations 1992 (Ref 16-91); and
- Construction (Design and Management) (CDM) 2015 Regulations (Ref 16-92).

16.6.6 However, it is considered highly likely that as the design of the Scheme evolves in preparation of the DCO application, it will become clear that there is no real risk or serious possibility of these events interacting with the Scheme. In that eventuality, it is proposed to scope out a standalone Major Accidents and Disasters chapter from the ES. The ES would note and explain where this approach has been taken. Should the possibility of any events interacting with the Scheme remain, this would be assessed and presented in the ES.

16.6.7 Mitigation measures relevant to this topic at this stage are also included in the Commitments Register, which is **Appendix D: Environmental Mitigation and Commitments Register** of this document.

Table 16-3: Major accidents or disasters shortlisted for further consideration

Major accident or disaster	Potential Receptor	Comments
Floods	Property and people in areas of increased flood risk.	Both the vulnerability of the Scheme to flooding, and its potential to exacerbate flooding, will be covered in the Flood Risk Assessment, and reported in ES, both in terms of the risk to the Scheme and increased risk caused by the Scheme. Mitigation will be considered and, where necessary, incorporated into the Scheme design.
Fire	Local resident, habitats and species.	There may be some potential for fire as a result of the battery storage element of the Scheme. However, the BESS will include automatic control, cooling, shutdown, and suppression systems, which are designed to regulate temperatures to within safe conditions to minimise the risk of fire. A Framework Battery Safety Management Plan will be prepared for the Scheme. The development of the Plan will be considered in the iterative design of the Scheme ensuring that design requirements to ensure fire safety (such as ensuring adequate provision of land for water storage) and management of any firewater runoff are captured. This will also be cognisant of the current (at it's time of writing) industry standards and norms in relation to the topic. It is anticipated that this will be a stand-alone report submitted alongside the DCO application.
Road accidents	Aquatic environment, Road Users.	The risk of road collisions and accidents will be addressed in the **Chapter 13: Transport and Access**.

Major accident or disaster	Potential Receptor	Comments
		The risk posed by spillage from hazardous loads as a result of a road traffic accident during construction or decommissioning has been scoped out of the ES as there are no nearby road features which suggest that the transfer of materials poses a greater risk than would be normally expected on the general highway network. The general risks of spillages of hazardous materials / chemicals will be considered in the **Chapter 14: Water Environment** of the ES. The potential for glint and glare to affect road users will be considered within a technical appendix to the ES if any risks are identified. Mitigation will be considered and, where necessary, incorporated into the Scheme design.
Aircraft Disasters	Pilots and aircraft	This will be covered in the Glint and Glare Technical Appendix and summarised within **Chapter 16: Other Environmental Topics**.
Flood Defence Failure	Property and people in areas of increased flood risk.	This will be covered in the Flood Risk Assessment and reported in ES, both in terms of the risk to the Scheme and increased risk caused by the Scheme.
Utilities failure (gas, electricity, water, sewage and oil)	Employees and local residents.	The Scheme has the potential to affect existing utility infrastructure above and below ground. To identify any existing infrastructure constraints, both consultation and a desk-based study will be undertaken.

Major accident or disaster	Potential Receptor	Comments
Mining/Extractive Industry	Employees	There is limited potential for current or past quarrying activity in the vicinity to lead to unstable ground. However, the risk will be considered as part of the geotechnical design, ensuring that the risk is designed out.
Unexploded Ordnance (UXO)	Human Health	The western extent of the Site was part of Newchurch Advanced Landing Ground (ALG) during World War II. This was a temporary ALG operating between July 1943 and September 1944 with two runways, various dispersal areas, blister hangers, tents, firing bays, gun site and a fuel store. Four V1 impacts have been noted in the vicinity of the runways. A UXO Risk Assessment will be conducted prior to ground investigation to establish the risk of UXO on Site.
Plant disease	Habitats and species	New planting may be susceptible to biosecurity issues, such as the increased prevalence of pests and diseases, due to climate change. The planting design will take account of biosecurity risks through a wider mix of species including some non-natives.

Summary of Elements Scoped In and Scoped Out

16.6.8 A standalone chapter for Major Accidents and Disasters is not considered appropriate given the nature, scale, and location of the Scheme. The Scheme is not considered to be vulnerable or give rise to significant impacts relating to Major Accidents and Disasters.

16.6.9 Therefore, the short listed elements of the Major Accidents and Disasters have been scoped out of the assessment. The scoped out elements are presented in **Table 16-4**.

Table 16-4: Elements scoped in and scoped out of the assessment of Major Accidents and Disasters

Element	Scoped In/Scoped Out
Floods	Scoped out – flood risk will be assessed within **Chapter 15: Water Environment** and within a Flood Risk Assessment to support the DCO Application.
Fire	Scoped out – fire risks relating to the battery storage element will be considered within a Framework Battery Safety Management Plan.
Road accidents	Scoped out – traffic related accidents will be detailed within **Chapter 14: Transport and Access**.
Flood defences failure	Scoped out – flood related risks will be detailed within **Chapter 15: Water Environment** and within a Flood Risk Assessment to support the DCO Application.
Utilities failure (gas, electricity, water, sewage, oil and communications)	Scoped out – impacts to utilities will be discussed within the telecommunications and utilities section of **Chapter 16: Other Environmental Topics**.
Mining extractive industry	Scoped out – disasters relating to mining extraction will be considered as part of the geotechnical design. Therefore, it is not considered necessary to assess in this within the EIA
Plant disease	Scoped out – disasters relating to plant diseases will be detailed within the planting design and Framework LEMP. Therefore, it is not considered necessary to assess in the EIA.

16.7 Telecommunications and Utilities

16.7.1 Solar farms have the potential to affect existing below ground utility infrastructure for example through 'cable strike' when piling the solar PV mounting structure or excavating the cable trenches but are not at a height to affect above ground utility infrastructure. The Scheme will be designed to ensure appropriate buffers are applied in relation to the placement of PV modules and other infrastructure in relation to present buried and above-ground utility infrastructure, to allow safe access and working areas.

16.7.2 To identify any existing infrastructure constraints, both consultation and a desk-based study will be undertaken. Consultation with relevant telecommunication and utilities providers is a routine part of development and consultees will include water, gas, telecommunications, and electricity utilities providers as appropriate. The currently known assets within the Energy Park Site and Interconnecting Cable Corridor Search Area are:

- UK Power Networks cables including 11kV and 33kV OHL, and buried cabling;
- UK Power Networks Substations;
- National Grid Electricity Transmission 400kV OHL;
- BT Openreach buried cables and OHL;
- South East Water Distribution Mains; and
- Affinity Water Distribution Mains.

16.7.3 Further information obtained from consultation will be used to inform the Scheme design and appropriate protective provisions will be included in the draft DCO to ensure the protection of apparatus wherever any existing infrastructure has the potential to be affected by the Scheme.

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

16.7.5 Taking the above into account, relevant measures will be captured within the Scheme design, therefore a separate utilities ES chapter is not considered to be required and is Scoped Out of the ES.

17. Structure of Environmental Statement

17.1.1 The ES will consist of three volumes and a Non-Technical Summary (NTS). This section provides a summary of each document that will form the ES.

17.1.2 **ES Volume I: Main Report** — this will form the main body of the ES, detailing the results of the environmental assessment, likely significant effects arising from the Scheme, and the proposed mitigation measures. The ES will also identify opportunities for social and economic benefits and environmental enhancement. The ES will be divided into a number of background and technical chapters, each being supported with figures and tabular information. Each topic will be assigned a separate technical chapter in the ES as follows:

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

17.1.3 In addition to the above, the following chapters will be produced as part of this volume of the ES:

- Chapter 1: Introduction;
- Chapter 2: The Scheme and Scheme Location;
- Chapter 3: Scheme Description;
- Chapter 4: Alternatives and Design Evolution;
- Chapter 5: EIA Methodology;
- Chapter 17: Cumulative Effects and Interactions; and
- Chapter 18: Summary of Environmental Effects.

17.1.4 **ES Volume II: Figures** — A complete set of figures will be provided for reference which support the assessments in ES Volume I.

17.1.5 **ES Volume III: Technical Appendices** — A complete set of appendices will be provided for reference. These comprise background data, technical reports, tables, figures and surveys which support the assessments in ES Volume I.

17.1.6 **Non-Technical Summary (NTS)** — The NTS will be presented in a separate document and provide a concise description of the Scheme, the

considered alternatives, baseline, assessment methodology, predicted residual environmental effects and mitigation measures. The NTS will be designed to provide information on the Scheme in an accessible format which can be understood by a wide audience and to assist interested parties with their familiarisation of the project.

18. Summary and Conclusions

18.1.1 This Scoping Report represents notification under Regulation 8(1)(b) of the EIA Regulations that the Applicant will undertake an EIA in respect of the Scheme and produce an ES to report the findings of the EIA. It also represents a formal application to PINS under Regulation 10 of the EIA Regulations for a 'Scoping Opinion' as to the information to be provided within the ES that will form part of the DCO application.

18.1.2 This report has identified the environmental effects that are considered to have the potential to be significant and proposes the approach to be used in assessments that will be undertaken for the EIA to characterise and understand the significance of these effects. The prescribed consultees are invited to consider the contents of this report and comment accordingly within the statutory 42-day time period.

18.1.3 In line with PINS recommendations for scoping of solar development (Ref 18-1) **Table 18-1** presents a summary of assessment which is proposed to be 'scoped out' and the rationale for this.

18.1.4 **Table 18-2** summarises the approach taken to the topics discussed in **Chapter 16: Other Environmental Topics** of this Scoping Report.

Table 18-1: Summary of matters proposed to be Scoped Out of the EIA

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
Climate Change	In-combination climatic conditions	Scoped out as changes in temperature, sea level, precipitation and wind patterns are not predicted to have a significant impact upon receptors identified by other environmental disciplines. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Cultural Heritage	Archaeology during operation	Given that the operation phase will not require ground works no impacts will occur to any buried assets. Any archaeological matters will be addressed prior to and/or during construction. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Ecology	Statutorily designated sites (European sites)	European sites beyond 10km from the Site (beyond 20km for birds and 30km for bats) without mobile species as qualifying criteria are scoped out of the assessment. Beyond these distances there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Statutorily designated sites	Statutory sites of national importance designated for their biodiversity value beyond 5km (without mobile species as qualifying criteria) of the Site are scoped out of the assessment.

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
	of National importance	Beyond these distances there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Non-statutorily designated sites	Non-statutorily designated sites beyond 2km of the Site are scoped out of the assessment. Beyond these distances there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Habitats	Common and widespread habitats of no conservation value and habitats outside of the Zone of Influence (ZoL) of the Site have been scoped out. There will be no direct impact to habitats outside of the Site and good practice construction methods will ensure that there are no indirect impacts to habitats outside of the Site. Therefore, there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Terrestrial Invertebrates	Common and widespread species of no conservation value and species outside of the Site have been scoped out. Retention of the majority of habitats (e.g. woodland, hedgerows and ditches) within the Site, avoidance of off-Site habitats and good practice construction

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
		methods will ensure that there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme. **Proposed mitigation summarised in the commitments register** No specific mitigation necessary at this stage.
	Aquatic Macroinvertebrates	Common and widespread species of no conservation value and species outside of the Site scoped out. Retention of the majority of habitats (e.g. watercourse and water bodies) within the Site, avoidance of off-Site habitats and good practice construction methods will ensure that there are no potential impact pathways during any phase (construction, operation and maintenance and decommissioning) of the Scheme. **Proposed mitigation summarised in the commitments register** No specific mitigation necessary at this stage.
	Breeding and Non-breeding Birds	The potential for bird species to collide with or be attracted to PV modules during operation is scoped out. 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 evidence in the UK that PV modules increase the risk of mortality or displacement of bird populations. Risk of attraction and collision with PV modules is therefore proposed to be scoped out of the assessment. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Species of Principal Importance (SPI)	Specific surveys for these species are scoped out. Brown Hare and Hedgehog are likely to be present within the Site and Harvest Mouse has the potential to be present, based on the

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
	mammals, including Brown Hare, Hedgehog and Harvest Mouse	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. **Proposed mitigation summarised in the commitments register** Embedded mitigation measures (which will be formalised in the Framework CEMP secured as part of the DCO requirements) will ensure the integrity of retained habitats are not adversely affected and that there is no fragmentation of habitats, or of populations of species and that no species mortality occurs.
	Hazel Dormouse and European Beaver	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. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Other mammals, e.g. common and widespread species of no conservation value (such as Deer)	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, however, no detailed assessment for these species is required. The Scheme design will consider the maintenance of ecological corridors and connectivity across the Scheme for common and widespread mammal species. **Proposed mitigation summarised in the commitments register** Perimeter fence will include gaps for mammal access at appropriate locations for ecological connectivity.

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
Landscape and Visual Amenity	Landscape Designations, including setting	Landscape designations and settings will be represented within relevant Landscape Character Areas (LCA) and represented viewpoints, as part of the landscape assessment. As such a separate assessment of Landscape Designations is not proposed. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Lighting	Lighting during the construction phase would be directional and temporary, and designed to minimise potential for light spillage beyond the Site, particularly towards residential properties, live traffic and ecological habitats in so far as it is reasonably practicable. During operation any lighting will be directed at infrastructure and only triggered by motion detection or for emergency use. **Proposed mitigation summarised in the commitments register** Lighting design, direction and use is detailed in the commitments register.
Noise and vibration	Operational traffic noise	Operational traffic flows would be minimal and not sufficient to result in a 1 dB increase in noise, which would require a 25% increase in traffic. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Vibration from the operation of the Scheme	No plant that would generate perceptible levels of vibration are part of the Scheme and, as such, there will be no associated operational vibration effects. It is proposed that operational ground-borne vibration is scoped out of any further assessment. **Proposed mitigation summarised in the commitments register**

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
		No further mitigation necessary.
	Construction traffic vibration	Road traffic can cause vibration; however, DMRB LA 111 states: "*operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects*." Given that the condition of road surfaces on the majority of the highway network is outside the scope of the Scheme, an assessment of construction traffic vibration has been scoped out. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Decommissioning traffic vibration	Road traffic can cause vibration; however, DMRB LA 111 states: "*operational vibration is scoped out of the assessment methodology as a maintained road surface will be free of irregularities as part of project design and under general maintenance, so operational vibration will not have the potential to lead to significant adverse effects*." Given that the condition of road surfaces on the majority of the highway network is outside the scope of the Scheme, an assessment of decommissioning traffic vibration has been scoped out. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Socio-economics and Land Use	Development Land – Mineral Consultation Areas and	No mineral safeguarding areas, mineral consultation areas, waste safeguarding areas or transport safeguarding areas are adjacent to or within the Site boundary such that they could be affected by direct land take, or accessibility. **Proposed mitigation summarised in the commitments register**

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
	Mineral/Transport /Waste Safeguarding Areas	No further mitigation necessary.
	Farming Business	Farmers will be using the renting of their land on the Energy Park Site to diversify their businesses, and those for the Interconnecting Cable Corridors and Grid Connection Route will only experience temporary restriction when the works to lay cables are ongoing. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Soils and Agricultural Land	Decommissioning of the Scheme	The decommissioning phase activities would be outlined in the Framework DEMP. Decommissioning effects on soils and agricultural land are expected to be similar to, or of a lesser magnitude than, construction effects. Therefore, decommissioning effects are considered to be the same as construction phase effects and will be scoped out of specific assessment within the ES. **Proposed mitigation summarised in the commitments register** A Framework Soil Management Plan will be prepared as part of the DCO Application, this will specify the good practice management that will be utilised in the decommissioning of the Scheme.
Transport and Access	Impact of the Decommissioning phase of the Site	As a standalone assessment due to uncertainties in relation to future traffic flows and the magnitude of impacts being the same or less than during construction and therefore able to conclude with confidence the significance of effect would be the same or less than has been

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
		determined for the Construction phase. Measures for the management of decommissioning traffic will be summarised within the Commitments Register submitted with the DCO application. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Hazardous/Large Loads (during the Construction phase, Operation and Decommissioning Phase)	There are no nearby road features which suggest that the transfer of materials poses a risk beyond that which would be expected on the general highway network. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Impact of the Operational phase of the Site	The trips associated with the operational phase of the Scheme are expected to be nominal and therefore not result in significant impact. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Water Environment	Nutrient neutrality assessment (construction, operation and	No hydrologic connectivity between the Site and the designated sites identified by Natural England as requiring assessment. Additionally, it is noted that the Scheme will halt the use of pesticides and fertilisers on land within the Energy Park Site as a result of the change from its current arable agricultural use to Solar PV, this will reduce the runoff of fertilisers and pesticides into the surrounding

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
	decommissioning)	watercourses. However, there may be a small volume of foul waste generated on site during operation. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Potential impacts to coastal waterbodies (i.e. the Kent South coastal WFD water body) from surface water during construction, operation and decommissioning.	The Kent South coastal WFD water body is beyond the 1 km Study Area and given distance downstream and its scale (offering significant dilution and dispersal potential) there is not considered potential for significant impacts to this water body. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Materials and Waste	Changes in availability of materials	Construction materials required to construct the Scheme are unlikely to be required in large quantities, i.e. more than 10% of regional or national construction material availability. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
	Waste arising from extraction, processing, and manufacture of construction components and products	Waste from extractions cannot be definitively predicted given that they relate to procurement decisions which are not certain. Therefore, waste extractions cannot be assessed. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Environmental impacts associated with the management of waste from the Scheme e.g., on water resources, air quality, noise, or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste	Environmental impacts associated with the management of waste from the Scheme e.g., on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste are addressed separately in other relevant sections. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.

Topic	Matter	Information to support scoping aspect / matter out of the EIA where relevant
	Environmental impacts associated with the operation of offsite waste management facilities used by the Scheme in construction, operation and decommissioning	Offsite facilities will consider environmental impacts within their own planning and permitting processes. It is, therefore, not necessary to reassess within this assessment. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
	Changes to allocated/safeguarded mineral or waste sites	There are no allocated/safeguarded waste sites within the Scheme boundary as shown in the Kent Minerals and Waste Local Plan. There is, therefore, nothing to assess and has been scoped out. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.

Table 18-2: Approach to other environmental topics

Environmental Topic	Proposed Approach
Air Quality	Effect of Scheme construction and operational traffic on air quality is proposed to be scoped out due to construction traffic flows will be well below the Institute of Air Quality Management criteria triggering assessment, as well as the nominal operational activities and associated traffic. Detailed assessment of dust is not required following the implementation of mitigation measures outlined in the commitments register. **Proposed mitigation summarised in the commitments register** Qualitative dust assessment to identify measures to be included in a Framework CEMP. Suitable mitigation measures for construction and decommissioning plant and motorised equipment will be included in the Framework CEMP.
Electromagnetic Fields	A technical EMF assessment will be appended to the ES. This assessment will identify any potential risks to receptors once the Scheme design has evolved, in particular the export cable to the National Grid Substation placed within the Grid Connection Route. However following construction standards and national guidance, there is unlikely to be any resulting effect on sensitive receptors. **Proposed mitigation summarised in the commitments register** No high voltage cables will be installed within 10m of residential properties. No overhead lines will be part of the Scheme.
Glint and Glare	An assessment will be undertaken to identify the potential for solar reflections to impact on sensitive receptors for both orientation options to inform design development. Construction and decommissioning effects are proposed to be scoped out of the assessment.

Environmental Topic	Proposed Approach
	Proposed mitigation summarised in the commitments register No further mitigation necessary.
Ground Conditions	Construction phase impacts to ground conditions are proposed to be scoped out of the ES as a Preliminary Risk Assessment (PRA) will be included in the ES, the results and recommendations of which will be incorporated into the Framework CEMP, which will be implemented within a detailed CEMP post DCO consent. Measures identified by the PRA which are presented within the Framework CEMP mean that risks are adequately identified, assessed and mitigated so there is no requirement for a ground conditions chapter. Operational phase impacts on ground conditions are proposed to be scoped out of the ES as maintenance activities during the operational phase will be managed through an Operational Environmental Management Plan, produced in accordance with a Framework OEMP which will be submitted at DCO application. The measures which will be presented within the Framework OEMP will mitigate any risk to ground conditions receptors and as such there is no requirement for an assessment of this within a ground conditions chapter. **Proposed mitigation summarised in the commitments register** Numerous mitigation measures identified by the PRA for the Energy Park Site and Interconnecting Cable Corridor Search Area which will be included within the Framework CEMP. Industry standards and best practice measures to minimise risk during the operational phase will be identified and presented within a Framework OEMP at DCO submission.
Human Health	The consideration of impacts to human health from the Scheme is covered comprehensively by other chapters of the ES (**Chapter 6: Climate Change**, **Chapter 9: Landscape and Visual Amenity**, **Chapter 10: Noise and Vibration**, **Chapter 11: Socio-Economics and Land Use**, **Chapter 13:**

Environmental Topic	Proposed Approach
	Transport and Access, **Chapter 14: Water Environment**; and **Chapter 16: Other Environmental Topics** (including Air Quality, Ground Conditions, Electromagnetic Fields and Major Accidents and Disasters). These assessments determine mitigation measures where appropriate and as such a separate assessment of Human Health is not required. **Proposed mitigation summarised in the commitments register** A wide range of environmental design and management measures will be employed to minimise impacts to human health during the construction and decommissioning phases of the Scheme. These will be incorporated into the Framework CEMP, Framework OEMP and Framework DEMP which will be provided alongside the ES as part of the DCO application.
Major Accidents and Disasters	The following matters will be assessed and or controlled through the application and therefore do not require a separate assessment within a standalone major accidents and disasters chapter: • Flooding – Flood risk will be assessed as part of the proposed Water Environment chapter as well as a Flood Risk Assessment; • Fire – Fire risks relating to BESS will be controlled by the Framework Battery Safety Management Plan; • Road Accidents – Traffic related accidents will be assessed within the proposed Transport and Access chapter; • Flood Defence Failure – Flood defence failure will be assessed as part of the proposed Water Environment chapter as well as a Flood Risk Assessment;

Environmental Topic	Proposed Approach
	• Utilities Failure – There are minimal utilities present in the Site area. Potential effects relating to utilities will be reviewed as part of the telecommunications and utilities section of the proposed Other Environmental Topics chapter; • Mining Extractive Failure – Risks relating to mining extraction will be considered as part of the geotechnical design; and • Plant Disease – Risks relating to plant diseases will be controlled through the measures outlined in the Framework LEMP. Where the major accidents and disasters identified are not already being considered within the scope of existing technical assessments, they will continue to be reviewed with the design team to ensure the risks are understood and addressed through design as necessary. However, it is considered highly likely that as the design of the Scheme evolves in preparation of the DCO application, it will become clear that there is no real risk or serious possibility of the event interacting with the Scheme. In that eventuality, it is proposed to scope out from the ES the assessment of such major accidents or disasters. The ES would note and explain where this approach has been taken. **Proposed mitigation summarised in the commitments register** No further mitigation necessary.
Telecommunications	Consultation and a desk based study to identify any existing infrastructure constraints and this information will be used to inform the Scheme design to avoid any conflict with current telecommunication or utilities infrastructure. Relevant measures will be captured within the Scheme design, therefore a separate utilities ES chapter is not considered to be required and is Scoped Out of the ES **Proposed mitigation summarised in the commitments register**

Environmental Topic	Proposed Approach
	No further mitigation necessary.

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Appendix A: Transboundary Screening Matrix

Appendix A Transboundary Screening Matrix

Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 requires the consideration of any likely significant effects on the environment of another European Economic Association (EEA) State.

Guidance upon the consideration of transboundary effects is provided in the Planning Inspectorate's Advice Note 12: Transboundary Impacts and Process[1].

The following screening matrix provides the consideration of transboundary effects for the Scheme, taking guidance from Advice Note 12 (Annex 1).

Criteria and Relevant Considerations	Commentary with Regard to the Scheme
Characteristics of the development • Size of the development • Use of natural resources • Production of waste • Pollution and nuisance • Risk of accidents • Use of technologies	The resources required for the construction of the Scheme are likely to be obtained from the global market but it is envisaged that materials would be obtained locally wherever possible. No waste, nuisances or accidents are likely to extend beyond the border of the UK. No novel technologies are proposed that have potential for transboundary effects.
Location of development (including existing use) and Geographical area • What is the existing use? • What is the distance to another EEA state? (Name EEA state)? • What is the extent of the area of a likely impact under the jurisdiction of another EEA state?	The Scheme's closest EEA boundary is France, located approximately 46 km to the south-east. No impacts are likely to extend beyond the jurisdiction of the UK, with the exception of potential greenhouse gas emissions. The latter is expected to be minimal given the nature of the Scheme, which will not emit relatively small quantities of GHG emissions during construction and operation (except for any emissions associated with maintenance vehicles and repair works).
Environmental importance • Are particular environmental values (e.g. protected areas – name them) likely to be affected?	There are a number of European statutory designated nature conservation sites within 10km of the Scheme. The potential for significant effects relating to these designated sites will be assessed in the EIA. However, it is not anticipated that there is potential for transboundary effects

[1] https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-twelve-transboundary-impacts-and-process/

• Capacity of the natural environment. • Wetlands, coastal zones, mountain and forest areas, nature reserves and parks, Natura 2000 sites, areas where environmental quality standards already exceeded, densely populated areas, landscapes of historical, cultural or archaeological significance.	(and therefore any effects on important environmental receptors beyond the UK).
Potential impacts and carrier • By what means could impacts be spread (i.e. what pathways)?	The only potential transboundary environmental impact which is considered likely is from greenhouse gas (GHG) emissions. These emissions would be spread by atmospheric processes and are anticipated to be minimal given the nature of the Scheme. The Scheme is expected to offset GHG emissions through the generation of clean electricity, that otherwise would have been generated from a typical fuel mix comprising technologies such as gas fired power stations for example.
Extent • What is the likely extent of the impact (geographical area and size of the affected population)?	The only potential transboundary environmental impact which is considered likely is from greenhouse gas emissions, which are known to contribute to changes on climate on a global scale.
Magnitude • What will the likely magnitude of the change in relevant variables relative to the status quo, taking into account the sensitivity of the variable?	The impact of GHG emissions is considered irreversible within human lifetimes, however as above, the emissions are expected to be minimal during construction and decommissioning and is expected to lead to a beneficial contribution to UK GHG emissions during operation (assumed to be 40 years). The temporal pattern of GHG emissions is likely to be relatively constant during the construction and decommissioning phases.
Probability • What is the degree of probability of the impact? • Is the impact likely to occur as a consequence of normal	It is proposed to calculate the likely greenhouse gas emissions as part of the EIA. Greenhouse gas impacts will be put into context in terms of their impact on the

conditions or exceptional situations, such as accidents?	UK's 5 year carbon budgets which set legally binding targets for greenhouse gas emissions. The greenhouse gas emissions offset through the production of cleaner electricity during the operational phase will be accounted for within the greenhouse gas emissions calculations. In any event, the receptor for GHG emissions is the global atmosphere rather than individual countries, and it is not currently possible to determine if GHG emissions would change atmospheric processes or affect a particular country or state. There is therefore no potential for significant effects on the environment of any EEA State or group of EEA States resulting from GHG emissions from the Scheme. The assessment will present the GHG emissions and compare them with the UK national emissions inventory; transboundary effects from GHG emissions will not be considered further in the EIA.
Duration • Is the impact likely to be temporary, short-term or long-term? • Is the impact likely to relate to the construction, operation or decommissioning phase of the activity?	
Frequency • What is likely to be the temporal pattern of the impact?	
Reversibility • Is the impact likely to be reversible or irreversible?	
Cumulative impacts • Are other major developments close by?	Proposed developments within 10km of the Scheme will be taken into consideration in the Environmental Impact Assessment (EIA), with particular consideration given to other proposed solar developments. However, it is not anticipated that there is potential for significant cumulative transboundary effects.

Appendix B: Glossary

Appendix B Glossary

Agricultural Land Classification (ALC)	The standardised method for classifying agricultural land in England and Wales according to its versatility, productivity and workability, based upon inter-related parameters including climate, relief, soil characteristics and drainage, i.e. ALC assesses land quality based upon the type and level of agricultural production the land can potentially support. These factors form the basis for classifying agricultural land into one of five grades (with Grade 3 land divided into Subgrades 3a and 3b), ranked from excellent (Grade 1) to very poor (Grade 5).
Air Quality Management Area (AQMA)	Places where air quality objectives are not likely to be achieved. Where an AQMA is declared, the local authority is obliged to produce an Action Plan in pursuit of the achievement of the air quality objectives.
Baseline conditions	The conditions against which potential effects arising from the Scheme are identified and evaluated.
Battery energy storage system	Proposed development of a battery energy storage installation and associated infrastructure development to allow for the storage and exportation of energy to the National Grid.
Best and most versatile (BMV) agricultural land	Best and most versatile (BMV) agricultural land of excellent (ALC Grade 1), very good (Grade 2) and good (Subgrade 3 a) agricultural quality.
Construction Environmental Management Plan (CEMP)	A site specific plan developed to ensure that appropriate environmental management practices are followed during the construction phase of a project.
Cumulative Effects	Effects upon the environment that result from the incremental impact of an action when added to other past, present or reasonably foreseeable actions. Each impact by itself may not be significant but can become a significant effect when combined with other impacts.
Energy Park Site	The maximum extent of land potentially required for the solar photovoltaic (PV) modules, battery energy storage system, and on-site substation developments.

Environmental effect	The consequence of an action (impact) upon the environment such as the decline of a breeding bird population as a result of the removal of hedgerows and trees.
Environmental impact	The change in the environment from a development such as the removal of a hedgerow.
Environmental Impact Assessment (EIA)	A process by which information about environmental effects of a proposed development is collected, assessed and used to inform decision making. For certain projects, EIA is a statutory requirement.
Environmental Statement	A document produced in accordance with the EIA Directive as transposed into UK law by the EIA Regulations to report the results of an EIA.
Flood Zone 1	This is land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1% Annual Exceedance Probability (AEP)).
Flood Zone 2	This zone comprises land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year.
Flood Zone 3	This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.
Geophysical survey	Geophysical survey is a non-intrusive pre-construction archaeological evaluation technique that exploits a variety of physical or chemical characteristics of rocks and soils etc, in an attempt to locate underground features of archaeological interest. Types of geophysical survey include magnetometer survey, magnetic susceptibility survey and resistivity survey.
Grid Connection Route	The area in which the construction of high-voltage cables will be undertaken to connect the Energy Park Site to the proposed National Grid Substation.
On-site substation	A compound containing electrical equipment to enable connection to the National Grid Substation.
Heavy Goods Vehicle (HGV)	Vehicles with 3 axles (articulated) or 4 or more axles (rigid and articulated).

Historic Environment Record	The record of archaeological and built heritage features in a county or district, usually held and maintained by the relevant County Council.
Interconnecting Cable Corridor search area	Area in which surveys and design work is being undertaken to define the interconnecting cable corridors.
Interconnecting Cable Corridors	The area in which construction will be undertaken for the laying of high-voltage cables to connect the Sites within the Energy Park.
Inverter	Inverters convert the direct current (DC) electricity generated by the PV modules into alternating current (AC), which allows the electricity generated to be exported to the National Grid. Battery energy storage systems also use inverters to convert between DC and AC. The batteries function in DC and electricity must be converted to / from AC to pass into / from the grid.
Jointing pit	Underground structures constructed at regular intervals along the cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Mitigation	Measures including any process, activity, or design to avoid, prevent, reduce, or, if possible, offset any identified significant adverse effects on the environment.
National Policy Statement (NPS)	National Policy Statements are produced by government. They comprise the government's central policy documents for the development of nationally significant infrastructure.
Nationally Significant Infrastructure Projects (NSIP)	NSIPs are large scale developments such as certain new harbours, power generating stations (including wind farms), highways developments and electricity transmission lines, which require a type of consent known as 'development consent' under procedures governed by the Planning Act 2008 (and amended by the Localism Act 2011).
Preliminary Ecological Appraisal (PEA)	Comprises a desk study, Phase 1 Habitat Survey (which categorises habitats to a broad level using the methodologies set out by JNCC (1993 as amended) guidelines) and Protected Species Scoping survey (which includes preliminary survey work to identify the presence or potential presence of legally protected species).

Preliminary Environmental Information (PEI) Report	PEI Report is defined in the EIA Regulations as: *"information referred to in Regulation 14(2) which –* *(a) has been compiled by the applicant; and* *(b) is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)."*
Preliminary Risk Assessment	Report that presents a summary of readily available information on the geotechnical and/or geo-environmental characteristics of the site and provides a qualitative assessment of geo-environmental and/or geotechnical risks in relation to the proposed development.
Principal Aquifer	These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.
Receptor	A component of the natural or man-made environment that is affected by an impact, including people.
Scheme	The Shepway Energy Park comprising the Energy Park Site and Interconnecting Cable Corridor Search Area.
Scheme Boundary	The maximum extent of land potentially required temporarily and/or permanently for the construction, operation and maintenance of the Scheme, including the Energy Park Site and the Interconnecting Cable Corridor search area.
Setting	The surroundings within which a heritage asset is experienced and any element, which contributes to the understanding of its significance.
Soil (as referred to in Chapter 15 Soils and Agricultural land)	The upper layers of the earth's surface, comprising a mixture of mineral and organic components that contain air, water and micro-organisms. Soils provide a substrate for plant growth, a habitat for animals and storage for water and carbon. Generally, soils are considered to occur to a maximum depth of 1.2 m, but are often shallower
Soil Associations	Groupings of related soil series (see below).

Soil series	Soil series are the lowest category in the soil classification system and are precisely defined based upon particle-size distribution, parent material (substrate) type, colour and mineralogical characteristics.
Source Protection Zone (SPZ)	SPZs show the risk of contamination from any activities that might cause pollution to groundwater sources such as wells, boreholes and springs used for public water supplies. The closer the activity, the greater the risk. SPZs can comprise of up to three main zones (inner, outer and total catchment). A fourth zone of special interest can also occasionally be applied to a groundwater source.
Sustainable drainage systems (SUDS)	Surface water drainage systems developed in line with the ideals of sustainable development (e.g. swales, ponds, basins, filtration flow control, etc).
The Sites	The six land parcels in which the Energy Park will be constructed and operated within.
Transformers	Transformers control the voltage of the electricity generated across the site before it reaches the electrical infrastructure.
Visual receptors	People with views of the development or associated activities. These are located within the visual envelope and are typically residents, motorists, pedestrians, recreational users in residential areas on publicly accessible roads, footpaths and open spaces.
Water Framework Directive	The Water Framework Directive ("WFD") introduced a new system for monitoring and classifying the quality of surface and ground waters. The Directive requires that Environmental Objectives be set for all surface waters and groundwater to enable them to achieve Good Ecological Potential/Status by a defined date.
Zone of Theoretical Visibility	The zone within which views of a proposed development may be experienced, as determined by analysis of OS data and field survey. It is influenced by many factors including topography and intermediate visual intrusions, such as blocks of woodland and buildings.

Appendix C: Abbreviations

Appendix C Abbreviations

AADT	Average Annual Daily Traffic Flow
AC	Alternating current
AEP	Annual Exceedance Probability
agl	Above ground level
ALC	Agricultural Land Classification
AOD	Above Ordnance Datum
APFP	Applications: Prescribed Forms and Procedure
AQMA	Air Quality Management Area
ATC	Automatic Traffic Counts
BAP	Biodiversity Action Plan
BGS	British Geological Survey
BMV	Best and Most Versatile
BNG	Biodiversity Net Gain
BOD	Biological Oxygen Demand
BPM	Best Practicable Means
BRE	Building Research Establishment
BS	British Standard
CBC	Common Bird Census
CCC	Climate Change Committee
CCTV	Closed circuit television
CDM	Construction Design Management
CEMP	Construction Environmental Management Plan
CH_4	Methane
CIEEM	Chartered Institute of Ecology and Environmental Management
CIfA	Chartered Institute of Archaeologists
CO_2	Carbon dioxide
COPA	Control of Pollution Act 1974
COSHH	Control of Substances Hazardous to Health

CSM	Conceptual Site Model
CTMP	Construction Traffic Management Plan
DBA	Desk-Based Assessment
DC	Direct current
DCLG	Department for Communities and Local Government
DCO	Development Consent Order
DECC	Department of Energy and Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DEMP	Decommissioning Environmental Management Plan
DLL	District Level Licence
DMRB	Design Manual for Roads and Bridges
EC	European Commission
EcIA	Ecological Impact Assessment
eDNA	Environmental DNA
EEA	European Economic Association
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPS	European Protected Species
EPSM	European Protected Species Mitigation
EPUK	Environmental Protection UK
ERP	Emergency Response Plan
ES	Environmental Statement
ESRC	Economic and Social Research Council
EU	European Union
FRA	Flood Risk Assessment
GCN	Great Crested Newt
GHG	Greenhouse gas
GLVIA3	Guidelines for Landscape and Visual Impact Assessment, Third Edition
GRP	Glass reinforced plastic
GVA	Gross Value Added

GWDTE	Groundwater Dependent Terrestrial Ecosystem
H&SP	Health and Safety Plan
ha	hectare
HDD	Horizontal Directional Drilling
HER	Historic Environmental Record
HFCs	Hydrofluorocarbons
HGV	Heavy goods vehicle
HIA	Health Impact Assessment
HLC	Historic Landscape Characterisation
HMSO	Her Majesty's Stationery Office
HMWB	Heavily Modified Water Body
HRA	Habitat Regulation Assessment
HSI	Habitat Suitability Index
HUDU	Healthy Urban Development Unit
HV	High voltage
HVAC	Heating, Ventilation and Air Conditioning
IAQM	Institute of Air Quality Management
IAS	Invasive Alien Species
IBD	Internal Drainage Board
ICCI	In-combination climate change impact
ICE	Inventory of Carbon and Energy
IEA	Institute of Environmental Assessment
IEMA	Institute of Environmental Management and Assessment
IHBC	Institute of Historic Building Conservation
INNS	Invasive Non-Native Species
ISO	International Organisation for Standardisation
JNCC	Joint Nature Conservation Committee
km	Kilometre
kV	Kilovolt
LDR	Long Distance Route

LFA	Lead Flood Authority
LHA	Local Highway Authority
LLFA	Lead Local Flood Authority
LNR	Local Nature Reserve
LPA	Local Planning Authorities
LRN	Local Road Network
LSE	Likely significant Effects
LSOAs	Lower Layer Super Output Areas
LVIA	Landscape and Visual Impact Assessment
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographical Information for the Countryside
MHCLG	Ministry of Housing, Communities and Local Government
MSA	Mineral Safeguarding Areas
MSOA	Middle Layer Super Output Area
MW	Mega Watts
NCA	National Character Area
NERC	The Natural Environmental and Rural Communities
NF_3	Nitrogen trifluoride
NGET	National Grid Electricity Transmission
NGR	National Grid Reference
NHLE	National Heritage List for England
NHS	National Health Service
NNR	National Nature Reserve
NO_2	Nitrogen Dioxide
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
NPS	National Policy Statement
NPSE	Noise Policy Statement for England
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary

NVQ	National Vocational Qualification
NVZ	Nitrate Vulnerable Zone
OHL	Overhead Line
ONS	Office for National Statistics
OS	Ordnance Survey
PBDE	Polybrominated diphenyl ethers
PCAN	Place Based Climate Action Network
PEA	Preliminary Ecological Appraisal
PEI	Preliminary Environmental Information
PEIR	Preliminary Environmental Information Report
PFCs	Perfluorocarbons
PFOS	Perfluoroctane sulphate
PHE	Public Health England
PIA	Personal Injury Accident
PINS	Planning Inspectorate
PPE	Personal protective equipment
PPG	Pollution Prevention Guidance
PPG	Planning Practice Guidance
PRA	Preliminary Risk Assessment
PRF	Preliminary Roost Assessment
PRF	Potential Roost Features
PRoW	Public Right of Way
PV	Photovoltaic
RBD	River Basin District
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SAR	Standardised Admission Ratio
SDLP	Selby District Local Plan
SF_6	Sulphur hexafluoride
SFRA	Strategic Flood Risk Assessment

SGHAT	Sandia Laboratories Solar Glare Hazard Analysis Tool
SINC	Sites of Nature Conservation Interest
SMR	Standardised Mortality Ratio
SoCC	Statement of Community Consultation
SoS	Secretary of State
SPA	Special Protection Area
SPG	Supplementary Planning Guidance
SPZ	Source Protection Zone
SRN	Strategic Road Network
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
SWMP	Site Waste Management Plan
TA	Transport Assessment
TAG	Transport Assessment Guidance
tCO2e	Tonnes of carbon dioxide equivalent
TRL	Transport Research Laboratory
UK	United Kingdom
UKBAP	UK Biodiversity Action Plan
UKCIP	UK Climate Impacts Programme
UKCP18	UK Climate Projections 2018
W	Watts
Waste FD	Waste Framework Directive
WCA	Wildlife and Countryside Act 1981
WFD	Water Framework Directive
WHIASU	Wales Health Impact Assessment Support Unit
WSI	Written Scheme of Investigation
WTN	Waste Transfer Note
ZOI	Zone of influence
ZTV	Zone of Theoretical Visibility

Appendix D: Environmental Mitigation and Commitments Register

Shepway Energy Park

EIA Scoping Report

Appendix D Environmental Mitigation and Commitments Register

Appendix D Environmental Mitigation and Commitments Register

1.1 Introduction

1.1.1 **Table 1** lists the environmental mitigation measures and commitments to be adopted during the construction, operation (including maintenance), and decommissioning phases of the Scheme. These measures are draft and will be developed and confirmed as the Scheme progresses in response to design development, consultation, technical engagement and emerging good practice. These measures are assumed as part of the scoping in and out of topics and aspects in **Chapters 6-16** onwards of this Scoping Report. Ultimately, these measures are anticipated to be secured in the Draft Development Consent Order (DCO), although the exact securing mechanism will be confirmed.

1.1.2 This table is aligned with the Planning Inspectorate's guidance on Commitment Registers and Scoping Solar Development (Ref. 1). Whilst the naming of columns differs slightly from the Planning Inspectorate's guidance, the information contained is largely the same. Columns are not provided on 'monitoring', 'delivery', 'associated supporting documentation' and 'compliance date and details' as these are not deemed appropriate at this early stage.

1.1.3 Measures relating to noise and vibration, air quality and dust, visual amenity, glint and glare and water all contribute mitigation of human health and socio-economic impacts. As such, no specific human health and socio-economic measures are identified.

Table 1. Shepway Energy Park Environmental Mitigation and Commitments Register

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
AQ-01	Air Quality	Transport and Access	Develop and implement a **Dust Management Plan** (DMP) in accordance with the Framework Construction Environmental Management Plan (CEMP) and Framework Decommissioning Environmental Management Plan (DEMP), to be consulted upon by the Local Authority, setting out measures in line with the Institute of Air Quality Management (IAQM) 'Guidance on the Assessment of Dust from Demolition and Construction' (Ref. 2). The DMP will set out measures for communications, site management, monitoring, preparing and maintaining the construction site, operating vehicle/machinery and sustainable travel, operations and waste management. In addition, activity specific measures will be set out for earthworks, construction and to minimise the trackout of dust making material onto the public highway. Dust emission from maintenance and replacement works during operation will be managed through measures set out within the Framework Operational Management Plan (OEMP).	Construction, Operation, Decommissioning	Framework CEMP Framework OEMP Framework DEMP
CC-01	Climate Change	Water Environment	**Materials storage:** Storing topsoil and other construction and decommissioning materials outside of the 1 in 100-year floodplain extent (Flood Zone 3), as far as reasonably practicable.	Construction Decommissioning	Framework CEMP Framework DEMP
CC-02	Climate Change	-	A **Climate Change Risk Assessment** will accompany the PEI Report and Environmental Statement (ES). Engagement will be undertaken with relevant environmental disciplines and the engineering design team to discuss the Climate Change Risk Assessment and identify appropriate mitigation measures to improve the resilience of the Scheme to future climate change impacts and incorporate such measures into the design. These embedded measures will then be considered as part of the assessment.	Construction, Operation, Decommissioning	Framework CEMP Framework OEMP Framework DEMP
CH-01	Cultural Heritage	Landscape and visual amenity	**Preservation of heritage assets by scheme design:** Where possible, the Scheme will, through design, endeavour to avoid or minimise impacts to heritage assets. This includes, but may not be limited to, setbacks and appropriate planting and screening to minimise changes to the setting of assets, as well as alterations to the design avoid or minimise impacts on buried archaeological deposits and surface earthworks. These will be guided by relevant Design Principles and details set out in the Framework Landscape Environmental Management Plan (LEMP) and the Framework Construction Environmental Management Plan (CEMP).	Construction	Design Principles Framework LEMP Framework CEMP
CH-02	Cultural Heritage	Archaeological remains	A programme of **archaeological mitigation measures** will be implemented in accordance with archaeological project design (such as an Archaeological Mitigation Strategy (AMS) or Outline Written Scheme of Investigation (OWSI)) which would be submitted for approval and secured	Construction	Archaeological Project Design

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			through a requirement of the DCO. The mitigation will comprise an appropriate programme of archaeological fieldwork, followed by assessment and reporting of the results and, where appropriate, publication.		(e.g. AMS, OWSI or equivalent) Framework CEMP
EC-01	Ecology and Nature Conservation	Water Environment Arboriculture	**Habitat Avoidance Measures:** The Scheme design will retain habitats of ecological interest, where possible, including standing water, running water, arable field margins, habitats of value to fish, terrestrial invertebrates, great crested newt, reptiles and amphibians, breeding and wintering birds, bats, riparian mammals, badger and other mammals, if appropriate. The following buffers from key habitat features will be applied: • All woodland – at least 15 m; • All trees within hedgerows and individual trees – protected by clearly defined root protection areas, concordant with the requirements for each individual tree as detailed in any Arboricultural Impact Assessment. • Watercourses (where practicable) – at least 10 m from the bank-top of the watercourse; • Standing water – at least 20 m; • Hedgerows – where practicable, at least 5 m; and • Appropriate buffers (of up to 30 m) around any identified Badger setts, or trees with bat roost potential (a buffer of 15 m) throughout the Scheme will be implemented.	Construction	Framework LEMP Framework CEMP
EC-02	Ecology and Nature Conservation	Lighting Water Environment Air Quality Noise and Vibration	**General Construction Management Measures for Ecology** Implement appropriate measures to minimise impacts on IEFs as set out in a Framework CEMP: • Vegetation clearance will be undertaken in advance of construction and at an appropriate time of year so as to avoid the nesting bird period and incidental injuring or killing of animals, such as Brown Hare or reptiles. • A security perimeter fence will be implemented early in the construction phase to secure the Order limits and prevent construction activity in proximity to peripheral habitats and retained habitats within the Order limits. The fence design will include gaps to allow mammals that may use woodland habitats, including small deer, Badger, Brown Hare and Hedgehog, to pass underneath at strategic locations. Equally, in some locations, gaps will be avoided to allow the security fencing to act as an anti-predator fence, particularly in areas targeted at providing habitat for ground-nesting birds. • Where lighting is required, it will conform to best practice guidelines with respect to minimising light spill into retained habitats. Lighting will be minimised to that required for safe site	Construction	Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			operations and security and directed towards the middle of the Order limits rather than towards the boundaries. • Measures to avoid animals being injured or killed within construction working areas, through excluding them from such areas (e.g., fencing) will prevent animals from falling into and becoming trapped in excavations. Furthermore, any excavations will be covered, or a means of escape (such as a ramp) will be implemented. • The Scheme will implement standard environmental protection measures required to mitigate any construction related effects on IEFs, including those associated with dust deposition, air pollution, pollution incidents, water quality, light, noise, and vibration. Furthermore, measures for the safe storage of chemicals / other hazardous materials (e.g., fuel), to prevent them reaching standing and running waters through flood events during construction will be implemented. Those involved with the construction stages will be committed to agreed best practice and meet all relevant environmental legislation.		
EC-03	Ecology and Nature Conservation	-	**Pre-construction Surveys for Ecology:** To comply with relevant wildlife legislation, pre-construction surveys, such as Phase 1, badger, great crested newt, reptiles and other amphibians, breeding birds and bat walkovers (if roost features are impacted), will be undertaken to support the baseline survey findings. The purpose of these preconstruction surveys is to ensure mitigation during the construction phase is based on the latest protected species and invasive species information.	Construction	Framework LEMP Framework CEMP
EC-04	Ecology and Nature Conservation	Arboriculture	**Habitat – woodland, including individual and veteran trees** Implement following measures to minimise impacts on woodland habitats will be set out in a Framework CEMP: • Retained trees and woodland will be protected, in line with British Standard Recommendations and undeveloped buffers will be of at least 15m from the boundary of woodlands and tree lines. • Other retained trees, outside of woodland habitats and adjacent to construction working areas, will be protected by clearly defined root protection areas, concordant with the requirements for each individual tree, to prevent damage/compaction of roots by plant and other machinery and prevent direct or indirect impacts to trees.	Construction	Framework LEMP Framework CEMP
EC-05	Ecology and Nature Conservation	-	**Hedgerows:** The Scheme will be designed to minimise hedgerow loss with the majority of hedgerows across the Order limits retained.	Construction	Framework LEMP Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
EC-06	Ecology and Nature Conservation	Major Accidents and Disasters	**Invasive Non-native Species** Implement the following measures to minimise the impact of invasive species will be set out in a Framework CEMP: • Pre-construction surveys will be undertaken to provide an update on the presence and location of any invasive species, the findings of which will inform the implementation of measures to prevent their spread into the wild. These surveys will inform the production of a Biosecurity Management Plan which will set out procedures so that that no invasive species are brought onto the Order limits (e.g., Wildlife and Countryside Act 1981 (as amended) Schedule 9 species (Ref. 4)). In the event that any future infestations of invasive non-native species are identified prior to and or during the development process, exclusion zones will be established around them, and an EcoCoW contacted for advice as required.	Construction	Framework CEMP
EC-07	Ecology and Nature Conservation	Lighting	**Operational Lighting** No part of the Scheme will be continuously lit. Where required, manually operated, and motion-detection lighting will be utilised for operational and security purposes around electrical infrastructure such as inverters, transformers, and switchgear across the Site, and within the compounds and substations. Lighting will be directed downward and away from boundaries.	Operation	Framework OEMP
EC-08	Ecology and Nature Conservation	-	**Biodiversity Net Gain** The Applicant is committed to delivering a minimum of 10% Biodiversity Net Gain in accordance with a Framework LEMP and a Biodiversity Net Gain Report to be submitted with the DCO Application.	Construction Operation	Framework LEMP BNG requirement
EMF-01	Electromagnetic Fields	-	**Cabling** Cables will not be installed within 10m of any property due to the need for construction vehicles to manoeuvre both sides of the trench within the working width.	Construction Operation	Design Principles
EMF-02	Electromagnetic Fields	-	**EMF Assessment** The potential effects of EMFs on workers for the Scheme will be controlled and mitigated to acceptable levels through the legislative framework.	Operation	Draft DCO Design Principles
EMF-03	Electromagnetic Fields	Socio-economics and Land Use	**Public Rights of Way (PRoW)** The presence of the public either directly above or adjacent to underground cables associated with the Scheme would be transient, with the individuals using the ProW exposed to electro-magnetic fields from the cables for only very short periods of time. It is considered that the level of exposure to users of ProW would be similar to (and a lot less than some) that associated with general household	Operation	Design Principles

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			appliances (and noticeably less than associated with the exposure when using a vacuum cleaner) and as such will not be assessed within the technical appendix. As the design develops, consideration will be given to the potential for EMF to impact on sensitive receptors. This will include undertaking calculations to determine whether EMF will be experienced by sensitive receptors and to what intensity. If it is likely to be a nuisance or hazard, mitigation will be proposed. As appropriate, the results and recommendations of any EMF assessment will be incorporated into the Scheme design and an EMF assessment presented as a technical appendix to the ES. As electricity will only flow through the cabling and infrastructure during the operational phase, this assessment will only consider operational phase effects.		
EMF-04	Electromagnetic Fields	-	**Cabling** All cabling will be installed underground, no overhead lines will be included as part of the Scheme.	Construction Operation	Design Principles
GG-01	Glint and Glare	Landscape and Visual Amenity	**Avoidance of Glint and Glare through Scheme Design** As the design develops, consideration will be given to the potential for solar reflections to impact on sensitive receptors. If Glint and Glare is calculated to likely to be a nuisance or hazard, mitigation will be proposed. Mitigation may include: • Careful siting of the Scheme in the landscape with offsets from existing residential areas, vegetation patterns, and road networks; • Conserving existing vegetation patterns; • Creating new Green Infrastructure (i.e., vegetation planting) within the Site with planting proposals that are appropriate with respect to the wider landscape character; and • Specification of anti-reflective (AR) coating, an industry standard for PV modules, to reduce the reflective properties of them.	Operation	Design Principles
GC-01	Ground Conditions	Major Accidents and Disasters	**Ground conditions – general management** Work will be carried out in accordance with relevant Construction Design Management (CDM) Regulations and measures will be presented within the Health and Safety Plan (H&SP), and the Framework Construction Environmental Management Plan (CEMP). A Framework Construction Environmental Management Plan (CEMP) will be developed to provide a framework of measures that will be further developed and implemented via detailed CEMPs by the Principal Contractor.	Construction	Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			The Framework CEMP will be prepared prior to commencement of the works, setting out the management, monitoring, auditing and training procedures, and the mitigation measures that will be put in place during decommissioning, demolition and construction, to maintain compliance with the applicable regulations.		
GC-02	Ground Conditions	Human Health Major Accidents and Disasters	**Pre-commencement activities** The below pre-commencement activities are to be undertaken post-consent prior to commencement: • Detailed Unexploded Ordnance (UXO) Assessment; • Limited intrusive Site Investigation and Generic Quantitative Risk Assessment (GQRA); • Coal Mining Report; • Utilities Mapping (gas pipelines); • Health and Safety Risk Assessment; and • Geotechnical Site Investigation. The results of these assessments and reports should be reviewed prior to construction or decommissioning	Construction	Framework CEMP
GC-03	Ground Conditions	Major Accidents and Disasters Air Quality	**Asbestos** containing materials and other materials and structures contaminated with asbestos fibres will be identified and removed by a competent / licensed contractor during a pre-site preparation survey.	Construction	Pre-site preparation survey
GC-04	Ground Conditions	Major Accidents and Disasters Water Environment Ecology and Nature Conservation	A **Pollution Response Plan** will be drafted prior to the commencement of the works as part of the Framework CEMP. The plan will outline key pollution mitigation measures including a Control of Substances Hazardous to Health (COSHH) / fuel inventory and key contacts to be notified in the event of a significant pollution incident, which may subsequently lead to the contamination of controlled waters. Tanks and dispensing pumps will be locked when not in use to prevent unauthorised access. Information regarding spill prevention and disposal of COSHH items will be provided as part of the standard site induction presentations and during regular toolbox talks and as the works progress.	Construction	Framework CEMP
GC-05	Ground Conditions	Major Accidents and Disasters	**Piling** will be carried out in accordance with the Environment Agency Guidance Note on Piling / Penetrative Ground Improvement Methods on Land Affected by Contamination and ground investigations will inform the Foundation / Piling Works Risk Assessment which will define the appropriate piling methods and foundation design to mitigate risk.	Construction	Foundation/Pilling Works Risk Assessment

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
GC-06	Ground Conditions	Soils and Agriculture Water Environment	Specification of **concrete** used in foundations and building structures will be selected based on the results of the chemical composition of the Site's soil and groundwater.	Construction	Design Principles
GC-07	Ground Conditions	Materials and Waste	**Waste material disposal:** Waste materials will be disposed of by the contractor/s to appropriately permitted waste management facility in line with the Site Waste Management Plan (SWMP) dependent on the waste classification determined from the chemical analysis or Waste Acceptance Criteria testing as necessary.	Construction, Operation and Decommissioning	Framework CEMP Framework OEMP Framework DEMP
GC-08	Ground Conditions	Materials and Waste	**Waste effluent** will be tested for appropriate physical and chemical parameters and where necessary, disposed of a permitted facility by a licensed specialist contractor/s.	Construction	Framework CEMP Framework OEMP Framework DEMP
GC-09	Ground Conditions	Transport and Access Water Environment	**Access roads** will be regularly cleaned and damped down with water as set out in the Framework CEMP.	Construction	Framework CEMP
GC-10	Ground Conditions	Transport and Access Air quality	All vehicles entering and leaving the Site during the remediation, decommissioning, demolition and construction periods will pass through a **wheel washing** facility as set out in the Framework CEMP. As required, vehicles used to transport materials and aggregates will be enclosed or covered in a tarpaulin. Vehicle movements will be kept to a minimum and vehicle speeds within the Site will be limited.	Construction Decommissioning	Framework CEMP
GC-11	Ground Conditions	Major Accidents and Disasters	Appropriate use of **Personal Protective Equipment** (PPE) and implementation and adherence to Health & Safety Protocols, Plans and Procedures. Construction workers will remain vigilant of ground conditions at all times and will report to the Principal Contractor any suspect areas of potential contamination.	Construction Operation Decommissioning	H&SP
GC-12	Ground Conditions	Ecology and Nature Conservation Soils and Agriculture	**Potentially contaminated made ground** will be removed from excavations. Advice should be sought from an environmental specialist should materials suspected of being contaminated be uncovered. A procedure for dealing with unexpected contamination will be included within the Framework CEMP.	Construction	Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
		Materials and Waste			
GC-13	Ground Conditions	Materials and Waste Water Environment	**Oils and hydrocarbons** will be stored in designated locations with specific measures to prevent leakage and release of their contents, include the siting of storage areas away from surface water drains, on an impermeable base with an impermeable bund that has no outflow and is of adequate capacity to contain 110% of the contents. Valves and trigger guns will be protected from vandalism and kept locked up when not in use. Details of appropriate storage and handling measures will be presented within the Framework CEMP.	Construction Operation Decommissioning	Framework CEMP, OEMP and DEMP
GC-14	Ground Conditions	Transport and Access Materials and Waste	**Vehicles** should be well maintained to prevent accidental pollution from leaks. Static machinery and plant should include drip trays beneath oil tanks / engines / gearboxes / hydraulics, which will be checked and emptied regularly via a licensed waste contractor.	Construction Operation Decommissioning	Framework CEMP, OEMP, and DEMP
GC-15	Ground Conditions	Water Environment	**Consultation:** The Lead Local Flood Authority (LLFA) and the appropriate utility company will be consulted on the potential requirement for an oil interceptor and sediment trap at the point where site surface water runoff enters the sewerage network.	Construction Operation	DCO Application
GC-15	Ground Conditions	Water Environment	A spillage **Emergency Response Plan (ERP)** will be produced (and could form part of the Framework CEMP and OEMP), which site staff will be required to have read and understood. On-site provisions will be made to contain a serious spill or leak through the use of booms, bunding and absorbent material.	Construction Operation	Framework CEMP and OEMP
GC-16	Ground Conditions	Noise and Vibration Air Quality	The Framework CEMP will set out mitigation for appropriate **handling and disposal of pile arisings, concrete, pastes and / or grouts** during the laying of foundations. During the excavation, the contractor/s will employ dust suppression measures when necessary to prevent the potential mobilisation of contaminated dust particles and their migration off site. Complaints about dust will be investigated at the earliest opportunity and appropriate action taken to control the source or remedy the impact as appropriate.	Construction	Framework CEMP
GC-17	Ground Conditions	Noise and Vibration Air Quality	**Stockpiles:** Stockpiles and material handling areas will be kept as clean as practicable to avoid nuisance from dust. Dusty materials will be dampened down using water sprays in dry weather or covered. The length of time materials are stockpiled on-site before being removed for re-use, recycling or disposal is to be kept to a minimum and stockpiles are to be covered with tarpaulins prior to disposal.	Construction Decommissioning	Framework CEMP and DEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
GC-18	Ground Conditions	Noise and Vibration Air Quality	**Dust generating equipment** e.g. mobile crushing and screening equipment will be located to minimise potential impacts to receptors, as far as practicable.	Construction Decommissioning	Framework CEMP and DEMP
LVA-01	Landscape and Visual	Cultural Heritage Ecology Transport and Access Socio - economics and Land Use	**Design principles related to mitigating effects on the landscape resource and visual amenity** will include (but are not restricted to) the following: • Siting of infrastructure and any operational site offices in locations benefiting from existing screening and at distance from sensitive receptors; • Use of minimum offsets from existing trees, woodland, hedgerows, ditches and ponds. • Use of existing field tracks, hedgerow entrances and field gates for construction and operational access; • Offsets to the Scheme from the settlement fringe of Newchurch to protect key views to/ from the settlement, including the Heritage Hub; • Offsets to the Scheme from isolated rural properties, particularly where there are key views from elevations or gardens; • Consideration of the relationship between the Scheme from the rising ground to the north, within the KDNL designation; • Consideration and appropriate mitigation for views to or from and landscapes associated with sensitive receptors such as St Peter and St Paul Church, Eastbridge Church ruin (heritage assets but also key features within the wider landscape); • Provide hedgerow planting along rural lanes and around properties where appropriate within the landscape context, to screen local views of the Scheme. • Avoiding the use of narrow lanes for construction access; • Reducing vegetation removal along rural lanes where it may be required for highways visibility and access works;	Construction Operation Decommissioning	Design Principles Framework LEMP Framework CEMP
LVA-02	Landscape and Visual	Cultural Heritage Ecology Transport and Access Socio - economics and Land Use	• **Design principles related to enhancement of landscape condition, amenity value and green infrastructure** will include (but are not restricted to) the following: • Provision of improvement to ecological networks, green infrastructure and landscape condition, including as part of Biodiversity Net Gain, through the provision of features such as new / reinstated hedgerows, localised tree planting appropriate for Romney Marsh, species rich grasslands, and uncultivated strips along drainage ditches; • Reintroduction of the traditional Romney Marsh sheep grazing where practicable, which could improve species richness of grassland and reflect historic practices;	Construction Operation Decommissioning	Design Principles Framework LEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			• Improved recreational access, within an area where PRoW run across intensive farmland and may be difficult for all users to use throughout the year.		
LVA-03	Landscape and Visual	Cultural Heritage Ecology Socio - economics and Land Use	**Lighting** during the construction phase will be directional and temporary, and designed to minimise potential for light spillage beyond the Site, particularly towards residential properties, live traffic, and ecological habitats in so far as it is reasonably practicable. During operation lighting will be directed at infrastructure and only triggered by motion detection, during critical maintenance activities, or emergency / security situations. .	Construction Operation Decommissioning	Design Principles Framework LEMP and CEMP
LVA-04	Landscape and Visual	Cultural Heritage Ecology Socio - economics and Land Use	A **Framework LEMP** will be included within the DCO application, and a detailed LEMP will be submitted to the relevant planning authority including measures to: • Protect and retain existing trees and vegetation; • Manage and enhance landscape and biodiversity; • Ensure compliance through management and monitoring; and • Ensure maintenance and management, including a landscaping maintenance plan.	Construction Operation Decommissioning	Design Principles Framework LEMP and CEMP
LVA-04	Landscape and Visual	Cultural Heritage Ecology Socio - economics and Land Use	The indicative Interconnecting Cable Corridors will be designed to minimise **disturbance of existing vegetation**, where practicable. Where selective vegetation removal is required, replacement planting will be reinstated, where practicable.	Construction Operation Decommissioning	Design Principles Framework LEMP
MAD-01	Major Accidents and Disasters	Water Environment	The Scheme design will take into account the results of the **flood risk** assessment and mitigation where applicable will be detailed to alleviate any potential scheme impacts to flood risk.	Construction Operation	Design Principles and Drainage Strategy
MAD-02	Major Accidents and Disasters	Transport and Access	The Scheme design will take into account the results of transport assessment. **Road safety** will be assessed and mitigation where applicable will be detailed to minimise any potential scheme impacts to the likelihood or magnitude of road accidents.	Construction	Design Principles
MAD-03	Major Accidents and Disasters	N/A	**Framework Battery Safety Management Plan** A Framework Battery Safety Management Plan (BSMP) will be produced to accompany the DCO application. The BSMP will be in place to manage potential risks related to the Battery Energy Storage System.	Construction Operation	Framework BSMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
MW-01	Materials and Waste	-	The Scheme will aim to prioritise **waste prevention**, followed by preparing for reuse, recycling and recovery and lastly disposal to landfill as per the waste hierarchy.	Construction Operation Construction	Framework CEMP
MW-02	Materials and Waste	-	All **management of waste** will be in accordance with the relevant regulations and waste will be transported by licensed waste hauliers to waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them.	Construction Operation Construction	Framework CEMP Framework OEMP Framework DEMP
MW-03	Materials and Waste	-	**The construction of the Scheme** will be subject to measures and procedures defined within a Framework Construction Environmental Management Plan (CEMP) and a Site Waste Management Plan (SWMP).	Construction	Framework CEMP
MW-04	Materials and Waste	-	**The operation of the Scheme** will be subject to measures and procedures defined within a Framework Operational Environmental Management Plan (OEMP) which will include the approach for material and waste management on-site.	Operation	Framework OEMP
MW-05	Materials and Waste	-	**The decommissioning of the Scheme** will be subject to measures and procedures defined within a Framework Decommissioning Environmental Management Plan (DEMP) which will include the approach for material and waste management on-site.	Decommissioning	Framework DEMP
NV-01	Noise and Vibration	Socio - economics and Land Use	**Potential noise and vibration effects** during construction and decommissioning phases are likely to include works activities associated with site preparation, plant installation, substation construction, cable laying and construction-related vehicle movements within the Energy Park Site boundary and along access routes. Measures to control noise as defined in Annex B of British Standard (BS) 5228:2009+A1:2014 ‘Code of practice for noise and vibration control on construction and open sites – Part 1: Noise’ and measures to control vibration as defined in Section 8 of BS 5228:2009+A1:2014 ‘Part 2: Vibration’ will be adopted where reasonably practicable. These measures represent ‘Best Practicable Means’ (as defined by section 72 of the Control of Pollution Act 1974) to manage noise and vibration emission from construction activities. Examples of BPM that may be implemented during construction works are presented below:	Construction and Decommissioning	Framework CEMP Framework DEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			• Unnecessary revving of engines will be avoided, and equipment will be switched off when not in use; • Appropriate routing of construction traffic on public roads and along access tracks; • Drop heights of materials will be minimised; • Plant and vehicles will be sequentially started up rather than all together; • Plant will always be used in accordance with manufacturers' instructions. Where possible, equipment will be sited away from noise-sensitive areas. Where possible, loading and unloading will also be carried out away from such areas; and • Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's specifications.		
NV-02	Noise and Vibration	Socio-economics and Land Use	**Noise Mitigation** Enclosures, local screening, mufflers and silencers will be used as appropriate within the plant design to minimise noise emissions.	Construction	Design Principles
NV-03	Noise and Vibration	Socio - economics and Land Use	**Embedded mitigation measures** that will be applied for the operational phase of the Proposed Development are summarised as follows: • Selection of plant with consideration to noise emission level. • Design, location and orientation of plant to control and/or minimise noise at receptors.	Operation	Design Principles
SA-01	Soils and Agricultural Land	-	**Soil Management Plan** Where possible, mitigation measures to avoid or reduce soil damage and loss will be incorporated into the design of the Scheme such as the layout and/or how it shall be constructed. Embedded mitigation will be set out in a Framework Soil Management Plan (SMP) to be submitted with the DCO application, followed by a detailed SMP to be produced pre-construction. The SMP will also draw upon the soil survey data collected for the Scheme to ensure that the mitigation measures are tailored to the soils encountered, as well as the specific soil survey requirement for the Interconnecting Cable Corridors to inform appropriate soil handling during construction and decommissioning. The SMP will include provision for the management of removed soil to achieve original land quality and use can be reinstated following decommissioning.	Construction Decommissioning	Design Principles Framework SMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
SA-02	Soils and Agricultural Land	-	As the development is assumed temporary, **no soil resources will be removed** from the site and will be retained for reuse, to be reinstated upon completion.	Construction Operation Decommissioning	Design Principles Framework SMP
SA-03	Soils and Agricultural Land	Ecology and Nature Conservation Socio-economics and Land-Use	The Applicant's land agent will maintain **communication with surrounding landowners and farmers** as well as Natural England to minimise impacts on surrounding land and farming operations.	Construction Operation	DCO application
SA-04	Soils and Agricultural Land	Ecology and Nature Conservation Socio-economics and Land-Use	Where practicable, the permanent **loss of agricultural land** for substations and areas of ecological enhancement will be located on non-BMV (Best and Most Valuable) land.	Construction	Design Principles
SA-05	Soils and Agricultural Land	Socio-economics and Land-Use	**The installation of cabling** would be with a minimum 0.9m restored backfilled soils, which is sufficient to allow ploughing and arable farming after reinstatement.	Construction	Design Principles Framework SMP, CEMP and OEMP
SA-06	Soils and Agricultural Land	Socio-economics and Land-Use	Subject to the confirmation of the absence of any restrictive covenants that would prevent its use, and other assessments such as technical, health and safety, insurance, **sheep grazing** will be implemented to avoid the loss of agricultural land. The density of grazing would be managed; and grazing restricted to drier periods when the land is less prone to poaching and compaction to mitigate damage to soil resources.	Construction and operation	Framework CEMP and OEMP Design Principles
SA-07	Soils and Agricultural Land	Water Environment Ground Conditions	To minimise **risk of soil erosion** within the Energy Park Site, existing grass cover would be maintained, and new permanent grassland mix cover created and maintained for the lifetime of the Scheme to protect the soil surface from the effects of surface run-off. Any areas where vegetation cover was damaged and/or bare soil surface was visible, would be re-seeded. Additionally individual angled PV modules would be installed with rain gaps to allow water to disperse more evenly.	Construction and operation	Design Principles Framework SMP, CEMP and OEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
TE-01	Telecommunications and Utilities	Major Accidents and Disasters	The Scheme will be designed so that appropriate buffers are applied in relation to the **placement of PV modules** and other infrastructure in relation to present buried utility infrastructure and OHL to allow safe access and working areas.	Construction and operation	Design Principles
TE-02	Telecommunications and Utilities	Major Accidents and Disasters	Appropriate **protective provisions** will be included in the draft DCO to protect apparatus wherever any existing infrastructure has the potential to be affected by the Scheme.	Construction	Draft DCO
TA-01	Transport and Access	Noise and Vibration Ecology and Nature Conservation Landscape and Visual Socio-economics and Land Use Cultural Heritage	**Construction Traffic Management Plan** A Framework Construction Traffic Management Plan (CTMP) has not yet been produced. The CTMP will be in place to manage the impacts of construction traffic on the highway network and sensitive receptors like heritage assets or schools. It will set out management measures for traffic routing, timing and access to the Scheme. Examples of measures that may be included in the Framework CTMP include: • A shuttle service to pick up and drop off staff to / from nearby catchment areas, reducing vehicle trips on the surrounding highway network; • A shuttle service utilising internal routes through the Scheme to transfer staff from the main compound to various work sites; • A Car Share scheme to match potential sharers and to help staff identify any colleagues who could potentially be collected along their route to / from the Scheme; • Working hours (to be confirmed) will be timed so that construction staff will be travelling to / from the Scheme outside of the network peak hours; • Heavy Goods Vehicle (HGV) and Light Goods Vehicle (LGV) movements to be restricted to an eight-hour window (hours to be confirmed), to avoid increasing traffic levels on the surrounding highway network during the peak hours. This would be managed in accordance with a Delivery Management System (DMS) and monitored accordingly; • Upgrading of routes where considered necessary to cater for the additional and / or larger vehicles; • Encouraging local construction staff to car share, to reduce single occupancy car trips, by promoting the benefits of car sharing such as reduced fuel costs and by providing dedicated parking spaces for those who car share, nearer to the compound; • Encouraging local construction staff to car share, to reduce single occupancy car trips, by promoting the benefits of car sharing such as reduced fuel costs and by providing dedicated parking spaces for those who car share, nearer to the compound; • Implementation of a communications strategy, including regular meetings with sub-contractors to review and address any issues associated with travel to/ from the Scheme, as well as to relay information including any restrictions and requirements which should be followed;	Construction	Framework CTMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			• Road condition surveys pre-construction, during construction, and post-construction, to identify any defects on highway assets / verges that have arisen during the construction phase of the Scheme for re-instatement; • Temporary Traffic Management (TTM) where required during the period when cables are installed across the highway to connect with the Scheme (point of connection to be determined); • Sufficient, but capped, on-site car parking provided within the Scheme compounds to accommodate the expected peak parking demand of construction staff within the Scheme (numbers of spaces to be confirmed at a later date); and • Cycle parking spaces provided within the Scheme to encourage construction staff to travel by bicycle where viable (numbers of spaces to be confirmed at a later date).		
TA-02	Transport and Access	As above	**Traffic Management during Decommissioning** Measures for the management of decommissioning traffic will be similar to those set out above for construction and may be set out within a Framework Decommissioning Environmental Management Plan (DEMP).	Decommissioning	Framework DEMP
TA-03	Transport and Access	Socio - economics and Land Use	**Management of Public Rights of Way** If any PRoW are impacted by the Scheme a Framework PRoW Management Plan will be produced, setting out measures for minimising impacts on the PRoW network (including existing and Claimed PRoW) during construction. Examples of measures that may be included in the Framework PRoW Management Plan include: • Maintaining access to / along PRoW, or otherwise providing temporary PRoW diversion routes where necessary to avoid any PRoW closures or potential conflicts with the Scheme where possible. Any diversion routes would be consulted up with the Local Highway Authority (LHA) prior to construction; • Reinstatement of existing PRoWs once construction access is no longer required; • Providing sufficient protection/ separation between existing PRoW and construction routes; and • Managing areas where a proposed construction route crosses an existing PRoW (where these are unable to be diverted) or local access roads, by maximising visibility between construction vehicles and other users (e.g. pedestrians and other vulnerable road users), implementing traffic management (e.g. advanced signage to advise other users of the works) and providing manned controls are each crossing point (i.e. marshals / banksmen). The default priority would be for construction traffic to give-way to other road users.	Construction	Framework ProW Management Plan

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
TA-04	Transport and Access	-	**Abnormal Indivisible Loads (AIL) Management** AILs may be required to transport transformers and cable drums to the Scheme. If required, measures to manage the impact of AIL deliveries on the local highway network will be included within the Framework CTMP. Examples of measures that may be included in the Management of AILs include: • Overseeing the management of AILs travelling to and from the Scheme. A specialised haulage service may be employed to transport AILs with the necessary escort, permits and traffic management, with the Contractor consulting with the relevant highway authorities so that the correct permits are obtained; • Advance notification to the Police (under the Road Vehicle authorisation of Special Types Order 2003); and • Implementing local off-site highway improvements to accommodate AILs travelling to the Scheme (e.g. pavement protection, temporary removal of street furniture and vegetation clearance including overhanging trees and lifting overheard cables).	Construction	Framework CTMP
TA-05	Transport and Access	Socio - economics and Land Use	**Operational Transport and Access Management Measures** If required, a Framework Operational Environmental Management Plan (OEMP) will be produced, setting out measures to manage impacts during the operational phase. Examples of measures that may be included in the Framework OEMP include: • Providing suitable access points for operational vehicles; • Maintaining access to all existing PRoW within the Scheme, with no diversions or closures; • Controlling areas where the internal maintenance routes cross any existing PRoW or local access roads (such as providing gates), permitting only operational traffic to utilise these internal routes within the Scheme; and • Operational traffic should give-way to other users (pedestrians and vulnerable road users) when utilising the crossing points. Visibility will be maximised between operational vehicles and other users, with warning signage provided if required.	Operation	Framework OEMP
WE-01	Water Environment	Ecology and Nature Conservation	**General Construction Management Measures for Reducing Pollution Risk to the Water Environment:** The CEMP will set out good practice methods for reducing the risk of pollution to surface waters and the groundwater environment by setting out measures for the management of construction runoff and spillage risk.	Construction	Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			The final CEMP (to be produced post consent based on a Framework CEMP that will be included in the ES), will be supported by a Water Management Plan (WMP) that will provide greater detail regarding the mitigation to be implemented to protect the water environment from adverse effects during construction. The WMP will include details of pre, during and post-construction water quality monitoring. This will be based on a combination of visual observations and reviews of the Environment Agency's automatic water quality monitoring network.		
WE-02	Water Environment	Ecology and Nature Conservation	**Watercourse Crossings with Non-Intrusive Techniques if required (e.g. Horizontal Directional Drilling):** The methodology of the trenchless (non-intrusive) techniques of watercourse crossings will include the below measures to minimise the risk to the environment, and will be set out in a Framework CEMP: • A minimum headroom of 1.5 m below the watercourse bed will be maintained for trenchless, nonintrusive, crossings to avoid bed disturbance, subject to the appropriate consents being obtained. • A pre-works hydromorphology survey of the channel of each watercourse to be crossed will be undertaken prior to construction. The pre-works survey is a formal record of the condition of each watercourse prior to commencement of works to install cables beneath the channel. • The send and receive pit excavations will be located at least 10 m from the watercourse (measured from the water's/channel edge under normal flows) under which they will be directional drilled. • A shoring system appropriate to the ground conditions will be used to minimise water ingress into the pits. This may be timbers, sheet piling, or a modular system and will be chosen based on suitability for the site conditions. The ingress of any groundwater will be carefully managed through design of the send or receive pit, shoring method, and a pumping and treatment system. Once the cable is installed beneath the watercourse the pits and any cable trenches will be backfilled to the original ground level and seeded to reduce the risk of runoff and fine sediments entering the watercourse. • For HDD, the drill fluids used will be water based, mixed with naturally occurring minerals like bentonite clay. • HDD, or other trenchless techniques, will be undertaken by a specialist Contractor and the water column above the drill path will be continuously monitored during drilling. • Where any leakage of drilling fluid is observed in the watercourse or there is an increased perceived risk (i.e. lack of drilling fluid returns), the HDD operation will be suspended, remediation action implemented, and subsequently the methodology for that crossing re-	Construction	Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			evaluated. It may be that the excavation, or boring, in that area must take place at a deeper depth than the minimum 2 m below the bed of the watercourse. • Any wastewater / drilling products which are not recycled must be stored and removed from the Scheme by a suitable waste management Contractor and disposed of at a licenced wastewater facility. • A site-specific hydraulic fracture risk assessment will be produced prior to commencing works to define the mitigation required based on ground conditions.		
WE-03	Water Environment	Ecology and Nature Conservation	**Watercourse Crossings with intrusive techniques** The methodology of the trenched (intrusive) techniques of watercourse crossings will include the below measures to minimise the risk to the environment, as will be set out in the Framework CEMP: • Intrusive watercourse crossing techniques will only be used for more minor watercourses/drains, some of which may be dry, ephemeral channels associated with field boundaries. • Where intrusive crossing techniques will be used, a pre-works hydromorphological and riparian survey must be undertaken to record channel features and provide the baseline against which reinstatement will be provided. • Reinstatement will aim to provide an improved channel form with enhancement works to be carried out (where relevant and appropriate to do so) between 5 and 10 m upstream and downstream of the open trench so that the reinstated improved channel form merges into the existing channel form. It is anticipated that enhancements will consist of soft engineering techniques and improvements to the riparian corridor to improve channel diversity and biodiversity. • Proposed reinstatement proposals will be set out in a Water Framework Directive (WFD) Mitigation and Enhancement Strategy. • Where possible intrusive watercourse crossings will be carried out during drier periods of the year or during a period of dry weather where flows in the watercourse are low (this may be baseflow or where the channels are very small and not as well connected to groundwater, they may even be dry). However, this cannot be guaranteed and so any water flow within the watercourse will need to be over-pumped/flumed through the works area to maintain a dry trench and to reduce pollution risks. • Bank and bed sediments must be stored separately and in distinct layers as excavated on geotextile layers so they can be reinstated as found following completion of the works. • The banks and the bed will need to be appropriately reprofiled with the inclusion of suitable geomorphic features with the aim to provide betterment on the original channel.	Construction	Framework CEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			• Banks will be replanted with suitable riparian species. A suitable geotextile will need to be pinned in place to provide bank protection while new planting establishes (or other suitable measures to prevent soil erosion and bank instability).		
WE-04	Water Environment	Climate Change	**Management of Flood Risk during Construction:** The Framework CEMP that will be included in the DCO submission will set out measures for the management of construction activities aimed at preventing an increase in flood risk during the construction works. In addition, the Contractor will be required to produce an Emergency Response Plan following grant of the DCO and prior to construction.	Construction	Framework CEMP
WE-05	Water Environment	Climate Change	**Management of Flood Risk during Operation:** The PV modules will be offset from watercourses by 10 m from the top of the bank of watercourses. The design of the PV modules is for them to be raised above ground level with the minimum height to be ascertained by further analysis of flood risk within the FRA.	Operation	Design Principles; Surface Water Drainage Strategy; Flood Risk Assessment
WE-06	Water Environment	Ecology and Nature Conservation	**Permanent Access Track Crossings of Watercourses:** • Permanent access tracks will be constructed across the Site. These will typically be up 6 m wide compacted stone tracks with 1:2 gradient slopes on either side. The internal track layout will be designed to avoid drainage ditch and watercourse crossings wherever possible. • Existing farm tracks will be used where possible, upgrading surfaces as required. The creation of new tracks will be minimised. • For any additional access crossings, culverts will be avoided wherever possible. Where culverts are necessary, the least impacting design that is reasonably practicable is proposed (e.g. arch rather than box culverts, and box culverts in preference to pipes etc). • The crossings will be sized at detailed design stage in order to not impact on flow conveyance, with the culvert inverts will be buried below the natural bed level to allow for natural bed formation and passage of sediments. • Where channel will be lost for an access track crossing, a pre-works hydromorphological survey must be undertaken to record channel features and provide the baseline against which reinstatement will be provided. Proposed reinstatement proposals will be set out in a Water Framework Directive (WFD) Mitigation and Enhancement Strategy.	Construction	Design Principles

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
WE-07	Water Environment	Ecology and Nature Conservation	**Temporary Access Track Crossings of Watercourses:** Temporary access tracks are likely to be needed to cross watercourses along the Grid Connection Route. These will be temporary bailey bridge type construction wherever possible. Abutments would be set back to maintain the riparian margin. The length of time these crossings are required to be in place will be minimised where possible.	Construction	Framework CEMP
WE-08	Water Environment	Ecology and Nature Conservation	**Other Consents, Permits and Licences:** Where not disapplied through the DCO, there may be the need for several secondary permissions for temporary and potentially some permanent works affecting watercourses or groundwater (e.g. flood risk activity permits, water activity permits, land drainage consents, temporary abstraction / impoundment licences and trade effluent consents). It is assumed that all temporary works will be carried out under the necessary consents/permits and that the Contractor will comply with any conditions imposed by any relevant permission. Some of these secondary consents will be sought through the DCO.	Construction; Operation; Decommissioning	DCO – where disapplied; legal requirements
WE-09	Water Environment	Ecology and Nature Conservation Climate Change Ground Conditions	**Outline Drainage Strategy:** • A Surface Water Drainage Strategy will be undertaken so that the risk of surface water flooding is not increased as a result of the Proposed Development, and any increased land take for foundations and any access roads. • The design of drainage systems aims to avoid any increase in flood risk downstream, during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance for climate change. • Careful consideration of the SuDS features, in-keeping with local planning policy and through liaison with the Lead Local Flood Authority (LLFA), the Romney Marshes Area Internal Drainage Board (IDB) and Environment Agency, will be undertaken so that that the Surface Water Drainage Strategy adequately attenuates and treats runoff from the Proposed Development, whilst not increasing flood risk to the site and surrounding areas. • In accordance with local planning policies (Kent County Council and Folkestone and Hythe District Council) and general good practice, mitigation will be provided by restricting surface water discharge rates and providing on-site attenuation, primarily via SuDS, such as Rural SuDS (RSuDS) techniques or other appropriate solutions. • A water quality risk assessment of all solar infrastructure will be undertaken using the Simple Index Approach described in The SuDS Manual (Version 6) (CIRIA C753). This will inform what, if any treatment measures are required to manage the risk from diffuse urban runoff to watercourses or ground.	Operation	Surface Water Drainage Strategy

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
WE-10	Water Environment	Ecology and Nature Conservation	**Surface Water Drainage Strategy - Drainage Outfalls:** Should the Surface Water Drainage Strategy require discharge to watercourses then outfalls are likely to be required.. A green ditch outfall would avoid the need to construct an engineered outfall and would be adopted where appropriate. However, if engineered outfalls are required, the location, position and orientation of them will be carefully determined and informed by a hydromorphological survey to minimise any adverse local impacts on river processes. Appropriate micro-siting of the outfall will minimise loss of bank habitat, the need for bed scour or hard bank protection, and localised flow disturbance or disruption to sediment transport processes (e.g. angled 30-60° downstream to the direction of flow). It will also avoid the creation of 'dead' spaces with sedimentation and vegetation blockage risks and to that effect it is not proposed that outfalls are recessed into the bank. It is assumed that the site survey and micro-siting of outfalls will occur following grant of the DCO. The drainage system will be designed in accordance with current guidance so that the potential for siltation and blockages is minimised under normal operation. If there is any evidence of excessive erosion or sedimentation associated with new structures further actions will be considered to remedy that impact as sustainably as possible.	Construction	Framework CEMP
WE-11	Water Environment	Ecology and Nature Conservation	**BESS Safety Management Plan (BSMP):** A Framework BSMP will be developed for inclusion in the DCO application. This will provide details of firefighting water supply for use in an emergency situation, storage for fire water runoff, arrangements for testing of contaminants in the runoff and how this would then be discharged. This would be subject to consultation with the Local Fire and Rescue service.	Operation	BESS Safety Management Plan, OEMP
WE-12	Water Environment	Ecology and Nature Conservation	**Outline Drainage Strategy - Foul Drainage** There is a commitment to provide adequate foul drainage arrangements that do not pollute the water environment. Details are yet to be confirmed. This may require drainage to the nearest foul sewer, or if this is not available it could take the form of a fully contained cess pit or septic tank arrangement, that can be regularly emptied under contract with a licensed waste management Contractor.	Construction, Operation	Framework CEMP; OEMP
WE-13	Water Environment	Ecology and Nature Conservation	**General Management Measures for Water Environment during Operation:** A detailed OEMP will be prepared prior to operation (based on a Framework OEMP to be included in the DCO application. This will include: • A regular schedule for the management and maintenance of infrastructure, including visual inspection of the PV modules.	Construction, Operation	Framework CEMP; OEMP

ID	Relevant Topic/ Discipline	Secondary Topic	Commitment	Project Phase	Likely Commitment Securing Mechanism
			• Measures to manage the risk from pollution from small leaks and spillages from proposed infrastructure and maintenance activities, such as correct storage in appropriately bunded areas of any hazardous materials, and appropriate, regular inspection and maintenance of all equipment on-site. • Water for operational cleaning of PV Modules will be sourced from local potable water suppliers, not from the main supply. • Regular inspection and maintenance of the drainage systems, proposed sustainable drainage systems (SuDS) and watercourse crossings will be undertaken in accordance with good practice guidance.		
WE-14	Water Environment	Ecology and Nature Conservation	**General Management Measures for Water Environment during Decommissioning:** At the decommissioning stage the potential impacts to the water environment would be controlled in accordance with a Framework DEM, which will be included in the DCO application. This would ensure that potential impacts are considered and controlled within the decommissioning process.	Decommissioning	Framework DEMP

References

Ref. 1 Planning Inspectorate (2024) Nationally Significant Infrastructure Projects: Technical Advice Page for Scoping Solar Development. Available at: https://www.gov.uk/guidance/nationally-significant-infrastructure-projects-technical-advice-page-for-scoping-solar-development

Ref. 2 IAQM (2024); Guidance on the Assessment of Dust from Demolition and Construction. Available at: Construction-Dust-Guidance-Jan-2024.pdf

Appendix E: Designated Heritage Assets Gazetteer

Shepway Energy Park

EIA Scoping Report

Appendix E Designated Heritage Assets Gazetteer

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Table 1 Designated Heritage Assets Within the 3km Study Area

NHLE Number	Record Type	Grade	Name	Description	NGR
1005132	Scheduled Monument	-	Eastbridge Church	This monument includes the buried and upstanding remains of Eastbridge Church, built in about the 12th century with additions in the 13th and later centuries. According to Edward Hasted's 'History and Topographical Survey of the County of Kent' of 1799, the church was an appendage to the manor of Eastbridge, which was given to the hospital of St Mary in Dover during the 13th century. A record of roofing works is documented in 1452, although soon after the church fell into disrepair. At the Dissolution of the Monasteries, it passed to Henry VIII. In 1547, King Edward VI granted it to Thomas Cranmer, Archbishop of Canterbury. It was still in possession of the see of Canterbury in 1799. The parish of Eastbridge was partitioned between Burmarsh and Newchurch parishes in 1934. The chancel of the church was partially excavated in 1933. Consolidation work was carried out to the walls in the early 1990s. The standing remains of the church are Grade II listed.	TR 07426 32134
1003781	Scheduled Monument	-	World War II underground operational post, 1/3 mile (540m) SW of Chapel Farm	The monument includes a World War II auxiliary hide or underground observational post surviving as upstanding, and below-ground remains. It is situated on low-lying ground on Romney Marsh, south of Chapel Lane near Newchurch. The auxiliary hide is a rectangular room 2.1m by 2.4m by 4.6m with brick-lined walls and a concrete floor and roof. It is concealed below-ground in the bank of a drain at the edge of a field on Romney Marsh. The hide is entered through 3.7m shafts at either end. The original hatches have	TR 07265 31497

NHLE Number	Record Type	Grade	Name	Description	NGR
				been replaced by later cast-iron hatches. The fittings in the interior include two double-decker bunk beds, a wooden seat, shelves and a water tank.	
1005126-1005130; 1005113	Scheduled Monument	-	Royal Military Canal, Bonnington Bridge to Gigger's Green Bridge	The monument includes a length of the Royal Military Canal, an early 19th century defensive work, situated on low-lying ground on Romney Marsh, south-east of Bonnington. It runs ENE for 135m from Bonnington Bridge before bearing east for 175m then ESE for 905m. It resumes an ENE course for the remaining 225m to Gigger's Green Bridge. Along the ESE orientated section of the canal is a 'kink' designed to allow enfilading fire along the canal if the enemy attempted to cross it. The length of canal is water-filled, and the surviving features include the parapet; an earthwork bank on the west side, the Royal Military Road which survives as an earthen terrace, and the back drain, which survives as a water-filled ditch. On the north side of the canal are two Second World War reinforced concrete pillboxes, which are included in the scheduling. At the eastern end of this length of canal is Gigger's Green Bridge.	TR 06361 34290
1016682	Scheduled Monument	-	Moated site and associated fields, 460 m north-east of Pickney Bush Farm	The monument includes an abandoned medieval moated residence and an area of associated small fields, or closes. It is situated towards the centre of Romney Marsh on low-lying, artificially drained land around 2km south-east of Newchurch. The moated residence lies within the north-western part of the monument and survives in the form of earthworks, below ground building foundations and associated buried remains. The north-south aligned, roughly rectangular moated island measures approximately 125m by 45m and is surrounded by ditches up to 15m wide and	TR 06417 29708

NHLE Number	Record Type	Grade	Name	Description	NGR
				1m deep. Projecting from the moat onto the island are three narrow ponds which have been interpreted as fishponds. The associated closes cover the remainder of the monument in an irregular grid pattern and take the form of at least 14 small rectangular fields enclosed by ditches which are now mostly dry. Mathew Poker's map of Romney and Walland Marshes, dating to 1617, depicts a dwelling on the moated island. Later cartographic sources indicate that the house had become abandoned and demolished by the mid-17th century. All modern fences which cross the monument, and the wooden sheepfold situated on its north-western edge are excluded from the scheduling, although the ground beneath these features is included.	
1014626	Scheduled Monument	-	Martello tower no. 24 at Dymchurch	The monument includes a Martello tower, one of a pair lying towards the south-western edge of Dymchurch, a modern seaside town situated on the south Kent coast. The tower, which is Listed at Grade II, lies c.250m north-east of its twin, tower no.25. The pair were constructed in 1805-6 as part of a chain of 21 towers guarding the coastline of Romney Marsh, between Hythe in Kent and Rye in East Sussex. They were specifically designed to protect Marshland Sluice, the main drain of the three which emptied into the sea at Dymchurch, then the administrative centre for the Marsh. The slightly elliptical, brick-built tower measures up to c.13m in diameter externally and was constructed on three levels. It stands to a height of c.10m, with battered (inwardly sloping) walls ranging from 1.5m to 4m in thickness, the most substantial section being the wall base on the south easterly, seaward side.	TR 10164 29253

NHLE Number	Record Type	Grade	Name	Description	NGR
				The Martello tower was used during the later 19th and early 20th centuries as a coastguard station and look-out tower. Between 1959-69 it was restored by the Ministry of Works, work which included the re-rendering of the exterior brickwork and the replacement of most of the original woodwork. The monument, which houses a small museum, is now in the care of the Secretary of State and open to the public. Excluded from the scheduling are the modern metal steps which lead up to the first-floor entrance, and all other modern fixtures, fittings and display boards.	
1012216	Scheduled Monument	-	Aldington Knoll Roman barrow and later beacon	The monument includes a large artificial mound of earth which has been identified in the past as both a burial mound dating from the Roman period and a beacon. The mound in its present form was created by the heightening of an existing burial mound at the summit of a natural hill which overlooks the former coastline now infilled to form Romney Marsh. The form of the barrow is not known, but the later enlargement took the somewhat unusual form of a triangular mound approximately 50m long on each side. A landslip on the southern side has resulted in the present horned appearance of the mound in plan. The mound now stands over 3m above the level of the surrounding land and would originally have stood to a greater height before it was disturbed by partial excavation and by military use during World War II. Part of the mound was disturbed in 1755 when excavations unearthed the cremated remains of a body accompanied by a quantity of bronze work which may have formed a stool as found in other Roman burials. No other evidence of the date of the burial was recorded. The identification of the mound as a beacon relies largely upon oral tradition: no visible evidence of such a use in antiquity	TR 07081 35258

NHLE Number	Record Type	Grade	Name	Description	NGR
				survives. The most recent use of the mound was as an anti-aircraft emplacement in the Second World War, as a result of which use a depression in the summit and a long slit-trench extending into the wood to the north are clearly visible.	
1018877	Scheduled Monument	-	Bilsington Priory	The monument includes an Augustinian monastery, and an earlier medieval manorial residence situated on a clay hill which overlooks Romney Marsh to the south. The monastery and moated site survive in the form of standing buildings, water-filled fishponds, earthworks and associated below ground remains. Dedicated to St Mary the Virgin and St Nicholas, the monastery was founded in 1253 by Sir John Mansell, Lord Chief Justice of England and Lord Warden of the Cinque Ports. Mansell had the monastic buildings constructed at the manorial centre of Upper Bilsington, endowing the monastery with the surrounding demesne lands. The roughly square, north-east-south-west aligned moat which lies within the southern part of the monument is believed to represent the pre-existing, moated medieval manor house. The north-eastern arm of the moat has become infilled but will survive as a below ground feature. The central part of the moated island is now occupied by The Priory, a large private residence built in 1906. The construction of the modern house, along with associated garden landscaping, has partly disturbed this area of the monument. The Priory is excluded from the scheduling although the ground beneath is included. Below ground traces of the manorial centre and later monastery can be expected to survive on the moated island in the areas beneath and around the modern house. Situated towards	TR 04290 35551

NHLE Number	Record Type	Grade	Name	Description	NGR
				the eastern edge of the monument, the main monastic buildings were arranged around a square, north-west-south-east aligned cloister yard. The standing, `L'-shaped ranges are mainly constructed of originally plastered ragstone rubble, decorated with ashlar dressings and topped by clay-tiled roofs. Bilsington Priory was dissolved in 1536, and ownership passed for a time to Thomas Cranmer, Archbishop of Canterbury. Much of the monastery was demolished and the surviving buildings reused as a farmhouse throughout the post-medieval period. During the early 19th century, local smugglers known as the Aldington Gang used the monastic buildings for the storage of contraband. The buildings fell gradually into decay before the major restoration of 1906. The grounds were used for army training during World War II, which will have caused some disturbance to the monument. A number of features are excluded from the scheduling; these are The Priory (the private dwelling built in 1906), the early 20th century road bridge over the moat, the modern footbridge giving access onto the north eastern fishpond island, all modern outbuildings, garden structures and features, all modern fences and gates, and the modern surfaces of all roads, tracks, paths, paving and hardstanding; the ground beneath all these features is, however, included.	
1005148	Scheduled Monument	-	Chapel at Court-at-Street	The monument includes a medieval chapel, known as Bellirica Chapel, surviving as upstanding and below-ground remains. It is situated near the top of an escarpment overlooking Romney Marsh at Court-at-Street. The chapel is a single cell building constructed of ragstone with at least two phases of building evident within the walls.	TR 09022 35211

NHLE Number	Record Type	Grade	Name	Description	NGR
				It is approximately 14.5m long by 8m wide. The chapel is now roofless, but the walls survive up to an average of 2.1m high, although much of the north wall is no longer standing. The west wall contains a Late Perpendicular four-centred doorway, although only the outer sections of the lintel survive, and, in the north side, a holy water stoup. In the east wall are traces of the springing of a chancel arch. The east part of the south wall and much of the east wall are in smaller stone rubble, which is thought to form the remains of an earlier 12th century, two-celled, building. Much of the chapel was rebuilt in the 16th century. Bellirica Chapel is likely to have been a chapel of ease to a nearby manor house. The remains of walls and foundations of a possible manor house have been recorded just to the south. The chapel is associated with Elizabeth Barton, the Holy Maid of Kent, and became a place of pilgrimage from the 16th century onwards. Further archaeological remains survive in the vicinity of this monument but are not included because they have not been formally assessed.	
1185079	Listed Building	I	Church of St Mary Magdalene	Parish church. C12 origin, tower rebuilt C13, arcade and fenestration mainly C14, C15 alterations. Ragstone with plain tiled roof, with timber north porch and leaded spire. Chancel, north chapel, nave with aisles, western tower and north porch. Two stage western tower, the upper section Cl3 with spire on C12 lower stage, with offset corner buttresses and south-western angle vice. Ogee headed and cusped single and doubled lights. Perpendicular double wave moulded western doorway set within C12 doorway with billet, keel, chevron and roll and fillet moulded orders on double attached columns with scalloped capitals. Paired	TR 02474 33535

NHLE Number	Record Type	Grade	Name	Description	NGR
				trecusped lights to south aisle with 1 leaded wooden casement. C12 south doorway with chevron and roll moulded outer orders on attached columns, the abaci enriched with zig-zag and billet mouldings. Boldly projecting south chapel with offset corner buttresses and corbelled western chimney, with blocked C18 brick west doorway and cusped Y- tracery fenestration. East end with 2 three light cusped Y-tracery windows with mouchettes, that to chancel with larger, less cusped tracery pattern. Cusped lancets to chancel and Y-tracery fenestration to north aisle, with corner buttresses (repaired with brick). North porch on flint base, with rendered and applied timber upper walls, and damaged cusped and moulded bargeboard with pendant. The porch within is unrestored, with small crown-post roof on cambered and moulded tie beam with moulded wall plate. Fine C14(?) door, with moulded and lapped timbers in hollow-and ovolo-moulded doorway with hoodmould. Interior: wide nave, with mutilated tower arch on octagonal responds, with double chamfered and roll moulded arch. Nearly all the stonework of the arcades badly scaled by fire and some with iron straps; C14 3 bay arcades with octagonal piers and moulded capitals to double chamfered arches. South pier to C14 damaged chancel arch in C15 replacement. Roof of 4 crown posts with lean-to aisles, and simple arch from south aisle to south chapel. Chancel with Cl9 tie beam, and rafter roof, and double chamfered arch to south chapel, the latter with trussed rafter roof on moulded tie beams. Fittings: cusped ogee headed piscina in east wall of chancel; C17 altar table with fluted frieze and gadrooned cup and cover legs and square floor-level stretchers and mid C18 turned baluster altar rail. Medieval choir stalls to	

NHLE Number	Record Type	Grade	Name	Description	NGR
				south of chancel with frame of screen to south chapel with simple poppy head bench ends, returned across chancel arch and mirrored on north side, largely by Cl9 copies, but incorporating 4 C15 or C16 panels with tracery and shields. Cusped and roll moulded shelved piscina in south chapel. Simple octagonal font and base. Heavy Cl9 wooden Gothic style pulpit. Early C18 screen to tower with raised and fielded panelled base, turned balusters over to cornice with iron spiked top rail. Central door on H hinges. On the south wall of the tower, a reredos, with 4 fluted Doric pilasters, painted to look like marble, with entablature blocks supporting a modillion cornice, the centre raised to pediment, with central segmentally headed commandments board with cloud burst over and Hebrew lettering, flanked by Lord's Prayer and the Creed. Early Cl9 painted Royal Arms on tower north wall.	
1362769	Listed Building	I	St Augustines Priory (Medieval Buildings)	Monastic remains, sometime house. Founded 1253, restored 1906 by J.T. Micklethwaite, Architect, for R.H. Balston. Ragstone with plain tiled roof. First floor hall connected by 3 storey tower to 3 storeyed cross-wing. The hall range with corner buttresses and string course and C20 plate traceried windows with 1 (genuine?) lancet in gable end. The north elevation with cill cornice to 1st floor, raised to centre, with blocked doorways to left and to right (with four centred arch) and corbel heads. The foundations of cloisters projecting from this elevation have been traced. Tower in 2 stages externally with small corner buttresses with restored square headed doorway and shouldered lights. Shallow south eastern angle vice. Hipped roof with gablets and stack. Three storey cross-wing, with low angle buttress, and hipped roof with gablets. Small squared lights.	TR 04341 35525

NHLE Number	Record Type	Grade	Name	Description	NGR
				Entry by depressed arched and chamfered doorway to undercroft of main hall in wooden porch. Interior: plain undercroft, C20 wooden turned baluster stair to main hall, the internal reveals of the windows brought down as seats, only the western window possibly original. Blocked chamfered arched door- ways on northern face and to right of western window on west wall. Remains embedded at south end of moulded main beams of screens passage/ gallery. Restored roof of 3 crown posts on moulded tie beams and wall plate. Spiral staircase full height in tower block with chamfered arched doorways to hall and each floor of chamber block. Tower chamber with simple chamfered fireplaces and moulded cross-beamed roof. Chamber cross-wing with short moulded crown post to upper room, possibly originally a double height chamber with inserted 1st floor ceiling. Tower roof with 3 massively braced tie beams and scissor-braced rafters. The function of the surviving buildings has never been fully established, probably the Infirmary hall, possibly the Refectory with Prior's Lodgings attached. The Priory, of Augustinian Canons was founded 1253 by Sir John Mansell (Lord Chief Justics, Lord Warden of the Cinque Ports, etc.). Dissolved 1536, and used as a Farmhouse, becoming progressively more ruinous until restoration 1906. Foundations and remains of cloisters to north, the church (of St. Mary the Virgin and St. Nicholas) beyond that and further still the Gate House and Holy Well, as well as 3 fishponds (1 a moat to the south-west). The plan has affinities with the premonstratensian priory at East Langdon, Kent. Used as a storage base by smuggling gangs, particularly the Ransley gang e.C19.	

NHLE Number	Record Type	Grade	Name	Description	NGR
1071194	Listed Building	I	Church of St Rumwold	Parish church. C12, nave rebuilt C13/C14. Ragstone with timber framed and brick infill porch and weather boarded turret, with plain tiled roof and leaded turret roof. Chancel and nave with western turret and northern porch. Offset buttresses, repaired with brick, to western end, with double hollow chamfered western doorway with drip mould. Leaded ogee-shaped roof to turret with vane post. Nave with 3 offset buttresses to each wall with 2 cusped 2 light Y-tracery windows on each wall. Chamfered south doorway and hollow chamfered north door with drip mould in timber porch with ragstone base and cusped bargeboard over doorway with durns Nave east wall with lancets (blocked to south). Chancel stepped with Romanesque lancet to north, C16 2 light Perpendicular window to south and Romanesque triple East window. Interior: nave with roof of 2 crown posts and early C17 timber gallery structure at west end, the floor boards missing, but with turned baluster rail and upper flight of newel stairs. Chamfered chancel arch on moulded imposts. Chancel with plastered barrel roof. Fittings: segmentally arched double piscina in east wall and partly blocked aumbrey in south wall of chancel, with window seat to C16 chancel south window. Turned baluster altar rail with wrought iron supports to gate piers, simple wainscotting to sanctuary and raised and fielded panelled choir stalls. C18 octagonal pulpit with attached reading desk, with raised and fielded panels on rendered masonry base, with Greek key cornice and fluted pilastered back panel to tester with Greek key and modillioned cornice. Small trefoiled and ogee headed beaded niche on nave north-east wall. Bulbous font of Bethersden marble on square base, with railed surround (taken from altar rail?) with re-used Poppy head bench end.	TR 05715 34426

NHLE Number	Record Type	Grade	Name	Description	NGR
				Bolection moulded prayer boards and benefaction board in nave (dated 1774, recording the benefaction of Valentine Knott of 8 shillings p.a. from Pinn Farm, 1614 Fragments of glass, C14 and Cl5, in nave, and East window dated 1907. Royal Arms, mid C18, on west wall.	
1278140	Listed Building	I	Church of St Peter and St Paul	Parish church. C13, C14 and C15, restored circa 1845. Stone, with plain tile roofs. West tower, continuous nave and chancel, continuous south aisle and chapel and continuous, broader, north aisle and chapel, chapels stopping short of east end. North and south porches: West tower: C15. Three stages on moulded plinth. Angle buttresses. Battlements above moulded gargoyled string. North-east stair turret, slightly taller, and battlemented. Belfry windows of 2 trefoil-headed lights, square-topped, with hoodmoulds. Single trefoil-headed light with square top and hoodmould to each side of middle stage. Pointed arched west window with rendered C19 intersecting tracery and C15 hoodmould. 2-centred arched moulded west doorway in square-topped architrave with casement moulding. Single shaft either side with bell capital and moulded base as springing for quatrefoiled spandrels. Moulded hoodmould with head to label stop. South aisle and chapel: aisle C14, chapel probably C14 on C13 site. Plinthless, with south-west and south-east angle buttresses and 2 south buttresses. Gabled. Small cusped ogee light with hoodmould to west. 3 south windows with C19 tracery in medieval styles. 3-light east window with cavetto mullions and possibly only the tracery renewed in C19. South porch: C19 with moulded 2-centred arched outer doorway. Inner doorway moulded, 2-centred arched with roll-and-fillet hoodmould and outward-turning scrolls. Chancel: C13. North-east and south-east	TR 05407 31351

NHLE Number	Record Type	Grade	Name	Description	NGR
				angle buttresses. Gabled, with ridge lower than that of nave. Hollow-chamfered south lancet and 2 hollow-chamfered north lancets. Four-light C19 east window with trefoil-headed lights and sexfoils. North aisle and chapel: aisle C14, chapel probably C14 on a C13 site. Gabled, with north-east and north-west angle buttresses and 2 north buttresses. 3-light C19 east window with intersecting tracery. Four C19 north windows in a C14 style, that towards east within a medieval architrave. C19 west window. North porch: very broad, plain-tiled, with broad pointed-arched vault. No gate. Inner doorway moulded, pointed arched, with roll-and-fillet hoodmould and outward-turning scrolls. Projecting stone stoup to west of doorway. Interior: structure: 4-bay C14 nave arcade to north and south, stopping about 5 feet short of west end; pointed arches of 2 chamfered orders springing from octagonal columns with moulded capitals and bases. Chancel arcade of single broad pointed chamfered arch to north and south springing from rectangular piers with nicked hollow-chamfered imposts and roll stops. Broad pointed chancel arch, bevelled, with roll stop, possibly C13. Tall C15 tower arch with 3 orders of hollow chamfers, that to centre springing from single attached column to either side with moulded capital and base. Pointed-arched doorway to tower stairs with hollow chamfer and broach stops. Rounded rood-loft stair arches squinted between east ends of north and south aisles and west end of chancel. Roof: 4 octagonal crown posts to nave with moulded capitals and bases on cambered double-chamfered tie-beams. Sous-laces, ashlar-pieces and moulded cornice. C19 boarding to chancel. North aisle and north chapel with common rafters, sous-	

NHLE Number	Record Type	Grade	Name	Description	NGR
				laces, ashlar-pieces, moulded cornice and 4 moulded tie-beams. South aisle and chapel similar. Fittings: piscina in south wall of chancel with cinquefoiled ogee head and sexfoiled drain. Similar piscina to south chapel with plain drain. Projecting stone stoup to north chapel. C15 octagonal font on 2 octagonal stone steps, with buttressed stem and bowl with shields and roses. Fragmentary C15 screens between north and south aisles and chancels. C19 stall on south side of chancel with 3 bays of blind tracery, the outer 2 incorporating medieval work. Raised C18 panels bearing Creed, Decalogue and Lord's Prayer now serving as screen at west end of south aisle. Late C18 Benefactors' Board over south door.	
1061102	Listed Building	I	Church of St Mary the Virgin	Parish church. C12, circa 1300, circa 1800 and C19. Mixed stone, partly rendered. Plain tile roof. Wood shingles to spire. West tower, virtually continuous nave and chancel, north and south aisles to nave, and south porch. West tower: C12. Three stages to north and south, lower two incorporated to west. Clasping buttresses. Splay-footed octagonal spire. North and south sides each have small chamfered round-headed opening to first and third stages and broader round-headed opening to second stage (blocked to north). Single trefoil-headed light to top stage to west. 2-centred arched west door with plain chamfer and broach stops, now rendered. South aisle: probably circa 1300. Narrow and gabled, with 3 buttresses. No west window. Two 2-light south windows of circa 1800 with round-headed cavetto-moulded lights and segmental hoodmould with dropped verticals. Chamfered, round-headed east window, possibly inserted. South porch: coped, with rounded kneelers of rendered tiles. Rectangular lights to	TR 06492 27990

NHLE Number	Record Type	Grade	Name	Description	NGR
				east and west. Chamfered 2-centred arched outer doorway and similar inner doorway with broach stop. Chancel: C12, extended circa 1300. South-east and north-east angle buttresses. Battered plinth to east. 2 tall rebated south lancets, that to west longer and broader. Small doorway to west of centre with pointed arch, plain chamfer and broach stops. Cusped 4-light east window of circa 1300, with 3 quatrefoils to head, cavetto mullions, hollow-chamfered architrave and no hoodmould. One tall chamfered north lancet towards west end. North aisle: circa 1300. No plinth. Gabled, with moulded stone coping. 4 evenly-spaced north buttresses on moulded plinths. 2-light east window with cinquefoiled head , square top and hoodmould. 2 similar windows to north in outer bays. Central hollow-chamfered north doorway with broach stops and almost pointed head. No west window. Interior: Structure: 3-bay nave arcade with pointed arches of 2 hollow-chamfered orders and columns with bell capitals and bases. Arcades rest at east and west ends on moulded imposts, that to north-west forming tall moulded hat slung low over carved head beneath. No chancel arch. Tower arch plain chamfered and pointed (a later alterarion?). Springing from attached columns with scalloped capitals and bell bases.East window flanked either side by slender shaft with bell capital and base set within the hollow-chamfered architrave of the window.Hollow-chamfered rere-arch with roll-and-fillet hoodmculd.String below east window rounded but not undercut. Inner arches of 2 south lancets spring from small carved heads with bell "hats". Small moulded imposts to north lancet. Rectangular stone to east of centre of chancel in north wall said to mark extent of C12 chancel. Broad	

NHLE Number	Record Type	Grade	Name	Description	NGR
				rectangular blocked opening at west end of south chancel wall. Narrow round-headed rood-loft doorway just above nave arcade at south junction of nave and chancel. Roof: 4 crown-posts to nave; 2 to centre octagonal with moulded capitals and bases, that to west end rectangular with broad chamfered sides, that to east end plain. Sous-laces, ashlar-pieces and moulded cornice. Moulded tie-beams, those to centre with pendant posts and solid braces. Chancel roof of common rafters with collars, sous-laces, ashlar- pieces and chamfered cornice. Straight central plain-chamfered tie-beam. 4 short, rectangular, chamfered crown-posts to north aisle on heavy cambered moulded tie-beams. Sous-laces and ashlar-pieces. Moulded cornice to north. 3 plain straight intermediate tie-beams. South aisle roof similar, but with taller crown-posts. Fittings: 2 stepped sedile and unusual double piscina under continuous roll-and-fillet hoodmould with mask-like face between sedile and piscina and priest's head between sedile. All 3 have trefoil-heads, hollow chamfers and broach stops. Medieval floor tiles to chancel. Octagonal Medieval font with octagonal shaft on square stone plinth to west of south door. Painted wood font cover, probably C17, with knob finial. Slender moulded beam to west end of east bay of south aisle, set towards springing of arcade and probably the head of a screen. C18 north door to north aisle and C18 doors with fielded panels to tower arch. C18 hexagonal pulpit with fielded panels and balusters. Royal arms 1775 over north door. Italianate triptych on west wall of south aisle. Monuments: Plain tablet above font to Edith M. Nesbit 1858-1924. Brass to Matilda Jamys, d.1499, and brass to William Gregory, d.1502 in nave.	

NHLE Number	Record Type	Grade	Name	Description	NGR
1061129	Listed Building	II*	New Hall New Hall Cottage The Expenditors House	House and Court Room, now house, Court Room and offices. Late C16, altered in C19. Timber framed. North elevation (to New Hall Close) : ground floor clad in C19 in chequered red and grey brick, first floor in alternate bands of plain and fishscale tiles. First floor of right end bay rebuilt in brick. Plain tile roof. 2 storeys. Central section recessed. Left projection formerly jettied to north and east, right probably formerly jettied to north. Hipped roof; right hip returns with lower ridge, left hip with higher ridge. Small brick ridge stack towards right end of recess and later gable end stack to right. Irregular fenestration of 4 windows; 2 broadly-spaced 2-light fixed lights with glazing bars to Court Room in broader left projection, large tripartite sash to centre of recess, 12-pane glazing bar sash to right projection. Recess has 2 ground-floor windows in open boxes; one narrow, adjoining front door to left and one 16-pane glazing bar sash with rendered voussoirs to right. Door of 6 fielded panels towards left end of recess, with fluted Doric pilasters and broad hood with moulded triangular pediment. 2-storey house adjoining to right but set back. Probably early C19. Rendered,right end tile-hung. Plain tile roof. 2 storeys. Stack towards right. One 12-pane glazing bar sash in open box. Panelled door in single-storey brick extension to front at right end. C20 single-storey brick addition to left bay not included. Elevation to High Street: clad in red brick with occasional grey headers. Dentilled brick eaves cornice. Rendered quoins to left. Steeply-pitched hipped roof, left hip returning with lower ridge. Central brick ridge stack. Irregular fenestration of three 12-pane glazing bar sashes in open boxes to right of stack (to Court Room) and, to left of stack, one sash either side of	TR 10288 29702

NHLE Number	Record Type	Grade	Name	Description	NGR
				short C19 two-storey brick wing. All windows have segmental heads. Left return wing rendered with 4 glazing bar sashes. Interior: first-floor Court Room in north-east corner, of 2 timber-framed bays running north-south, with staggered butt-side purlins and scowled posts with moulded brackets. Court Room benches and tables, some fixed. Room beneath Court Room has moulded beams and dragon beam; access to it through chamfered doorway from timber-framed passage leading via moulded doorway from entrance hall. Interior only partly inspected. Built on site of a building burnt circa 1580. Centre of Romney Marsh administration until Corporation divested of powers during late C19 and early C20. Part used as gaol until 1866.	
1071191	Listed Building	II*	Church of St Peter and St Paul	Parish church. C12 nave, refenestrated C14, C12 chancel. C16 tower. Restored 1883 by Joseph Clarke. Ragstone, with red brick and timbered south porch with plain tiled roofs and shingled tower upper stage and spire. Chancel, nave, western tower and south porch. Two stage tower on high plinth, the upper stage shingled with shallow spire and finial. Small single western light, with Sydney Arms and 2 dates: 1590 over. Nave with massive C19 offset buttresses, with C19 Decorated style fenestration to south and unrestored C14 windows to north with ogee and early Perpendicular tracery. South porch with red brick in English bond with C19 bargeboard and door frame. Simple arched south doorway with C17(?) plank and muntin door. Chancel stopped in with lancet fenestration (19 triple lancet east window). Interior: nave with western doorway to tower with some re-used C12 tooled stonework in voussoirs and blocked deeply splayed Romanesque window over south doorway. Roof of 3 C19 crown posts and simple chamfered chancel arch, with, to	TR 04216 34264

NHLE Number	Record Type	Grade	Name	Description	NGR
				the south, blocked doorways at base and head of rood stair (external vice removed with C19 restoration). Chancel with south-eastern lancet reveal brought low to ground, with carved head jamb stop. C19 roof. Fittings: C19 sedile and piscina in chancel; C14 trefoil headed water stoup by south doorway in nave. Fragments of C14 glass in nave north windows. C20 reredos and hatchment (for Lord Justice of Appeal, Sir Arthur Luxmore). Seven oval prayer boards and 2 rectangular text boards in nave and Royal Arms dated 1754 over chancel arch.	
1300006	Listed Building	II*	Barn About 50 Metres South West of Court Lodge	Barn. C15. Timber framed and weather boarded on high ragstone and red brick base with plain tiled roof. Hipped roof with gablets and hipped midstrey to left. Interior: three bays with terminal outshots and aisles. Passing shores to main arcade posts, with short, deeply cut jowls to aisle posts and arcade posts, and deep, thin and eccentrically placed arched braces to tie beams. Roof of 3 plain crown posts, braced to the collar purlin. The manor of Bilsington Inferior (Court Lodge adjacent) to which the barn belongs was appropriated to the Augustinian Canons of Bilsington Priory.	TR 04115 34234
1061152	Listed Building	II*	Church of St Augustine	Parish church. C13, C14, and C15, restored 1873 by C.T. Whitley. Roughly coursed stone with plain tile roof. West tower, broad nave, south porch, chancel set towards south side of nave with chapel to north which projects north beyond nave. West tower: C14 or early C15. Two stages. No plinth. Setback buttresses. Battlements. Small chamfered rectangular light with wood louvres to each side of upper stage and to west and south side of lower stage. Moulded 2-centred arched west doorway with roll-and-fillet hoodmould with carved heads as label stops. Nave: C13.	TR 01422 29934

NHLE Number	Record Type	Grade	Name	Description	NGR
				Plinthless. South elevation has 2 buttresses and two C19 two-light windows in a C14 style, with hoodmoulds. South porch: C19. Small blocks of roughly squared coursed stone. Moulded 2-centred arched doorway and two C19 windows. Inner doorway medieval; 2-centred arch with hollow chamfer. Chancel: C13 rebuilt or altered in C14. Plinthless. Three buttresses. Two cusped C19 two-light south windows with hoodmoulds. 3-light east window with similar cusping, with inscription beneath: "ErectedA.D. 1873 Edward Wilkinson Rector". North chapel: C13 altered in C14. Plinthless. Three buttresses. Gabled. C19 octagonal moulded stone stack to north east corner. Reticulated 2-light east window of C14 origin with hood mould. North windows similar but probably restored. C19 two-centred arched doorway with hoodmould to west end. North elevation of nave: Plinthless. 2 buttresses. 2 cusped C14 two-light windows, probably largely original, one with ogee-headed lights and quatrefoil, the other with intersecting tracery, both with hoodmoulds. No west window. Interior: Structure: West door leads into base of tower, one step lower than rest of church. Broad aisleless nave leading by separate eastern arches to both chancel and north chapel. C14 two-bay chancel arcade of double-chamfered arches dying into walls and central octagonal column with moulded base and renewed moulded capital. Broad chamfered chancel arch with cushioned chamfer-stops; probably C14, with renewed head dying into wall. C13 arch with chamfered imposts between nave and chapel. Low tower arch, also with chamfered imposts. Roof: nave cornice C14 with roll-and-fillet moulding stopped at tie-beams with horizontally-carved heads. Crown-post roof to chan cel later, with central	

NHLE Number	Record Type	Grade	Name	Description	NGR
				cambered hollow-chamfered tie-beam, chamfered collar purlin and moulded octagonal crown-post. Short pendant posts support hollow-chamfered arch braces with solid spandrels. Moulded cornice. Common-rafter roof to chapel with sous-laced collars; ashlar-pieces and moulded cornice to north side only. Moulded tie-beam with pendant posts and solid arch-braces. Fittings: C15 piscina and sedile to south wall of chancel, the latter with brattished cornice, moulded jambs and vestigial arms. Trefoil-headed piscina to south wall of chapel. Stone slab with skull, cross-bones, scythe and tools on north wall of nave. Pulpit of 1858 incorpating finely-carved traceried heads of a Medieval screen.	
1061163	Listed Building	II*	Church of All Saints	Parish church. C12. C13 and C15, restored 1878. Stone, with plain tile roof to chancel. Nave roof not visible. West tower, short nave, south porch, small chancel. West tower: C15. 2 stages on low moulded plinth, with battlements above moulded string. Integral north-west and south- west angle buttresses. Trefoil-headed, hollow chamfered louvred light to each side of belfry. Another, smaller, with square head, hollow spandrels and hoodmould towards base of upper stage to west. West window of two trefoil- headed lights with renewed mullion, no opening between lights and no voussoirs or hoodmould. Corbel head at what would have been apex. Moulded 2-centred arched west doorway with hoodmould. Nave: C12. South elevation: no visible plinth. Battlemented without string. 2 buttresses. C15 window above porch of 2 cinquefoiled lights with cavetto mullion and square head, C19 two-light window towards east, pointed, with two trefoil-headed lights,trefoil and hoodmould. South porch: said to be dated 526. Stone, with cement-rendered quoins. Round-arched outer architrave	TR 10118 32035

NHLE Number	Record Type	Grade	Name	Description	NGR
				with decorative cast-iron gate. Inner doorway C12, with fat roll, chevron, and outer billet moulding. Stone face affixed towards apex. Square moulded abaci to single shaft either side with scalloped cushion capitals and slightly moulded bases. Doorway infilled with 3-centred arched stone inner architrave. Chancel: C12. Galleted stone. No plinth. Gabled. Traces of blocked south-west window with trefoiled head. C19 east window. Short narrow C12 north window with rounded head formed from single stone. Nave: north elevation: moulded plinth continuous with that of tower. Battlements above chamfered string. Central C19 north window. Interior: Structure: aisle-less nave. No chancel arch. C13 pointed tower arch with chamfered jambs and imposts. Roof: crown-post roof of 1878 to chancel, unobtrusively stencilled. Shallow-pitched C19 king-post roof to nave. Fittings: Royal Arms of George III to south wall of nave, unusually signed, "J. Marten Tenterden Pinxt". Oval text board. Bell, probably late C14, standing in north-east corner of nave, ascribed to John Danyell of London (Anne Roper, The Church of All Saints,Burmarsh, 1980). Reredos 1897-1900, carved in Oberammergau.	
1061130	Listed Building	II*	Church of St Peter and St Paul	Parish Church. C12 and C13, restored in 1821. Stone, with rendered mortar. Tower partly timber framed, with upper stage tile-hung. Slate roof to nave, plain tiles to chancel, wood shingles to tower. Small west tower, nave, south porch, chancel. West tower: 1821, built between 2 existing stone buttresses at west end of nave. 2 stages with pyramidal tower. Rectangular louvres to upper stage. C19 pointed-arched wooden casement to west, and ribbed west door under flat bracketted hood. Inner doorway C12 with round- headed arch of 3 orders (plain, fat roll and chevrons)	TR 10315 29737

NHLE Number	Record Type	Grade	Name	Description	NGR
				springing from square moulded abaci. Single shaft either side with scalloped cushion capital and moulded base. Nave: no plinth. Rounded C19 kneelers. Two C19 south windows in an early C15 style. South porch: 1910. Pebbledashed with plain tile roof on moulded plinth. Moulded 2-centred arched outer doorway. Inner doorway C12, similar to west doorway but with rows of small nailheads visible within base moulding. Chancel: C12, east end possibly rebuilt in 1821. Single chamfered lancet-type light to north and to south. Similar but broader light to east. Semi-octagonal north-east vestry of 1910 not included. Nave: north elevation: 1821, with low plinth. Rendered rectangular stack to east end. Two C19 windows in an early C15 style. two C19 west windows to north of tower. Interior: structure: broad aisle-less nave,widened to north in 1821. C12 chancel arch, plain to east, decorated to west with fat roll and chevrons springing from square moulded abaci, each surmounting single shaft with voluted cushion capital and moulded base. Narrow tiles laid in herringbone pattern infilling archways of south and west doorways. Roof: nave roof 1821, in 5 cants with 3 queen-post trusses. Chancel roof of common rafters and collars re-using older ashlar-pieces. Fittings: no stoups or piscinae. Broad plain-chamfered pointed-arched aumbry in east wall of nave to south of chancel arch, linked to much taller, broad, hollow-chamfered opening, possibly a sedile, in south wall of nave towards east end. Both have roll chamfer-stops. The "sedile" has key-pattern wall-painting within head, with traces of superimposed patterning. Font, medieval or C17, with circular bowl, octagonal shaft, with fat roll to base above short cylinder with fins to a final rectangular plinth, all	

NHLE Number	Record Type	Grade	Name	Description	NGR
				with pronounced vertical tooling. Gallery of 1821 spanning west end on 5 rectangular Doric columns, with fielded panels, and splat balusters to staircase in south-west corner. Royal Arms 1778 on north wall of nave. Monuments: wall tablet on south wall of nave at east end to Captain Timothy Bedingfeild, d.1693, and Mary his wife, d.1714; black and white marble on moulded plinth with consoles, and moulded cornice surmounted by emblem.	
1184629	Listed Building	II	Prospect Place	Prospect Place II House. Early C19. Timber framed and weather boarded with plain tiled roof. Two storeys and hipped roof with projecting and offset stacks to left (rendered) and to right. Regular fenestration of 3 sashes with vertical glazing bars on 1st floor and 2 on ground floor in moulded surrounds. Central door of 2 moulded panels with rectangular fanlight.	TR 03806 34852
1071187	Listed Building	II	The Cottage	House. C16. Timber framed, with exposed close-studding with plaster infill on east front, the south or present entrance front clad with red and blue brick. Plain tiled roof, hipped to south and sharing clustered brick chimneystack with adjoining property to west. Two storeys: irregularly-spaced casement windows. East front has a continuous jetty on brackets with three arched tension braces and two irregularly-spaced wooden casements on each floor. The south front has a tripartite wooden casement on each floor, that on the ground floor with segmental head and cornice and boarded door to right. A good quality C16 timberframed house which forms part of a group.	TR 03983 34503

NHLE Number	Record Type	Grade	Name	Description	NGR
1362804	Listed Building	II	The Old House	House. Early C18. Timberframed, clad in weatherboarding with plain tiled roof. Roof half-hipped to north and gabled to south, has a hipped dormer and chimneystack to rear. Two storeys and attics: two windows. Two wooden casements on first floor and two tripartite wooden casements on ground floor with boarded door to south. Brick lean-to extension to north with sash window. An early C18 house built of local materials and forming part of a group.	TR 03978 34511
1071188	Listed Building	II	Knights Cottage	House. C17. Red brick with plain tiled roof. Two storeys and attic with half hipped roof, hipped dormer and stack to right (shared with adjoining property). Two-light and three-light wooden casements on each floor, with segmental heads on ground floor. Boarded door to right in trellised porch.	TR 03979 34498
1071189	Listed Building	II	Forge Cottage	Cottage. Early C19. Red and painted brick with plain tiled roof. One storey with moulded stack at end left. Sash windows with vertical glazing bars to left and to right and central tripartite mullioned and transomed casement. Half-glazed door to left, panelled door to centre, and double carriage doors to centre right, half-glazed with panelled lower sections. Included for group value.	TR 03970 34493
1362803	Listed Building	II	St Amand and Number 4 Cross Cottages	Two dwellings. Cl8. Red and blue brick and plain tiled roof Two storeys with stacks to left and to right. Regular fenestration of 2 tripartite wooden casements on each floor, those on ground floor with segmental heads. Central boarded door with inserted wooden casement to right as sidelight. Included for group value.	TR 04017 34510

NHLE Number	Record Type	Grade	Name	Description	NGR
1362805	Listed Building	II	Cross House	House. C17 or earlier, extended late C20. Timber framed and clad with red brick, painted to front elevation with weather boarding on 1st floor. Plain tiled roof. Two parallel ranges. Two storeys with hipped roof with central stack. Two wooden casements on each floor and central panelled door with moulded flying cornice. Hipped rear wing. Included for group value.	TR 03968 34470
1071190	Listed Building	II	The White Horse	Public house. Late C18 and mid C19. Painted brick and plain tiled roof. Three parallel ranges. Two 2 storey hipped ranges to right, with stacks to centre and to left, the right hand block recessed slightly. Tripartite glazing bar sash on each floor of each range, those to right of smaller dimension and with segmental heads. Half- glazed door to centre right in plain doorway. C19 range to left, recessed slightly, the 2 storeyed gabled roadside elevation with 1 blank window space and 1 sash on each floor. Two semi-dormers and 2 sashes to left return. Iron sign bracket to end left, and flag pole with iron bracket to centre left. Tripartite glazing bar sashes to rear elevation. Interior: bar altered.	TR 03992 34473
1362768	Listed Building	II	Willow Trees and Wall Attached	House. Early Mid Cl9 Timber framed and weather boarded with red brick stack and slate roof. Two storeys to hipped roof and stack to right. Regular fenestration of 2 sashes with vertical glazing bars on each floor with door of 5 moulded panels in large central hipped porch with sidelights. Wall projecting from right return, about 8 feet high of red brick some 4 yards in length.	TR 04064 34370

NHLE Number	Record Type	Grade	Name	Description	NGR
1184823	Listed Building	II	The Cosway Monument	Obelisk. Erected 1835 by George Cooper. Ashlar. Simple, tall obelisk on pedestal. The north side bears a tablet inscribed: As a tribute of respect to the memory of Sir William Richard Cosway. Kt. this monument was erected by his friends and the reformers of East Kent in the year 1835. G. Cooper fecit Canterbury. Cosway was killed here in a coaching accident. The obelisk was lightning damaged and the upper sections weathered at time of survey.	TR0392734285
1071192	Listed Building	II	Bell and Housing 1 Metres South West of Church of St Peter and St Paul	Bell and housing 1 metres south- west of Church of St. Peter and St. Paul GV II Bell and housing. C15 bell in housing of c.1900. Timber framed with plain tiled roof. Simple braced wooden frame with tiled pentice roof and bell hanging from central cross-beam. The bell was paid for by Henry Jordan, Fishmonger of London, and is inscribed "In multis annis resonet Campana Johannis".	TR 04207 34259
1184735	Listed Building	II	Sundial About 10 Metres South of Church of St Peter and St Paul	Sundial about 10 metres south of Church of St. Peter and St. Paul GV II Sundial. Dated 1807. Brass plate on freestone base. Small column with square cap and plate, the centrally placed upright linked to the plate by a curved brass brace. Signed J. Bishop 1807	TR 04217 34251
1362806	Listed Building	II	Court Lodge	C16 or earlier, clad C18-C19, altered late C20. Timber framed and clad with painted brick and tile hung on 1st floor with plain tiled roof. Hall house plan, now lobby entry. Two storeys and garret buttressed to left. Hipped roof with gablets and stacks to centre left and to end right. Half-glazed glazing bar sash to left, margin light casement and 3 late C20 wooden casements to right on 1st floor, and tripartite glazing bar sash to left, 2 wooden casements and	TR 04152 34270

NHLE Number	Record Type	Grade	Name	Description	NGR
				French window to centre right on ground floor. C20 plank and stud door to centre left in gabled porch. Left return with plinth and plat band and hipped dormer. Catslide outshot to rear. A manorial site adjacent to the church with a complete moat surrounding it.	
1185036	Listed Building	II	Harrison House	House. Mid C18 exterior to possibly earlier core. Red and blue chequered brick on ragstone base, with ragstone return elevation. Plain tiled roof. Two storeys and attic on plinth with brick eaves cornice of 3 courses, dentilled, corbelled and dogtooth, to hipped roof with central stack and 2 hipped dormers. Two 3 light and central 2 light wooden casements on 1st floor, and 3 segmentally headed wooden casements on ground floor, that to left in late C20 outshot. Central door of 6 raised and fielded panels with original fittings/handles and Grotesque mask knocker, in moulded architrave with flat, moulded hood. Catslide outshot to rear and late C20 hipped rear extension. Interior: with large square inglenooks. Stop chamfered beams and joists (with tongue-stops), some later insertions, others possibly indicating earlier origin to building.	TR 02184 33843
1071204	Listed Building	II	Monument to Ransley Family, About 10 Metres South East of Church of St Mary Magdalene	Monument to James and William Ransley, d.1800. Wood and iron. Simple wooden plank supported by spear-finialled iron posts at either end and by central iron split-post. The board may have been originally painted with an inscription. James and William Ransley were members of the Aldington gang, led by Cephas Quested and George Ransley, and were hanged 1800 for smuggling offences, the local influence of the Ransleys (born in nearby Ransley Cottage) such that they were accorded honourable burial in the churchyard. The Aldington gang inspired the G.P.R. James	TR 02493 33524

NHLE Number	Record Type	Grade	Name	Description	NGR
				novel The Smugglers and Russel Thorndike's series of Dr. Syn adventures.	
1362772	Listed Building	II	Court Lodge	House. C16, clad c.1700 and extended late C20. Timber framed and clad and extended with red brick and tile hung on 1st floor, with plain tiled roof. Hall house plan in origin. Two storeys on plinth with hipped roof with gablets and central stack. Projecting half-hipped C20 wing. Five metal casements on 1st floor and 4 on ground floor, with central C20 plank and stud door with flat hood on brackets.	TR 02392 33497
1185104	Listed Building	II	Ransley Cottage	House. C16, altered late C18. Timber framed and clad with painted brick, with plain tiled roof. One storey and attic, present entrance front (to roadside) with catslide outshots to front and rear elevations with hipped roof and gablets and central stack, and stack to right in outshot. Two wooden casements and central boarded door. Half glazed doors to return and rear elevations. Two large gabled dormers and bow windows in rear elevation (former entrance front). Said to be birth place (1782) and home of George Ransley, leader after 1821 of the Aldington Gang, and one of the last great figures of Kentish smuggling legend.	TR 02582 33635
1071205	Listed Building	II	Black Beams	Cottage. Circa 1700, extended C20. Timber framed and part exposed with plaster infill and extended with painted brick. Plain tiled roof. Single cell unit in origin. One storey and attic on stone plinth with gambrel roof with raking dormer and stack projecting and offset to end left. Single 3 light leaded wooden casement and offcentre boarded door on ground floor. Outshot to rear, and mid C20 extension to left with glazed door and sidelights. A rare example of a small rural cottage, possibly for sheep watchers.	TR 02608 33627

NHLE Number	Record Type	Grade	Name	Description	NGR
1184913	Listed Building	II	Pinn Farmhouse	House. Circa 1700. Galletted ragstone and red and blue brick with plain tiled roof. Two storeys and attic with brick eaves cornice to half- hipped roof with 2 hipped dormers and central stack cluster. Two 3 light wooden casements and central 2 light on 1st floor with 2 segmentally headed 3 light wooden casements on ground floor. Central door of 6 raised and fielded panels with flat hood. Single storey brick extension to right of 1 storey with half-hipped roof and no fenestration. Late C20 ragstone and tile hung wing to rear. Interior: stop chamfered beams and stud partitions. Coved overmantels to inglenook fireplaces.	TR 05558 35147
1184908	Listed Building	II	Headstone to William Jordan About 10 Metres South East of Church of St Rumwold	Headstone to William Jordan, d.1743. About 2½ feet high, with scrolled shoulders, and crossed-palm fond, cornice and bones, skull and hourglass motifs.	TR 05729 34415
1071221	Listed Building	II	Goldenhurst Manor	House. C17 or earlier, clad C18, extended 1927-30. Timber framed and clad with painted ragstone and tile hung, with plain tiled roof. Two storeys and hipped roof with gablets and stack to end right. Two wooden casements on each floor. Rear with 1930's bow window and 2 storey hipped wing of red brick in English bond. Single storey extensions to north end of house, of painted brick and plain tiled roofs, with moulded stack, that to west of main range with present entry (boarded door with flat hood). Main block dated 1707 on down- pipes, initialed T.G.M. The extensions and refurbishment were largely done for Noel Coward, who joined the farmhouse, cottage and barns on this site into a	TR 06862 34768

NHLE Number	Record Type	Grade	Name	Description	NGR
				single dwelling, now again divided into 2 (see also, Goldenhurst, the Old House). Coward lived here 1926-1956, most building work was done 1927-30; his main residence out of London and Switzerland.	
1071222	Listed Building	II	Goldenhurst, The Old House	House. C16 or earlier. Timber framed and exposed close studding with plaster infill, and part clad with red brick. Plain tiled roof. Two parallel ranges. The southern range of 1 storey and attic with hipped roof and gablets, 3 hipped dormers and stack cluster to rear left, and stacks to rear centre and rear right. Four light mullioned window and hipped porch to right with boarded door. The rear range of 2 storeys with tile hanging, and pendant gable is the original house range, the present entrance front a former barn, converted for Noel Coward, who ran house, barn and adjoining cottage together as a single dwelling 1927-30, now 2 houses (see Goldenhurst Manor). Coward lived here 1926-56, his main residence outside London and Switzerland. (See Present Indicative, 1937, N. Coward). 'Cavalcade' was written here, 1931.	TR 06862 34786
1071223	Listed Building	II	Copperhurst	House. C16 or earlier, clad C17 to early C19. Timber framed and clad with red brick in English Bond and ragstone and plain and decorative tile hanging. Plain tiled roof. Open courtyard plan (hall house or lobby entry house with two rear wings). Entry now in rear-courtyard with boarded door in arched brick surround. Roadside elevation of two storeys and basement on plinth in two builds, tile hanging over brick to left, over ragstone to right, the left hand section projecting slightly (and the end bay of the main range). Hipped roof, with oversailing gablet to left and stacks to end left and to centre right. Three leaded wooden casements on first floor,	TR 07302 35470

NHLE Number	Record Type	Grade	Name	Description	NGR
				two tripartite glazing bar sashes and central single glazing bar sash on ground floor. Basement opening to right return. Main timber framed range now to left return, two storeys with hipped roof with gablets, with irregular fenestration of wooden casements, and catslide outshot to rear. A manorial site.	
1300109	Listed Building	II	Little Copperhurst	House. Cl8. Timber framed and tile hung on ragstone with red brick dressings on ground floor. Plain tiled roof. Two storeys and hipped roof with stacks to rear and to end right. Four wooden casements on each floor, with segmental heads on ground floor. Boarded door to centre right in gabled porch with pendant bargeboard.	TR 07348 35487
1071247	Listed Building	II	Falconhurst Farmhouse	House. C15 and clad and extended early C18. Timber framed and clad with painted brick with plain tiled roof.Hall house plan in origin. Two storeys and attic in 2 builds, the timber framed range to left, with plinth and hipped roof with gablet and stack to rear left, with stack cluster to right, and roof stepped up to C18 range, with plinth, plat, hipped dormer and stack at end right. Two wooden casements on each floor to each block, with small casement in stack-bay of framed building on 1st floor. Painted ragstone outshot to left with boarded door. Plank and stud door to right in gabled porch. Outshots to rear. Framed interior, said to date c.1480. Manorial and former parochial centre (the site of church of St. Leonard is about 100 metres north).	TR 07663 34521
1344180	Listed Building	II	Frostland Farmhouse	Farmhouse. C18 or earlier with C20 alterations. Ground floor painted brick, first floor painted tile-hanging. Right gable end painted brick. C20 plain-tile roof. Possibly lobby entry plan. 2 storeys on painted brick plinth. Hipped roof.	TR 05471 31407

NHLE Number	Record Type	Grade	Name	Description	NGR
				Brick stack in front slope of roof slightly off-centre to right. Regular 2-window front of 3-light casements. Boarded door with 3 square lights under flat bracketted hood beneath stack. Rear lean-to.	
1344179	Listed Building	II	The Black Bull Public House	Public House. Late C18 or early C19. Painted brick with plain tile roof. 2 storeys with plain brick eaves band. Hipped roof, hips returning to right and left. Rear stack to left and slender stack to right gable end. Regular 3-window front of 16-pane glazing-bar sashes in open boxes. 8-pane ground-floor windows. Central half-glazed door with rectangular fanlight.	TR 05621 31472
1231413	Listed Building	II	Old School House	School house, now house. Mid C19. Uncoursed stone with plain tile roof. 1½ storeys. Stone-coped gables. Red brick ridge stack slightly off-centre to left. 2-light stone mullion window within each gable. Ground floor has one 2-light stone mullion window either side of door and a single chamfered light to right. Ribbed door in stone architrave beneath stack. Interior not inspected. Listed for group value.	TR 05471 31378
1344181	Listed Building	II	The Old Rectory	Rectory, now house. Early-to-mid C19. Stuccoed with slate roof. 2 storeys on plinth. Coved eaves soffits. Hippped roof. Garden front has central 2-storey rectangular projection with hipped roof. 4 tall rendered stacks; one-to left, one either side of central bay and one to rear to right. Regular 5-window front of 4 recessed glazing bar sashes (2 either side of central bay) and one tripartite sash to central bay. Tall 15-pane glazing bar sashes to ground floor. Canted bay with moulded wood cornice to ground floor of central bay. Panelled door with 3 vertical lights under flat hood on heavy consoles in a projection to centre of right gable end.	TR 05497 31330

NHLE Number	Record Type	Grade	Name	Description	NGR
1362432	Listed Building	II	Ham Mill Green	House. Early C18. Red brick and plain tiled roof. Two storeys and attic on plinth with hipped roof with central stack and 2 hipped dormers. Regular fenestration of 2 glazing bar sashes each floor with central wooden casement on 1st floor and half-glazed door to centre. Catslide outshot to rear.	TR 00182 31568
1071206	Listed Building	II	Wey Street Farmhouse	House. Early C18. Part timber framed and clad and fronted with red and blue chequered brickwork. Plain tiled roof. Two storeys on plinth with corbelled brick eaves to roof with stacks at end left and end right. Regular fenestration of 3 wooden casements on 1st floor and 2 on ground floor with cambered heads. Central panelled door, the top section glazed, in C20 gabled porch. Integral catslide outshot to rear. Interior: framed partitions and rear wall to catslide, and posts to main range. Possibly a (slightly) earlier framed structure clad/rebuilt in brick. Inglenook and coved overmantel to parlour fireplace. Staggered purlin roof.	TR 02841 31701
1061153	Listed Building	II	Stockbridge House	House. Early-to-mid C19. Ground floor painted brick, first floor tile hung. Slate roof. Double depth. 2 storeys on brick plinth with boxed wood eaves. Hipped pyramidal roof of shallow pitch. Stacks half way along side hips. Regular 3-window front of two 16-pane and one central 12-pane glazing bar sashes. Central recessed panelled door with 2 top lights up 3 shallow steps. Outer architrave of fluted pilasters and frieze, with patterae. Wood porch of 2 Doric pilasters Bind 2 Doric columns, triglyphs suggested by incisions, and flat corniced top.	TR 01011 31066

NHLE Number	Record Type	Grade	Name	Description	NGR
1344187	Listed Building	II	Gribble House	House. C18, with C19 and C20 alterations. Ground floor red brick with occasional grey bricks in Flemish bond. Fishscale tiles to first floor with deep borders of plain tiles to top and bottom. Plain tile roof. T-plan lobby-entry house with one room either side of stack and one behind. 2 storeys. Base of tile hanging projects over finely-moulded fillet. Moulded and dentilled wood eaves cornice with slight cove above. Half-hipped roof. Central stack behind ridge. 2 dormers with triangular pediments. Regular 5-window front of 2-light casements. Two 3-light ground floor casements. Broad C18 central door of 2 sunk beaded panels under later wooden porch with triangular pediment over high frieze. Rear lean-tos to right and left of-wing. Interior: exposed beams. A few C18 doors.	TR 01844 31408
1185008	Listed Building	II	Millbank	House. Early C19 facade to earlier core. Timber framed and part exposed to right return with brick infill, and clad with red brick, with painted brick and tile hanging to rear wings. Plain tiled roof. Two storeys with coped parapet to hipped roof with stacks to rear left and clustered to end right. Three glazing bar sashes on each floor, with keystones on ground floor. Offcentre half-glazed door with semi-circular surround with imposts and keystone. Stone tablet in right end gable inscribed: "The boundary of Newchurch Parish confirmed at the Sessions at Canterbury on the 11th day of July 1820".	TR 03410 30582

NHLE Number	Record Type	Grade	Name	Description	NGR
1061140	Listed Building	II	Millbank	Farmhouse. Early C19 facade to earlier timber-framed building. Brick front in Flemish bond. Rear wings painted brick to ground floor, tile-hung above. Right wing has exposed studding within brickwork to rear. Plain tile roof. Main range with 2 adjoining rear wings, probably of different dates. 2 storeys with coped parapet. Roof hipped to left of main range and to rear of left wing, half-hipped to rear of right wing. Rear stack to left and multiple brick ridge stack to right gable end. Irregular fenestration of 3 recessed glazing bar sashes with splayed painted brick voussoirs. Ground-floor windows with keystones. Half-glazed door towards centre, recessed within semi-circular architrave with small brick imposts and keystone. Stone in east (right) gable inscribed: "The boundary of Newchurch Parish confirmed at the Sessions at Canterbury on the 11th day of July 1820."	TR 03407 30581
1230753	Listed Building	II	Table Tomb Circa 2 Yards South of Nave of Church of St Augustine	Table tomb. Early C18. Stone, with moulded plinth, corniced lid and moulded side panels. Inscription illegible at time of re-survey.	TR 01422 29926
1230739	Listed Building	II	Court-At-Wick	House. Early C19. Brick, covered with channelled render. Plain tile roof. Double depth, incorporating coach-house to left of one room front and rear, intercommunicating, but no access to rest of house. 2 storeys on plinth. Hipped roof, hips returning to right and left. 2 rear stacks. Regular 3-window front of 12-pane glazing bar sashes, middle one slightly smaller and off-centre to left. Panelled door with 3-light rectangular fanlight slightly off-centre to left. Ribbed door towards front of left gable end. Blocked rear doorway	TR 00953 29612

NHLE Number	Record Type	Grade	Name	Description	NGR
				to left bay, of small double door size with cambered head, now containing boarded door and adjacent window. Interior: only partly inspected. Brick floor and irongrate with decorative tiles to front ground floor left end room; rear room with brick floor, heavy joists, solid block stairs, plain fireplace, and pantry with ventilation slats.	
1061151	Listed Building	II	Walnut Tree Farmhouse	House. Late C18 front to a possibly earlier building. Chequered red and grey brick on stone plinth. Plain tile roof. 2 storeys and garret on plinth, with boxed wood eaves cornice. Half-hipped roof. Brick ridge stack off-centre to left and another to rear at right gable end. Regular 3-window front of 2 tripartite and one 12-pane glazing bar sashes in open boxes. Central C20 glazed door. Broad weatherboarded lean-to to left. Short rear additions to left and centre.	TR 01234 29432
1061137	Listed Building	II	Moat House	House. C16 or early C17 with late C18 or early C19 facade. Timber framed, clad in painted brick. Plain tile roof. 2 storeys and attic with cogged brick eaves cornice. Roof hipped to right. Multiple brick ridge stack to centre. Small hipped dormer towards right end. Irregular fenestration of 4 windows; one 3-light casement, one fixed light and two 12-pane glazing bar sashes in open boxes. Central boarded door in painted brick porch with hipped plain tiled roof. Interior: only partly inspected. Ground floor right hand room has hollow chamfered beam and joists. Inglenook fireplace. Exposed timbers. Moated site.	TR 02144 28694

NHLE Number	Record Type	Grade	Name	Description	NGR
1231340	Listed Building	II	Poplar Farmhouse	House, formerly 2 cottages, now farmhouse. Probably C18, with C19 and C20 alterations. Ground floor painted brick, first floor hung with fishscale tiles. Plain tile roof. 2 storeys and attics. Hipped roof. Rear stack towards top of left hip and ridge stack towards right end. 2 small gabled dormers between stacks. Irregular fenestration of 4 three-light casements. C20 panelled door slightly off-centre to right under flat corniced hood. Lean-to to left.	TR 02290 28433
1071193	Listed Building	II	Pear Tree Farmhouse	House, sometime 3 cottages. C17 or earlier; altered C18-eCl9 and mid C20. Red brick, part painted, with tile hanging, in part on ragstone base. Probable timber framed core. Plain tiled roof. An irregular accretion of 2 separate cottages joined by later linking blocks, all of varying dates. Main block:2 storeys on plinth, tile hung on 1st floor, with hipped roof stepped up to right and stacks to centre right and to right. Three glazing bar sashes on 1st floor, and glazing bar sash, top hung casement, tripartite wooden casement and old metal casement on ground floor, with boarded door to right. Door of 6 panels to left return with segmental head and glazing bar sash over, (this left end bay an addition to the 3 bay main block). Hipped 1 and 2 storey wings to rear in ragstone and tile hanging over painted brick. Interior: large inglenook in main block	TR 04264 32956
1299954	Listed Building	II	Granary About 10 Metres South East of Pear Tree Farmhouse	Granary about 10 metres south-east of Pear Tree Farmhouse GV II Granary. C18. Timber framed and weather boarded on staddle stones with corrugated iron roof. Two bay rectangular plan, on four by three staddles. Hipped roof. Boarded door on north elevation.	TR 04296 32948

NHLE Number	Record Type	Grade	Name	Description	NGR
1231387	Listed Building	II	Barn Circa 34 Yards West of Honeywood Farmhouse	Barn. Late C15 or earlier. Timber framed on stone plinth. Weatherboarded to left and rear. Right elevation and gable end to road red brick in Flemish bond. Plain tile roof. At right-angles to road. Roof half- hipped to front, hipped to rear. C20 porch with boarded doors and lean-to roof to centre of left elevation. Boarded loading doors to street. Interior: 4 timber-framed bays with midstrey in third bay from rear. Aisled each side. Road end bay rebuilt and most of wall studding replaced. 3 pairs of principal posts on wood cills, with curved passing shores from cills to tops of posts. Heavy gunstock jowls. Long arch braces. Straight tie-beams. Plain crown-posts with 2 upward and 2 downward braces. Lapped collars. Posts tall and of large scantling, roof steeply pitched.	TR 05324 32693
1061139	Listed Building	II	Honeywood Farmhouse	Farmhouse. Early C19 front to a possibly earlier building. Chequered red and grey brick to sides and rear. Front elevation brick covered with red mathematical tiles in Flemish bond. Plain tile roof. Double depth. 2 storeys. Hipped roof, hips returning to right and left. Brick stack to each return ridge. Regular 3-window front of 12-pane glazing bar sashes. Central ribbed door under flat bracketted hood.	TR0536732694
1071195	Listed Building	II	The Old Oak	Inn, now public house. Mid C18. Painted ragstone and red and blue brick in gables with plain tiled roof. Two parallel ranges. Two storeys and attic with brick quoins and brick dentil eaves cornice to roof with stacks to left and to right and with 3 hipped dormers. Regular fenestration of 3 Cl9 sashes with vertical glazing bars on 1st floor (narrower to centre) and paired Cl9 sashes on ground floor with cambered heads. Central boarded door with flat hood on	TR 07119 32874

NHLE Number	Record Type	Grade	Name	Description	NGR
				brackets. Cantilevered wooden sign beam to top right. Left return with S-ties. Interior: half-round fireplace with semi-circular projecting grate. Fitted cupboards with butterfly hinges. Newel stair in upper floor. Chamfered softwood ceiling joists throughout. Formerly the Royal Oak Inn.	
1278124	Listed Building	II	Norwood Farmhouse	Farmhouse. C16 rear range, early C19 front range. Rear range timber- framed, clad in C19 red brick in English bond. Front range chequered red and grey brick. Plain tile roofs. Rear range of 2 timber-framed bays, parallel to but slightly shorter than front range. Front range: 2 storeys with hipped roof. Rear stacks to left, centre and right. Regular 3-window front of two 16-pane and central 12-pane recessed glazing bar sashes. Ground-floor windows have splayed painted voussoirs. Central panelled door with plain fanlight under trellised porch. Interior: only partly inspected. Broad joists to rear left-hand ground-floor room.	TR0484930471
1061138	Listed Building	II	The Manor House	House. Early C19. Rendered with plat band and cornice-band to parapet hiding roof with two ridge stacks. 2 storeys; regular 5 window front. Glazing bar sashes. Central flat-headed porch with cornice, round-arched entrance in square-headed recess, panelled door and arched side windows. 2 single-storey canted bays on ground floor of right return front.	TR 05594 30947

NHLE Number	Record Type	Grade	Name	Description	NGR
1231360	Listed Building	II	Crook Cottage Gammon's Farmhouse	Farmhouse, now farmhouse and cottage. Rear range probably early C18 or earlier, front range 1823. Front range: brick in Flemish bond with plain tile roof. 2 storeys. Hipped roof. Rear stack to right. Regular 3-window front of recessed C20 two-light casements. Central ribbed door up 2 steps. Decorative semi-circular fanlight under semi- circular-headed red brick architrave of 2 orders with keystone dated 1823. Rear wing to left with rendered walls and plain tile roof with lower ridge, hipped to rear. Range at right-angles to wing, to right, parallel to front range and projecting beyond it to right. Brick or brick clad. Plain tile roof hipped to right and left. Projecting stack to right. Link between front and rear ranges, parallel to right of wing. 2 storeys, brick, with plain tile roof.	TR 06945 31022
1231104	Listed Building	II	Eastbridge Church Ruins	Ruins of Eastbridge parish church. Probably C14. Stone. 2 tall fragments of tower and west wall of nave. Rest of foundations excavated 1933. Parish of Eastbridge was partitioned between Burmarsh and Newchurch parishes in 1934. Scheduled Ancient Monument.	TR 07413 32125
1278269	Listed Building	II	Orgarswick Church Memorial	Church Memorial Cross. 1938. Cemented, on stone base. Base inscribed "A.M.D.C. This Cross was erected on the site of the ancient Church of Orgarswick 1938". The Parish of Orgarswick was incorporated in Burmarsh in 1938.	TR 08368 30679

NHLE Number	Record Type	Grade	Name	Description	NGR
1344154	Listed Building	II	Haymakers	Farmhouse, now house. Late C15 with C16, C18 and early C19 additions. Timber- framed rear range, with right gable pebbledashed, first floor tile hung to rear, and left gable end brick clad. Front range brick in Flemish bond of 2 periods. Plain tile roofs. Two parallel ranges. Rear range 2 open-hall bays of a Wealden with a storeyed left end bay. Right two-thirds of front range C18, left third infilled in 1821. Front range 2 storeys on low stone plinth, with hipped roof. Rear stack to left and stack to right gable end. Rear range 2 storeys with hipped roof and laternal stack to rear of right hand end. Front range has irregular fenestration of 3 windows: two 12-pane glazing bar sashes and a central C20 fixed light. Ground floor windows have segmental heads. Central half-glazed door under flat bracketted hood. Interior: central hall truss with thin arch-braces and octagonal crown-post with broach stops. Original recess built out leaving outer bracket to tiebeam visible. Ground floor of storeyed left end bay has moulded C16 beams and joists chamfer-stopped with roll and carved leaf decoration. A few C18 fittings to right ground floor room of front range. Left part of front range said to be dated 1821 in roof.	TR 09026 31774
1390616	Listed Building	II	K6 Telephone Kiosk	Telephone kiosk, Type K6. Designed 1935 by Sir Giles Gilbert Scott. Made by various contractors. Cast iron. Square kiosk with domed roof. Unperforated crowns to top panels and margin glazing to windows and doors.	TR1010832003
1344173	Listed Building	II	The Shepherd and Crook Public House	Public house. Early C19. Stone with brick dressings, rendered to front and to left. Slate roof. Double depth. 2 storeys on rendered plinth with plat band and flat eaves soffits. Hipped roof. Stack towards rear towards left and at right end. Regular 3-window front of 2 tripartite sashes and	TR 10144 32012

NHLE Number	Record Type	Grade	Name	Description	NGR
				one central 12-pane glazing bar sash, all with segmental headed glazing bars. 2 tripartite sashes to ground floor. Central ribbed door in tall round- headed slightly proud architrave with plain fanlight. Interior: Only partly inspected. Tall-ceilinged room to right with fluted dado rail.	
1061123	Listed Building	II	Rothschild Farmhouse	House. C18 with early C19 alterations. Facade and right gable chequered red and grey brick. Plain tile roof. 2 storeys on galletted stone plinth with renewed brick parapet. Gable end stacks. Regular 2-window front of 16-pane glazing bar sashes in open boxes with splayed voussoirs. Central C18 panelled door with 2 top lights under small C19 porch with 2 Corinthian columns and triangular wooden pediment inscribed "Rothschild Farm Cottage". C19 two-storey addition to rear tile-hung on first floor, with lean-to roof. Former forge to left much altered in C20. Interior: only partly inspected. Medieval timbers re-used as beams and joists on ground floor.	TR1023231856
1278211	Listed Building	II	Slodden Farmhouse	Farmhouse. Mid C18 with early C20 additions to left and right. Painted brick with plain tile roof. Lobby entry plan of 2 rooms and stack bay, with single-bay C20 addition in similar materials and style to left. 2 storeys and attic on stone plinth. Plain brick eaves band. Hipped roof. Rear stack to left and ridge stack towards right (central to original building). Three C20 hipped dormers. Irregular fenestration of one 3-light C20 casement to left. Original building has two 16-pane glazing bar sashes in open boxes and small central 4-pane sash. French doors in canted bay beneath central stack of original building. Datestone WM between 2 right-hand first-floor windows. 2-storey 1744 C20 recessed addition to right. 1650 datestone from a cottage formerly	TR1076430243

NHLE Number	Record Type	Grade	Name	Description	NGR
				adjoining the house re-used in left gable end. Interior: exposed beams and joists. Inglenook fireplace with jack. Stairs between stack and door. Boarded and panelled rooms, one with corner cupboard.	
1061132	Listed Building	II	Martello Tower No 23	Martello Tower, 1806. Brick covered with cement render. Circular, slightly tapering tower about 30 feet high. Said to have walls 5½-6 feet thick. Project- ing cement rendered stone coping to shallow domed roof. 2 recessed glazing bar sashes, one to north and one to south with cills about 12 feet up. Small grilles below towards base. Vertical door to west with cill about 10 feet up, with proud architrave and segmental head. T-shaped recess under cill surrounded by continuation of architrave of door. No external steps at time of re-survey. Plaque over doorway. Interior: not inspected, but said to have central brick pillar with vaulted arches, magazine on ground floor and 2 rooms as quarters for garrison above. One of a series built in 1806 as gunposts against a possible Napoleonic invasion. Stands immediately behind sea wall. See also Dymchurch Road (east side), Martello Tower No. 25 and High Street (east side), Martello Tower No. 24.	TR 11260 30456
1061131	Listed Building	II	30 and 32, Hythe Road	House, now house row. Late C18 or early C19. Timber framed, weatherboarded, with plain tile roof. Face away from present road. 2 storeys and garret. Roof half-hipped to left, hipped to right. Rear stack to left and to right, and stack to right-hand wing. Irregular fenestration of three 12-pane glazing bar sashes. Original door behind C20 glazed porch, between left and central windows. Short 2-storey rear wing to left and 1½-storey rear wing to right, both with hipped roofs and each with door to road.	TR 10551 29979

NHLE Number	Record Type	Grade	Name	Description	NGR
1344177	Listed Building	II	West End Villa	House. Mid-to-late C18, possibly with earlier core. Red brick, largely in Flemish bond. Rear wall tile-hung on first floor. Plain tile roof. 2 storeys with Ionic modillioned wood eaves cornice. Projecting gable end stacks. Regular 3-window front of two 12-pane glazing bar sashes in open boxes and central Venetian window with splayed brick voussoirs. Central panelled door with rectangular top light in panelled recess. Wood architrave of unfluted Doric pilasters surmounted by fluted pilasters and broken-based pediment with Ionic modillions. Semi-circular fanlight within architrave. Protected by C19 brick porch with half-glazed C20 door. Single storey C19 rear addition with half-hipped roof.	TR 09545 29185
1231565	Listed Building	II	Headboard to E Nesbit Circa 9 Yards South of Chancel of Church of St Mary the Virgin	Headboard. 1924. Wood. Narrow horizontal board between 2 vertical posts. Board inscribed: "Resting E. Nesbit. Mrs Bland-Tucker Poet and Author Died 4th May 1924 Aged 65. "	TR 06493 27971
1393230	Listed Building	II	K6 Telephone Kiosk	The K6 telephone kiosk in St Mary in the Marsh, Shepway, Kent, is designated at Grade II for the following principal reasons: * It has a strong visual relationship with two listed buildings * It stands in close proximity to a Grade I listed building * It is a representative example within a village setting of this important C20 industrial design	TR 06494 27928

NHLE Number	Record Type	Grade	Name	Description	NGR
1344205	Listed Building	II	The Star Inn	Public House. C18 and early C29. Rendered brick. Gable ends tile hung on first floor. Plain tile roof. Two parallel ranges. Rear range, C18, broader, with higher ridge, front range early C19. 2 storeys. Regular 3-window front of 12-pane glazing-bar sashes in open boxes. 4 ground floor windows. Projecting brick stack to right end of front range, and gable end stacks to both ends of rear range, that to left projecting. Central C20 half-glazed porch with hipped plain-tile roof and half-glazed door. Interior: only partly inspected. C18 panelled door to ground floor of rear range.	TR 06519 27916
1061103	Listed Building	II	Haffenden Farmhouse	Farmhouse. Circa 1600 with mid CI7 rear wing, facade of mid-to-late C18 and early C19 alterations. Timber framed, clad in red brick in Flemish bond with occasional grey headers. Plain tile roof. Lobby-entry plan; narrow stack bay with one room either side and narrow bay to right end. Separately-framed rear wing to left of 2 timber-framed bays. 2 storeys and attic. Main range roof and facade appear to be in 2 sections but conceal frame of one period. Steeply pitched hipped roof over left two-thirds. Left hip returns along wing with lower ridge. Roof over right third with much lower ridge, and hip returning to right. Dormer to right hip of left section. Multiple brick ridge stack to centre of left section. Irregular fenestration of three 16-pane glazing bar sashes, forming regular 3-window front to left section, with no window to right. Ground floor windows in broader blocked openings with segmental heads. Panelled door beneath stack under open wood porch which has 4-centred arched head to front and flat hood with modillioned cornice. Rear left return wing: Mid C17. Timber framed, brick clad, with C19 and C20 windows and C20 door. Rear right return wing: C19, brick,in Flemish bond. 2-storey addition to left	TR 06341 28117

NHLE Number	Record Type	Grade	Name	Description	NGR
				end of front elevation: C20, brick, with leaded lean-to roof, one bay replacing lean-to. Interior:exposed, chamfer-stopped beams and joists. Large square panels (2 per storey) with tension braces to rear wall of main range. Clasped purlin roof to left wing.	
1231597	Listed Building	II	Well Cottage	House, (said to have been a Poor House), formerly cottages, now house. Late C16 or early C17 with C19 additions. Painted brick with strip of tile hanging beneath eaves. Plain tile roof, formerly thatched. 1½ storeys. Hipped roof. Red and grey brick ridge stack towards left end and rear stack towards right end. 4 hipped dormers. Irregular ground floor fenestration of 6 leaded windows; three 2-light casements, 2 fixed lights and one rect- angular bay with hipped tiled roof. Ribbed door below and slightly to left of left stack, under open wood porch. C19 lean-to to right with leaded casement. C20 rear additions. Interior: 8 timber framed bays, including stack bay; that to right end possibly added, rest in 3 rooms of 2 bays with stack between left and central rooms. Lateral stack to right room with inglenook, possibly added in C18. Traces of small stack within right end room. Exposed beams. Roof has dropped tie-beam with queen-struts to collar. Central truss has curved passing braces between dropped tie-beam and queen-struts, trenched past the interrupted tie-beam.	TR 07077 26833
1061126	Listed Building	II	The Ship Inn	Inn. Early C18 with later alterations. Painted brick with plain tile roof. Left gable end tile-hung. Main range with additions either end in same style and later parallel rear range to left. 2 storey, and attics. Brick plinth, much higher to earlier central section. Moulded wood eaves cornice. Hipped roof. Rear stack to left and right. 4 hipped dormers and central	TR 10373 29742

NHLE Number	Record Type	Grade	Name	Description	NGR
				skylight. Regular 5-window front of 6-pane glazing bar sashes in open boxes, central 3 to main range and one beyond straight-joint at either end. Ground floor windows have segmental relieving arches. Central C20 glazed door behind C20 glazed porch.	
1231211	Listed Building	II	Sundial Circa 2 Yards South of Nave of Church of St Peter and St Paul	Sundial. Early C19. Stone on brick base with square stone plinth, octagonal stem with moulded base and corniced top, and metal dial.	TR 10315 29728
1061125	Listed Building	II	Dymchurch Rectory	House, now Rectory. Late C16 or early C17 with early C18 facade. Timber framed. Clad in red brick in Flemish bond with occasional grey headers. 3 courses of grey headers in a flush band between floors. Plain tile roof. 4 timber framed bays, forming 2 rooms, and 2 narrow end stack bays. Central entrance hallcreated in C18. 2 storeys and attic on plinth. Coped brick gables with red brick kneelers. Gable end ridge stacks. Small central skylight. Regular 5-window front of 12-pane glazing bar sashes in open boxes with segmental heads to glazing bars, and brick voussoirs. Ground floor windows similar. Half-glazed inner door within C20 brick porch with half-glazed double doors. Rear lean-to. Interior: broadly spaced square framing (2 panels per storey) to rear wall with large posts and heavy curved tension braces. Chamfer-stopped beams and joists. Large inglenook to left. Splat balusters to stairs, some C19, some possibly earlier. Broad C18 panelled doors. Ground floor room to right completely furnished with fielded panels and	TR 10342 29648

NHLE Number	Record Type	Grade	Name	Description	NGR
				lightly-moulded cornice. Clasped purlin roof. Became a Rectory in 1947.	
1344175	Listed Building	II	The Old Manor House	House. C17 or earlier with early C19 facade. Timber framed. Ground floor brick-clad, first floor tile-hung. Whole of left gable end tile- hung. Plain tile roof. 2 storeys. Hipped roof with gablets. Central stack parallel to ridge. Irregular fenestration of 3 glazing bar sashes. Central panelled door with horizontal top light under flat bracketted hood.	TR 10333 29632
1061128	Listed Building	II	Cedar Dairies Well Cottage	House, now house row. Right cross-wing late C16 or early C17, left section of possibly similar date, all with early C19 facade. Wing, and possibly the rest, heavily timber framed. Ground floor clad with painted brick, first floor with painted tile-hanging. Plain tile roof. Main range, with cross-wing to right. 2 storeys and attic. Hipped roof, right hip returning along rear wing with lower eaves and higher ridge. Rear of wing half-hipped. No visible stack. 2 hipped dormers. Irregular fenestration of two 12-pane glazing bar sashes. Half-glazed door to No.119 to left. Panelled door to No.121 at left end of a single storey C19 shop to right of wing. Single storey addition to left. Interior: only No.121 (cross-wing) inspected. Exposed timbers, some chamfer-stopped.	TR 10288 29537

NHLE Number	Record Type	Grade	Name	Description	NGR
1061135	Listed Building	II	Clissold Cottage	House. Early C19. Upper part of first floor tile-hung, rest channelled render. Plain tile roof. 2 storeys on rendered plinth. Half-hipped roof. Central brick stack just to rear of ridge. Regular 2-window front of 2-light casements. Central boarded door under shallow-pitched wooden hood. Small 2-storey C19 brick addition to right. Interior not inspected. Listed for group value.	TR 10421 29564
1231308	Listed Building	II	Tudor Cottage	House, formerly 2 cottages, now house. C18 facade to a possibly earlier building. Ground floor red brick in Flemish bond, with 3 flush courses of grey headers below first floor tile-hanging. Right gable end red and grey brick above eaves, stone below. Plain tile roof. 2 storeys and attics on stone plinth. Cogged brick eaves cornice. Coped brick gable end with kneeler. Roof half-hipped to left. Multiple brick ridge stack towards left end and brick ridge stack to right gable end. Three C20 hipped dormers. Irregular fenestration of 4 casements; three 3-light and one, over door, 2-light. Ground floor windows have segmental heads and splayed brick voussoirs. Boarded door off-centre to right. Stone rear lean-to.	TR 10403 29552
1061127	Listed Building	II	Dormers Restaurant Little Cottage The Cottage	Cottage row Later C18. Painted brick with plain-tile roof. 1½ storeys on painted plinth. Small rear stack to left, central ridge stack and gahle end stack to right. 5 hipped eaves dormers. Irregular fenestration of five 2-light casements with segmental heads; shutters to all but left 2. Boarded doors; to No.21 between 2 left windows,to No.23 other side of second window from left with another blocked door beside it. Boarded doors Nos.25 and 27 in each side of painted brick porch with hipped plain tile roof to left of right end window.	TR 10087 29261

NHLE Number	Record Type	Grade	Name	Description	NGR
1061124	Listed Building	II	Martello Tower No 24	Martello Tower. 1806. Brick, covered in channelled cement render. Circular, slightly tapering tower about 30 feet high. Walls said to be 5½-6 feet thick. Shallow domed roof surrounded by projecting cement-rendered coping. 2 small horned recessed glazing bar sashes, one to north and one to south with cills about 12 feet up. 2 small ventilation grilles towards base. Vertical door with proud architrave and segmental head, with cill about 10 feet up, on west side. T-shaped recess below cill with surround continued from door architrave. Flagpole and gun mounted on done. No.24 on plaque over doorway. Now reached by external C20 metal staircase. Interior: not inspected, but said to contain central brick pillar with vaulted arches, magazine on ground floor and 2 rooms as quarters for garrison on first floor. One of a series built in 1806 as gunposts against a possible Napoleonic invasion. Stands immediately behind sea wall. Scheduled Ancient Monument.	TR 10164 29252
1344176	Listed Building	II	Dunkirk End and Herring Hang Attached	House. Early-to-mid C18 with C19 alterations. Red brick with occasional grey headers in Flemish bond. Plain tile roof. Set back from road. 2 storeys and garret on brick plinth. Slightly projecting eaves with flat soffits. Brick-coped gable ends with brick kneelers. Gable end stack to right in front slope of roof and gable end stack to left. Irregular fenestration of two 6-pane glazing bar sashes only slightly recessed. 3 ground floor glazing bar sashes with segmental heads. Boarded door with segmental head off-centre to left, between 2 first floor windows. Integral rear lean-to. Datestone between first floor windows: A.K. R.H. 1736 Interior not inspected. Herring hang or kipper house. Probably C19. Attached to left gable end of house. Brick on submerged stone plinth with plain tile roof. Rectangular,	TR 09932 29276

NHLE Number	Record Type	Grade	Name	Description	NGR
				much narrower than house and about two-thirds the height. Very small wooden hatch or smoke outlet in left gable end. towards apex, and 2 small rectangular vents towards base. Boarded door to rear against junction with house. Interior: down deep step. 7 smoke-blackened wooden bars remain intact, axially placed at intervals of about 1 foot, from 7 feet from ground to just below gable hitch. Corresponding brick ledges to long walls to take other ends of rods or speets (now gone) placed across the building and threaded with fish. Walls of hang smoke-blackened except at base.	
1061134	Listed Building	II	Bridge Cottage Middle Cottage	Cottage row. Probably late C18. Painted brick with plain tile roof. At right-angles to road and to Dunkirk End, and joined to latter by brick infill wall. 1 storey and attic. Brick eaves band. Gable end stacks. 2 hipped dormers. Irregular fenestration of two 6-pane glazing bar sashes with segmental heads in partly blocked openings. 2 boarded doors to centre, that to Bridge Cottage to right.	TR 09922 29272
1231289	Listed Building	II	Dr Syn's Restaurant	House, now restaurant. Late C18 facade to a possibly earlier building. Ground floor painted brick, first floor tile-hung. Plain tile roof. 2 storeys. Hipped roof. Brick ridge stack off-centre to left. Irregular fenestration of two 3-light leaded casements. C20 boarded door towards left end. Painted brick lean-to to left and C20 2-storey timber framed rear addition to right.	TR 09987 29248
1061133	Listed Building	II	Old Tree Cottage	House. Late C18 facade to possibly earlier C18 house. Red brick with occasional grey headers in Flemish bond. Rear wall timber framed. Plain tile roof. 2 storeys with cogged and dentillei brick eaves cornice. Gable end stacks. Regular 2-window front of 2-light casements to first floor and 3-light	TR 10000 29230

NHLE Number	Record Type	Grade	Name	Description	NGR
				casements to ground floor, in altered openings. Central late C20 gabled brick porch with C20 ribbed door. Late C20 brick addition to left not included. Interior: exposed timbers of relatively small scantling. Inglenook fireplace left with iron door to small salt niche. Listed for group value.	
1344174	Listed Building	II	Martello Tower Number 25	Martello Tower. 1806. Brick, covered in plain render. Circular, slightly tapering tower about 30 feet high. Walls said to be 51/2-6 feet thick. Renewed shallow domed roof surrounded by projecting cement-rendered coping. 2 small C20 casements, one to north and one to south, with cills about 12 feet up. 2 small ventilation grilles towards base. Vertical door with proud architrave and segmental head, with cill about 10 feet up, on west side. T-shaped recess below cill with surround continued from door architrave. Plaque over doorway. No external steps at time of re-survey. C20 door to ground floor. Interior gutted. One of a series of towers built in 1806 as gunposts against a possible Napoleonic invasion. Stands immediately behind sea wall.	TR 10012 29036

Table 2 Designated Heritage Assets Between 3-5km

NHLE Number	Record Type	Grade	Name	Description	NGR
1005125-1005126; 1005113; 1005492; 1005114	Scheduled Monument	-	Royal Military Canal, Bonnington Bridge to Gigger's Green Bridge	The monument includes a length of the Royal Military Canal, an early 19th century defensive work, situated on low-lying ground on Romney Marsh, south-east of Bonnington. It runs ENE for 135m from Bonnington Bridge before bearing east for 175m then ESE for 905m. It resumes an ENE course for the remaining 225m to Gigger's Green Bridge. Along the ESE orientated section of the canal is a 'kink' designed to allow enfilading fire along the canal if the enemy attempted to cross it. The length of canal is water-filled, and the surviving features include the parapet; an earthwork bank on the west side, the Royal Military Road which survives as an earthen terrace, and the back drain, which survives as a water-filled ditch. On the north side of the canal are two Second World War reinforced concrete pillboxes, which are included in the scheduling. At the eastern end of this length of canal is Gigger's Green Bridge.	TR 06361 34290
1016681	Scheduled Monument		Medieval farmstead at Pilchers, 340m north east of Codhall	The monument includes an abandoned medieval farmstead and an area of associated small fields, or closes. It is situated near the north-western edge of Romney Marsh on low-lying, artificially drained land around 1.3km north east of Snargate. The farmstead lies within the south-eastern corner of the monument and survives as an area of raised, uneven ground containing buried building foundations and associated below ground remains. Pottery fragments and building debris found here during field investigation have been dated to the 14th century. The associated closes cover the remainder of the monument in an irregular grid pattern and take the form of at least six	TR 00281 28949

NHLE Number	Record Type	Grade	Name	Description	NGR
				small rectangular fields enclosed by ditches which are now dry. Two local maps dating to 1653 and 1721 depict the farmstead buildings, and later cartographic sources indicate that the farmstead had become abandoned and was demolished by the mid-18th century. The monument is recorded as Old House Field in the Tithe Award of 1840. The wooden sheepfold situated in the south-eastern corner of the monument is excluded from the scheduling, although the ground beneath it is included.	
1003605	Scheduled Monument		Hope All Saints', remains of church	The monument includes a medieval parish church surviving as upstanding and buried remains. It is situated on level ground north-west of New Romney on Romney Marsh. All Saints' Church is thought to have 12th century origins but was altered in the 13th century. The church was in use in 1541 but had fallen into decay not long after. In 1663 it is recorded as ruinous, with only the chancel left standing, following neglect and storm damage. The standing remains of the church are Grade II listed.	TR 04932 25807
1011803	Scheduled Monument		Part of a Cistercian grange, north of New Romney High Street, also known as Romney Priory	The monument includes part of what survives upstanding of the so-called Cistercian priory of Romney, which is now interpreted as a monastic grange, and burial remains beneath the upstanding structure and in an open area to the west. The upstanding remains are in the form of a small medieval building with a medieval stone wall running northwards from it. The building itself is in use as a workshop and is excluded from the scheduling; the wall is included. The medieval building and wall are Listed at Grade II*, as is the 18th century house to the south. The medieval building is in use as an upholsterer's workroom and is thus excluded from the scheduling, although the	TR 06422 24856

NHLE Number	Record Type	Grade	Name	Description	NGR
				ground beneath it is included. The medieval wall and the gardens to the west of the building are all included in the scheduling, as is the dividing wall between the two gardens. The pump and tank are excluded, along with the garden shed close to the shop, the steps leading up to the dividing wall and the brick paved surface of the gardens, the black `post-box' inserted into the outer face of the medieval wall along with any service trenches below ground surface and their access points in the gardens; the ground beneath all these features is, however, included in the scheduling.	
1415588	Scheduled Monument		Phoenix Caisson off Littlestone-on-Sea	The monument comprises a single Phoenix caisson, resting on the seabed and exposed at low tide. It is approximately 200 ft (61m) in length, 32 ft (10m) wide. The height is unclear from current information but, depending on the type of caisson, will be between 24 and 60ft high (7-18m). It is constructed of a steel framework with concrete base and walls around 0.3m thick. The interior is divided into nine sections, open to the sky. These are further divided by a spine wall creating 18 square cells. Some of these retain their diagonal steel tension bars. Later navigation lights are mounted at the four corners on steel posts. The scheduled area is restricted to the structure of the caisson itself. The four navigation lights and their mountings are excluded from the scheduling.	TR0949324640
1017352	Scheduled Monument		Dymchurch Redoubt	The monument includes an early 19th century redoubt or circular fortification, set within a dry moat and outer glacis (sloping bank); additional World War II fortifications, including gun emplacements and observation posts survive, as do structures associated with the later 20th	TR 12922 32137

NHLE Number	Record Type	Grade	Name	Description	NGR
				century use of the redoubt as a military training facility. It is situated at the head of the shingle beach on the western edge of the Hythe Ranges. The redoubt was constructed between 1804 and 1812, to support a defensive chain of 21 Martello towers, guarding the coastline of Romney Marsh between Hythe in Kent and Rye in Sussex. It was specifically designed to help protect the Marshland sluices which emptied into the sea at Dymchurch, then the administrative centre for the Marsh. The circular redoubt is brick built, with granite and sandstone dressings, and was constructed on two levels. It measures up to around 68m in diameter externally and stands to a height of about 12m. The sloping roof of the parapet wall, designed to deflect cannon shot, protrudes above the lip of the brick retaining wall of the moat, which encircles the redoubt at a distance of around 9m and was intended to protect it from bombardment and ground assault.	
1016518	Scheduled Monument		Early medieval flood defence at Botolph's Bridge, West Hythe	The monument includes the best surviving stretch of a flood defence embankment situated near the north eastern edge of Romney Marsh. The embankment has been dated to the later Anglo-Saxon period (eighth-ninth centuries AD), and survives as a roughly south west-north east aligned, curving earthwork around 358m long, up to 20m wide and 0.5m high. It was constructed in order to help protect the fertile agricultural lands of this part of the marsh from inundation by flood water. It is thought to have been in use for a relatively short period before being made redundant by natural coastal changes and the reclamation for agriculture and settlement of the southern part of Romney Marsh, achieved by the 11th century.	TR1241233428

NHLE Number	Record Type	Grade	Name	Description	NGR
1005179	Scheduled Monument		Saxon Shore fort now called Stutfall Castle, 468m south-west of St Stephen's Church	The monument includes a Roman fort of the Saxon Shore series, now called Stutfall Castle, surviving as upstanding and below-ground remains. It is situated towards the foot of a steep escarpment at the north-east edge of Romney Marsh, a short distance south of Lympne. The fort walls survive in a fragmentary form due to landslips, but it appears to have originally been of irregular pentagonal plan. The upstanding remains of the walls are about 3.5m thick on the west, north and east side of the fort. The Saxon Shore fort was built in about the late third century AD, during the reign of Carausius, and abandoned in about AD 350. The conjectured coastline during the Roman period would have allowed the fort to protect the entrance of a substantial natural harbour in an area which is now part of Romney Marsh.	TR 11764 34244
1004216			Romano-British building S of Burch's Rough	The monument includes a Roman villa surviving as buried remains. It is situated on a north-west facing slope above a tributary of the East Stour River near Court-at-Street.	TR 08687 36130
1475132			Barrow cemetery to the south-west of Barrowhill	The monument comprises a barrow cemetery dating from around the Early Bronze Age and includes the buried and earthwork remains of seven barrows, located within a wider funerary landscape.	TR1032636926
1071208	Listed Building	I	Church of St Martin	Parish church. C11 (Saxo-Norman). Chancel extended C13, chapel and aisles C13/14. Tower 1507-1557 (evidence of wills), battlements 1911. Restored 1876 (with later work) by Sir Arthur Blomfield. Ragstone, squared and hammer-dressed to tower. Plain tiled roofs. Chancel with south chapel, nave and south aisle with south	TR 07499 36183

NHLE Number	Record Type	Grade	Name	Description	NGR
				porch and western tower. Large western tower of three stages with string courses and offset buttresses rising to full height of tower to battlements. Octagonal north-eastern angle vice. Triple, two tier belfry openings, single lights on second stage, and deep set restored three-light Perpendicular style west window, flanked by canopied niches, with cusped quatrefoil panels and ogee headed niche below, with four centred arched doorway with label hood, waterstoup and flanking quatrefoil panels. Nave with separately roofed south aisle with projecting vestry. C19 fenestration and timbered south porch. North nave wall with buttresses and exposed jambs of round headed C11 windows, now blocked, as is north door; C19 fenestration. C19 fenestration to chancel, with restored perpendicular five-light east window, with the jambs of C13 lancets. South chapel, projecting, with lancets. Interior: fine, tall tower arch, with continuous wave moulding and attached inner piers with octagonal capitals. Four centred arched door to north to stair vice. Late.C13 two bay arcade to south aisle with round pier and octagonal responds. Nave roof with scissor- braced rafters in two levels, partly with tie-beams. South aisle with vestry at west end with blocked lancet to aisle and with massive walls and re-used timber ceiling, identified as base of C11 south-western tower. Lancet in gable to south chapel, with double chamfered arch below on corbels. Tenoned purlin roof. Rood passage door to south, and at gallery level to nave. Restored double chamfered chancel arch on octagonal corbels with carved heads. Exposed jambs of lancet east windows, with shafts and capitals, and also exposed jambs of east end of C11 chancel, before C13	

NHLE Number	Record Type	Grade	Name	Description	NGR
				extension. C19 scissor-braced roof. Fittings: C14 priest's door and three sedilia in chancel with cusped ogee heads, roses in cusped spandrels with rose, oak leaf and heraldic enrichments and embattled top. Iron twist turned altar rails with moulded top rail. Choir stalls, inserted probably for use by Archbishop of Canterbury's entourage while resident in his adjacent hunting lodge. C15, partly restored, with poppy head bench ends, arcaded panels to front of benches; south range incorporates open screen to south chapel, with four bays with ogee tracery, brattished top rail and four centred arched doorway. Western range incorporates base of nave rood screen, north range with simple boarded panelling. Misericords mainly with foliage decoration, on south with foliage and castles. South chapel with C17 arcaded panelling with mannerist pilasters, with strapwork frieze and enrichment, with a separate panel with lozenge and guilloche decorations and inscribed AN 1617 WK . RA . WF . C, with yet a third different section to west wall. All introduced late C19, and possibly from the demolished Scott's Hall, Smeeth. Nave with two pulpits, with panelled walls behind, C17 with strapwork, geometric panels, and foliate enrichment, that to north of two tiers, probably made up from domestic panels, and incorporating a wooden relief panel of a Pelican in her piety, said to have come from Pattison's Farmhouse, Aldington. C12 square font bowl on five piers, with C17 wooden cover, with arcaded base with detached Ionic colonettes with modillion cornice and finial with ogee scrolled lantern with finial. Wrought iron gate and screen to tower, dated 1891, removed from Olantigh Towers, Wye, and set up here by Sir Reginald Blomfield.	

NHLE Number	Record Type	Grade	Name	Description	NGR
				Monuments: brasses; small inscription in south chapel to Margaret Blechynden, d.1596, John Weddcot, d.1475; 19 inch brasses of armoured knight and Lady. The reverse records George Sibley of Boston (d.1474). John Blechynden, d1607; black and white marble wall plaque, with scrolled and enriched base, simple aedicule with Arms Cartouche over. Latin hexameter inscription. Glass: fragments in chancel north window. The Reverend George Blomfield (Rector from 1868) was brother-in-law of Sir Arthur Blomfield (restored the church 1876) and father of Sir Reginald Blomfield, who embellished the church and designed the lychgate. The quality of medieval work is linked to the church's use as a chapel to the adjacent hunting lodge of the Archbishops of Canterbury (see Court Lodge), who also appointed Thomas Linacre Rector 1509 (founder of Royal College of Surgeons) and Desiderius Erasmus, briefly in 1511.	
1231321	Listed Building	I	Church of St George	Parish church. C13, late C14 and C15, restored 1888-1890 by R.T. Blomfield and in late C20. Tower roughly coursed stone, rest mixed roughly coursed stone and flint. Gable of north aisle weatherboarded. Nave roof leaded, north aisle has plain tile roof, rest not visible. West tower, continuous nave and chancel with continuous north and south aisles and chapels. South porch with parvis chamber. West tower: C15. Three stages on moulded plinth, with battlements above a moulded string. Integral angle buttresses. Polygonal north east stair turret, also with moulded string, but plain-coped and taller than tower. Two-light belfry windows with hoodmoulds; those to north and east with trefoil-headed lights and square heads, those to	TR 02812 27665

NHLE Number	Record Type	Grade	Name	Description	NGR
				west and south with quatrefoil between vertical bars. Small hollow-chamfered rectangular light to north and south of second stage. C14 west window, probably re-set (J. Newman, Buildings of England Series, West Kent and the Weald, 1980), with cusped intersecting tracery, cavetto mullions, moulded architrave, and hoodmould. Two-centred arched west door with moulded architrave and square-topped quatrefoiled spandrels springing from attached columns with moulded capitals and bases. Hoodmould. Nave: clerestory of four blocked quatrefoiled lights to north and south. South aisle: Late C14. On moulded plinth with moulded string and plain parapet. Three buttresses. Lean-to roof. No west window, three south windows, two to west and one to east of porch; one C19, one late C14, restored, of two trefoil-headed lights with sexfoil and hoodmould, and one, restored, three-lights, traceried, with cambered head. South porch:C14. Integral with south aisle, but taller. On moulded plinth with string and battlements. Small hollow-chamfered rectangular lights to parvis chamber to east, west and south. Diagonal buttresses. Rounded, battlemented north west stair turret in angle with nave. Chamfered two-centred arched doorway with hoodmould. Inner doorway with two centred arch, roll-and-fillet moulding and hoodmould. Medieval backing to door, Low stone seats along east and west walls. Rendered quadripartite vault with exposed hollow-chamfered stone ribs springing from moulded corner capitals. South Chapel: Late C14, possibly with C13 origins. No plinth. Moulded string. Parapet continuous with that of south aisle. Pilaster buttress adjacent to south aisle buttress, two further south buttresses and south east angle	

NHLE Number	Record Type	Grade	Name	Description	NGR
				buttress. Lean-to roof. Three south windows, two C19 in a C14 style and one of two lights with a sexfoil. Untraceried east window of two trefoil-headed lights with cambered head and hoodmould. Chancel: late C14 with C13 origins. No plinth. Gabled. Two buttresses. Clerestorey with two south windows of two trefoil-headed lights and three quatrefoiled north lights. Two-centred arched east window of five narrow uncusped cavetto-moulded lights with hoodmould. North Chapel: late C14 with C13 origins. High plinth slightly overlapping chancel and stepped down under window. Blocked C15 west window of five stepped trefoil-headed lights with tracery above, cambered head and hoodmould. North elevation of north chapel and north aisle: Continuous. Wall battered towards base. Moulded plinth resumes to west of north door. North east angle buttress and six evenly-spaced north buttresses. Moulded string and continuous stone-coped parapet. Lean-to roof to chapel, double pitched, gabled roof to aisle. Circular north west stair turret, also on plinth, with string and stone-coped parapet, but taller than aisle. Chamfered doorway leads from it onto aisle roof. Six windows, evenly spaced between buttresses: four to east and two to west of north door, with variety of tracery patterns, two restored in C19, all with hoodmoulds. Two-centred arched north door, also between buttresses, with moulded architrave and hoodmould. Finely carved C14 west window of three trefoil-headed lights with cascade of mouchettes above, and hoodmould. Interior: structure: continuous late C14 seven bay north and south arcades to nave and chancel, with pointed	

NHLE Number	Record Type	Grade	Name	Description	NGR
				arches of two hollow-chamfered orders and octagonal columns with moulded capitals and bases.Tall C15 moulded tower arch with one attached column either side with moulded capitals and bases. Moulded C13 semi-circular column base abutting east wall of chancel towards north side. Low stone seat, possibly base of an earlier wall along part of south wall of south chapel. Three-centred arched moulded stone doorway with broach stops to tower stair turret. Moulded elliptical arched stone doorway to north aisle stair turret. Chamfered doorway to parvis chamber stairs with broach stops and pointed arched head. Remains of piscina with cusped ogee head in south wall of south chapel. Pointed arched stoup to south door with cushion stops and very deep quatrefoiled basin with sunk panel to outer face. Roof: king-and-queen-post roof to nave; five king-posts with moulded capitals and bases and heavy upward braces. Broad ridge-piece. Single continuous purlin to each side. Queen-posts with braces to purlin and, elongated, to rafter above, forming distorted arch with the king-post braces Chamfered tie-beams with braced pendant posts. Unusual for Kent. King-and-queen-strut roof to chancel with four short heavily braced, rebated, broach-stopped king-posts and broad chamfered ridge-piece. Two tiers of continuous purlins sandwiched, over tie-beams, between outer and inner rafters. Inner rafters stop short of the ends of the tie-beams and are pegged at tops into undersides of the braces from king posts to outer rafters. Heavy cambered, slightly moulded tie-beams braced to short pendant posts. Very short curved queen-struts between tie-beams and inner rafters. Also unusual for Kent and	

NHLE Number	Record Type	Grade	Name	Description	NGR
				possibly not medieval. South aisle and chapel and north chapel have staggered butt purlins, some moulded. One principal rafter in south aisle painter: 1703 IS RR C W . North aisle roof plastered. Fittings: octagonal font with moulded plinth on two octagonal steps, probably late C14 or C15. Two L-shaped stalls with two-light blind-traceried panels, shafted arms to seats, and mortices for screens on backs of seats. C15 traceried screens to north and south of third bay from east. Altar rails with late C17 or C18 turned balusters and C20 rail. Screen to base of tower arch dated 1686 with spiked top rail and turned balusters above boarded base. C18 pulpit with fielded panels. Late C18 screens to north aisle. Central bay of chancel has panelled north and south screens with chinoiserie gates said to have come from the Church of St. Clement, Old Romney (Miss. A. Roper, The Church of St. Clement, Old Romney, 1983). Royal Arms 1775 over north door. Eight oval text boards to nave. Decalogue, Creed and Lord's Prayer on four boards to east end. C18 panelled funeral hudd. Fragments of stained glass in east window of south chapel.	
1101773	Listed Building	I	Lympne Castle	Fortified house, now house. Probably C13; mid C14, and C15. Restoration and additions 1907 and 1911-12 by Lorimer. Ragstone, with ashlar dressings and plain tile roofs. Square east tower, probably C13, with C14 stair turret and service rooms to south. C14 hall to west of tower, incorporating solar block within west end and with C14 or C15 north-east: porch. Rectangular C14 west tower, formerly extending further to south, and with semi-circular C15 addition with stair turret, to west side. Further block added to north-west by Lorimer, linked to rectangular	TR 11926 34661

NHLE Number	Record Type	Grade	Name	Description	NGR
				west: tower by short, narrow 2-storey range, and by garden wall to gateway and service range to north. North elevation of medieval range: east tower 3 storeys, porch 2 storeys, hall tall single-storey, with lower eaves than porch but incorporating 2-storey solar section to west. West tower 4 storeys. Chamfered stone plinth to east tower and porch, and formerly to hall range. Battered base to west turret. All four sections battlemented above chamfered string. Various stone stacks concealed within battlements of towers. Tall stone ridge stack towards right end of hall range. Irregular fenestration of C15-style stone windows, largely inserted or restored by Lorimer; two cross windows with trefoil-headed top lights, to each of 2 lower floors of east tower. One window of 2 trefoil-headed lights with squared hood-mould to each face of first floor of porch, and narrow rectangular chamfered light to ground floor of west side. 2 tall pointed- arched mullioned and transomed windows to hall, with cusped lights and tracery of vertical bars with quatrefoil. One cusped square-headed 2-light window to each floor of solar section. No visible north windows to west tower. Moulded pointed-arched doorway to porch with squared hoodmould, hollow spandrels and quatrefoils. South elevation of medieval range: irregular elevation to east tower, truncated walls forming buttresses, with fragment of stone south-west door jamb. Buttress beneath hall stack formed from fragment of east wall of a former south extension of solar section, incorporating chamfered, pointed-arched stone doorway. 3 stone corbels under string-course of solar section, with stump of a doubly plain- chamfered stone rib below them. Various 2- and 3-light stone mullion windows. 2 hall windows as on north	

NHLE Number	Record Type	Grade	Name	Description	NGR
				elevation. Pointed-arched plain- chamfered doorway with broach stops, to east end of hall. Retaining wall running parallel to and about 2 metres south from south elevation, joined by buttress to east end of east tower. East section re-built by Lorimer, West section formerly west wall of south extension of west tower and incorporates 2 blocked pointed-arched garderobe arches on west side. Wall continued to west by Lorimer, curved and branching to form terraced garden. C20 north-west range: east elevation: 1½ and 2 storeys. Irregular facade. 2 gables and dormers to courtyard, with swept eaves. Troll slender stone stacks. Various one, two and three-light stone mullion windows. Panelled door in rectangular moulded stone architrave. North-east corner of range linked to south-east corner of former service range by buttressed stone garden wall. Former service range (now house row): also by Lorimer. Ragstone, with plain tile roof. North (street) elevation: single storey and attics. Canted east stair turret. Stone gable towards centre. 4 stone ridge stacks, and one stack forming straight west side to central gable. 8 hipped dormers. Irregular fenestration of stone mullioned windows, some with idiosyncratically carved architraves and mullions. 4 boarded doors (some later) and 2 blocked doors. Garage and stable block adjoining, but set back, to west, with boundary wall curved round former stable yard. Entrance gates adjoining to east, with tall canted stone flanking walls, and moulded pointed-arched gateway with solid wooden doors. South elevation of service range: stone-arched loggia to south end of garage block. Small stone turret with conical roof in re-entrance angle of garage and main range. Rear central gable incorporating dove-	

NHLE Number	Record Type	Grade	Name	Description	NGR
				cote and with stone beasts to verge ends. Buttressed garden wall running north-south between east end of gateway and north-east corner of east tower of medieval range. Interior: Medieval range: moulded or plain-chamfered pointed-arched C14 and C15 stone doorways; on ground floor, 2 to east end and 2 to west end of hall, one to north-west end of solar section and one between west tower and rounded west addition; on first floor, to south and east walls of porch (former to a gallery since removed), two to south wall of square east tower, one to west wall of solar section, one between 2 chambers of west tower, and one to south- west stair turret. Stone newel stairs to south-west of square east tower and to south-east of rounded west addition, the latter staircase starting from first floor. Broad C14 or C15 extended four-centred arched moulded stone fireplace to east wall of ground floor of east tower. Smaller, similarly arched C15 moulded stone fireplace to west wall of first-floor room of east tower. Cavetto-moulded stone jambs of C16 fireplace to west end of hall, with moulded wooden bressumer probably designed by Lorimer. Squint between hall and first floor of porch. 4-bay hall roof with 5 trusses (at least partly restored); moulded octagonal crown-posts on moulded tie-beams, with scissor-braces lapped over collars to form sous-laces. Ashlar-pieces and moulded wooden cornice. Similar roof to first floor of solar section, largely restored. Numerous moulded stone doorways and fire-places by Lorimer. Linenfold panelling, probably early C20, to hall. Most ceilings by Lorimer. A few early C20 hinged decorative iron brackets for curtains. Early C20 vaulted ceiling to first-floor room of east tower. Early C20 north-	

NHLE Number	Record Type	Grade	Name	Description	NGR
				west range (only partly inspected): panelling and plaster ceiling to south-west ground- floor room. Staircase of 1907 with turned balusters and finials of carved wooden beasts. Variety of moulded stone fireplaces. Boarded doors. Interior of former service range not inspected. Lympne granted to Archdeacons of Canterbury from C11. Castle commands extensive views from Dover to Hastings See also Castle Close, Well-head at Lympne Castle.	
1101780	Listed Building	I	Church of St Stephen	Parish church. Late C11, C12, C13 and C14, restored circa 1859. Further restoration 1878-80 by St. Aubyn. Small blocks uncoursed ragstone, with Caen-stone, tufa and ragstone dressings. Plain tile roofs. Late CII tower, formerly with nave to east. Nave added to west in early-to-mid C12, and rebuilt or altered in C13. Former nave rebuilt, as chancel, in C13. North aisle to nave C13, possibly rebuilt in C14. North chapel to tower, now continuous with aisle, C13. C14 north porch. Nave: west gable end rebuilt circa 1859 with smell chimney stack, lancet, and pointed-arched west doorway. South elevation: two buttresses and three C19 lancets. Tower: 4 stages, with clasping buttresses. Stumps of C11 nave walls to east. Plain stone-coped and slightly cambered parapet. Two broad C19 lancets to each face of belfry. Blank arcading to base of south side of second stage. One blocked round-headed window to base of east side of third stage. Two conjoined restored lancets to south side of bottom stage. Chancel: two south buttresses and vestigial north buttress. Three restored lancets to each face, those to east with bulls- eye window above. Rainwater head dated 1872. North chapel and north aisle: gabled. Two tall, narrow east lancets. Five north lancets of uneven size. One C19 west lancet. North	TR 11975 34658

NHLE Number	Record Type	Grade	Name	Description	NGR
				porch: Stone, with vestigial plinth. Small rectangular hollow-chamfered window to each side. C19 moulded bargeboards. Partly renewed pointed-arched hollow-chamfered north doorway. Narrow pointed-arched inner doorway with slightly rounded jambs. Boarded inner door studded AGCW Interior: Structure: two-bay C13 arcade to nave of 1708 lightly-chamfered pointed arches springing from chamfered imposts. Rectangular plain-chamfered piers with bar stops. Tower arches to west and east with enriched early-to-mid C12 imposts. East arch round-headed. West arch chamfered and pointed, rebuilt above imposts in C13. North tower arch similar to north arcade of nave. Blank arcading above west tower arch at base of second stage, visible from nave, and one blocked round-headed window above north tower arch. Broad,chamfered pointed-arched recess to each side of east tower arch, on west side of wall. Roof: continuous crown-post roof to north aisle and chapel with moulded octagonal crown- posts, hollow-chamfered tie-beams and pendant posts, and short solid- spandrel braces. Ashlar-pieces. C19 roof to nave and chancel. Fittings: plain-chamfered pointed-arched stoup with bar stop towards east end of south wall of chancel. Rectangular late C12 or early C13 font with shallow panelled bowl bearing defaced figures;, set on C20 shafts. Continuous stone benches to north and south walls of chancel. Monuments: low C17 stone chest tomb against south wall of chancel, with chamfered base and lid, chest carved with arcaded panels in low relief; defaced back panel with triangular head. Cusped C14 tomb recess in north wall of north aisle.	

NHLE Number	Record Type	Grade	Name	Description	NGR
1071183	Listed Building	I	Church of St Matthew	Parish church. C13, with C14 aisles and chancel, tower of 1777 and north porch 1784. Ragstone with brick tower and porch. Plain tiled roofs. Chancel, nave with aisles, western tower and north porch. Three stage western tower with offset angle buttresses, plat bands and parapet, with north-west stair turret. Leaded cross-window and belfry lights, with simple segmentally headed western doorway. Rebuilt 1777 after lightning destroyed the old tower in 1770. Aisles with tall plinth with 2 light and 3 light C14 windows with cusped intersecting tracery. Chancel with square headed late C14 windows with cusped tracery. Perpendicular East window of 4 lights. The east window of the north aisle appears to incorporate an earlier tracery pattern built into later C14 window (due to restoration at some later date, perhaps). Red and blue chequered brick porch with segmental gable and dated keystone over door inscribed 1784. C18 panelled south door. Interior: C15 tower arch survives; tall arch with wave moulded surround on round moulded responds, with wave and hollow chamfered inner arch. Three bay arcades in nave, with round piers of Bethersden marble, with deep undercut capitals and double chamfered arches. North-western respond with fine carved head. Roof of 4 crown posts on moulded tie beams with quatrefoil pierced knee braces. Aisles with roofs of 4 short moulded crown-posts, almost as high as the nave roof. Eastern most side windows in each case with reveals brought down as seating. Depressed arched doors and passage doors to former rood stair and loft. No chancel arch, just a stepping-in, with roof of 3 spindly crown posts on 1 unmoulded and 2 moulded tie beams with blank traceried knee braces, the wall plate with stylised flower	TQ 98988 32512

NHLE Number	Record Type	Grade	Name	Description	NGR
				enrichment. The easternmost window reveals to north and south brought down to form seating. Fittings: window seat to chancel south wall enriched as sedilia with integral piscina in the eastern angle, a coved niche in the western angle, with deeply undercut naturalistic vine frieze, damaged. Arched aumbrey in east wall. C20 carved wooden reredos flanked by e.C18 text boards. C19 altar rail; pulpit of 1905. Ogee headed shelved piscina in south aisle with adjacent aumbrey. Simple C17 Bethersden marble font. Box pews in nave, installed 1738 (north side) (centre) and 1839 (south side). Screen to tower with simple panels and panelled door with scrolled and pedimented surround to Royal Arms, dated 1708; painted at the same time as the text boards in chancel, the Lord's prayer and Creed against the tower, and 4 sentence boards in the aisles (and by the same craftsman who painted the hall archway at Leacon Hall, Warehorne, item 5/153 also in 1708). Tower with boarded octagonal stair inserted 1820. Lugged benefaction board dated 1824 in south aisle. Fragments of C14 glass (figures) in north and south aisles, and heraldic and floral fragments in chancel. Patches of painted foliage in south aisle and by font in nave. Quarry tiles and some old encaustic tiles throughout, and medieval coffin lid in 3 sections by south door. Memorials: brass plaque in nave to Thomas Jely, d.1438; plain white bolection moulded wall tablet to John Camley, d.1681, and white marble plaque at nave east end to Joseph Hodges and family (1802 onwards), with Arms on apron, 2 ball finials and urn over. A board hung below the corbel head at the north end records that J. Woolley, Churchwarden, painted the church in 1850-1-2.	

NHLE Number	Record Type	Grade	Name	Description	NGR
1344057	Listed Building	I	Church of St Nicholas	This is the only surviving Church of the five (three parish churches, the Priory and the Hospital) that existed in New Romney in the Medieval Period. The 3 lower stages of the tower and 4 bays of the Nave date from circa 1160-70. the 2 upper stages of the Tower with the corner turrets and octagonal parapet (or remains of spire) are circa 1200. The Easternmost bay of the Nave, the Chancel and the Aisles of the Nave are C14. Piscina and triple sedilia in the Chancel and both aisles. Early C14 recess in the North Chapel having a depressed arch with big cusping and a frieze of large 4-petaled flowers. Brasses. Box pews.	TR 06529 24751
1184521	Listed Building	II*	Ruffyn's Hill Farmhouse And Walls Projecting	House. C16 or earlier, altered early C17. Timber framed and clad with red brick, in part in English bond, with some ragstone walling. Plain tiled roof. Hall house plan in origin. Two storeys on plinth (ragstone to rear) with hipped roof with gablets (half-hipped to left) with stack clusters to left and projecting and offset to end right. Two tripartite wooden casements, with segmental heads on ground floor, and 6 panelled door in gabled porch, with semi-circular fanlight to centre right. Two storeyed C17 gabled porch to left, with diapered brickwork and stone quoins, stone mullioned and transomed window and plank and stud door in four centred arched doorway with label hood. Projecting rear wings, part in ragstone, with four-centred arched doorway and catslide outshot to main range. Interior: Cl7 reeded beamed ceiling, oak panelling (similar to some now located in Aldington parish church), plaster cornices, staircase and carved overmantel reported. Projecting from front elevation to right a ragstone wall, some 8 feet high and about 10 yards long, with brick surround to four centred arched doorway. Red brick and ragstone wall projecting to left, about 10 x 25	TR 07170 36011

NHLE Number	Record Type	Grade	Name	Description	NGR
				yards with blocked up arched opening, terminating in red brick pier. The house was altered and enriched prior to his death in 1639 by Humphrey Blechenden (panelling in Church said to be from Ruffyn's Hill dated 1617).	
1071209	Listed Building	II*	Court Lodge Farmhouse	Farmhouse incorporating remains of Archiepiscopal hunting lodge. C14, much extended c.1500 and altered early Cl9. Ragstone, with some brick dressings and repairs, with plain tiled roofs. Entrance front: early C19, re-using medieval stone and possibly foundations. Two storeys with brick quoins and corbelled eaves to roof with kneelered parapet gables and stacks to left and to right. Three segmentally headed glazing bar sashes on each floor and ribbed panelled door to centre left. Long 2 storey wing extending to rear, with irregular wooden casements and boarded doors, and Cl4 blocked traceried windows on north and south elevations; and 1 to east elevation; one on south especially revealing tracery pattern (3 daggers over 2 cinquefoiled lights). Hipped extension with weather boarded outshot at north-east end. A second parallel range is adjacent to the south, the west and east ends rebuilt in late C20 brick (old photographs show oast roundels), the other elevation of stone and early C18 brickwork, used as garage/ stabling, with boarded door and ventilation slits, with jambs of blocked medieval window exposed. Interior: the main range to rear with screens- passage (stone jambs to cross-passage doors survive) 3 windows traceable on each long side, and 1 large eastern window and smoke-blackened barrel roof, and is probably the great hall not a chapel as previously maintained. The southern range may well be a kitchen block in origin. Cl7 inserted stacks with inglenooks, and beamed ceilings in main range. This was a	TR 07520 36203

NHLE Number	Record Type	Grade	Name	Description	NGR
				manor house and hunting lodge of the Archbishops of Canterbury, particularly favoured and improved by Archbishops Morton (1486-1500) and Wareham (1508-1532), both of whom also embellished the adjacent parish Church of St. Martin. The house, park and Chase (some 1000 acres) were bought and extended by Henry VII in 1540, the whole complex said to have 5 kitchens, 6 stables and 8 dovecotes.	
1344207	Listed Building	II*	Port Lympne, House, Stable Block, Forecourt Walls to East, and Loggia, Patio, Terrace and Shell Fountain to South	House, stable block and formal garden. House built by about 1912 by Sir Herbert Baker in a Cape Dutch style, for Sir Philip Albert Gustave David Sassoon, a British politician, art collector and connoisseur of the decorative arts. Sassoon belonged to the internationally famous Baghdadi Jewish business dynasty, known to contemporaries as 'the Rothschilds of the East'. His contemporaries regularly described him as 'oriental' – a stereotype he embraced in this deliberately exotic mansion. Additions, including doors, east forecourt, and probably south loggias, terrace and shell fountain, by Philip Tilden during early 1920s. Interior frieze by Glyn Philpot before c.1920. Further decoration by Tilden. Tent room by Rex Whistler 1933-34. Restored from 1973 by J. Aspinall. Buildings and loggias red brick with plain tile roofs. Terrace and fountain ashlared stone. H-plan house, with double-pile central range lying east-west. Entrance front to east with single-storey loggia running east from each end before curving away from forecourt; solid walls to, and colonnades away from forecourt. Forecourt walls continue east from curve in loggias. North loggia connects with stable block to north side of forecourt. South loggia also frames east side of south terrace. Further matching, loggia curving to	TR 10219 34985

NHLE Number	Record Type	Grade	Name	Description	NGR
				enclose west side of south terrace. Land drops to south of terrace, permitting loggia basements which are linked by retaining wall of terrace, with shell fountain below. East elevation (entrance front): two storeys on flush stone plinth. Rusticated quoins suggested by recessed brick bands. Shaped brick-coped gable ends to north and south. Narrow central bay breaks forwards slightly, rising above eaves to form gable with small central rubbed brick niche, flanking inverted brick scrolls and triangular pediment. Two slightly projecting brick stacks, each evenly spaced between central bay and gable ends, with stone shoulders panelled flues and moulded cornices. Shallow round-headed recess to base of each stack. Regular three window front of one four-light wooden casement between each stack and central bay, and one wooden cross-window with moulded brick floating cornice to central bay. Six wooden cross-windows to ground floor ; two below each first floor casement and one within panel to base of each stack. Central rectangular doorway with bolection-moulded stone architrave, surmounted by stone trophy by Tilden. Studded bronze double doors by Tilden. Doorways and windows to loggia walls. Forecourt walls: brick-coped, with 14 stone terms, brought from Stowe, at intervals against brick pilasters. Stable block: principal section two storeys with hipped roof, central cupola with bell and clock, and three hipped eaves dormers. South elevation: shaped gables to south ends of north-south wings, with intertwined initials PS towards top of each. Brick ridge stack to each end of central section. Regular five window front of one cross-window to each gable end with moulded triangular brick pediment, and two	

NHLE Number	Record Type	Grade	Name	Description	NGR
				four-light and central two-light wooden casements to central section. Moulded brick floating cornices to ground floor windows. Central rectangular bolection-moulded stone doorway with festooned swan-neck stone pediment. Glass double doors with filigree iron-work designed by Tilden, and older lunette. Patio of patterned tiles between wings in front of central section, with three oval steps down to terrace.Terrace: south wall capped with open-work stone frieze of variously combined initials PS. Flights of stone steps lead down to flank oval fountain pool running back into shell-shaped ashlared recess under terrace. Concave flight of stone steps descends from pool to lawn. West elevation: similar to east elevation but without central gable and break, and with three bay loggia. Interior: only partly inspected. Patterned black-and-white marble floor to passage between east and west doors on ground floor. Staircase flanked by blue marble columns to ground floor and pink marble columns to first floor. Iron balustrade to stairs copied from Caroline Park, Scotland. Moorish patio by Tilden leading off staircase to north.Egyptian frieze by Philpot to south west room of west wing, formerly in south west room of central section. Tent room by Whistler to northeast side of passage, said to be one of the finest examples of his work. Octagonal library behind north-east loggia. Grounds and fittings inspired by Roman associations of site. Venue for Peace Conferences 1920-21.	
1184555	Listed Building	II*	Cobb's Hall	House. Circa 1525-1530, altered early C19. Timber framed, close- studded and exposed with plaster and painted brick infill, with red brick to return and ragstone, red brick and some tile hanging to rear and right return	TR 06669 36276

NHLE Number	Record Type	Grade	Name	Description	NGR
				elevations. Plain tiled roof. Four bay (3 full bay and firebay) continuous jettied lobby entry plan. Two storeys on ragstone plinth, with jetty with moulded bresummer on brackets (and underbuilt at left and right ends by projecting brick walls of return elevations). Hipped roof with swept-out eaves. Moulded stack to centre left. Three wooden casements on 1st floor (leaded lights to left and to right), and 2 tripartite casements on ground floor with small light to end right. Original entry to centre left, now bricked in with applied timber studding over, present entry by half-glazed door in right return. Rear elevation: built early C19 (dated 1817) with 18 inch thick ragstone walling, with red brick dressings to small wooden casements on both floors, with brick 2 storey bargeboarded gable block and single storey kitchen extension. Late C20 glazed conservatory on ragstone base. Interior: clasped purlin with windbrace roof, reeded and stop chamfered ceiling beams and joists; chimney bresummers with fernleaf and flower enriched spandrels and painted overmantel (in scallop pattern, now papered over) on ground floor, plaster overmantel on upper floor with 3 scenes of Adam and Eve separated by 4 columns. Upper great chamber with plaster ceiling with shallow bosses and fleur-de-lys. Corridors inserted in both floors to give access to rear elevation, where the small casements (9 x 12 inches to exterior) are splayed to 18 inch square internally, set 4 feet off floor level (musket height) with a larger ground floor opening (for a cannon). Formerly said to have been part of the defences of Romney Marsh against Napoleon, these features are as likely to have belonged to a Watch House of the Preventive services (one opening initialled and dated 1817 seems to	

NHLE Number	Record Type	Grade	Name	Description	NGR
				support this). Traditionally associated with the Holy Maid of Kent (Elizabeth Barton), born 1506, whose prophecies (1525-34) in particular against Henry VIII's first divorce, led to her execution (with others). She was maid servant to Thomas Cobb, steward to the Archbishop of Canterbury's estates in Aldington. Other sources place Goldwell (see item 4/39) as the scene of those events, and since Cobb died at Goldwell in 1528, it suggests Cobb's Hall may not then have been built/completed for him and may not be as early as previously believed (said to be one of the earliest continuous jettied houses known in rural areas).	
1344206	Listed Building	II*	French House	House. C15 or early C16. Restored circa 1930 by H. Charlton Bradshaw for Sir Philip Sassoon. Further restoration 1953 and 1985. Timber framed, with rendered infilling. Plain tile roof. Wealden, with two roughly equal-length hall bays and storeyed end bays. 2 storeys, on stone plinth. Broadly-spaced close-studding. Tension braces to first floor of left end bay. Arch braces to flying wall-plate. Later brace to central tie-beams. Left end bay jettied to front, to gable end and to rear on moulded dragon posts. Right end bay jettied to front and gable end on plain dragon post. Hipped roof. Multiple brick ridge stack to junction of hall and left end bay. Projecting stone stack, with brick dressings and diagonally-set brick flues, to right gable end. Irregular fenestration of 3 leaded casements; one 4-light wood mullion window to left end bay, one broad 2-light window to left hall bay (above a 3-light ground-floor metal casement), and one 2-light casement to right end bay. Leaded French doors with 4-centred-arched wooden architrave to right end of right hall bay. Ribbed door with similar architrave to rear of left end of left hall bay. Long	TR 11232 34709

NHLE Number	Record Type	Grade	Name	Description	NGR
				rear wing to right of circa 1930, with stone ground floor, timber framed first flour and plain tile roof. Interior not inspected. Said to have slipped several feet during landslide in 1730s.	
1344185	Listed Building	II*	Church of St Eanswith	Parish church. Late C11 or C12, C13, C14, C16 and C18, restored 1826, 1876, 1902 and 1984. Roughly coursed stone. North chapel of thin slabs of iron stone and sandstone. Weatherboarded bell turret. Plain tile roof, with wood shingles to spire. Nave with west bell turret, and with lean-to south chapel or aisle at west end. South porch. Small chancel. North chapel and north aisle. West turret: rectangular, with louvres to north and south. Splay-footed octagonal spirelet with weathervane. Nave: late C11 or C12, extended to west in C14, 2 west buttresses. Small chamfered rectangular light to gable. Chamfered 2-centred arched west window with hoodmould and Y tracery at least partly restored. Moulded 2-centred arched west doorway with broach stops. South-west aisle: C14 integral with west end of nave. Roof continuous with nave roof. Chamfered west lancet with trefoil-headed light. No other windows. South elevation nave: 2 buttresses. One window either side of porch, each 2-light in C14 style with name of churchwarden inscribed under hoodmould and date 1826. 4 projecting stone corbels just below wall-plate. South Porch stone, with plain gable and roughly chamfered 2-centred arched outer doorway. 9-light ovolo-moulded wood mullion frieze windows to east and west, with round-headed lights. Moulded wood cornice to inside with oak leaves carved on chamfer stops. Steeply cambered arch-braced tie beams at north and south ends. Chamfered inner doorway with broach stops, rebuilt with square head.	TR 00505 27730

NHLE Number	Record Type	Grade	Name	Description	NGR
				Chancel: late C11 or C12, largely rebuilt in 1902. Herringbone stonework to base of south wall. Diagonal buttress. Gabled. 2-light C14 south window with renewed head and hoodmould. C19 or early C20 east window of 3 lights with intersecting tracery and hoodmould. North chapel: C13. Projects further north than north aisle. Gabled. 2-light east window with original jambs but restored Y tracery. Chamfered pointed-arched north window. North aisle: C13, extended to west by one bay in C14. Low, with lean-to roof and unbroken north wall. West wall continuous with nave, with chamfered, trefoil-headed west lancet. Dormer inserted at east end 1925. Interior: Structure: 3-bay north arcade to nave, all columns and piers now resting on low chamfered padstones. 2 east bays C13 with chamfered pointed arches, and piers with undercut moulded impost string and chamfer-stops to base. West bay has broad pointed double-chamfered arch; inner order springing from attached semi-octagonal columns with moulded capitals and chamfered-stopped, bases. Flanking outer order has no imposts, but cushioned chamfered-stops to bases. Similar arch opposite, to south. Chancel arch pointed, chamfered to east and double-chamfered to west, added above probably re-set Norman jambs with zig-zag moulding to outer order. Plain south and west arches to north chapel, dying into walls. West tower: timber framed, probably of C14 origin, altered in C19 and reconstructed 1902; on rectangular frame with body of nave, with 4 arch- braced corner posts and two C19 or C20 intermediate supports, and with boarded floor at wall-plate level. Roar: C19 chancel and nave roofs, and C19 boarding to north and south aisles. Nave has moulded	

NHLE Number	Record Type	Grade	Name	Description	NGR
				medieval cornice and two C16 tie-beams. Fittings: Stoup with cusped ogee head to south wall of north chapel. Small communion table with turned legs and rails. C18 pulpit with fielded panels. Veneered hexagonal tester now in south aisle. C18 reredos at east end of north chapel, painted to resemble stone, with fluted Doric pilasters and Ionic modillions to moulded cornice, Broken-based central pediment, bears Decalogue and Creed. 4 oval text boards to north wall of north aisle. Royal arms of 1780, north wall of nave. Stained glass to east window by Lavers, Barraud and Westlake, 1874. Traces of red and yellow paint on stonework. Monument: in north chapel to John Fagge d.1639, and John Fagge his son, d.1646, errected after 1646.Two reclining alabaster figures on white stone chest with black marble plinth, lid and panel. Side pilasters bearing coats of arms.	
1233761	Listed Building	II*	Stonelees	House. C15, rebuilt C16. Timber framed and exposed panelled framing on ground floor with red brick infill, and close-studding on 1st floor with plaster infill. Plain tiled roof. Cross-passage plan of 4 bays with smoke bay, incorporating service wing of earlier hall house. Two storeys.on plinth, with continuous jetty on brackets, that to end right bay separately framed with renewed dragon post. Hipped roof with gablets and stack cluster to left. Three light mullioned windows to left and oriel to right with enriched pendant frame (C20?). Four mullioned upper chamber windows to centre right. Leaded C20 mullioned wooden casements to ground floor. Four centred arched doorway with enriched spandrels to centre right with C16 15 panelled door. The end right bay is framed entirely separately from the rest of the building, the main posts to	TR 04508 37281

NHLE Number	Record Type	Grade	Name	Description	NGR
				right of door being duplicated, the 2 ranges literally strapped together with bifurcated iron ties. Interior: 2 depressed arched doorways to service wing with fernleaf-enriched spandrels and with moulded ship-lap doors. Double bead and fillet moulded cross-beamed ceiling, with beaded dais beam, and 2 depressed arched doors to right (rear) of stack, leading to parlour and stair, both with rose-enriched spandrels. Four centred arched wooden chimney bressumer with thistle and fernleaf and banded enrichment. Parlour with beaded beams and joists. Upper floor with enrichea spandrels to doors, enriched chimney bresummer. Roof with cambered chamfered tie beams (originally with crown posts?). Stack inserted into smoke bay. Duplicated framing to end bay (the main range represents a C16 rebuild of earlier hall and parlour wing which the sevice end still survives).	
1184992	Listed Building	II*	Court Lodge	House. C15 or earlier, extended C16 and altered 1847. Timber framed and part exposed close-studding with plaster infill, part rendered. Plain tiled roofs. L-shaped plan, the entrance front of 2 storeys on ragstone plinth repaired with brick to continuous jetty on brackets returned on massive, moulded dragon beams. Hipped roof with gablets (untiled to right) with gable end of rear wing oversailing to centre left. Massive C16 diapered brick offset stack projecting to centre left, with 2 lozenge set, truncated chimneys. Blocked original mullioned windows to left on lst floor with casements fitted between studs to right, with leaded casements on ground floor. Central C20 half-glazed door with flat hood. Single storey outshot projecting to end right. Left return wing (rendered) of 2 storeys on plinth with plat band and roof with stack to end left. Two metal	TQ 99984 34641

NHLE Number	Record Type	Grade	Name	Description	NGR
				casements, leaded, on 1st floor and 5 light leaded casement on ground floor with ragstone over inscribed: EK 1847 Door of 6 panels to left with flat hood on brackets. Interior: jettied range with crown post roof. Former exterior close studded wall now to interior of return range, with section of brattished bresummer. C16 wing with fine double wave moulded cross-beamed ceiling, with deeply cut fern-leaf chamfer stops. Extremely large inglenook fireplace with massive moulded chimney bressummer, and fireplace added by Edward Kingsnorth with large iron cauldron hooks and ratchet. Local History asserts the house's origins with Sir William Orlestone, 1320's.	
1184978	Listed Building	II*	Church of St Mary the Virgin	Parish church. Late C12/early C13 origin, altered C14, and heavily restored 1883-4 by T. Blashill. Ragstone, part rendered with plain tiled roof. Chancel, nave with shingled bell turret, western porch and vestry to south. C19 western porch with timber upper walls on flint and stone base, made up in part of window tracery removed here after restoration. Trecusped bargeboard. C19 west window, a rounded triangular oculus. Shingled turret with small lucarnes and weather vane. Timber framed C19 south vestry. Nave and chancel with cusped lancets to west, and 2 and 3 light windows with cusped sexfoil over, with offset buttresses, incorporating chimney and stoke hole at southern re-entrant to chancel. East end all of 1883-4. Interior: double framed gallery/belfry support, possibly C17in origin, but now largely C19. Roof of 2 tall crown posts on moulded tie-beams, all much restored 1883. Chancel arch set within stepped-in chancel, with heavy chamfered arch on octagonal responds with deeply undercut capitals. Crown post roof, late Cl9. Copy of nave	TR 00010 34696

NHLE Number	Record Type	Grade	Name	Description	NGR
				roof. Fittings: simple chamfered piscina in chancel, roll moulded piscina in nave and small ogee headed niche or stoup by south door. Good quality C19 fittings: colonette-rail to altar, choir stalls, reading desk/half- screen to chancel wooden pinnacled lectern. Alabaster font on Early English style column, with Evangelists' symbols on bowl sides. "Tudor" style Roll of Honour carved wooden tablet (for 1914-18, with 1939-45 additions). Glass of 1888; 1893 and 1898 by Holiday. The glass and monuments in the church are largely late C19/early C20 memorials to the Oliver family. Fragments of masonry on the west wall include late C12 (Canterbury style Early English) capitals (one dated 1884) and 2 coffin lids with calvary crosses bottonée. Royal Arms of 1828 over west door, and painted C19 texts over chancel arch and west doorway: In Obitu Pax : Post Tenebrus Lux.	
1061105	Listed Building	II*	Church of St Dunstan	Parish church. C13, C14, C15 and late C18, restored 1870-72 by C.T. Whitley of Dover. Tower galletted ragstone; east end of chancel small blocks of roughly squared and coursed ragstone; south elevation of south aisle and chapel pebbledashed, rest roughly coursed flint and ragstone. Plain tile roof. West tower, south porch, nave and chancel with continuous aisles reaching to east end. West tower: C15. 2 stages on moulded plinth, with battlements above a moulded string. Diagonal buttresses. Polygonal north- east stair turret with conical stone roof. Chamfered two-light belfry windows. C15 three-light traceried west window in casement-moulded architrave with hoodmould. West doorway with two-centred arch formerly moulded, with slender attached shafts either side with moulded capitals and bases. Archit- rave, casement-	TQ 99069 28646

NHLE Number	Record Type	Grade	Name	Description	NGR
				moulded and square-topped, with hoodmould, and traces of carved spandrels. Nave: slightly exposed at west end, where plinthless. South aisle and south chapel: south aisle C13, south chapel C14. Walls have continuous moulded plinth and cornice. Angle buttresses to east and west, and four plain south buttresses. Lean-to roof. Un-traceried square-topped west window with 3 cinquefoil-headed lights and hoodmould. 5 similar 2-light south windows and similar C15 traceried 3-light east window. Stone doorway to chapel at junction with chancel, with plain partially-dressed outer and round-arch inner architrave.Stump of wall of wall to south of doorway suggests it gave access to a further unit. South porch : late C18. Red brick in Elemish bond on stepped brick plinth with plain tile roof.2-centred arched Gothik doorway.Wooden door with inset light.Moulded stone Medieval inner doorway with 2-centred arch. Chancel: on moulded plinth with 2 buttresses. 2-centred arched traceried east window of 3 cinquefoil-headed lights with cavetto mullions and hoodmould. Late C19 quatrefoiled window in gable above. Moulded string beneath east window over inscription: "This Chancel was restored by Edward Wilkinson Rector A.D.1870." North aisle and north chapel: north aisle C13, (but later than south aisle), north chapel C14, (but earlier than south chapel). Gabled, with diagonal buttresses to east and west, and 5 north buttresses. C15 two-light traceried east window. Three north windows similar to those to south, 2-centred arched west window with hoodmould, restored with Y tracery. Small blocked rectangular light with chamfered stone architrave in west gable. Moulded 2-centred arched north doorway to west end of chapel. Moulded 3-centred	

NHLE Number	Record Type	Grade	Name	Description	NGR
				arched north doorway with hoodmould towards west end of aisle. Interior: Structure: 4-bay C13 nave arcade of circular columns with bell capitals and bases and pointed arches of 2 plain-chamfered orders. North arcade different from and slightly later than south. North arcade dies into wall to east and west. South arcade terminates on crocketted corbels with carved heads. 2-bay C14 chancel arcade with one north and one south column, both with moulded capitals and bases, but that to north earlier; hollow chamfer to south-east bay, otherwise 2 orders of plain chamfers. No chancel arch. Moulded C15 tower arch incorporating attached columns with moulded capitals and bases. Blocked round-arched doorway with hollow chamfer to east end of south chapel, with part of arcade wall cut back to allow access. Plain squarsheaded north doorway to north chapel. 3-centred arched north aisle doorway to north chapel. 3-centred arched tower stairs doorway with hollow chamfer and broach stops. Very small pointed-arched rood-loft doorway with hinges and rebate for door about 4 feet up in south side of north aisle at junction with north chapel. Round-arched opening through opposite wall on south side of nave. Trefoil-headed piscina with renewed cill to east end of chancel. Plain rectangular piscina to south side of north chapel. Remains of stoup to east of north aisle door. Roof: 5 crown;posts to nave; 3 to east with moulded capitals and bases on moulded tie-beams. Pendant posts with solid spandrels, each pierced with one quatrefoil and 2 trefoils. 2 west trusses are repairs. Chancel roof largely C19 with 2 crown-posts on medieval tie-beams. South aisle and chapel have continuous aligned butt purlin roof. North aisle and chapel have continuous	

NHLE Number	Record Type	Grade	Name	Description	NGR
				sans-purlin common-rafter roof with collars and sous-laces; ashlar pieces to north only; 7 plain tie-beams, 5 of which have central bosses, that to east carved with coat of arms of John Copuldike (circa temp. Richard II) (Canon Scott Robertson, "Churches in Romney Marsh", Archeologia Cantiana Vol. XIII 1880). Fittings and decorations:Font of dressed stone, square, on square stone base with moulded plinth up 2 stone steps from south, set against west pier of north arcade. Wall painting: of a "Great Ship" of circa 1500 in red ochre on north wall of north aisle. (G. Nesbitt-Wood, "Wall Painting of a Sixteenth Century Ship". Arch.Cant. LXXXVII 1972). Worn Medieval patterned floor tiles to east end of north aisle and near font. 7 oval text boards erected 1794. 2 lead plagues near north door, from roof, one dated 1773, the other with embossed inscription: "J. Bourne, C. Warden Warington Romney Plumber T. Apps Carpenter And all his jolly men 1780". Monuments: table tomb in north-east bay of chancel arcade with moulded plinth, corniced lid, pointed quatrefoils to sides and indent of a brass on lid.	
1185579	Listed Building	II*	Leacon Hall	House. 1708 for Hodges family. Red and blue chequered brickwork with plain tiled roof. Two storeys and attic on plinth with wooden moulded and modillioned eaves cornice to hipped roof with 3 pedimented dormers with horizontally sliding glazing bar sashes, and stacks to left and to right. Regular fenestration of 7 glazing bar sashes on 1st floor and 6 on ground floor, with thick glazing bars and rubbed brick heads, the central 1st floor window especially frilly and ornate. Central door of 6 moulded panels with rectangular fanlight and open moulded segmental pediment on enriched consoles and moulded panel	TQ 98663 33087

NHLE Number	Record Type	Grade	Name	Description	NGR
				pilasters. Interior: raised and fielded panelled rooms through- out, with separate dado and infilling panelling, with simple moulded fireplaces. Entrance hall with angle fireplace, and wide, keyed segmental arch to staircase hall. This arch is painted with Unicorn and Lion on the responds. Initials KH and date 1708 on key and spandrels, and painted swags and enrichment (by the same craftsman who executed the Royal Arms and prayer boards in the Church of St. Matthew, Warehorne). Dog leg and landing staircase with turned balusters on enriched scrolled tread ends with moulded hand rail. Raised and fielded panelled dado with fluted pilasters and ramped rail.	
1025316	Listed Building	II*	St John's Priory, Including the Ruins of the Priory	A large L-shaped house with early C18 front, possibly older behind the facade. 2-storeys attics and basement red brick on a base of stone rubble with flint galleting. Tiled roof with 2 hipped dormers to the Ashford Road elevation. Parapet. 7 sashes facing High Street, 3 sashes and 2 blank window spaces facing Ashford Road. Glazing bars intact except in 3 ground floor windows on the High Street front and brick architraves above. Doorcase up 5 steps in a moulded architrave surround with rectangular fanlight, large flat hood on carved brackets and door of 8 fielded panels. 2 inserted bow windows. The side facing Ashford Road has a recessed doorcase with rectangular fanlight over. The interior retains some panelling and a good staircase with 2 turned balusters to each tread and scrolled tread ends. To the rear of the house are the ruins of a medieval Priory founded in the Cl3. The main part of these consists of a small building of stone rubble with a tiled roof. 2 storeys. 3 windows, 1 of which is a small rectangular window. The other windows have 2 lights each, with a corbel head in the	TR 06441 24829

NHLE Number	Record Type	Grade	Name	Description	NGR
				spandrel between the lights and a dripstone over. Pointed doorway (now bricked up) with similar corbel head over. Another pointed doorway (unblocked) to the North without corbel head. Beamed interior. Behind this complete building to the North is a reconstructed wall made up of Medieval stones. It contains one small pointed window, 2 small rectangular windows, 1 blocked window of 2 quatrefoil- headed lights with a corbel bracket over, and in the centre of the wall a large depressed (almost square-headed) archway (now bricked up) with the remains of a window over it and a corbel bracket.	
1000939	Registered Park and Garden	II*	Port Lympne	An early C20 formal terraced garden laid out by Sir Philip Sassoon and the architect Philip Tilden and with later planting by Russell Page. HISTORIC DEVELOPMENT Sir Philip Albert Gustave David Sassoon, MP for Hythe from 1912 and, later in his career, Private Secretary to Lloyd George and Under-Secretary for Air, bought the estate land at Port Lympne and built the present house between 1911 and 1913 and laid out the gardens immediately after the end of the First World War. A British politician, art collector and connoisseur of the decorative arts, Sassoon belonged to the internationally famous Baghdadi Jewish business dynasty, known to contemporaries as 'the Rothschilds of the East'. His contemporaries regularly described him as 'oriental' – a stereotype he embraced in this deliberately exotic mansion and gardens. After his death in 1939, Port Lympne passed to a cousin, Hannah Gubbay but was commandeered by the RAF in 1942. After the Second World War it was owned by Colonel and Mrs Waite and then by a property company	TR 10323 34865

NHLE Number	Record Type	Grade	Name	Description	NGR
				for a time. It lay empty for many years until bought by Mr John Aspinall in 1973 for use as a centre and park for wild animals. It remains (1997) in private ownership. DESCRIPTION LOCATION, AREA, BOUNDARIES, LANDFORM, SETTING Port Lympne lies on the south side of the B2067, 1km west of the village of Lympne. The registered site of 23ha, which comprises 6ha of formal gardens set within c 17ha of woodland, occupies the summit and steep, 1km long south-facing slope of a cliff which rises c 100m above the levels of Romney Marsh. The site is bounded to the north by the B2067 and is enclosed from the road and the level farmland beyond by chain-link fencing and internal woodland belts. To the west, the fenced boundary abuts Aldergate Wood and open arable farmland while to the east and south the site is bounded by the paddocks and tree belts of the wild animal park and beyond them, to the south, by the Royal Military Canal and the arable landscape of Romney Marsh. ENTRANCES AND APPROACHES The present public entrance is reached by a footbridge over the B2067 from a public car park on the north side of the road. A path from the ramped footbridge (completed in 1997) leads south-westwards through woodland planted between 1913 and the 1930s (aerial photographs and OS revised edition of 1939) and now (1997) containing mesh-walled animal enclosures. The path continues through conifer woodland, planted in the 1920s and now housing further animal enclosures, to reach the north end of a 110m long avenue, lined with pine trees and wide hydrangea borders. The avenue, formerly enclosed by tall clipped hedges (aerial	

NHLE Number	Record Type	Grade	Name	Description	NGR
				photograph early 1930s, guidebook), is punctuated at its north end by a large urn on a plinth and at the south end opens into an hexagonal hedged enclosure with a central well-head, from which there are extensive views over the distant landscape to the sea and from which the descent to the terraced gardens below begins via the Trojan Staircase. Some 80m east of the footbridge, the present vehicular entrance is marked by a small stone-built lodge on the east side, the drive then following the former service route to the north side of the house. The original formal drive to the house, of almost 1km, entered the estate from the B2067 opposite the junction with Otterpool Lane (north of the B2067) and ran westwards, parallel to the main road and passing between the extended red-brick wing walls and gate piers of North and South Lodge (c 1912, listed grade II), 470m north-east of the house. The drive, now (1997) forming part of the public circulation route, continues on a south-westerly route through a belt of woodland containing animal enclosures to a circular turning area, now in use for outdoor restaurant seating, adjacent to the entrance forecourt on the west front of the house. The forecourt, laid out with a central octagonal lily pond and surrounded by lawn and a wide flagged perimeter path, is enclosed to the north, east, and south by tall, clipped yew hedges with thirteen alcoves containing terms brought from Stowe, Bucks (qv) in 1921 (guidebook). Along the south side, three windows cut in the yew hedge offer views over the landscape and a doorway in a wing wall in the south-west corner gives access through a loggia to the south terrace and the gardens.	

NHLE Number	Record Type	Grade	Name	Description	NGR
				PRINCIPAL BUILDING Port Lympne (listed grade I) stands on a terrace cut into the cliff just below its crest. The house, H-shaped in plan with a double-height central range running east/west and constructed of red brick with a tiled roof, was built between 1911 and 1913 by Sir Herbert Baker (1862-1946) in his 'Cape Dutch manner' (Newman 1969), largely for Sassoon's political and artistic weekend house parties. From c 1918, Sassoon commissioned the architect Philip Tilden (1887-1956) to make significant additions to the house. In collaboration with Sassoon, Tilden added the bronze-studded front door, the internal Moorish courtyard with a fountain basin and cruciform rills, and the colonnaded quadrant wings framing the entrance forecourt and the south terrace. The wing on the north side of the forecourt (converted to shop use in 1997), which contains an octagonal library, connects the house to the garage court (now, 1997, in use as a restaurant), its principal, two-storey section on the north side topped by a cupola with a bell and clock and its courtyard covered with a late C20 glazed roof. Several rooms in the house were painted for Sassoon by famous artists, of which the Tent Room, decorated by Rex Whistler in c 1933 and including a trompe l'oeil map of the gardens, survives. GARDENS AND PLEASURE GROUNDS These lie principally to the south and west of the house on a series of terraces stepping down the slope of the cliff. They were planned by Sassoon in collaboration with Philip Tilden from c 1918 to c 1920 but significant alterations and additions continued throughout the 1920s and 1930s. The south or garden front of the house opens onto a stone-paved terrace inset with two rectangular sunken parterres	

NHLE Number	Record Type	Grade	Name	Description	NGR
				of dwarf box and enclosed at the east and west ends by curved, hip-roofed loggias and along the south side by a wisteria-covered balustrade wall (both listed grade II). Either side of the central axis, stone steps descend against the terrace wall to a semicircular platform containing a circular pool partly recessed beneath a quarter-spherical hood (terrace and pool listed grade II). A further curved, segmental flight leads on down to a broad terrace with a central, 14m square, stone-edged pool set within lawns and enclosed by massive, sculpted yew hedges. Built in 1923 as a bathing pool and originally with balustraded small pools to east and west and tiered stone seating quadrants against the southern yew hedge (CL 1923), the pool was reduced to its present form by 1929 and the seating removed in the 1970s following ground subsidence. East and west of the lawn and on the same level, two further yew-hedged enclosures contain displays of bedding: on the west side to a chess-board pattern and on the east in parallel stripes, both areas laid out to these designs in the mid 1930s (CL 1936). Southwards from the lawn and on the central axis, a long flight of stone steps (formerly of grass) flanked by walls of clipped Leyland cypress, descends the steep slope. Either side of the staircase the slope is cut into a series of narrow, curved terraces, planted as a vineyard on the west side (laid out after 1929 and replanted in the late 1970s) and as a fig garden on the east side. The staircase terminates at a clairvoie (listed grade II) in the form of a central platform enclosed on the south side by a wrought-iron screen and with brick steps leading down from its east and west ends to a vaulted brick loggia beneath the platform. The clairvoie	

NHLE Number	Record Type	Grade	Name	Description	NGR
				overlooks three level areas enclosed by tall, clipped cypress hedges; the two to the south and south-west, now used for functions, are the former morning and evening tennis courts while that to the south-east is laid out in alternating segments of lawn and rose beds with a central sundial. This was a zinnia garden in 1936 (CL 1936). A paved path leads both east and west from the clairvoie. Some 40m to the west and passing along the foot of the vineyard terraces, the path enters the Herbaceous Walk, a wide grassed walk running 115m due south from the house terrace and terminating in a wrought-iron screen (by the firm of Bainbridge Reynolds). The walk is flanked by 6m wide parallel mixed borders enclosed by tall, clipped cypress hedges, laid out in the early 1920s and replanted with advice from Russell Page (1906-85) in c 1974. West of the Walk the slope is cut into a further series of three grassed terraces, created c 1933 (CL 1936). These, which increase in width as they descend, are linked by descending flights of stone steps on each side and are retained by ragstone walls, the lowest wall extending southwards in a central bastion and each wall with a wide flower border at the base. The lowest level of lawn is enclosed by cypress hedging which also projects southwards in a bastion, beyond which the continuing slope is informally planted with trees and serves as a picnic area. East of the clairvoie the path runs 45m eastwards along the foot of the fig garden terrace and then turns north to return to the entrance forecourt of the house by way of a 60m ascending flight of shallow stone steps, flanked on the east side by a line of mature chestnut trees and by an	

NHLE Number	Record Type	Grade	Name	Description	NGR
				orchard shown established by 1939 (OS). East of the steps and south of the orchard is a further series of three shallow, grassed terraces built in 1937 (Landscape Design 1983) and retained by random ragstone walls, the highest terrace being enclosed on the north side by a high ragstone wall with a central, semicircular recess. On its west side, the house opens from a loggia onto a paved patio and, beyond a pair of yew cones framing the axis, into the West Garden which is laid out with a central lily pool surrounded by stone flags (replacing grass in the late 1970s) and enclosed by yew hedging; the viewing windows shown cut in the south hedge in 1923 (CL) are now (1997) closed up. West of the garden a grass path on the axis of the door from the house leads c 90m along a lime avenue. Some 20m south of the lime avenue a path from the south terrace of the house leads westwards along a magnolia walk, largely replanted in the late 1970s. Northwards from the West Garden, the 125 stone steps of the Trojan Staircase (listed grade II) ascend to the top of the cliff to meet the avenue forming part of the present public entrance route. The staircase is flanked to east and west by rusticated stone rampart walls topped by tiers of high, clipped cypress hedges, at the base of which are service access routes to the house. Towards the upper end of the flight are the bases of flanking twin temples, built by Tilden with the staircase c 1920 but removed soon after on the advice of Sir Herbert Baker (CL 1923). OTHER LAND To the west and south the gardens are enclosed by the mature mixed woodland of Hill Hurst Wood (shown on Mudge's map of Kent of 1801) which is cut by a series of hard-surfaced allées leading to vista points on the	

NHLE Number	Record Type	Grade	Name	Description	NGR
				woodland boundary, some oriented southwards towards the sea and shown established by 1939 (OS). The woodland now (1997) contains a number of largely mesh-walled animal enclosures.	

Appendix F: Non-Designated Heritage Assets Gazetteer

Shepway Energy Park

EIA Scoping Report

Appendix F Non-Designated Heritage Assets Gazetteer

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Table 1 Non-Designated Built Heritage Assets

Reference	Record Type	Name	Description	Period
MKE68771	Find spot	Flint lithic implement dated to the Mesolithic to Bronze Age	Mesolithic to Bronze Age flint core.	Mesolithic to Bronze Age
MKE96612	Find spot	Copper alloy ingot	A Late Bronze Age copper plano-convex ingot edge fragment.	Bronze Age
MKE108284	Find spot	Iron Age copper alloy strap fitting	A complete cast copper-alloy very late Iron Age to mid-Roman bilobed strap-fitting or slide, dated c.50 BC - AD 200.	Late Iron Age to Roman
TR 03 SE 16	Find spot	Roman pottery findspot, Burmarsh Parish	Roman pottery findspot. Date, amount found and actual location unknown.	Roman
TR 03 SE 18	Find spot	Findspot of Roman pottery	Findspot of Roman pottery. Date of, amount found, and location found are unknown.	Roman
TR 03 SE 19	Find spot	Roman pottery found in Burmarsh Parish	Findspot of Roman pottery. Date of, amount found, and location found are unknown.	Roman
TR 03 SE 20	Find spot	Findspot of Roman pottery	Findspot of Roman pottery, possibly a result of later manuring.	Roman
TR 03 SW 9	Find spot	Findspot of Roman pottery	Substantial surface finds of Roman pottery may indicate the possible site of a settlement.	Roman
TR 03 SW 10	Find spot	Findspot of Roman pottery, possible settlement	Surface finds of a large amount Roman pottery indicates the possible site of a settlement.	Roman

Reference	Record Type	Name	Description	Period
TR 03 SE 23	Find spot	Findspot of Roman pottery	Findspot of Roman pottery.	Roman
TR 03 SE 25	Monument	Roman pottery and artefacts, Burmarsh Parish	Roman pottery and other artefacts suggest possible site. Date of, amount found and actual location unknown.	Roman
TR 03 SE 26	Find spot	Roman pottery findspot, Burmarsh Parish	Findspot of Roman pottery. Actual location, date and quantity found unknown.	Roman
TR 03 SE 27	Find spot	Roman pottery findspot, Dymchurch	Findspot of Roman pottery during fieldwalking survey. Type of pottery and date of pottery unknown.	Roman
TR 03 SW 5	Monument	Romano-British cremation	A Romano-British cremation deposit consisting of three complete glass vessels and two Samian vessels was found in the side of a newly cut sewer in 1970.	Roman
TR 03 SW 90	Find spot	Oxpound Farm surface find spots	Five finds of Roman pottery and briquetage located on the lands of Oxpound farm, Bilsington, Ashford. Some finds dated to 1st/2nd century and others listed as 'Roman'.	Roman
TR 03 SE 92	Find spot	Waddells surface find (pottery)	First century pottery found in topsoil.	Roman
TR 03 SE 94	Find spot	Pottery find spot near Eastbridge Sewer	Surface pottery find of 2nd to 3rd century Roman pottery near Eastbridge Sewer, Bonnington.	Roman
MKE69186	Find spot	Roman gold and silver ingots	A gold and silver hoard of probable Roman date which included two gold finger ingots and five silver cake ingots.	Roman
MKE96545	Find spot	Roman copper alloy earring	A copper alloy penannular ring with an oval cross-section and both ends tapered to form a sharp point. There are some very slight traces of gilding along the sides.	Roman

Reference	Record Type	Name	Description	Period
MKE108009	Find spot	Roman copper alloy coin	A very worn and abraded, copper alloy Roman nummus of the House of Constantine, possibly Constantine II (AD 317-340) or Crispus (AD 317-326).	Roman
MKE108249	Find spot	Roman copper alloy earring	A complete cast copper-alloy penannular ring of likely Roman to Early-Medieval date. The ring has a circular cross-section and each end tapers to a sharp point. The object is heavily patinated varied shades of green.	Roman
MKE120774	Find spot	Roman copper alloy mount	A cast, copper-alloy mount of unknown date, probably Roman to late medieval date (AD 43-1450). The object is flat and circular in plan with a raised concentric ridge midway through the plate.	Roman
TR 03 SE 15	Find spot	Roman and Saxon pottery findspot	Findspot of Roman and Saxon pottery. No further information available for this findspot.	Roman to early medieval
TR 03 SW 19	Find spot	Medieval and Roman pottery, ruckinge	Numerous sherds of medieval pottery were found on the edge of fields near Lords farm which have been dated to the 12th - 15th centuries. Also found at the site was a possible early Roman coarse ware sherd.	Roman to medieval
TR 03 SE 17	Find spot	Findspot of Saxon pottery, Burmarsh Parish	A 10th century pottery. This was a surface find recorded within Pound Field.	Early medieval
TR 03 SW 8	Find spot	Findspot of Saxon pottery	A findspot of Saxon pottery. This is not thought to result from manuring.	Early medieval
TR 03 SW 11	Find spot	Findspot of Saxon pottery	A findspot of Saxon pottery. No further information available for this findspot.	Early medieval
TR 03 SE 22	Find spot	Findspot of Saxon pottery	A findspot of Saxon pottery. No further information available for this findspot.	Early medieval

Reference	Record Type	Name	Description	Period
TR 03 SE 24	Find spot	Findspots of Saxon pottery	A findspot of Saxon pottery. No further information available for this findspot.	Early medieval
TR 03 SE 33	Monument	Probable moated site, Cobbs Place	A probable moated site has been recorded at Cobbs Place. A rectangular enclosure was depicted within the tithe map, and 14th century finds have been recorded there.	Early medieval
TR 03 SE 45	Find spot	Early medieval pottery finds from Burmarsh Parish	Early medieval pottery sherds were recorded during fieldwalking. A total of 26 pieces were recovered.	Early medieval
TR 03 SE 54	Find spot	Pottery finds	Early medieval pottery sherds were recorded during fieldwalking. A total of 27 pieces were recovered.	Early medieval
TR 03 SW 91	Find spot	Anglo Saxon pottery near Wills Farm	Surface find of Anglo-Saxon pottery near Wills Farm, Bilsington. The finds were listed as being dated to between 8th and 11th centuries.	Early medieval
TR 03 SE 108	Find spot	Surface find spot of a 10th century brooch and strap end Newchurch parish	The surface find spot of a 10th century brooch and strap end was recorded within the Newchurch parish.	Early medieval
TR 03 SW 99	Find spot	Oxpound Farm surface find spots 10th century pottery	Surface find spots of 10th century pottery was recorded at Oxpound Farm, Newchurch.	Early medieval
TR 03 SW 100	Find spot	Surface find spot of 10th century pottery near Wills farm	A surface find spot of 10th century pottery near Wills farm. The type of pottery was unspecified.	Early medieval
MKE55860	Find spot	Early medieval silver hooked tag	An 8th-9th century small, silver hooked tag with rounded head-plate was reocrded within the Portable Antiquities	Early medieval

Reference	Record Type	Name	Description	Period
			Scheme (PAS). There was one attachment hole and incised decoration in the form of a six-petalled flower. The hook on the back is intact.	
MKE67597	Find spot	Early medieval copper alloy pin	A pin head was recorded with the PAS. The pin had part of shaft remaining, and square in shape with rounded sides leading into pin shaft (rather like a shield). There were five faces in all, and the decoration on each face consists of three dots.	Early medieval
MKE67813	Find spot	Early medieval copper alloy pin	A pin head and part of pin was recorded with the PAS. The pin head comprised of 11 flat faces with an incised circle on each face that was possibly once inlaid, although no evidence of this survives. At the apex of these faces a cross. There are 3 mm of pin shaft surviving.	Early medieval
MKE67946	Find spot	Early medieval copper alloy brooch	A copper alloy disc brooch was recorded with the PAS. Decoration included a double beaded rim and bust of crowned or helmeted figure in centre, with evidence of the iron pin on the rear, however, the catch plate missing.	Early medieval
MKE68428	Find spot	Early medieval silver coin	A last small cross type cut farthing, dated to Aethelred II.	Early medieval
MKE68629	Find spot	Early medieval copper alloy key (locking)	An early medieval copper alloy key was recorded within the PAS. No further information has been given.	Early medieval
MKE68662	Find spot	Early medieval copper alloy hooked tag	An early medieval copper alloy hooked tag was recorded within the PAS. No further information has been given.	Early medieval
MKE68688	Find spot	Early medieval copper alloy mount	An early medieval copper alloy mount was recorded within the PAS. No further information has been given.	Early medieval

Reference	Record Type	Name	Description	Period
MKE68689	Find spot	Early medieval copper alloy buckle	An early medieval copper alloy buckle was recorded within the PAS. No further information has been given.	Early medieval
MKE68766	Find spot	Early medieval silver coin	An early medieval silver coin was recorded within the PAS, dated to Edward the Confessor (1042-66).	Early medieval
MKE69133	Find spot	Early medieval copper alloy strap end	An early medieval copper alloy strap end was recorded within the PAS. No further information has been given.	Early medieval
TR 03 SE 106	Find spot	Anglo-Saxon silver penny, Newchurch	An Anglo-Saxon silver penny was recorded near to Newchurch. It is dated to the reign of Aethelred the Unready	Early medieval
TR 02 NE 111	Find spot	Anglo-Saxon silver penny, Blackmanstone, north Lymchurch	An Anglo-Saxon silver penny was recorded near to Blackmanstone, near Lymchurch.	Early medieval
TR 03 SE 125	Find spot	Carolingian silver denier, near Newchurch	A Carolingian silver denier was recorded near Newchurch. The coin is dated to AD 881-887.	Early medieval
MKE79156	Find spot	Early medieval silver coin	A complete silver early medieval penny of Aethelred II, 978 - 1016 AD, was recorded within the PAS.	Early medieval
MKE79158	Find spot	Lead alloy pendant	A complete early medieval cast lead alloy pendant was recorded within the PAS. This pendant was sub-rectangular with rounded corners, and a circular suspension hole drilled at one end.	Early medieval
MKE93463	Find spot	Early medieval silver hooked tag	An incomplete early medieval silver hooked tag was recorded within the PAS. Only the lower portion of the plate and the hook survive, with the upper portion of the plate and lobes missing due to old breaks. The object consists of a flat plate, probably once circular but now	Early medieval

Reference	Record Type	Name	Description	Period
			semi-circular due to the break across the approximate centre of the plate.	
MKE96611	Find spot	Early medieval silver coin	An early medieval silver penny of Aethelred II 'The Unready' (978-1016) was recorded within the PAS.	Early medieval
MKE96741	Find spot	Early medieval copper alloy strap end	An Early Medieval copper alloy strap end with a tapering shaft and a zoomorphic terminal. There are two rivet holes at the attachment end, one of which still contains a rivet; the other hole has been broken by an old break. This was recorded within the PAS.	Early medieval
MKE108057	Find spot	Early medieval silver coin	An early-medieval silver penny of Harthacnut's joint reign with Harold I (1035-37) was recorded within the PAS.	Early medieval
MKE108062	Find spot	Early medieval silver coin	A worn early medieval silver penny of Edward the Confessor (1042-1066) was recorded within the PAS.	Early medieval
MKE108341	Find spot	Early medieval silver coin	A late Early-Medieval silver cut halfpenny of Edward the Confessor (1042-1066) was recorded within the PAS.	Early medieval
MKE108390	Find spot	Early medieval copper alloy strap end	An incomplete copper-alloy Anglo-Saxon strap end was recorded within the PAS, dating to the 9th century. The strap end is sub-oval in shape with convex sides, tapering to a decorative zoomorphic terminal.	Early medieval
MKE108506	Find spot	Early medieval silver strap end	A complete late Anglo-Saxon cast silver strap-end. It is sub-rectangular in shape with convex sides, tapering to a decorative zoomorphic terminal. This find was recorded within the PAS.	Early medieval
MKE113645	Find spot	Early medieval silver coin	An early-medieval silver penny of Harold I (1035-40) was recorded within the PAS.	Early medieval

Reference	Record Type	Name	Description	Period
MKE120535	Find spot	Early medieval silver coin	A slight cracked silver early medieval penny of Cnut (1016-1035) was recorded within the PAS.	Early medieval
MKE120643	Find spot	Post-medieval copper alloy brooch	An incomplete copper-alloy ansate brooch of middle early-medieval date (c.700-860) was recorded within the PAS.	Early medieval
MKE120767	Find spot	Early medieval silver coin	A penny of Edward the Confessor (1042-1066) was recorded within the PAS.	Early medieval
MKE120768	Find spot	Early medieval silver coin	A cut halfpenny of Edward the Confessor (1042-1066) was recorded within the PAS.	Early medieval
MKE120803	Find spot	Early medieval silver coin	An early-medieval silver cut farthing (quarter penny) in the name of Cnut the Great (1016-1035), posthumous issue by Harthacnut (1035-42) that was recorded within the PAS.	Early medieval
TR 03 SE 36	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 22 sherds of early medieval pottery and 54 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 37	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 60 sherds of early medieval pottery and 165 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 38	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 13 sherds of early medieval pottery and 19 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 64	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 49 sherds of early medieval pottery and 177 sherds of medieval pottery was recorded.	Early medieval to medieval

Reference	Record Type	Name	Description	Period
TR 03 SE 40	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 11 sherds of early medieval pottery and 75 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 41	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 35 sherds of early medieval pottery and 25 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 42	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 40 sherds of early medieval pottery and 6 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 43	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 20 sherds of early medieval pottery and 47 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 44	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 18 sherds of early medieval pottery and 67 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SW 22	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 340 sherds of early medieval pottery and 588 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SW 23	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 20 sherds of early medieval pottery and 35 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 48	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 52 sherds of early medieval pottery and 31 sherds of medieval pottery was recorded.	Early medieval to medieval

Reference	Record Type	Name	Description	Period
TR 02 NE 138	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 124 sherds of early medieval pottery and 165 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 50	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 99 sherds of early medieval pottery and 62 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 51	Find spot	Early medieval and medieval pottery findspot	During fieldwalking, 480 sherds of early medieval pottery and 181 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 52	Find spot	Medieval pottery finds, Burmarsh Parish	During fieldwalking, 106 sherds of early medieval pottery and 19 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SE 53	Find spot	Medieval pottery finds, Burmarsh Parish	During fieldwalking, 41 sherds of early medieval pottery and 10 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 02 NE 49	Find spot	Medieval pottery findspot, Dymchurch	During fieldwalking, 19 sherds of early medieval pottery and 10 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 03 SW 24	Find spot	Early medieval and medieval pottery finds	During fieldwalking, 16 sherds of early medieval pottery and 15 sherds of medieval pottery was recorded.	Early medieval to medieval
TR 02 NE 112	Find spot	Chapel Field pottery and coin finds, Newchurch	Find spot of 11th century pottery and coinage from Chapel field, Newchurch parish.	Early medieval to medieval
TR 03 SE 109	Find spot	Broadwaters, Gammons Lane, pottery surface finds	Surface find spot of 10th-11th century pottery assemblage, Broadwaters, Gammons Lane, Newchurch.	Early medieval to medieval
MKE55788	Find spot	Early medieval copper alloy buckle	An unusual buckle, possibly of foreign origin, with a circular frame, a prominent projecting tongue and a tapering integral split plate and a pair of rivets. The	Early medieval to medieval

Reference	Record Type	Name	Description	Period
			remains of the pin are of iron. This was recorded within the PAS.	
MKE55789	Find spot	Early medieval copper alloy stirrup	A terminal from a stirrup of late Saxon date. The terminal, now very worn, is in the form of an animal head. The head has a pair of crests curling backwards from behind it and there appears to be a pair of curving strips ending in scrolls which curl backwards from the nose. This was recorded within the PAS.	Early medieval to medieval
MKE67641	Find spot	Early medieval silver hooked tag	An early medieval silver hooked tag was recorded within the PAS. No further information has been given.	Early medieval to medieval
MKE67812	Find spot	Early medieval copper alloy key (locking)	A partial key handle comprising of a V shape strip of metal decorated with incised ring and dot pattern was recorded within the PAS.	Early medieval to medieval
MKE67814	Find spot	Early medieval copper alloy strap fitting	A copper alloy strap fitting with no obvious design. Recorded within the PAS.	Early medieval to medieval
MKE67990	Find spot	Early medieval copper alloy harness mount	A copper-alloy mount comprising an oval shaped disk with rounded protrusion at the top, bottom and sides. There is a central raised boss with radiating incised lines in the form of a cross. Recorded within the PAS.	Early medieval to medieval
MKE68607	Find spot	Early medieval silver brooch	An early medieval brooch recorded within the PAS. The brooch is in the shape of an upright bird in profile, with large head and straight beak.	Early medieval to medieval
MKE68769	Find spot	Early medieval copper alloy stirrup	An early medieval copper alloy stirrup with a crudely executed incised decoration on front plate. Recorded within the PAS.	Early medieval to medieval

Reference	Record Type	Name	Description	Period
MKE68792	Find spot	Early medieval copper alloy harness	An early medieval copper alloy stirrup was recorded within the PAS.	Early medieval to medieval
MKE69132	Find spot	Early medieval copper alloy stirrup	An early medieval copper alloy stirrup was recorded within the PAS.	Early medieval to medieval
MKE69185	Find spot	Early medieval copper alloy mount	An early medieval copper alloy stirrup was recorded within the PAS. The stirrup dates to the 11th Century AD.	Early medieval to medieval
MKE69228	Find spot	Early medieval copper alloy harness fitting	"An early medieval (1000-1300) cast copper alloy harness fitting was recorded within the PAS. It has a central rectangular boss, and an incomplete loop with oval cross section extending from one edge. The opposing edge has a projecting bar terminating in a sub- lozenge loop with semi-circular knops at each angle."	Early medieval to medieval
MKE69454	Find spot	copper alloy stirrup	An early medieval, cast, copper alloy stirrup strap mount was recorded within the PAS. The mount is pentagonal in shape with small lobes either side at the base and towards the apex.	Early medieval to medieval
MKE69517	Find spot	copper alloy hooked tag	An early medieval copper alloy hooked tag was recorded within the PAS. It is made from sheet metal, and is triangular with two attachment holes, drilled from face. It is dated to between 700 - 1100.	Early medieval to medieval
MKE69520	Find spot	copper alloy strap fitting	An incomplete cast copper alloy strap was recorded within the PAS. It appears that once it was rectangular, with a cylindrical protrusion in the centre at one end.	Early medieval to medieval
MKE70154	Find spot	copper alloy stirrup	An incomplete cast copper alloy stirrup was recorded within the PAS. It is a zoomorphic terminal, possibly depicting a beast head, and is hollow and D-shaped in profile.	Early medieval to medieval

Reference	Record Type	Name	Description	Period
MKE79009	Find spot	copper alloy stirrup	A complete early medieval copper alloy stirrup-strap mount was recorded within the PAS. The mount is pear shape in plan with a circular attachment loop at the apex.	Early medieval to medieval
MKE79157	Find spot	copper alloy strap end	A complete cast copper alloy early medieval strap end recorded within the PAS. It is sub rectangular in shape with a rounded terminal end, and a squared attachment end.	Early medieval to medieval
MKE96502	Find spot	Early medieval copper alloy scabbard	A fragment of an early medieval a cast copper alloy openwork scabbard chape of 10th-11th century date was recorded within the PAS. The moulded fragment depicts a knight on horseback wearing a pointed helmet and holding a kite-shaped shield.	Early medieval to medieval
MKE96820	Find spot	Early medieval silver hooked tag	An incomplete early medieval silver hooked tag recorded within the PAS. The tag has a flat, circular plate from which extends the complete (but cracked) integral hook, which tapers and curves back to the reverse of the object.	Early medieval to medieval
MKE96835	Find spot	Early medieval silver unidentified object	A gilded silver fragment of middle Anglo-Saxon date, perhaps a pin head, was recorded within the PAS. It is decorated on both faces with differing motifs but gilded on only one.	Early medieval to medieval
MKE108251	Find spot	Early medieval copper alloy bridle bit	An incomplete early medieval Anglo-Scandinavian cheek piece, dating to the 11th century, was recorded within the PAS.	Early medieval to medieval
MKE108457	Find spot	Early medieval copper alloy stirrup	An 11th century late Saxon copper-alloy stirrup-strap mount. The Mount is sub-triangular in shape with zoomorphic decoration in high relief.	Early medieval to medieval

Reference	Record Type	Name	Description	Period
MKE113662	Find spot	Early medieval copper alloy scabbard	An incomplete and fragmented cast copper-alloy openwork scabbard chape, likely of 11th to 12th century in date.	Early medieval to medieval
MKE120761	Find spot	Early medieval copper alloy finger ring	A complete though bent gilt copper-alloy early medieval to medieval finger-ring, dated to between 800-1100AD.	Early medieval to medieval
MKE120798	Find spot	Early medieval copper alloy stirrup	An incomplete fragment of late early medieval (Anglo-Scandinavian) iron stirrup including a copper-alloy zoomorphic stirrup terminal probably of 11th century.	Early medieval to medieval
MKE120801	Find spot	Early medieval copper alloy dress hook	An incomplete cast copper-alloy early medieval hooked tag dating to the period 800-1150.	Early medieval to medieval
TR 03 SE 28	Find spot	Medieval pottery found near Burmarsh	Field walking surveys recorded finds that included 12th and 13th century local coarsewares and some late medieval pink East Wealden ware. Other 12th-13th century coarseware sherds were found nearby.	Medieval
TR 02 NE 40	Find spot	Medieval pottery findspot, near Dymchurch	Early and late medieval pottery sherds were found; however, the actual date and location are unknown.	Medieval
TR 03 SE 46	Find spot	Medieval pottery finds	31 pieces of medieval pottery found by field walking.	Medieval
TR 03 SE 12	Monument	Possible Site of Orgarswick deserted Medieval village	A 10th Century harness fitting was found near church road Eastbridge.	Medieval
TR 03 SE 13	Monument	Eastbridge, possible deserted Medieval village	Eastbridge Deserted Medieval Village (DMV) had twenty-one people in the 1801 census. Eastbridge Church (TR 03 SE 4) is on a slight mound in Romney Marsh. No evidence of a DMV was seen in the vicinity.	Medieval

Reference	Record Type	Name	Description	Period
TR 03 SE 99	Monument	Bellfield, Bonnington, earthworks and field system	A field of some 4.5 hectares has been transversed by a series of earthwork ditches which form an irregular grid like pattern. These vary in depth from between 0.2 to 1.0m and divide the plot into 9 smaller areas of between 01 and 0.4 hectares. Ditches connect to a pond in the western half of the field.	Medieval
TR 03 SE 103	Find spot	Surface find of a medieval flesh hook	A medieval Flesh hook was picked up from a ploughed field. The socketed hook, 21cm long, has three curled prongs at its tip at right angles to the shaft. A pin, for holding the socket on to a wooden handle, is still in place near the base of the socket which is 2.5cm in diameter.	Medieval
TR 03 SE 104	Find spot	Surface find of 12th-13th century pottery, Newchurch	A large spread of medieval sherds, including Pink East Wealden ware, a few sherds of Rye ware and possibly some Tyler Hill ware were found on the surface.	Medieval
MKE55581	Find spot	Medieval copper alloy seal matrix	A copper alloy circular seal matrix with sexfoil handle and round suspension loop. The Copper alloy circular seal matrix with sexfoil handle and round suspension loop. Central motif shows a squirrel.	Medieval
MKE55975	Find spot	Medieval silver coin	A medieval silver long cross penny of Edward I.	Medieval
MKE56440	Find spot	Copper alloy key (locking)	A complete copper alloy medieval casket key. It has a circular bow, pipe stem with a flattened oval cross-section and simple bit.	Medieval
MKE67599	Find spot	Medieval lead seal	A lead seal with eight-pointed star, four of the lines of the star have horizontal lines through the top of them, resulting in a cross. There is an inscription that runs around outer edge. It is good quality seal matrix has obviously been used.	Medieval

Reference	Record Type	Name	Description	Period
MKE67601	Find spot	Medieval copper alloy buckle	A lever type buckle made of cast copper alloy. It is a double loop rectangular buckle with drilled frame for separate spindle, and notched front with transverse groove. It has flanged sides, a fragmented locking arm, and the pin partially missing.	Medieval
MKE67767	Find spot	Medieval copper alloy seal matrix	A copper alloy circular seal matrix, no handle, with pierced reverse lug. The reverse side has a bevelled edge. The central motif shows a rampant lion.	Medieval
MKE67785	Find spot	Medieval copper alloy knife	A medieval knife handle. Cast in copper alloy, the handle is sub-rectangular in shape, tapering towards the blade end. The blade is missing and there is a trace of iron where the blade was attached.	Medieval
MKE67895	Find spot	Medieval copper alloy key (locking)	A copper alloy casket key, with floriate bow.	Medieval
MKE67995	Find spot	Medieval iron brooch	Iron ring brooch, complete with iron pin, with loop around ring.	Medieval
MKE68588	Find spot	Medieval copper alloy buckle	A Tudor period buckle. No further information.	Medieval
MKE68589	Find spot	Medieval copper alloy button	A medieval period button. No further information provided.	Medieval
MKE68590	Find spot	Medieval copper alloy button	A medieval period button. No further information provided.	Medieval
MKE68633	Find spot	Medieval copper alloy pot	A medieval period pot leg. No further information provided.	Medieval
MKE68635	Find spot	Medieval silver coin	Edward I Penny.	Medieval

Reference	Record Type	Name	Description	Period
MKE68636	Find spot	Medieval copper alloy brooch	Medieval Ring brooch.	Medieval
MKE68663	Find spot	Medieval silver coin	Edward III Half Groat.	Medieval
MKE68687	Find spot	Medieval copper alloy button	A medieval period button. No further information provided.	Medieval
MKE68768	Find spot	Medieval copper alloy harness	Part of a copper alloy Medieval harness pendant, comprising a convex disc with integral suspension loop.	Medieval
MKE68770	Find spot	Medieval copper alloy seal matrix	Copper alloy seal matrix. No further information provided.	Medieval
MKE68785	Find spot	Medieval copper alloy strap end	Copper alloy strap-end. No further information provided.	Medieval
MKE68786	Find spot	Medieval copper alloy buckle	Cast copper alloy ring buckle. No further information provided.	Medieval
MKE68787	Find spot	Medieval copper alloy thimble	Copper alloy thimble. No further information provided.	Medieval
MKE68791	Find spot	Medieval copper alloy brooch	Cast copper alloy ring brooch. No further information provided.	Medieval
MKE68793	Find spot	Medieval silver coin	Medieval silver coin: cut half Tealby penny of Henry II.	Medieval
MKE68794	Find spot	Medieval copper alloy jetton	Medieval copper alloy jetton. No further information provided.	Medieval
MKE68795	Find spot	Medieval copper alloy pendant	Copper alloy pendant. No further information provided.	Medieval
MKE68965	Find spot	Medieval silver coin	Medieval silver coin: penny of Stephen, square flan.	Medieval

Reference	Record Type	Name	Description	Period
MKE69162	Find spot	Medieval copper alloy strap end	A Medieval copper alloy composite strap end dating to the 14th century. The front and back plates of the strap end are trapezoidal in shape and are plain.	Medieval
MKE69163	Find spot	Medieval copper alloy mount	A Medieval copper alloy rectangular mount dating to the 14th century. The mount is flat with straight edges and has two separate rivets in the centre of the front face, both of which are still present.	Medieval
MKE69166	Find spot	Medieval silver coin	A silver penny of Edward I (1272-1307).	Medieval
MKE69174	Find spot	Medieval silver coin	An Irish Edward IV (1461-83) penny perhaps struck at Drogheda, which can therefore be dated to 1473-8.	Medieval
MKE69220	Find spot	Medieval silver brooch	A 13th-14th century small medieval silver annular brooch, made of twisted square wire with a row of pellets within each twist, and a constriction for the pin. The pin is intact and looped around the constriction, with a collar at the junction of the loop and the shaft of the pin.	Medieval
MKE69226	Find spot	Medieval copper alloy unidentified object	A 13th century cast copper alloy terminal from a larger, unidentified object. Formed of a cylindrical bar with one angled finial in the form of an animal head. The surface is corroded, however there is a trace of moulded decoration and gilding surviving.	Medieval
MKE69227	Find spot	Medieval copper alloy thimble	A 14th century copper alloy thimble with a spiral of drilled pits and engraved circumferential line at its base.	Medieval
MKE69229	Find spot	Medieval silver coin	Medieval silver cut farthing of Henry III (1216-1272).	Medieval
MKE69231	Find spot	Medieval silver coin	Medieval silver penny of Edward III - Henry VII.	Medieval

Reference	Record Type	Name	Description	Period
MKE69246	Find spot	Medieval copper alloy horse pendant suspension mount	An incomplete medieval cast copper alloy suspension harness mount of fourteenth century date. The mount consists of two sub-rectangular loops with a moulded extension at one end.	Medieval
MKE69424	Find spot	Silver coin	A medieval silver long cross penny, of Edward I 1272 - 1307 AD. The reverse has a long cross dividing the legend, with three pellets in each quarter.	Medieval
MKE69425	Find spot	Silver coin	A medieval silver long cross penny, of Edward I 1272 - 1307 AD. Reverse has a long cross dividing the legend. The obverse has a crowned bust forward, with large lettering.	Medieval
MKE69426	Find spot	Silver coin	A medieval silver groat, of Edward III 1327 - 1377 AD. Reverse has a long cross dividing two legends with three pellets in each quarter.	Medieval
MKE69431	Find spot	Silver coin	A silver cut long cross penny, of Henry III 1216 - 1272 AD. The reverse has a long cross voided, with three pellets in each quarter. The legend is illegible.	Medieval
MKE69515	Find spot	Silver coin	A silver penny of Henry II, 'Tealby' type (cross and crosslets). Moneyer and mint illegible. Dated to 1158-1180.	Medieval
c	Find spot	Silver coin	A medieval silver short crosscut half penny, possibly of Henry II.	Medieval
MKE69521	Find spot	Silver coin	A complete silver long cross penny of Edward I 1272 - 1307 AD.	Medieval
TR 03 SE 102	Find spot	Anglo-Norman silver penny, Newchurch	Anglo-Norman silver penny, Newchurch. No further information provided.	Medieval

Reference	Record Type	Name	Description	Period
MKE80024	Find spot	Medieval copper alloy mount	An incomplete cast copper alloy medieval mount. It was most likely cruciform in shape when whole, but only three arms survive.	Medieval
MKE80025	Find spot	Medieval copper alloy key (locking)	A complete cast copper alloy medieval key, probably dating to 14th-15th century.	Medieval
MKE80046	Find spot	Medieval silver finger ring	A small fragment of the hoop of a medieval silver-gilt finger-ring.	Medieval
TR 02 NE 33	Find spot	Medieval pottery and evidence of occupation site, Near Dymchurch	An occupation site with medieval pottery identified by field walking in 1991. No further information provided.	Medieval
TR 02 NE 34	Find spot	Medieval pottery findspot near Dymchurch	Early medieval pottery finds (possibly indicative of an occupation site) identified by field walking.	Medieval
TR 02 NE 35	Find spot	Medieval pottery and knife findspot, near Dymchurch	Medieval pottery and a knife with a bronze handle were found by local farmer.	Medieval
MKE96498	Find spot	Medieval silver coin	A medieval silver long cross penny of Edward I.	Medieval
MKE96499	Find spot	Medieval silver coin	A medieval silver long cross penny of Edward I.	Medieval
MKE96500	Find spot	Medieval silver coin	A medieval silver long cross penny of Edward I.	Medieval
MKE96534	Find spot	Medieval silver coin	A complete medieval silver penny of William I.	Medieval
MKE96535	Find spot	Post-medieval harness pendant	An incomplete and corroded medieval cast copper-alloy gilded harness pendant (1250-1400). The sexfoil pendant has a hexagonal central body with six trefoil shaped lobes projecting from the sides.	Medieval

Reference	Record Type	Name	Description	Period
MKE96540	Find spot	Post-medieval silver coin	A silver colonial Spanish two real coin of Charles and Johanna AD 1506-1516.	Medieval
MKE96542	Find spot	Medieval silver coin	A medieval silver Farthing of Edward II.	Medieval
MKE96549	Find spot	Medieval copper alloy buckle	A medieval cast copper alloy annular buckle. The copper alloy pin is still in place. It is dated to between 1250-1450.	Medieval
MKE96581	Find spot	Medieval silver brooch	A complete medieval silver annular brooch, likely dating to AD 1200 - 1400. The frame is formed of a thick wire of circular cross-section, and it has been broken as a result of old damage.	Medieval
MKE96609	Find spot	Copper alloy jetton	A copper-alloy medieval jetton. The jetton is French and probably dates to the 15th century. It bears the French shield with three fleur des lis on the obverse and a straight long cross with cross four fleur des lis in the angles on the reverse.	Medieval
MKE96610	Find spot	Silver coin	A medieval voided long-cross penny of Henry III (1216-72).	Medieval
MKE96664	Find spot	Silver coin	A complete, but slightly bent, medieval silver penny of William I (AD 1066 - 1087).	Medieval
MKE96740	Find spot	Silver coin	A medieval silver penny of William I.	Medieval
MKE96821	Find spot	Silver coin	A medieval silver penny of William I.	Medieval
MKE96828	Find spot	Lead bulla	A medieval lead alloy bulla. The bulla is circular in plan with designs on both sides. The bulla is circular in plan with designs on both sides. One side of the bulla has an image of a figure holding a staff surrounded by a legend. The reverse also has a figure holding a crook and a book.	Medieval

Reference	Record Type	Name	Description	Period
MKE96829	Find spot	Silver brooch	A silver gilt medieval pin from a brooch dating from about 1250 - 1350 AD. The pin is rectangular in section with a bevelled upper face and tapers to the point.	Medieval
MKE107997	Find spot	Medieval silver coin	A worn and warped silver medieval voided long-cross cut halfpenny of Henry III (1216-1272).	Medieval
MKE107998	Find spot	Medieval silver coin	A slightly worn and abraded double struck medieval silver halfpenny of Edward III (1327 - 1377).	Medieval
MKE108000	Find spot	Medieval copper alloy buckle	An incomplete medieval copper-alloy single looped buckle with a small integral plate, of probable late medieval date 1250-1400.	Medieval
MKE108003	Find spot	Medieval copper alloy brooch	An incomplete medieval annular, copper alloy annular brooch, dating to the 13th or 14th century AD.	Medieval
MKE108007	Find spot	Medieval silver coin	A heavily worn medieval silver penny of possibly of Richard II (1377-1399).	Medieval
MKE108008	Find spot	Medieval silver coin	A worn and incomplete medieval silver cut short-cross halfpenny probably of John (1199-1216).	Medieval
MKE108254	Find spot	Medieval lead seal matrix	An unfinished and uninscribed cast lead medieval flat seal matrix, dating to 1200-1350. The seal matrix is flat and circular in shape although slightly warped and chipped around the circumference.	Medieval
MKE108391	Find spot	Medieval copper alloy buckle	An incomplete copper-alloy medieval asymmetrical double loop buckle with buckleplate, 1200-1300. The buckle consists of two loops, the outer loop is D-shaped, and the inner one is rectangular.	Medieval
MKE112247	Find spot	Early medieval silver coin	A silver early medieval cut half penny of Harold II dating to the year 1066.	Medieval

Reference	Record Type	Name	Description	Period
MKE113580	Find spot	Medieval copper alloy strap end	A copper alloy front plate from a decorative composite strap end (forked spacer type) of 14th-15th century date.	Medieval
MKE113642	Find spot	Medieval silver coin	A worn medieval silver short crosscut halfpenny of Henry II (1154-1189).	Medieval
MKE113669	Find spot	Medieval silver coin	A slightly worn silver cut halfpenny of Henry I (1100-135).	Medieval
MKE113693	Find spot	Medieval copper alloy mount	A sheet metal copper-alloy rectangular mount with a decorative black letter 'I', dating to the period 1350-1450.	Medieval
MKE113742	Find spot	Medieval copper alloy mount	A worn copper alloy heraldic mount, dating to the medieval period, probably dating to 1247-1377. The mount is shield-shaped, with a square top tapering to a point below, with slightly convex sides.	Medieval
MKE113756	Find spot	Medieval silver coin	A worn silver penny of King Stephen (AD 1135 - 1154).	Medieval
MKE113758	Find spot	Medieval silver coin	A cut halfpenny of William II (1087-1100).	Medieval
MKE120407	Find spot	Medieval lead pilgrim badge	An incomplete lead alloy pilgrim badge of the Head Reliquary of Thomas Becket of medieval date (1300-1400).	Medieval
MKE120409	Find spot	Medieval lead pilgrim badge	An incomplete lead alloy pilgrim badge of the Head Reliquary of Thomas Becket of medieval date (1300-1400).	Medieval
MKE120412	Find spot	Medieval lead ampulla	A complete cast lead ampulla of medieval date (1200-1500). The object consists of a moulded, scallop-shaped hollow container, and a rectangular neck, with squashed and broken mouth.	Medieval

Reference	Record Type	Name	Description	Period
MKE120414	Find spot	Medieval lead ampulla	A complete cast lead ampulla of medieval date (c.1200-1500). The object consists of a moulded, scallop-shaped hollow container, and a trapezoid neck, with oval mouth.	Medieval
MKE120493	Find spot	Medieval copper alloy strap fitting	A complete copper alloy medieval strap-slide or fitting of double-looped form with figurative decoration, possibly crowned king. Believed to be 14th century in date.	Medieval
MKE120568	Find spot	Medieval Lead seal matrix	A very worn/abraded and incomplete flat lead non-heraldic personal seal matrix of medieval date; 1200-1300.	Medieval
MKE120569	Find spot	Medieval copper alloy seal matrix	A cast and engraved Medieval copper-alloy heraldic pointed oval seal matrix. Dated to between 1200-1300.	Medieval
MKE120571	Find spot	Medieval Silver coin	A slightly clipped and double struck silver halfgroat of Edward III.	Medieval
MKE120572	Find spot	Medieval Silver coin	A medieval silver penny of Edward I (1272-1307).	Medieval
MKE120663	Find spot	Medieval silver finger ring	A complete gilt silver finger ring (iconographic) of medieval date (1300-1500).	Medieval
MKE120720	Find spot	Medieval copper alloy stud	A medieval cast copper alloy enamelled heraldic stud. The plate is lozenge shaped and depicts a lion or leopard, left, with tail upraised over its back. The animal is picked out in red enamel and sits within a border or field of blue enamel; the retained metal high spots are likely to have been gilded. The reverse has an integrally cast fixing lug. It has been dated to between the 13th to 14th centuries.	Medieval
MKE120726	Find spot	Medieval silver coin	A clipped and slightly bent medieval silver halfgroat of Edward IV (first reign, AD 1461-1470),	Medieval
MKE120773	Find spot	Medieval copper alloy strap end	An incomplete, copper alloy, composite three-piece strap end dating to the medieval Period (1250-1450).	Medieval

Reference	Record Type	Name	Description	Period
MKE120775	Find spot	Medieval copper alloy key (locking)	A worn, complete, cast, copper-alloy, casket key dating to the Medieval period, (1150-1400).	Medieval
MKE120777	Find spot	Medieval copper alloy strap fitting	A cast, copper-alloy strap fitting/link probably dating to the late medieval period, approximately to 1350-1450.	Medieval
MKE120800	Find spot	Medieval lead seal matrix	A cast and engraved medieval lead pointed oval seal matrix. Dated to 1200-1350.	Medieval
MKE120805	Find spot	Medieval silver coin	A very worn, medieval cut silver halfpenny of Henry I (AD 1100-1135).	Medieval
MKE120850	Find spot	Medieval copper alloy mount	A medieval copper-alloy barrel-shaped bar mount with four transverse grooves and two rivets.	Medieval
MKE120851	Find spot	Medieval copper alloy strap end	A composite medieval copper-alloy strap end with a rounded terminal and spacer, two tapering plates and two rivets.	Medieval
TR 02 NE 32	Monument	Moat, Marshall's Bridge, Burmarsh, Shepway	The probable medieval moat previously recorded here as part of its Scheduled Monument Notification is visible on aerial photographs of 1946 and 2006 as an extant earthwork. This feature has been mapped from aerial photographs as part of the South East RCZAS NMP project. Also identified as NHLE 1017659.	Medieval
TR 03 SE 145	Monument	St Peter & St Paul's Graveyard - The Street, Newchurch	The graveyard associated and probably the same age as the church, first shown on the OS 1st Edition map.	Medieval
TR 03 SW 15	Monument	Medieval field system, Newchurch Parish	The field is divided into two irregular plots by a substantial earthwork ditch, smaller ditches subdivide the east half into small closes. These are remnants of the medieval field system. From the small size of the plots these are	Medieval to post-medieval

Reference	Record Type	Name	Description	Period
			likely to date from the early medieval period. The uneven appearance of the ground occurs at the site of a past barn.	
TR 02 NE 41	Find spot	Medieval and pm pottery concentration, Dymchurch	A concentration of early medieval and medieval pottery sherds with one sherd of Roman pottery.	Medieval to post-medieval
TR 03 SE 56	Find spot	Medieval pottery and other finds, Tame Lane, Burmarsh Parish	60 early medieval and 165 medieval pottery sherds found by fieldwalking.	Medieval to post-medieval
TR 02 NE 3	Monument	Blackmanstone, Blackmanstone Bridge, New Church, Shepway	Blackmanstone Church, dedication unknown, fell into decay in the early 16th century and has since disappeared. The parish is now incorporated into Newchurch and Beresford lists Blackmanstone as a lost village.	Medieval to post-medieval
TR 03 SE 5	Monument	Orgarswick Church (Site of)	The Church of Orgarswick, 2.4km north-west of Dymchurch, has disappeared, only a few scattered stones marking the site. Orgarswick was so poor that it was exempted from taxation in 1384. The church fell into decay in the first half of the 16th century. The footings of this church can be traced in the turf upon a low mound. Over the site of the altar, a concrete cross upon a stone base was erected in 1938, as stated upon a tablet. No trace of DMV (TR 03 SE 12) was observed in the vicinity.	Medieval to post-medieval
TR 02 NE 101	Monument	Sheephouse field earthworks	Earthworks and a field system from Sheephouse field have been identified near to Dymchurch, Romney Marsh. These have been found within a 5-hectare pasture field 1km Dymchurch, south of the Edenbridge Road. These are broadly rectangular earthworks that divide this field up into a number of smaller enclosures. Two of these divide	Medieval to post-medieval

Reference	Record Type	Name	Description	Period
			the field, north to south into roughly equal rectangular areas. An elevated area with significant quantities of tile and rocks suggests the presence of small buildings, as do a number of small depressions which may also indicate robbing of material for building purposes.	
MKE67585	Find spot	Medieval copper alloy dress hook	A sub-circular dress hook with a rectangular strap bar and a bulky hook. There is a pellet design surrounding the circular plate, with elaborate six-armed floral motif in centre.	Medieval to post-medieval
MKE67596	Find spot	Medieval copper alloy brooch	An annular frame brooch with an inscription. The remains of zigzags are around the edge and there is an inscription on the inner part of the circle. There are traces of gilt on the piece as well.	Medieval to post-medieval
MKE67602	Find spot	Medieval copper alloy knife	A knife terminal with a cross-hatch design. No further information has been provided.	Medieval to post-medieval
MKE67815	Find spot	Medieval lead seal matrix	A seal matrix with inscription surrounding a star comprised of eight lines.	Medieval to post-medieval
MKE67896	Find spot	Medieval copper alloy pin	A copper alloy dress pin, with a flattened bi-conical head. The shaft of the pin is bent about halfway along its length at an angle of approximately 45 degrees.	Medieval to post-medieval
MKE68782	Find spot	Post-medieval silver belt	"A silver belt mount in the form of twining foliate stems with projecting knops at the centre, central hole worn from use with buckle pins or laces; two studs on reverse, one with original silver element which would have held textile or leather belt to the stud. The form suggests an early 16th century date.	Medieval to post-medieval

Reference	Record Type	Name	Description	Period
MKE68783	Find spot	Post-medieval lead token	A post-medieval lead token. No further information provided.	Medieval to post-medieval
MKE68784	Find spot	Medieval copper alloy unidentified object	A thin sheet of copper alloy with incised decoration was found. No further information provided.	Medieval to post-medieval
MKE68789	Find spot	Post-medieval copper alloy buckle	A copper alloy double-looped buckle. No further information provided.	Medieval to post-medieval
MKE68790	Find spot	Post-medieval copper alloy button	Copper alloy button. No further information provided.	Medieval to post-medieval
MKE68796	Find spot	Post-medieval copper alloy buckle	A copper alloy double-looped buckle. No further information provided.	Medieval to post-medieval
MKE69212	Find spot	Medieval copper alloy weight	A late Medieval cast copper alloy circular trade weight was found. The weight is incised with two concentric rings around the edge, with two further rings closer to dot in the centre, probably having been turned on a lathe.	Medieval to post-medieval
MKE69232	Find spot	Medieval copper alloy hooked tag	A complete cast copper alloy hooked tag, with a motif reminiscent of Ionic column capital.	Medieval to post-medieval
MKE69518	Find spot	copper alloy hooked tag	A post-medieval cast copper alloy dress hook. The dress hook is made of a single piece of cast copper alloy.	Medieval to post-medieval
MKE69519	Find spot	copper alloy button	A post-medieval complete cast copper alloy button, with a rectangular shrank drilled.	Medieval to post-medieval
MKE69522	Find spot	copper alloy furniture fitting	A complete cast copper alloy post-medieval furniture handle. It is trapezoidal with a rectangular cross-section. There are two integral projections at the end of each arm which is where it would have secured into the fitting on the piece of furniture.	Medieval to post-medieval

Reference	Record Type	Name	Description	Period
MKE69523	Find spot	copper alloy mount	A complete cast copper alloy post-medieval mount. It is openwork quatrefoil with integrally cast shank on the reverse. The centre of the mount has a six-petaled flower.	Medieval to post-medieval
MKE69524	Find spot	copper alloy hooked tag	A cast copper-alloy hooked clothing fastener or strap fitting, of post-medieval date. It is cast, with a flattened sub-rectangular cross-section. It is sub triangular in shape, with an integral hook at one end that hooks round to the reverse of the object. There are two circular rivet holes in the centre, with iron corrosion around on both sides.	Medieval to post-medieval
MKE79008	Find spot	copper alloy dress pin	A complete post-medieval copper alloy dress pin dated to between 1500-1600.	Medieval to post-medieval
MKE96536	Find spot	Medieval copper alloy finger ring	A complete late medieval or early post-medieval copper alloy signet ring. The ring has a oval bezel and a large circular hoop.	Medieval to post-medieval
MKE107999	Find spot	Post-medieval lead token	A worn lead unifaced token of the post-medieval to early modern period, dating to between 1500 -1850. The token is roughly circular and uniface (with decoration on one side).	Medieval to post-medieval
MKE115564	Monument	Possible medieval feature, Chapel Farm, Burmarsh	A large enclosure has been reported at Chapel Farm, Burmarsh. Its nature and extent (and even existence) are unknown but there is a suggestion in 1946/7 aerial photographs that there may be cropmarks in the field.	Medieval to post-medieval
MKE120802	Find spot	Medieval copper alloy button	A complete cast copper-alloy late medieval to post-medieval button, (1475-1600). The button is biconvex and hollow, with a central boss and ovoid openwork decoration on the front and oval openwork decoration on the back.	Medieval to post-medieval

Reference	Record Type	Name	Description	Period
MKE120849	Find spot	Medieval copper alloy chafing dish	A cast copper alloy handle attachment lug from a chafing dish of late medieval or post-medieval date (1400-1600). The lug has a complete loop with bevelled edges, an integral rivet and splayed collar.	Medieval to post-medieval
TR 03 NE 268	Monument	Cropmark and earthwork remains of probable medieval or post-medieval field boundary ditches	Cropmark and earthwork remains of probable medieval or post medieval field boundary ditches visible on aerial photographs in low-lying land east of the Great Bilsington Sewer between Gammon's Farm and Limberlost Farm. Traces of cultivation marks, possibly ridge and furrow can also be seen.	Medieval to Modern
TR 02 NE 42	Find spot	Early post-medieval pottery concentration, Dymchurch	Early post-medieval pottery was recorded; however, the actual location, date and pottery type are unknown.	Post-medieval
TR 02 NE 43	Find spot	Post-medieval pottery concentration Dymchurch	Concentrations of early post-medieval and late post-medieval pottery were located here, along with a sherd of Romano-British pottery.	Post-medieval
TR 02 NE 44	Find spot	Early post-medieval pottery, Dymchurch	Early post-medieval pottery was recorded; however, the actual location, date and pottery type are unknown.	Post-medieval
TR 02 NE 55	Monument	Sheepfold and dip near Marshall's Bridge	A brick-built sheep wash of 19th century date adjacent to brick shepards hut. It has a stepped entrance passage and circular chamber set into drainage channel.	Post-medieval
TR 02 NE 87	Monument	Former site of Sheep House at TR 076 295	The site of a Shepherd's Hut with an adjoining stable (or sheep) building. This was built in 1796, but was damaged in 1987 hurricane, since burnt and now ruinous.	Post-medieval
TR 03 SW 87	Monument	The site of a former Shepherd's hut, Bilsington parish	One of 3 Shepherd's huts located in the parish of Bilsington noted on the Romney Marsh Research Gazetteer 2010.	Post-medieval

Reference	Record Type	Name	Description	Period
TR 03 SW 88	Monument	The site of a former Shepherd's hut, Bilsington parish	One of 3 Shepherd's huts located in the parish of Bilsington noted on the Romney Marsh Research Gazetteer 2010.	Post-medieval
TR 03 SW 89	Monument	The site of a former Shepherd's hut, Bilsington parish	One of 3 Shepherd's huts located in the parish of Bilsington noted on the Romney Marsh Research Gazetteer 2010.	Post-medieval
TR 03 SE 101	Monument	The site of a former shepherd's hut, Newchurch parish	The site of a former shepherd's hut, dating to the 19th century recorded within the Newchurch parish.	Post-medieval
TR 03 SW 98	Monument	Site of a former shepherd's hut, Newchurch parish	The site of a former shepherd's hut, dating to the 19th century recorded within the Newchurch parish.	Post-medieval
TR 02 NE 114	Monument	Site of shepherd's hut	Site of Shepherds hut. No further information provided.	Post-medieval
TR 03 SE 142	Monument	Site of shepherd's hut	Site of Shepherds hut. No further information provided.	Post-medieval
TR 03 SE 143	Building	Newbarn	18th Century house. No further information has been provided	Post-medieval
MKE67594	Find spot	Post-medieval copper alloy seal matrix	A complete bronze seal matrix with lion striding left. The seal is of John, son of Nichol Jordon.	Post-medieval
MKE67595	Find spot	Post-medieval copper alloy sword	An incomplete thin plate metal sword chape. As decoration along the shaft there are two raised horizontal lines.	Post-medieval
MKE67598	Find spot	Post-medieval copper alloy seal matrix	A small copper alloy seal matrix that is complete. On the seal, there is an image of curled up beast surrounded by abstract decoration with no inscription.	Post-medieval

Reference	Record Type	Name	Description	Period
MKE67600	Find spot	Post-medieval gem intaglio	A Georgian Intaglio with only the stone surviving. The stone is blue/white in colour.	Post-medieval
MKE67795	Find spot	Post-medieval copper alloy jetton	A post-medieval copper alloy jetton with no further description given.	Post-medieval
MKE67797	Find spot	Post-medieval lead token	A lead token with initials WL.	Post-medieval
MKE67799	Find spot	Post-medieval copper alloy coin	Copper alloy coin dated to the post-medieval period. No further information.	Post-medieval
MKE68630	Find spot	Post medieval silver coin	William III Sixpence.	Post-medieval
MKE68631	Find spot	Post medieval copper alloy coin	Charles II Farthing.	Post-medieval
MKE68632	Find spot	Post-medieval copper alloy coin	Charles I Farthing.	Post-medieval
MKE68767	Find spot	Post-medieval silver coin	Post-medieval silver coin; half groat of Elizabeth I.	Post-medieval
MKE68788	Find spot	Modern copper alloy figurine	A copper alloy figurine of a dog. Probably of 19th century date.	Post-medieval
MKE68797	Find spot	Post-medieval copper alloy dagger	Cast copper alloy dagger chape. No further information.	Post-medieval
MKE69164	Find spot	Post-medieval copper alloy mount	A post-medieval copper alloy mount with integral rivets. The mount is formed of an open work cordate or heart shaped frame which is rectangular in section.	Post-medieval

Reference	Record Type	Name	Description	Period
MKE69247	Find spot	Post-medieval copper alloy mount	A post-medieval cast copper alloy incomplete mount of late 16th or early 17th century. The mount a flat rectangle in cross section and is only decorated on one side: the reverse being plain.	Post-medieval
MKE69248	Find spot	Post-medieval copper alloy mount	A post-medieval cast copper alloy mount in the form of an acorn, 17th century in date. The mount is slightly convex at the front and concave at the rear. At the front the seed is plain and has a small, raised knop at the apex.	Post-medieval
MKE69249	Find spot	Post-medieval flint gunflint	A post-medieval gun flint from a flintlock musket. The flint is roughly rectangular in shape and has been knapped to create sloped edges.	Post-medieval
MKE69428	Find spot	Silver coin	A silver penny of Elizabeth I, 1575 AD. The reverse is a square shield on a long cross dividing the legend, with '1575' above.	Post-medieval
MKE88198	Building	Outfarm north east of Gribble House	An outfarm or field barn group consisting of two detached buildings.	Post-medieval
MKE88202	Building	Outfarm east north east of Hans Farm	An outfarm with a loose courtyard plan with buildings to two sides of the yard.	Post-medieval
MKE88204	Building	Wey Street Farm	A dispersed plan farmstead.	Post-medieval
MKE88205	Building	Langdon Farm (Langden)	A regular courtyard farmstead with buildings to four sides of the yard incorporating a L-plan element.	Post-medieval
MKE88206	Building	Millbank Farm	A dispersed multiyard plan farmstead.	Post-medieval
MKE88245	Building	Outfarm south south west of Hills Farm	An outfarm with a regular U-plan.	Post-medieval

Reference	Record Type	Name	Description	Period
MKE88246	Building	Wills Farm	A loose courtyard origin farmstead with buildings to three sides of the yard including an L-plan element.	Post-medieval
MKE88247	Building	Outfarm north north east of Wills Farm	An outfarm with a regular L-plan range.	Post-medieval
MKE88248	Building	Pear Tree Farm	A regular multiyard farmstead.	Post-medieval
MKE88250	Building	Honeywood Farm (Honywood Farm)	A loose courtyard origin farmstead with buildings to three sides of the yard including an L-plan element.	Post-medieval
MKE88251	Building	Oak Farm	An L-plan (house attached) farmstead.	Post-medieval
MKE88252	Building	Outfarm west of Oak Farm	A field barn with no associated yard.	Post-medieval
MKE88253	Building	Brooker Farm (Brooker's Farm)	A regular courtyard farmstead with buildings to four sides of the yard incorporating an L-plan element.	Post-medieval
MKE88254	Building	Toll Farm	A regular courtyard farmstead with buildings to three sides of the yard incorporating an L-plan element.	Post-medieval
MKE88255	Building	Outfarm north east of Brooker Farm	An outfarm with a loose courtyard plan with buildings to two sides of the yard and a secondary yard.	Post-medieval
MKE88256	Building	Norwood Farm	A regular multiyard farmstead.	Post-medieval
MKE88257	Building	Outfarm north west of Norwood Farm	An outfarm or field barn group consisting of a loose cluster of three buildings.	Post-medieval
MKE88294	Building	New Barn Farm	A loose courtyard plan farmstead with buildings to two sides of the yard.	Post-medieval
MKE88295	Building	Frostland Farm	A regular L-plan farmstead.	Post-medieval
MKE88296	Building	Street Farm	A dispersed plan farmstead.	Post-medieval

Reference	Record Type	Name	Description	Period
MKE88297	Building	Vincent Farm	A loose courtyard plan farmstead with buildings to two sides of the yard.	Post-medieval
MKE88300	Building	Outfarm west of Oak Farm	A field barn with no associated yard.	Post-medieval
MKE88301	Building	Oak Farm	A dispersed plan farmstead.	Post-medieval
MKE88302	Building	Hurst Farm	A loose courtyard plan farmstead with buildings to two sides of the yard.	Post-medieval
MKE88303	Building	Crook Cottage (Gammon's Farm)	A regular L-plan farmstead.	Post-medieval
MKE88304	Building	Farmstead at Blackmanstone	A regular L-plan farmstead.	Post-medieval
MKE88305	Building	Martin Farm (Marten Farm)	A regular courtyard farmstead with buildings to four sides of the yard incorporating an L-plan element.	Post-medieval
MKE88321	Building	Sheepfold east of Blackmanstone	An outfarm or field barn group consisting of two detached buildings.	Post-medieval
MKE88322	Building	Newbarn	A regular multiyard farmstead.	Post-medieval
MKE88323	Building	Chapel Farm	A regular multiyard farmstead.	Post-medieval
MKE88329	Building	Sheepfold north east of Chapel Farm	An outfarm with a loose courtyard plan with a building to one side of the yard.	Post-medieval
MKE88330	Building	Sheepfold north west of Forty Acres Farm	A field barn with no associated yard.	Post-medieval
MKE88331	Building	Orgarswick Farm	A regular multiyard farmstead.	Post-medieval

Reference	Record Type	Name	Description	Period
MKE88332	Building	Sheepfold north east of Sellinge Farm	An outfarm with a loose courtyard plan with a building to one side of the yard.	Post-medieval
MKE88333	Building	Sellinge Farm	A regular multiyard farmstead.	Post-medieval
MKE88337	Building	Sutton's Farm	A dispersed multiyard plan farmstead.	Post-medieval
MKE88338	Building	Sheepfold south east of Orgasrwick Church	An outfarm with a loose courtyard plan with a building to one side of the yard.	Post-medieval
MKE88339	Building	Orgarswick	A dispersed plan farmstead.	Post-medieval
MKE88340	Building	Forty Acres Farm (Forty Acre Farm)	A loose courtyard plan farmstead with buildings to four sides of the yard.	Post-medieval
MKE88341	Building	Haymakers	A dispersed plan farmstead.	Post-medieval
MKE88709	Building	Farmstead south east of Newchurch	A regular U-plan courtyard farm.	Post-medieval
MKE88986	Building	Outfarm south east of Wills Farm	A field barn with no associated yard.	Post-medieval
MKE96543	Find spot	Post-medieval silver coin	A post-medieval silver Half Groat of James I. Large Crown and Rose initial mark. C. AD 1605-1606.	Post-medieval
MKE96582	Find spot	Post-medieval copper alloy finger ring	A copper alloy post-medieval finger ring of probable 1540-1900 date. The ring has been made in one piece with an annular band and sub-circular bezel.	Post-medieval
MKE96608	Find spot	Copper alloy seal matrix	A post-medieval copper alloy fob seal matrix. The body of the matrix is sub-conical with a broken attachment at the apex.	Post-medieval
MKE96613	Find spot	Post -medieval copper alloy toy	A post-medieval copper alloy toy gun of 17th Century date. The toy has been cast in one piece and has a 'fishtail'	Post-medieval

Reference	Record Type	Name	Description	Period
			butt, faceted barrel (hollow), open pan and rectangular trigger guard. Decorative hatches can be seen on the back of the butt.	
MKE108056	Find spot	Post-medieval lead alloy token	A cast post-medieval lead-alloy circular uniface token (c. 1500-1850).	Post-medieval
MKE108059	Find spot	Post-medieval silver coin	A heavily worn sixpence and incomplete of Elizabeth I (1558-1603).	Post-medieval
MKE108070	Find spot	Post-medieval silver coin	A worn and tarnished halfgroat of Elizabeth I (1558-1603).	Post-medieval
TR 03 SE 146	Building	Former National School, The Street, Newchurch, Shepway	The former National School for boys and girls in Newchurch is shown on the 1862-75 map. The building continued as a school, as shown on the 1897-1900, 1907-23 and 1929-52 maps. It is shown as the Old Village Hall on the current OS map.	Post-medieval
MKE113592	Find spot	Post-medieval copper alloy vessel	building continued as a school, as shown on the 1897-1900, 1907-23 and 1929-52 maps. It is shown as the Old Village Hall on the current O/S map.	Post-medieval
TR 03 SW 124	Monument	Site of Methodist Chapel, Newchurch Road, Bilsington	The site of a former Wesleyan Methodist Chapel, Newchurch Road, Bilsington as shown on the 1st, 2nd and 3rd Edition OS maps. The chapel has since been demolished and a private house built on the site.	Post-medieval
MKE120573	Find spot	Post-medieval silver coin	A partially worn post-medieval halfgroat of Elizabeth I (1558-1603).	Post-medieval
MKE120574	Find spot	Post-medieval copper alloy mount	A complete cast post-medieval copper-alloy mount. The mount is triangular in shape with the upper edge slightly concave creating a subtle flying V effect.	Post-medieval

Reference	Record Type	Name	Description	Period
MKE120596	Find spot	Post-medieval silver coin	A complete post-medieval silver groat of Mary dating to AD 1553-1554.	Post-medieval
MKE120599	Find spot	Post-medieval gold finger ring	A complete gold finger ring.	Post-medieval
MKE120786	Find spot	Post-medieval copper alloy strap fitting	A cast copper alloy trefoil shaped strap fitting probably dating to the post-medieval period. The object consists of three circular loops, which together form a trefoil loop.	Post-medieval
TR 03 SE 148	Monument	Cropmarks within a large field to the west of Chapel Farm	Cropmarks of probable post medieval field boundaries and three possible shack stands or stock refuge mounds are visible within a large field to the west of Chapel Farm on aerial photographs. The stack stands appear as the levelled remains of three small circular mounds in a group centred loosely on TR 0729 3177.	Post-medieval
1534137	Monument	Three blocks of probable post medieval drainage are visible as earthworks on aerial photographs taken in the 1940s	Three blocks of probable post medieval drainage are visible as earthworks on aerial photographs taken in the 1940s. The drainage is defined by straight and narrow ridges and resembles post medieval cultivation, but it is more likely to be related to the drainage of the marsh as seen on other marshland areas. The drainage earthworks have subsequently been plough levelled as the result of modern cultivation.	Post-medieval
1535621	Monument	Post-medieval stack stands scattered across a wide area are visible on aerial photographs of 1941	Post-medieval stack stands scattered across a wide area are visible on aerial photographs of 1941 as earthworks in the fields between St Marys Bay and High Knock. These features have been mapped from aerial photographs as part of the South East RCZAS NMP project.	Post-medieval

Reference	Record Type	Name	Description	Period
TR 02 NE 28	Monument	Shepherd's hut near Marshalls Bridge	A brick-built Shepherd's Hut set amongst sheep folds. The structured is likely 19th century in date and constructed of several varieties of brick, much of it low grade, with roof replaced in corrugated iron. Inside the hut is a fireplace with flue built against a gable wall. The building is still in use. A brick-built sheep wash, also of 19th century date, is located adjacent to the builidng with a stepped entrance passage and circular chamber set into drainage channel.	Post-medieval to modern
TR 03 SE 93	Monument	Windmill, newchurch	A tower millwas built in 1810 by the Rev. Nares. The mill, built of brick from the material from the old rectory, made flour until 1890, when it started to mill only corn. The mill ceased work in 1901, with the building being demolished in 1906. The base of the mill has been roofed over and is now used as a store.	Post-medieval to modern
TR 03 SE 55	Monument	Second World War Auxiliary Unit hide, Dymchurch	An operational base of WW2 Auxiliary Unit now likely destroyed. No further information given.	Modern
TR 03 SE 63	Monument	Crash site of a Messerschmitt BF 109e, Burmarsh	A Messerschmitt Bf109E-4 (5095) crashed on the 28th October 1940 at Fielding Lane, Dymchurch. The pilot was killed and the aircraft written off. The site was excavated in 1973 by Brenzett Aeronautical Museum. The pilot was recovered and buried with honours following inquest.	Modern
TR 03 SW 46	Building	Pillbox (Type FW3/22)	On the west side of Ruckinge to Ivy Church Road, north of the junction with the road to Stockbridge (Wey Street); in the angle of road junction (corner of field of Wey Street Farm). A concrete type 22 pillbox facing north west is located here.	Modern

Reference	Record Type	Name	Description	Period
TR 03 SW 97	Monument	RAF Newchurch	The site of an advanced landing ground, a special type of World War Two temporary airfield prepared to support the Allied invasion of Europe. It was opened in 1943 and flying ceased at the end of 1944. The airfield was situated west of Newchurch around the area occupied by Brooker Farm and Will's Farm. It consisted of two intersecting runways made of Sommerfeld Track, a type of steel mesh matting. Personnel were housed in a tented camp (or billeted in local houses). There were 4 Blister Aircraft hangars. The airfield had improvements made to its tracks in October 1943- April 1944. In contrast to some other advanced landing grounds in Kent, Newchurch was fully used for D Day with fighter aircraft of Numbers 3 and 56 Squadrons and 486 (New Zealand) Squadron giving air cover for the Normandy landings. Subsequently they were engaged in intercepting V1 missiles. The site was decommissioned in December 1944. After the war the site returned to agriculture. There are little remains of the former airfield, reportedly gaps in field boundaries and a concrete bridge are among the few traces.	Modern
TR 03 SW 101	Monument	Possible crash site of two RAF Spitfires	Two RAF Spitfires, BM323 + BM539, crashed in this area on 9th June 1943 following a mid-air collision.	Modern
MKE69050	Find spot	Modern silver brooch	An openwork silver brooch. The brooch, formed of Celtic-style interlace motifs, is unlikely to be earlier than the late 19th century and is probably 20th century in date.	Modern
TR 03 SW 111	Monument	Crash site of Messerschmitt Bf110	A Messerschmitt Bf110 force landed on the 1st September 1940 on Tarpot Farm, Bilsington, Hamstreet near Ashford. The crew were captured and the aircraft written off.	Modern

Reference	Record Type	Name	Description	Period
TR 03 SE 139	Monument	Crash site of Bleriot 155	A Bleriot 155 (F-AIEB) of Compagnie Air Union crashed on the 18th August 1926 and struck a barn roof at College Farm, south of Aldington while attempting to land at Lympne. The two Crew members were injured, and two passengers were killed, with 11 more injured. The aircraft was written off. The Times article (19th August 1926, page 10) states that the Aircraft was a Farman Goliath.	Modern
TR 03 SW 115	Monument	Crash site of Messerschmitt Bf109E-4	A Messerschmitt Bf109E-4 (5205) crashed on the 15th September 1940 on outbuildings at Hanns Farm, Bilsington. The pilot was captured and the aircraft written off. Finds are held at Brenzett Aeronautical Museum.	Modern
TR 03 SE 144	Monument	Crash site of Hawker Hurricane I	A Hawker Hurricane I (R4074) of 46 Sq, based at RAF Stapleford, crashed on the 22nd October 1940 near Newchurch church. The pilot was killed and the aircraft written off. Surface finds were recovered by Kent Battle of Britain Museum, Hawkinge.	Modern
TR 03 SE 134	Monument	Crash site of Heinkel He111H-3	A Heinkel He111H-3 (5680) force landed and was burnt by the crew on the 11th September 1940 at Burmarsh. The crew were captured.	Modern
TR 03 SE 133	Monument	Crash site of Hawker Hurricane I	A Hawker Hurricane I (P3025) of 111 Squadron, based at RAF Croydon, crashed on the 7th September 1940 at Gammons Farm, Newchurch. The pilot baled out and the aircraft written off. Site excavated on the 24th August 1974 by Brenzett Aeronautical Museum.	Modern
TR 03 SE 132	Monument	Crash site of Dornier Do17Z	A Dornier Do17Z (3316) crash landed on the 31st August 1940 at Newchurch near Dungeness. The crew were captured and the aircraft written off.	Modern

Reference	Record Type	Name	Description	Period
TR 03 SE 131	Monument	Crash site of Supermarine Spitfire II	A Supermarine Spitfire II (P7303) of 421 Flight, based at RAF Gravesend, crashed on the 11th October 1940 near Newchurch. The pilot was killed and the aircraft written off. The site was excavated in 1978 by Brenzett Auronautical Museum.	Modern
TR 03 SW 107	Monument	Crash site of Consolidated B24J Liberator	A Consolidated B24J Liberator of 577 Sq, 392 Bomb Gp, USAAF crash landed on the 7th July 1944 at Newchurch. The aircraft was written off.	Modern
TR 02 NE 135	Monument	Crash site of Messerschmitt Bf110C	A Messerschmitt Bf110C force landed on the 18th August 1940 at Blackmanstone near Newchurch. Crew captured. The aircraft was written off.	Modern
TR 02 NE 134	Monument	Crash site of Supermarine Spitfire I	A Supermarine Spitfire I (R6753) of 603 Sq, based at RAF Hornchurch, crashed on the 29th August 1940 at St Mary's Road, Dymchurch. The pilot bailed out, and Aircraft XT-G written off. Finds recovered Summer 1976 by Brenzett Aeronautical Museum.	Modern
MWX51332	Monument	Second World War bomb crater, between Dunkirk End and Marshland Bridge	A Second World War bomb crater is visible on aerial photographs of 1946 as hollow in a field between Dunkirk End and Marshland Bridge. This feature has been mapped from aerial photographs as part of the South East RCZAS NMP project.	Modern
1477714	Monument	Site of a Second World War light anti aircraft (Diver) battery at Dymchurch.	The site of a Second World War light anti aircraft (Diver) battery at Dymchurch. This was armed with 40mm guns, and was manned by 232 Battery of 97 Anti Aircraft Regiment when it was deployed here on the 17th July 1944. It formed part of the Littlestone Section of 43 Anti Aircraft Brigade Light Anti Aircraft Artillery. This area was surveyed as part of the South East RCZAS NMP project.	Modern

Reference	Record Type	Name	Description	Period
			The Diver battery was not visible on historic aerial photographs.	
1477709	Monument	Site of a Second World War light anti aircraft (Diver) battery at Dymchurch.	The site of a Second World War light anti aircraft (Diver) battery at Dymchurch. This was armed with twelve 40mm guns, and was manned by 450 Battery of 135 Anti Aircraft Regiment when it was deployed here on the 17th July 1944. It was redeployed to TR095301 on 2nd August 1944. It formed part of the Littlestone Section of 43 Anti Aircraft Brigade Light Anti Aircraft Artillery. This area was surveyed as part of the South East RCZAS NMP project. The Diver battery was not visible on historic aerial photographs.	Modern
TR 03 SE 9	Monument	World War II underground operational post, south west of Chapel Farm.	An Auxiliary Hide, built in World War Two. This is a small underground building concealed by a dyke. The entrance is from two shafts, one at either end with brick walls and a concrete floor. It was intended as secret base for resistance fighters after an invasion. This is a scheduled monument NHLE 1003781.	Modern
TR 03 SW 21	Monument	Earthwork enclosure (undated)	A square enclosure, seen as an earthwork and on tithe map, has also been recorded within aerial photography. Pottery and building materials have also been observed, and it has been idenitfied as a possible moated site.	Unknown
TR 02 NE 48	Monument	Possible site of Maggot Hall	A square enclosure has been identified on aerial photographs, maps and from field evidence. It is the possible site of Maggot Hall.	Unknown
TR 03 SE 34	Monument	Possible moated site, Gammons Lane	Aerial photographs, maps and field observations have identified and revealed a square enclosure, which is a possible moated site.	Unknown

Reference	Record Type	Name	Description	Period
TR 02 NE 17	Monument	Circular enclosure/cropmark	Part of a large, circular enclosure was recorded on the north side of St Marys Road near Swallowtail Bridge.	Unknown
TR 02 NE 19	Monument	Circular cropmark	A circular cropmark, possibly enclosure, has been recorded but could be non-archaeological.	Unknown
TR 03 SE 113	Find spot	2nd Century coin found Burmarsh Parish	A 2nd century coin, recorded as a surface find, was recorded at Eastbridge.	Unknown
TR 03 SE 114	Find spot	1st century pottery-surface find, Pound Field	A 1st century pottery sherd was found within Pound Field.	Unknown
TR 03 SE 115	Find spot	1st Century pottery, surface find, Two and Twenty, Chapel Farm	A 1st century pottery sherd was found during field walking at Chapel Farm, Orgarswick	Unknown
TR 03 SE 116	Find spot	10th century pottery-surface find, Pound Field	A 10th century pottery sherd was recorded as a surface find at Pound Field.	Unknown
TR 03 SE 117	Find spot	10th century pottery-surface find, Pound Field	A 10th century pottery sherd was recorded as a surface find at Pound Field.	Unknown
TR 03 SE 118	Find spot	7th-11th century pin, coin and hooked tag dress fastener found on the surface near Church Road Eastbridge	A 7th to 11th century pin, coin and 'hooked tag' dress fastener found on the surface near Church Road, Eastbridge.	Unknown
TR 03 SE 119	Find spot	10th century buckle and strap end found near Tame Lane, Eastbridge	A 10th century buckle and strap end found near Tame Lane Eastbridge.	Unknown

Reference	Record Type	Name	Description	Period
tr 03 se 120	Find spot	10th century harness fitting found near Church Road, Eastbridge	A 10th Century harness fitting found near church road Eastbridge.	Unknown
tr 03 se 121	Find spot	12th-13th century stirrup found in Rushy Field	A surface find of 12th to 13th century copper gilt stirrup in Rushy Field.	Unknown
tr 03 se 122	Find spot	14th century pottery found on Orgarswick Farm	14th Century pottery found on Orgarswick Farm.	Unknown
TR 03 SE 141	Find spot	14th-15th century lead ampulla scallop shell design found on Orgarswick farm	A 14th to 15th century lead ampulla with a scallop shell design.	Unknown
MKE56460	Find spot	Lead alloy weight	A complete cast lead alloy spindle whorl. It is flat conical with a central circular perforation that is slightly offset. It has some damage that has possibly occurred whist in the ground as it has not worn. These can date from the Roman period to the post-medieval.	Unknown
MKE69435	Find spot	Silver coin	A silver coin recorded within the PAS. No further information recorded.	Unknown
MKE69525	Find spot	copper alloy buckle	A complete cast copper alloy rectangular single loop buckle was recorded within the PAS. It has a sub rectangular frame, and a slightly offset strap bar.	Unknown
MKE78986	Find spot	Modern gold finger ring	A gold finger-ring that has a hollow construction with inner rim. The construction of the ring suggests that it is not more than 300 years old. Recorded within the PAS.	Unknown

Reference	Record Type	Name	Description	Period
TR 03 SE 126	Monument	Cropmark of a ring ditch, southeast of Newchurch	A large ring ditch visible as a cropmark in Google Earth images of 2007 and aerial photos of 2008 to the southeast of Newchurch, east of Bilsington Sewer.	Unknown
MKE93918	Find spot	Silver buckle	A fragment of a silver gilt zooamorphic buckle or mount, probably of medieval date. The mount is in the form of a 3D crouching animal, possibly a lion. Recorded within the PAS.	Unknown
MKE108248	Find spot	Medieval copper alloy mount	A copper-alloy mount or possible strap fitting dating to between 1350-1400 and recorded within the PAS.	Unknown

Appendix G: Preliminary Ecological Appraisal

Shepway Energy Park

EIA Scoping Report

Preliminary Ecological Appraisal

May 2025

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Glossary

BAP	Biodiversity Action Plan
BESS	Battery Energy Storage Systems
BoCC	Birds of Conservation Concern
BNG	Biodiversity Net Gain
BTO	British Trust for Ornithology
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CRoW	Countryside and Rights of Way
CWS	County Wildlife Site
DCO	Development Consent Order
Defra	Department for Environment, Food and Rural Affairs
eDNA	Environmental DNA
EIA	Environmental Impact Assessment
EPS	European Protected Species
ES	Environmental Statement
EU	European Union
ha	Hectares
HaPI	Habitat of Principal Importance
HSI	Habitat Suitability Index
IAS	Invasive Alien Species
IEF	Important Ecological Feature
INNS	Invasive Non-native Species
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
km	Kilometres
KNPBS	Kent Nature Partnership Biodiversity Strategy
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LNRS	Local Nature Recovery Strategy
LWS	Local Wildlife Site

MAGIC	Multi-agency Geographic Information
MW	Megawatts
NERC	Natural Environment and Rural Communities
NGET	National Grid Electricity Transmission
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
NPS	National Policy Statements
NSIP	National Significant Infrastructure Project
NVC	National Vegetation Classification
OHL	Overhead Line
OS	Ordnance Survey
PEA	Preliminary Ecological Appraisal
PEAR	Preliminary Ecological Appraisal report
PEIR	Preliminary Environmental Information Report
PRF	Potential Roost Feature
PRoW	Public Rights of Way
PRV	Protected Road Verges
PV	Photovoltaic
RMAIDB	Romney Marshes Area Internal Drainage Board
RMAIDB BAP Action Plan	Romney Marshes Area Internal Drainage Board Biodiversity
RPA	Root Protection Area
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site of Special Scientific Interest
UGC	Underground Cable
UK BAP	United Kingdom Biodiversity Action Plan
UKHab	UK Habitat Classification
WCA	Wildlife and Countryside Act
WFD	Water Framework Directive
ZoI	Zone of Influence

Executive Summary

Site Details	Name: Shepway Energy Park Location: Romney Marsh, Kent, TR042316 Approximate area of the Energy Park Site: 420 hectares (ha)
Scheme Details	Shepway Energy Park (the Scheme) comprises the installation of solar photovoltaic (PV) modules, associated electrical equipment, cabling, on-site electrical substations and on-site battery energy storage system (BESS) facilities across a proposed site which lies within the Romney Marsh area of Kent, approximately 10 kilometres (km) south of Ashford, 15 km west of Folkestone and 15 km north-east of Rye (hereafter referred to as the 'Energy Park Site'). The Scheme would allow for an export of circa 200 megawatts (MW) of solar PV electrical generation capacity and circa 400MW BESS capacity to a new substation proposed by National Grid Electricity Transmission (NGET), which is expected to be located along the Dungeness to Sellindge overhead line (OHL). The Scheme would be operational for 40 years, following operation the Scheme will be decommissioned and returned to landowners. 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 DCO under the Planning Act 2008.
Ecological Features that may be affected by the Scheme	<u>Designated sites:</u> There are three sites statutorily designated at a European (International) level for their biodiversity value within 10 km of the Site, seven sites that are statutorily designated for their biodiversity value at a National level within 5 km and four non-statutory sites (all LWSs) designated for their biodiversity value within 2 km of the Site.

	Habitats and Species: Much of the Energy Park Site is arable farmland and semi-improved or improved grassland used for grazing livestock. Protected or notable habitats within the Site include field margins, native hedgerows and open standing water (i.e. ponds and ditches / drains). Four priority habitats, six veteran trees and one ancient tree were identified within the wider zone of influence of the Scheme (see Figure 3). Protected or notable species that the Site could support are birds (during the breeding and non-breeding season), bats, Otters (*Lutra lutra*), Water Vole (*Arvicola amphibius*), Great Crested Newt (*Triturus cristatus*), Badger (*Meles meles*) reptiles, aquatic invertebrates, aquatic macrophytes and fish.
Recommendations for Further Survey and Assessment	Designated sites: The potential for impacts on designated sites will be assessed in the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES). Suitable management plans will need to be prepared (such as a CEMP) to ensure best practice guidance is followed during all phases (e.g. construction, operation and decommissioning) of the Scheme. Habitats: A detailed vegetation survey, during the appropriate season, will be required to obtain specific survey information for any potential Habitat of Principal Importance and determine whether any significant plant communities are present that may inform any mitigation requirements. It is recommended that a hedgerow survey is carried out on the hedgerows present in the Site. Aquatic Species: Initially, a scoping survey of the Site is recommended to identify any potentially notable habitats for aquatic receptors (fish, macroinvertebrate and macrophytes). Surveys of selected water bodies are likely to be required and will be determined following the scoping survey.

Terrestrial Invertebrates:
Initially, a scoping survey of the Site is recommended to identify any potentially notable habitats for terrestrial invertebrates. Depending on the outcomes of the scoping survey, further targeted surveys may be required.

Great Crested Newts:
It is recommended that environmental DNA surveys be carried out on suitable waterbodies within a 250 m buffer of the Site. This will confirm the presence or absence of Great Crested Newt in those waterbodies. If presence is detected, then further surveys may be required to identify population sizes.

Reptiles:
It is recommended that presence / absence surveys be completed on suitable habitat within the Site. This will involve the placement of artificial refugia (sheets of roofing felt or metal corrugated roofing panels) and seven follow up visits to check them for reptile presence.

Birds:
It is recommended that surveys of non-breeding and breeding birds are undertaken to determine the presence and assemblages of birds using the Site (and appropriate buffers) during these periods.

Bats:
A Daytime Bat Walkover to be carried out to provide an initial assessment of potential suitability for roosting bats in features identified. To assess how bats use the habitats for foraging and commuting away from roosts, it is recommended that bat activity transects and static monitoring are carried out across the Site (and appropriate buffers).

Badgers:

It is recommended that a walkover survey of the Site (and appropriate buffers) be conducted to search for any evidence of Badger. This involves walking every field and both sides of hedgerows and ditches.

Otters and Water Voles:

It is recommended that riparian mammal surveys of the watercourses (and suitable terrestrial habitat for Otter holts e.g. woodlands near the watercourses) on Site be completed. This involves investigating the watercourses 200 m up and downstream, searching for signs of Otter and Water Vole. For Water Voles, two surveys must take place, one in the first half of the breeding season (April to June) and one in the second half (July to September).

Other Priority Species:

No further investigation is required for Brown Hare (*Lepus europaeus*) and Hedgehog (*Erinaceus europaeus*) but mitigation and enhancement delivered as part of the Scheme should look to avoid disturbance to these species, retain habitats and ensure that connectivity is maintained throughout the Scheme and into the wider area. All species are likely to benefit from a reduction in intensively managed agricultural land.

Although both Hazel Dormouse (*Muscardinus avellanarius*) and European Beaver (*Castor fiber*) are 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

Invasive non-native species:

No further investigation is required but their presence will be recorded during other ecological surveys. If any Invasive non-native species are identified, a management plan should be produced to manage and eradicate where required.

1. Introduction

1.1 Background

1.1.1 This Preliminary Ecological Appraisal (PEA) report has been prepared by AECOM on behalf of SSE Newchurch Solar Limited, to identify whether there are known or potential ecological features (designated sites, protected and / or notable[1] habitats or species and invasive non-native species) that may constrain or influence the design of the proposed Shepway Energy Park (the 'Scheme').

1.1.2 The appraisal of ecological features has been undertaken with reference to current good practice guidelines published by the Chartered Institute of Ecology and Environmental Management (CIEEM) (Ref. 1) and forms part of the technical information commissioned by SSE Newchurch Solar Limited in connection with the Scheme. This PEA report (PEAR) addresses relevant wildlife legislation and planning policy as summarised in **Annex B** and is consistent with the requirements of British Standard 42020:2013 Biodiversity – Code of Practice for Planning and Development (Ref. 2).

1.1.3 This PEAR is intended to provide a high-level appraisal of ecological features within the relevant Study Areas (see **Section 3** of this PEAR) and where further site investigation is or may be required through additional ecological surveys.

1.2 The Scheme

1.2.1 The Scheme comprises the installation of solar photovoltaic (PV) modules, associated electrical equipment, cabling, on-site electrical substations and on-site battery energy storage system facilities across a proposed site which lies within the Romney Marsh area of Kent, approximately 10 kilometres (km) south of Ashford, 15 km west of Folkestone and 15 km north-east of Rye (hereafter referred to as the 'Energy Park Site').

1.2.2 The Scheme would allow for an export of circa 200 megawatts (MW) electrical generating capacity via solar PV panels and circa 400MW BESS capacity to a new substation proposed by National Grid Electricity Transmission (NGET), which is expected to be along the Dungeness to Sellindge overhead line (OHL). The Scheme would be operational for 40 years.

1.2.3 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

[1] A notable habitat or species is not legally protected but is included on one or more lists of conservation concern.

Project (NSIP) and will therefore require consent via a DCO under the Planning Act 2008 (Ref. 3).

The Energy Park Site

1.2.4 The Energy Park Site is located within Romney Marsh, immediately adjacent of the Village of Newchurch at its closest point. It is denoted by the solid red line encompassing seven field parcels on **Figure 1** in **Annex A**, which make up a total of approximately 420 hectares (ha). The six land parcels lie within the administrative district of Folkestone and Hythe and predominantly within the civil parish of Newchurch, stretching south-east towards the civil parish of Dymchurch. The location of the Energy Park Site is centred at Ordnance Survey (OS) Grid Reference TR042316 and is presented in **Figure 1** (**Annex A**).

1.2.5 The Energy Park Site comprise mainly cereal crop fields with arable field margins and some areas of grassland and scrub as well. It is bounded by wet ditches and hedgerows, and the wider area consists of arable farmland.

1.2.6 Details of any Interconnecting Cable Corridors between the land parcels within the Energy Park Site and Grid Connection Routes to substations are unknown at the time of writing this PEAR and an assessment of such areas does not form part of the commissioned scope reported within this report.

1.3 Purpose of the Preliminary Ecological Appraisal

1.3.1 The purpose of the PEAR is to provide a high-level ecological appraisal of the Energy Park Site, specifically to:

- Establish baseline conditions and determine the presence of important ecological features (IEFs) (or those that could be present), as far as is possible;
- Identify potential ecological constraints to the Scheme and make initial recommendations to avoid impacts on IEFs, where possible;
- Identify requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
- Establish any requirements for more detailed surveys; and,
- Identify any opportunities offered by the Scheme to deliver biodiversity enhancements.

2. Legislation, Policy and Guidance Documents

2.1 Introduction

2.1.1 The following section summarises the legislation, national and local policy plans and other guidance documents, relevant to biodiversity, that were reviewed when undertaking the PEA. Further information on each piece of legislation / policy / guidance is provided in **Annex B**.

2.2 Legislation

2.2.1 The following wildlife legislation was reviewed as part of this PEA:

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) (Ref. 4);
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive) (Ref. 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. 6);
- Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ref. 7);
- The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) (Ref. 8) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (Ref. 9);
- Wildlife and Countryside Act (WCA) 1981 (as amended) (Ref. 10);
- Countryside and Rights of Way (CRoW) Act 2000 (Ref. 11);
- Environment Act 2021 (Ref. 12);
- The Natural Environment and Rural Communities Act 2006 (NERC Act) (Ref. 13);
- The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref. 14);
- Protection of Badgers Act 1992 (Ref. 15);
- The Hedgerows Regulations 1997 (Ref. 16);
- Wild Mammals (Protection) Act 2006 (Ref. 17); and
- The Invasive Alien Species (Enforcement and Permitting) (IAS) Order 2019 (Ref. 18).

2.2.2 Compliance with the above legislation may require the attainment of relevant protected species licences prior to the implementation of the Scheme.

National Planning Policy

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

- National Planning Policy Statements (NPSs), specifically policies:
  - Overarching National Policy Statement for Energy (EN-1) (Ref. 19);
  - National Policy Statement for Renewable Energy Infrastructure (EN-3) (Ref. 20)
  - National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref. 21); and
- National Planning Policy Framework (NPPF) (Ref. 22).

Local Planning Policy

2.2.4 Local planning policies that are relevant to biodiversity and the Scheme are:

- Kent County Council Environment Policy 2020 (Ref. 23).
- Ashford Local Plan 2030 (Ref. 24), 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. 25), 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 – Submission Draft Summary of Main Issues (Ref. 26), specifically:
- Chapter 14: Natural Environment and Policy NE2 - Biodiversity; and
- Chapter 15: Climate Change and Policy CC6 – Solar Farms.

National Guidance

2.2.5 National guidance documents that were reviewed when completing this PEA, relevant to the Scheme and biodiversity includes:

- Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Costal and Marine (Ref. 27);
- Environmental Improvement Plan (2023) (Ref. 28);
- Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services (Ref. 29);

- Biodiversity Guidance for Solar Developments (2014) (Ref. 30);
- Natural England and the Department for Environment, Food and Rural Affairs (Defra) Standing Advice (protected species) (Ref. 31);
- The UK Biodiversity Action Plan (UK BAP) list of priority habitats and species (Ref. 32), succeeded by the UK Biodiversity Framework (Ref. 33);
- The International Union for Conservation of Nature (IUCN) Red List of Threatened Species (Ref. 34);
- Mitigating biodiversity impacts associated with solar and wind energy development: Guidelines for project developers (2021) (Ref. 35);
- Natural England's evidence review of the impacts of solar farms on birds, bats and general ecology (Ref. 36);
- Natural England's Technical Information Note TIN101 Solar parks: Maximising Environmental Benefits (Ref. 37);
- The Guidelines for the Selection of Biological SSSIs (Ref. 38);
- State of Nature 2023 report (Ref. 39); and
- Birds of Conservation Concern (BoCC) 2021 (Ref. 40);

Local Guidance

2.2.6 Local guidance documents that were reviewed when completing this PEA, relevant to the Scheme and biodiversity includes:

- Kent Nature Partnership Biodiversity Strategy (KNPBS) 2020 to 2045 (Ref. 41);
- Kent Landscape Information System (Ref. 42);
- Local Wildlife Sites in Kent: Criteria for Selection and Delineation of Wildlife Sites (Ref. 43); and
- Romney Marshes Area Internal Drainage Board Biodiversity Action Plan 2.0 (Ref. 44).

3. Methods

3.1 Characterising the Baseline

3.1.1 Within this PEAR, the following terminology is used when referring to the geographic areas within which assessments were made:

- Zone of Influence (ZoI) – the area over which features may be affected by biophysical changes as a result of the Scheme 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 (predominantly arable) and habitats in the vicinity (majority being arable), their connectivity (e.g. through hedgerows, ditches or grassland margins), and how they may be used by different species;
- The presence and assemblages of species which may be in the area 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.

- Study Area – the Scheme area and an appropriate radius (dependent on the ecological feature, see Section 3.2 of this PEAR) which is subject to collection of background information e.g. desk study records for protected or notable species; and
- Survey Area – the area within which initial field survey work was undertaken and is the Energy Park Site plus a maximum distance of 50 metres (m) (where visible / accessible).

3.2 Desk Study

3.2.1 A desk study was undertaken to identify sites designated for their biodiversity value and protected or notable habitats and species including invasive non-native species potentially relevant to the Scheme.

3.2.2 A stratified approach was taken when defining the desk Study Area, based on the likely ZoI of the Scheme on different ecological features and an understanding of the maximum distances typically considered by statutory consultees. Accordingly, the desk study identified the following:

- Any European sites (e.g. Special Protection Areas (SPAs) or Special Areas of Conservation (SACs)) within 10 km of the Energy Park Site, extended to 20 km from the Energy Park Site where birds with extensive foraging ranges (e.g. Golden Plover *Pluvialis apricaria*) are noted as a qualifying feature and up to 30 km for any SACs where bats are noted as the, or one of the, qualifying features;
- Sites designated at a national level (e.g. Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs)) within 5 km of the Energy Park Site; and
- Non-statutorily designated sites (e.g. County / Local Wildlife Sites (CWSs / LWSs)) and protected or notable habitats and species within 2 km of the Energy Park Site.

3.2.3 The desk study was carried out using the data sources presented in **Table 1**. Protected or notable habitats and species include those listed under:

- Schedules 1, 5 and 8 of the WCA (Ref. 10);
- Schedules 2 and 4 of the Habitats Regulations (Ref. 8);

- Habitats and species of principal importance (HaPI and SPI) listed under Section 41 of the NERC Act (Ref. 13); and
- Other species that are listed in national or local lists as species of conservation concern (such as Nationally Rare on the IUCN Red Data Book (Ref. 34), or species listed as Red or Amber on the BoCC (Ref. 40).

3.2.4 Only records up to ten years old were considered within the assessment, as any records older than ten years are unlikely to be still representative of species presence in the local area.

Table 1. Desk study data sources.

Data Source	Accessed	Data Obtained
Multi-Agency Geographic Information for the Countryside (MAGIC) website (Ref. 45)	November 2024	Location of European sites (SPAs, SACs and also Ramsar sites) up to 30 km from the Energy Park Site. Location of nationally designated sites (SSSIs, NNRs, LNRs) within 5 km of the Site.
Natural England's website (Ref. 46)	January 2025	Information on sites statutorily designated for their biodiversity value and to confirm reasons for designation and their condition
Natural England's Ancient Woodland (England) inventory (Ref. 47)	January 2025	Ancient woodlands and notable habitats within 2 km of the Energy Park Site.
Woodland Trust's ancient tree inventory (Ref. 48)	January 2025	Details of ancient, veteran or notable trees within the Study Area
OS 1:2500 Pathfinder maps and aerial photography	November 2024	Information on habitats and habitat connections (based on aerial photography) relevant to the Scheme.
Kent & Medway Biological Records Centre	November 2024	Sites designated at a county or local level for their biodiversity importance, such as CWSs / LWSs and Protected Road Verges (PRV) within 2 km of the Energy Park Site. Protected or notable species within 2 km of the Energy Park Site (records for the last ten years only).
National Biodiversity Network (NBN) Atlas	January 2025	Open-source details on any protected or notable species recorded within 2 km of the Energy Park Site
Environment Agency Ecology & Fish Data Explorer	January 2025	Open-source details on any aquatic species surveys completed by the Environment Agency within 2 km of the Energy Park Site

3.3 Field Survey

UK Habitat Classification Survey

3.3.1 Habitats within the Energy Park Site were mapped against the UK Habitat Classification (UKHab) between 28 October and 1 November 2024 by appropriately experienced ecologists. UKHab surveys (Ref. 49) are a standard method of environmental audit and involves categorising different habitat types and habitat features within the surveyed area. The information gained from the survey can be used to determine the baseline habitats and, using professional judgement, whether those habitats may support protected or notable species (see below) and if there is a need to undertake any more specific survey work to inform the Environmental Statement (ES).

3.3.2 The standard UKHab survey method was extended to record target notes on protected, notable and invasive species (see **Table 14**). Typical and notable plant species were recorded for different habitat types and reflect the conditions at the time of survey. This was not intended to be a detailed inventory of the plant species present in the Survey Area, as this is not required for the purposes of a UKHab survey.

3.3.3 The Survey Area encompassed all accessible parts of the Energy Park Site and adjacent habitats to a maximum distance of 50 m, where access permission had been granted in advance of survey, or where this land was visible from within the Energy Park Site, from public rights of way (PRoW) or other publicly accessible areas.

Appraisal of the Potential Suitability of Habitats for Protected and Notable Species

3.3.4 An appraisal was made of the potential suitability of the habitats present to support protected or notable species of plants or animals (as defined by legislation and planning policy in **Section 2** of this PEAR). Field signs, habitat features with potential to support protected or notable species, and any sightings or auditory evidence were recorded when encountered, but no detailed surveys were carried out for any particular species.

3.3.5 In addition, attention was given to identifying invasive non-native species that are listed under Schedule 9 of the WCA (Ref. 10) and those “widespread species” listed in the IAS Order 2019 (Ref. 18). Locations of plants and animals of any such invasive non-native species, if found, were recorded.

Desk Study and Field Survey Limitations

3.3.6 The aim of the desk study was to help characterise the baseline context of the Energy Park Site and provide valuable background information that would not be captured by a single site survey alone. Information obtained during the course of the desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular habitat or species does not necessarily mean that the habitats or species do not occur in the Study Area. Likewise, the presence of records for

particular habitats and species does not automatically mean that these still occur within the area of interest or are relevant in the context of the Scheme.

3.3.7 The classification of habitats within the Energy Park Site against the UK Habitat Classification (UKHab) criteria was undertaken outside the typical optimal survey period. However, given the prevalent habitats present (arable farmland), for the purposes of this PEAR the classified habitats are sufficiently robust. Where habitats, such as grassland, are present, these were target noted and will be subject to follow up surveys during the spring/summer months. In addition, condition assessments of all habitats will be undertaken during the optimal survey periods.

3.3.8 Where habitat boundaries coincide with physical boundaries recorded on OS maps, the resolution is as determined by the scale of mapping. Elsewhere, habitat mapping is as estimated in the field and / or recorded by hand-held Samsung tablets using Field Maps software. Where areas of habitat are given, they are approximate and should be verified by measurement on-site where required for design or construction.

3.3.9 While indicative locations of trees are recorded, this does not replace requirements for detailed specialist arboricultural surveys to British Standard 5837:2012 Trees in Relation to Design, Demolition and Construction (Ref. 50).

3.3.10 There were no other limitations to the desk study or initial field survey.

4. Results

4.1 Designated Sites

Statutorily Designated Sites

4.1.1 The desk study identified three sites statutorily designated at a European (International) level for their biodiversity value within the 10 km Study Area and these are presented in **Table 2**. The desk study identified three sites statutorily designated at a European (International) level for their biodiversity value within the 10 km Study Area and these are presented in **Table 2.**

4.1.2 There are no European sites within 30 km of the Energy Park Site for which bats are a qualifying feature and no other European sites within 20 km of the Energy Park Site for which birds are a qualifying feature.

4.1.3 At a National level, the desk study identified seven sites that are statutorily designated for their biodiversity value.

4.1.4 Statutorily designated sites are summarised in **Table 2** and **Table 3** and are listed in descending order of distance from the Energy Park Site. Individual site designation details are taken from citation documents published online by Natural England (SPA, Ramsar and SSSI, NNR and LNR sites) (Ref. 46) and the Joint Nature Conservation Committee (JNCC) (SAC sites) (Ref. 51). The locations of statutorily designated sites are presented in **Figure 2** (**Annex A**).

Table 2. Sites statutorily designated at a European (International) level within 10 km of the Energy Park Site.

Statutory Site Name and Designation	Description	Approximate distance (km / m) 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. 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.
Dungeness, Romney Marsh and Rye Bay Ramsar	Dungeness, Romney Marsh and Rye Bay Ramsar site (6,377 ha) is located on the south coast of England, on the border of East Sussex and Kent between Hastings and New Romney. This is a large area with a diverse coastal landscape comprising a number of habitats. The sites include the largest and most diverse area of shingle beach in Britain, with low-lying hollows in the shingle providing nationally important saline lagoons, natural freshwater pits and basin fens. 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.
Dungeness SAC	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*).	4.1 km south.

Statutory Site Name and Designation	Description	Approximate distance (km / m) and direction from closest point of the Site
	Dungeness is the UK's largest shingle structure and represents the habitat type on the south-east coast of England. The total area of exposed shingle covers some 1,600 ha, though the extent of the buried shingle ridges is much greater. Despite considerable disturbance and destruction of the surface shingle, the site retains very large areas of intact parallel ridges with characteristic zonation of vegetation. It still has the most diverse and most extensive examples of stable vegetated shingle in Europe, including the best representation of scrub on shingle, notably prostrate forms of Broom (*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. Dungeness in south-east England has the largest shingle expanse in Europe and contains a large number of waterbodies within its 2,000 ha. This extensive site hosts a large and viable Great Crested Newt (*Triturus cristatus*) population in a range of natural and anthropogenic habitats.	

Table 3. Sites statutorily designated at a National level within 5 km of the Energy Park Site.

Statutory Site Name and Designation	Description	Approximate distance (km / m) and direction from closest point of the Site
Ham Street Woods SSSI	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 and Hazel Dormouse (*Muscardinus avellanarius*)	2.1 km north-west.
Dungeness, Romney Marsh and Rye Bay SSSI	The Dungeness, Romney Marsh and Rye Bay SSSI 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.	2.2 km south.
Ham Street Woods NNR	Ham Street Woods NNR is a remnant of an ancient forest that once covered the whole Weald after the last Ice Age. The woods are still managed in a traditional way, which help it support an outstanding collection of birds and moths.	2.5 km north-west.
Romney Warren LNR	This site comprises dune grassland, Willow (*Salix* sp.) scrub and ponds, rich in wildlife.	2.9 km south.
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. 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	3.4 km north-east.

Statutory Site Name and Designation	Description	Approximate distance (km / m) and direction from closest point of the Site
	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 (*Carpinus betulus)* 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.	3.6 km north.
Orlestone Forest SSSI	Ancient woodland site near Ham Street and an important invertebrate locality of national significance.	4.7 km north-west.

4.2 Non-statutory Designations

4.2.1 The desk study identified four sites non-statutorily designated for their biodiversity value at a county level within 2 km of the Energy Park Site. These are presented in **Figure 3** (**Annex A**). These sites have been designated as LWS and are known to have supporting value to a wide variety of protected and ecologically important habitats and / or species. These sites are presented in **Table 4** and are listed in ascending order of distance from the Energy Park Site.

Table 4. Non-statutorily designated sites within 2 km of the Energy Park Site.

Statutory Site Name and Designation	Description	Approximate distance (km / m) and direction from closest point of the Site
SH37 Pasture, Ditches and Pond, Dymchurch (LWS)	An area of grassland with a ditch approximately 185 m in length, and a number of ponds, of which some may be a priority habitat.	1.1 km east.
SH26 Royal Military Canal (LWS)	The Royal Military Canal, running for 45 km between Seabrook and Cliff End, was constructed as Napolenic defence and is now an annual recipient of the Green Flag award, since 2010. The Site has 35 bird boxes, reptile monitoring stations and Glow Worm (*Lampyris noctiluca*) monitoring. The canal is also home to national rarities such as the Lesser Spotted Woodpecker (*Dryobates minor*), Cetti's Warbler (*Cettia cetti*) and Greater Water-parsnip (*Sium latifolium*).	1.2 km north.
AS16 Bilsington Woods and pasture (LWS)	Bilsington Woods and pasture is an ancient semi-mature woodland surrounding by fields commonly used for grazing by sheep. It is of significant landscape value being set within the Greensand Ridge Special Landscape Area and bounded by the Greensand Way long distance public right of way to the west.	1.8 km north.
SH52 St Mary the Virgin Churchyard, St Mary in the Marsh, New Romney (LWS)	This site comprises grassland surrounding the St Mary the Virgin Church.	2.0 km south-west.

4.3 Habitats

Desk Study

4.3.1 **Table 5** summarises the records of priority habitats (including veteran trees and Ancient Woodland) within the 2 km Study Area (see **Figure 3** for the locations of these habitats). These have been identified through the MAGIC website (Ref. 45).

Table 5. Priority habitats within the Study Area.

Habitat Type	Description	Approximate distance (km / m) and direction from closest point of the Site
Traditional orchard	There are two areas of traditional orchard close to the west of the Energy Park Site (less than 100 m). Traditional orchards are structurally and ecologically similar to wood-pasture and parkland, with open-grown trees set in herbaceous vegetation. They are generally distinguished from other woodland priority habitat complexes by the following characteristics: • The species composition of the trees, these being primarily in the family *Rosaceae*; • The usually denser arrangement of the trees; • The small scale of individual habitat patches; and • The wider dispersion and greater frequency of occurrence of habitat patches in the countryside.	85 m west.
Coastal and floodplain grazing marsh	There are three areas of coastal and floodplain grazing marsh within the Study Area, the closest being within 200 m of the Energy Park Site. Grazing marsh is defined as periodically inundated pasture, or meadow with ditches which maintain the water levels, containing standing brackish or fresh water. Almost all areas are grazed and some are cut for hay or silage. Sites may contain seasonal water-filled hollows and permanent ponds with emergent swamp communities, but not extensive areas of tall fen species.	170 m east.
Deciduous woodland	There is one area of deciduous woodland within 500 m of the Energy Park Site.	475 m south.

Habitat Type	Description	Approximate distance (km / m) and direction from closest point of the Site
	Deciduous woodlands have a great variety in the species composition of the canopy layer and the ground flora, which create unique ecological niches.	
Ancient Woodland	There is one area of ancient and semi-natural woodland within 2 km of the Energy Park Site. Ancient woods are areas of woodland that have persisted since 1600 in England. This time period means allows for undisturbed soils and accumulation of decaying wood, which create the complex and unique ecosystems for communities such as fungi and invertebrates.	1.8 km north-west.
Ancient / Veteran Trees	There are six veteran trees within 2 km of the Energy Park Site, the closest being a Lime *Tilia* sp. Other species include Field Maple (*Acer campestre*), Ash and Pedunculate Oak. There is also one Ancient Pedunculate Oak 1.91 km north-west of the Energy Park Site. Ancient and Veteran trees provide important ecological features for a variety of rare and common species including birds, bats, invertebrates and fungi.	1.3 km east.

4.4 Field Survey

4.4.1 The UKHab survey was undertaken within the Energy Park Site between 28 October and 1 November 2024 by appropriately experienced ecologists. Typical and notable plant species were recorded for different habitat types, to aid classification and reflect the conditions at the time of survey. Target notes were recorded to denote the location of any relevant ecological features (see **Annex C**) and the positions of these are presented on **Figure 4** (**Annex A**).

4.4.2 The habitat types present within the Energy Park Site are presented in Table 6**Table 6.** The approximate extent and distribution of these habitats recorded are mapped (to primary code level, using UKHab) on **Figure 4** (**Annex A**) and a summary of indicator species recorded within each primary habitat follows **Table 6**.

Table 6. Habitats found within the Energy Park Site.

Primary Habitat Classification	Habitat	Primary Code	Secondary Code	Area (ha) / Length (km)	% of site area	Conservation designation
	Arable field margins tussocky	c1a5	N/A	1.454 ha	0.35	
	Other cereal crops	c1c7	N/A	405.258 ha	97.79	Not a HaPI
	Non-cereal crops	c1d	N/A	3.503 ha	0.84	
Grassland	Modified grassland	g4	10 – scattered scrub 614 – Permanent agricultural grassland	4.057 ha	0.97	Not a HaPI
Heathland and scrub	Native hedgerow	h2a	11 – hedgerow with trees 50 – ditch (500 – dry)	5.6 km km	-	HaPI and KNPBS priority habitat
	Bramble scrub	h3d	N/A	0.003 ha	<0.01	Not a HaPI
	Mixed scrub	h3h	N/A	0.020 ha	<0.01	
	Willow scrub	h3j	N/A	0.009 ha	<0.01	

Primary Habitat Classification	Habitat	Primary Code	Secondary Code	Area (ha) / Length (km)	% of site area	Conservation designation
Rivers and Lakes	Standing open water and canals	r1g	41 – ponds (non-priority) 42 – ponds 50 – ditches 500 – dry 10 – scattered scrub	0.036 ha 14.1 km	0.01	HaPI and KNPBS priority habitat - there is one waterbody within the Site and eight within 500 m of the Site. HaPI - there are 61 drains and ditches within the Site.
Woodland	Other broadleaved woodland	w1g	29 - plantation 33 – line of trees 200 – individual trees 50 – ditch 526 – Accessible natural green space	0.003 ha 0.11km	<0.01	None
	Coniferous woodland	w2	33 – line of trees 50 – ditch	0.23 km	-	
Urban	Buildings	u1b5	N/A	0.001 ha	<0.01	None
	Other developed land	u1b6	800 - road	0.106 ha	0.03	

Primary Habitat Classification	Habitat	Primary Code	Secondary Code	Area (ha) / Length (km)	% of site area	Conservation designation
	Artificial, unvegetated, unsealed surface	u1c	N/A	0.036 ha	0.01	
	Suburban mosaic of developed and natural surface	u1d	827 - garden	<0.01 ha	<0.01	

Cropland

Arable field margins

4.4.3 Arable field margins bordered the majority of the arable fields within the Energy Park Site, some of which span up to 8 m wide. Species present include Bristly Oxtongue (*Helminthotheca echioides*), Creeping Buttercup (Ranu*nculus repens*), Cock's Foot (*Dactylis glomerata*), Ragwort (*Jacobaea vulgaris*), Cow Parsley (*Anthriscus sylvestris*), Wild Mustard (*Sinapis arvensis*), Scented Mayweed (*German chamomile*), Dandelion (*Taraxacum officinale*), Red Cover (*Trifolium pratense*) and Common Hogweed (*Heracleum sphondylium*).

Other cereal and non-cereal crops

4.4.4 The majority of the Energy Park Site is used as arable farmland, specifically farming cereal crops such as wheat (*Triticum aestivum*). There were also two fields in the Energy Park Site recorded as Sunflower (*Helianthus annuus*) fields.

Grassland

Modified grassland

4.4.5 There are several areas of modified grassland within the Energy Park Site, including two areas of permanent agricultural grassland with scattered scrub as well as an area that is managed as an airfield strip. Species present within this habitat type include Perennial Ryegrass (*Lolium perenne*), Red Fescue (*Festuca rubra*), Bristly Oxtongue, Creeping Buttercup, Vetch species (*Vicia* sp.), Meadow Fescue (*Lolium pratense*), Curled Dock (*Rumex crispus*), Field Elm (Ulmus minor), Bramble (*Rubus fruticosus* agg.), Grey Willow (*Salix cinerea*), Hoary Ragwort (*Jacobaea erucifolia*), Hawthorn (*Crataegus monogyna*), Creeping thistle (*Cirsium arvense*), Dogrose (*Rosa canina*), Common Nettle (*Urtica dioica*), Hemlock (*Conium maculatum*), False Oat-grass (*Arrhenatherum elatius*), Creeping Bent (*Agrostis stolonifera*), Teasle (*Dipsacus fullonum*), Dove's-foot Crane's-bill (*Geranium molle*), Common Mallow (*Malva neglecta*) and Burdock species (*Arctium* sp.).

Heathland and Scrub

Native hedgerows

4.4.6 Hedgerows border many of the fields on the Energy Park Site. Many hedgerows incorporated ditches as part of their structure (h2a 50 / h2a 11 50). The species recorded within the hedges include Hawthorn, Willow species, Blackthorn, Elm, Dog Rose (*Rosa canina*), Common Dogwood (*Cornus sanguinea*), Elder and Sycamore (*Acer pseudoplatanus*).

Bramble, Willow and mixed scrub

4.4.7 Areas of scrub within the Energy Park Site include Bramble scrub, Willow scrub and Mixed scrub which are dominated by woody species such as Hawthorn, Elder (*Sambucus nigra*) and Blackthorn.

Rivers and Lakes

Standing open water and canals

4.4.8 There is a network of ditches and drains within the Energy Park Site as well as one pond (0.036 ha) located within the Energy Park Site (there are a further four ponds within 500 m of the Energy Park Site). A submerged macrophyte species Water Starwort (*Callitriche* sp.) was observed and emergent vegetation and marginal species comprised Water Cress (*Nasturtium officinale*), Bulrush (*Scirpoides holoschoenus*), Grey Willow, Common Reed (*Phragmites australis*) and Drooping Sedge (*Carex pendula*).

Woodland

Other broadleaved woodland

4.4.9 The Newchurch Millenium Spinney incudes species such as Blackthorn, Silver Birch (*Betula pendula*), Spindle (*Euonymus europaeus*), Alder species (*Alnus* sp.), Hawthorn, Buddleia species (*Buddleja sp.*), Walnut (*Juglans regia*), Hazel (*Corylus avellana*), Pedunculate Oak, Common Honeysuckle (*Lonicera periclymenum*), Sycamore, Crab Apple (*Malus sylvestris*), Rowan (*Sorbus aucuparia*), Wild Service Tree (*Sorbus torminalis*) and Willow species.

4.4.10 Occasional lines of broadleaved trees and individual broadleaved trees were found within the Energy Park Site. Species present include Willow species and Hawthorn.

Coniferous woodland

4.4.11 There were occasional lines of Lawsons Cypress (*Chamaecyparis lawsoniana*) trees found within the Energy Park Site.

Urban

Buildings, tracks, and fencing

4.4.12 The Energy Park Site includes a few areas of hardstanding and fencing, as well as single track roads. There are a number of residential and farm buildings immediately adjacent to the Energy Park Site.

Protected and Notable Species

4.4.13 **Table 7** provides a summary of potentially relevant species identified through a combination of desk study and field survey and provides comment on the likelihood of presence within the ZoI.

4.4.14 Where species are identified in **Table 7** as likely or possible, they are likely to represent legislative constraints or may be material to determination of the planning application. Further surveys will or may be required to determine presence or probable absence of species

Table 7. Protected or notable species within the Study Area.

Species (or species group)	Supporting Comments
Flora	**Desk Study:** The desk study identified records of scarce and 'near threatened' plants occurring within the Study Area, including Bluebell (*Hyacinthoides non-scripta*), Common Twayblade (*Neottia ovata*), Deptford Pink (*Dianthus armeria*), Early-purple Orchid (*Orchis mascula*) and Snowdrop (*Galanthus nivalis*). **Field Survey:** Grassland areas, arable field margins and other notable habitats may support protected or notable flora.
Aquatic Macrophytes	**Desk Study:** The desk study identified records of notable, 'vulnerable' and 'endangered' aquatic macrophytes occurring within the Study Area. These included 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*). **Field Survey:** There are aquatic habitats present with the Energy Park Site (e.g. ponds and watercourses) with potential to support notable or protected aquatic macrophytes.
Terrestrial Invertebrates	**Desk Study:** The data search returned records of protected or notable invertebrate species occurring within the last ten years and within 2 km of the Energy Park Site. These included 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*). **Field Survey:** There are grassland areas and scrub habitats present across the Energy Park Site that may support protected or notable invertebrate species.

Species (or species group)	Supporting Comments
Aquatic Invertebrates	**Desk Study:** The data search returned records of aquatic invertebrates including: • 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, Micropterna sequax.* The data search also returned a single record of a white-clawed Crayfish (*Austropotamobius pallipes*) from 2017 and within 2 km of the Energy Park Site. **Field Survey:** There are aquatic habitats present with the Energy Park Site (e.g. ponds and watercourses) with potential to support notable aquatic invertebrate species and assemblages.
Fish	**Desk Study:** The data search returned records of fishes including European eel (*Anguilla anguilla*) from within the last ten years and within 2 km of the Energy Park Site. **Field Survey:** There are aquatic habitats present with the Energy Park Site (e.g. ponds and watercourses) with potential to support notable fish species and assemblages.
Amphibians	**Desk Study:** The data search returned eleven records of six amphibian species occurring within the Study Area, these being Great Crested Newt, Smooth Newt (*Lissotriton vulgaris*), Palmate Newt (*Lissotriton helveticus*), Common Frog (*Rana temporaria*), Marsh Frog (*Pelophylax ridibundus*), Common Toad (*Bufo bufo*). **Field Survey:**

Species (or species group)	Supporting Comments
	There are ponds within and adjacent to (within 500 m) the Energy Park Site. Drainage ditches within the Energy Park Site may also support amphibians such as Marsh Frogs.
Reptiles	**Desk Study:** The data search returned seven records of three species of reptile (Slow Worm *Anguis fragilis*, Common Lizard *Zootoca vivipara* and Grass Snake *Natrix helvetica*) within 2 km of the Energy Park Site and from within the last ten years. **Field Survey:** Reptile habitat is limited across the Energy Park Site, but small pockets of grassland habitat suitable for reptiles do exist.
Birds (breeding and non-breeding (wintering and passage))	**Desk Study:** The desk study identified over 200 bird species within the Study Area, including specially protected bird species such as Peregrine *(Falco peregrinus)*, Hobby (*Falco subbuteo*) and Barn Owl (*Tyto alba*). **Field Survey:** The habitats on Energy Park Site are likely to support nesting birds during the breeding season, including species of conservation concern such as Skylark (*Alauda arvensis*) and potentially Lapwing (*Vanellus vanellus*). Trees, scrub and arable fields occurring within the Energy Park Site have the potential to support birds during the non-breeding season, including those of conservation concern, such as Linnet (*Linaria cannabina*), Redwing (*Turdus iliacus*) and Fieldfare (*Turdus pilaris*).
Bats	**Desk Study:** The desk study identified 24 records of at least five bat species (Nathusius' Pipistrelle *Pipistrellus nathusii*, Serotine bat *Eptesicus serotinus*, Brown Long-eared bat *Plecotus auritus* and unidentified Myotis *Myotis* sp. and Pipistrelle species *Pipistrellus* sp.) within the Study Area. **Field Survey:** Habitats on the Energy Park Site and in the surrounding area includes trees and buildings which have the potential to support roosting bats. The habitat within the Energy Park Site also provides low suitability for commuting and foraging bats.

Species (or species group)	Supporting Comments
Badger (*Meles meles*)	**Desk Study:** The data search returned one record of Badger from 2018, approximately 1.8 km north of the Energy Park Site. **Field Survey:** Several field signs of Badger activity, including setts, were recorded within the Energy Park Site during the UKHab survey.
Otter	**Desk Study:** The data search returned no records of Otter within the Study Area in the past ten years. **Field Survey:** Some of the watercourses and water bodies occurring on the Energy Park Site have the potential to support Otter.
Water Vole	**Desk Study:** The data search returned nine records of Water Vole within 2 km of the Energy Park Site. The closest records are from 2020, approximately 1.23 km south-east of the Energy Park Site. **Field Survey:** Several potential field signs of Water Vole activity were recorded within the Energy Park Site during the UKHab survey and the watercourses and water bodies occurring on the Energy Park Site have the potential to support Water Vole.
Invasive non-native species	**Desk Study:** The data search returned 22 records of invasive non-native species within the Study Area. 17 invasive non-native plant species were returned, (New Zealand Pigmyweed *Crassula helmsii*, Canadian Waterweed *Elodea canadensis,* Nuttall's Waterweed *Elodea nuttallii*, Parrot's-feather *Myriophyllum aquaticum*, Water Fern *Azolla filiculoides*, Least Duckweed *Lemna minuta,* Montbretia *Crocosmia pottsii x aurea = C. x Crocosmiiflora,* Rhododendron *Rhododendron ponticum*, Spanish Bluebell *Hyacinthoides hispanica*, Yellow Archangel *Lamiastrum galeobdolon subsp.argentatum*, Winter Heliotrope *Petasites fragrans*, Three-cornered Garlic *Allium triquetrum,* Japanese Knotweed *Fallopia japonica,*Himalayan Balsam *Impatiens glandulifera,* Wall Cotoneaster *Cotoneaster horizontalis,* Japanese Rose *Rosa rugosa,* and Virginia-creeper *Parthenocissus quinquefolia*.

Species (or species group)	Supporting Comments
	Two invasive non-native fauna species were returned, Western Conifer Seed Bug (*Leptoglossus occidentalis*) and American Mink (*Neovison vison*). Three records of non-native non-invasive aquatic invertebrates were returned*, Crangonyx pseudogracilis/floridanus,* New Zealand mud snail *Potamopyrgus antipodarum* and Acute bladder snail *Physella acuta.* Six of these records were within or immediately adjacent to the Energy Park Site, these included records for Nuttall's Waterweed and Yellow Archangel. **Field Survey:** No invasive non-native species were recorded within the Energy Park Site during the survey. However, there is potential for invasive non-native species to be present within the Energy Park Site.
Brown Hare (*Lepus europaeus*)	**Desk Study:** The data search returned 14 records of Brown Hare within the Study Area. **Field Survey:** The species has the potential to occur across the Energy Park Site within the arable fields.
Hedgehog (*Erinaceus europaeus*)	**Desk Study:** The data search returned one record of Hedgehog from 2024 approximately 830 m from the south-east of the Energy Park Site. **Field Survey:** The species has the potential to occur across the Energy Park Site within the grassland and scrub habitats.

Species present on site are those for which recent direct observation or field signs confirmed presence. Species which are possibly present are those for which there is potentially suitable habitat based on the results of the UKHab survey, or this combined with desk study records.

Legally protected species are those listed under Schedules 1, 5 and 8 of the WCA; and Schedules 2 and 4 of the Habitats Regulations.

Species (or species group)	Supporting Comments
	SPIs as those listed under Section 41 of the NERC Act. Planning Authorities have a legal duty under Section 40 of the same Act to consider such species when determining planning applications. *Other notable species include native species of conservation concern listed in the KNPBS (except species that are also SPI), those that are Nationally Rare, Scarce or Red Data List, and non-native controlled weed species listed under Schedule 9 of the WCA.*

5. Identification of Constraints and Recommendations

Introduction

Approach to the Identification of Ecological Constraints

5.1.1 Relevant IEFs that may represent constraints to the Scheme, or that provide opportunities to deliver ecological enhancement in accordance with planning policy, are identified in within the following sections of this PEAR.

5.1.2 The NPPF (Ref. 22) and local planning policy (summarised in **Section 2** of this PEAR) specify requirements for the protection of IEFs for biodiversity. Planning policy is a material consideration when determining planning applications. Compliance with planning policy requires that the Scheme considers and engages the following mitigation hierarchy where there is potential for impacts on relevant IEFs:

- Avoidance – actions taken to avoid causing impacts to the environment prior to beginning development (for example, 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 (for example, adapting the development design to minimise impacts);
- Restoration or rehabilitation – actions taken to repair environmental degradation or damage following unavoidable impacts caused by development; and
- 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 and / or by providing suitable habitats elsewhere (whether in the control of SSE Newchurch Solar Limited or otherwise legally enforceable through planning condition).

5.1.3 This hierarchy requires the highest level to be applied where possible. Only where this cannot reasonably be adopted should lower levels be considered. The rationale for the proposed mitigation and / or compensation should be provided with planning applications, including sufficient detail to show that these measures are feasible and would be provided.

5.1.4 In pursuance of the objectives within the NPPF (Ref. 22) and the Environment Act 2021 (Ref. 12) of providing net gains in biodiversity, consideration should be given to the scope for enhancement as part of the Scheme. This should represent biodiversity gain over and above that achieved through mitigation and compensation. Enhancement could be achieved on and / or off the Site.

5.1.5 The likelihood of the relevant IEFs constraining the Scheme has been assessed with reference to the scale described in **Table 8.** The higher the importance of the IEF for the conservation of biodiversity at national and

local scales, the more likely it is to be a material consideration during determination of the planning application for the Scheme.

Table 8. Scale of constraint to the Scheme.

Likelihood	Definition
High	An actual or potential constraint that is subject to relevant legal protection and is likely to be a material consideration in determining the planning application (e.g. statutory nature conservation designations and European / nationally protected species). Further survey likely to be required (as detailed in this report) to support a planning application.
Medium	An actual or potential constraint that is covered by national or local planning policy and, depending on the level of the potential impact as a result of the Scheme, may be a material consideration in determining the planning application. Further survey may be required (as detailed in this report) to support a planning application.
Low	Unlikely to be a constraint to development or require further survey prior to submission of a planning application. Mitigation is likely to be covered under Construction Environmental Management Plan (CEMP) or precautionary working method statement (e.g. generic requirements for the management of nesting bird risks).
Negligible	No constraint to the development and further survey not required.

Constraints and Recommendations: Designated Sites

Sites statutorily designated for their biodiversity value

5.1.6 The desk study identified three sites statutorily designated at a European (International) level for their biodiversity value within the 10 km Study Area and seven sites that are statutorily designated for their biodiversity value at a National level. All of these sites are outside of the Energy Park Site.

5.1.7 The Scheme, where solar PV modules and other infrastructure (not including the Grid Connection Route) are proposed, will not result in any direct impacts (i.e. through habitat loss) to these statutory sites as they are outside of the Energy Park Site. Indirect impacts (e.g. from lighting, noise or air quality) are unlikely during construction, operation or decommissioning, based on the distance between the Scheme and the sites. However, the potential for impacts, including any potential hydrological links, will be assessed in the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES). Suitable management plans will need to be prepared (such as a CEMP) to ensure best practice guidance is followed during all phases (e.g. construction, operation and decommissioning) of the Scheme.

5.1.8 Therefore, the risk of statutorily designated sites constraining the Scheme during construction, operation and decommissioning is currently High (see

Table 8) but will be re-assessed when further details of the Scheme are available.

Sites non-statutorily designated for their biodiversity value

5.1.9 The desk study identified four non-statutory sites (all LWSs) designated for their biodiversity value within the Study Area (see **Table 4**), with the closest being the 'SH37 Pasture, Ditches and Pond, Dymchurch' LWS, which is approximately 1.11 km east of the Energy Park Site.

5.1.10 The Scheme, where solar PV modules and other infrastructure (not including the Grid Connection Route) are proposed, will not result in any direct impacts (i.e. through habitat loss) to these non-statutory sites as they are outside of the Energy Park Site. Indirect impacts (e.g. from lighting, noise or air quality) are unlikely during construction, operation or decommissioning, based on the distance between the Scheme and the sites. However, the potential for impacts will be assessed in the PEIR and ES. Suitable management plans will need to be prepared (such as a Construction Environmental Management Plan (CEMP), Operational Environmental Management Plan (OEMP), Landscape and Ecological Management Plan (LEMP) and Decommissioning Environmental Management Plan (DEMP)) to ensure best practice guidance is followed during all phases (e.g. construction, operation and decommissioning) of the Scheme.

5.1.11 Therefore, the risk of non-statutorily designated sites constraining the Scheme during construction, operation and decommissioning is currently Medium (see **Table 8**) but will be re-assessed when further details of the Scheme are available.

Constraints and Recommendations: Habitats

5.1.12 Through the website MAGIC, four priority habitats, six veteran trees and one ancient tree were identified within 2 km of the Energy Park Site.

5.1.13 A further three potential priority habitats were identified during the UKHab surveys – arable field margins, native hedgerows and open standing water (i.e. ponds and ditches / drains). These habitats should be avoided (through retention of such habitats) and buffers may be required to avoid any impacts occurring.

5.1.14 The Scheme should seek to avoid, protect and retain notable habitats where practicable and should include:

- offsets of at least 15m from woodland;
- offsets applicable to each tree's root protection area (RPA) (Ref. 34) for individual trees and trees occurring within hedgerows;
- a minimum no development buffer of 5m from hedgerows without trees;
- a minimum offset of 10m from the banks of watercourses (taken from the top of the bank) as per Environment Agency guidelines; and
- suitable no development buffers (dependent on the aquatic habitat present) from water bodies (such as ponds) to protect aquatic habitats.

5.1.15 A detailed vegetation survey will be required during the appropriate survey season to obtain specific survey information for any potential HaIP (Ref. 13) and determine whether any significant plant communities are present that

may inform any mitigation requirements (see **Section 5.4** below for details on the flora surveys).

5.1.16 Therefore, the risk of protected habitats / HaPIs constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**), but will be re-assessed when further details of the Scheme are available and once the recommended flora surveys are completed.

Biodiversity Net Gain

5.1.17 Surveys to inform the biodiversity net gain (BNG) assessment should be undertaken as appropriate to record the area (or length) of each habitat measured alongside a habitat condition assessment in line with UKHab (Ref. 49), as per BNG guidance documents (Ref. 52). Biodiversity metrics provide a measure of overall biodiversity value based on habitat type, area, condition, strategic significance and distinctiveness. The current approved metric is the Defra Statutory Metric which is a tool that allows a value of biodiversity to be measured. This is calculated pre- and post-development for three habitat components: Habitat, Rivers and streams and Hedgerows. The change in biodiversity units is calculated for each component and indicates either a net loss, a net gain or no change in biodiversity.

5.1.18 A BNG assessment document will be prepared as part of the DCO submission (see **Table 9** of this PEAR for recommended further surveys).

Constraints and Recommendations: Species

Flora

5.1.19 The desk study identified records of several scarce and 'near threatened' plants occurring within the Study Area, including Bluebell and Early Purple Orchid.

5.1.20 Some habitats within the Energy Park Site have the potential to support protected or notable flora species, such as those associated with arable field margins. Any potentially important habitats (i.e. arable field margins and woodlands) that are likely to support protected or notable flora should be avoided (through retention of such habitats) and suitably buffered to avoid impacts.

5.1.21 Further investigation of these habitats is required to determine the presence of protected or notable plant species. As such, further National Vegetation Classification (NVC) surveys (Ref. 53) should be undertaken to identify species and any areas of notable flora communities. Protected or notable flora will also be recorded within further hedgerow and arable flora surveys.

5.1.22 Therefore, the risk of protected or notable flora constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**), but will be re-assessed when further details of the

Scheme are available and once the recommended flora surveys are completed.

Aquatic Macroinvertebrates

5.1.23 The desk study identified records of several notable aquatic macrophyte species occurring within the Study Area, including frog-bit and greater water parsnip.

5.1.24 There are some aquatic habitats present on site (such as ponds and ditches) that have the potential to support notable aquatic macrophyte species and assemblages. Any potentially important habitats (i.e. waterbodies and watercourses) that are likely to support protected or notable species of aquatic macrophytes should be avoided (through retention of such habitats) and suitably buffered to avoid impacts.

5.1.25 Further investigation of watercourses and waterbodies through a scoping assessment will be undertaken to determine the presence of notable aquatic habitats that may support protected or notable aquatic species and assemblages and to identify any areas of importance.

5.1.26 Therefore, the risk of aquatic macrophytes constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**), but will be re-assessed when further details of the Scheme are available and once the recommended scoping survey is completed.

Aquatic Invertebrates

5.1.27 The data search returned records of protected or notable aquatic invertebrate species occurring within the Energy Park Site, including the great silver water beetle and a single record of white-clawed crayfish from 2017. That said, it is unlikely that white-clawed crayfish will be present within the Site given that the ditches do not represent good habitat for white-clawed crayfish.

5.1.28 There are some aquatic habitats present on site (such as ponds and ditches) that have the potential to support notable aquatic invertebrate species and assemblages. Any potentially important habitats (i.e. waterbodies and watercourses) that are likely to support protected or notable species / assemblages of aquatic invertebrates should be avoided (through retention of such habitats) and suitably buffered to avoid impacts.

5.1.29 Further investigation of watercourses and waterbodies through a scoping assessment will be undertaken to determine the presence of notable aquatic habitats that may support protected or notable aquatic species and assemblages and to identify any areas of importance.

5.1.30 Therefore, the risk of aquatic invertebrates constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**), but will be re-assessed when further details of the Scheme are available and once the recommended scoping survey is completed.

Fish

5.1.31 The data search returned one record of a protected or notable fish species occurring within the Energy Park Site, European eel.

5.1.32 There are some aquatic habitats present on site (such as ponds and ditches) that have the potential to support fish species and assemblages. Any potentially important habitats (i.e. waterbodies and watercourses) that are

likely to support protected or notable fish should be avoided (through retention of such habitats) and suitably buffered to avoid impacts.

5.1.33 Further investigation of watercourses and waterbodies through a scoping assessment will be undertaken to determine the presence of notable aquatic habitats that may support protected or notable aquatic species and assemblages and to identify any areas of importance.

5.1.34 Therefore, the risk of fish constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**), but will be re-assessed when further details of the Scheme are available and once the recommended scoping survey is completed.

Terrestrial Invertebrates

5.1.35 The data search returned several records of protected or notable terrestrial invertebrate species occurring within the Energy Park Site.

5.1.36 The Energy Park Site comprises habitats that may support protected or notable terrestrial invertebrates or invertebrate communities. Any potentially important habitats (i.e. grassland, waterbodies, hedgerows and arable margins) that are likely to support protected or notable species / assemblages of terrestrial invertebrates should be avoided (through retention of such habitats) and suitably buffered to avoid impacts to terrestrial invertebrates.

5.1.37 Based on the geographic location of the Energy Park Site, habitats on site and species recorded during the desk study, a scoping survey should be undertaken to establish the presence of particular species or hotspots for terrestrial invertebrate assemblages.

5.1.38 Therefore, the risk of terrestrial invertebrates constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**), but will be re-assessed when further details of the Scheme are available and once the recommended scoping survey is completed.

Amphibians

5.1.39 The desk study identified nine waterbodies within 500 m of the Energy Park Site, one of which is on the Energy Park Site (see **Figure 5**, **Annex A**), along with numerous agricultural ditches. The data search returned records of six amphibian species, including Great Crested Newt, occurring within 2 km of the Energy Park Site. Furthermore, Great Crested Newt is listed as a primary reason for the selection of the Dungeness SAC. The Dungeness SAC, although 4.11 km from the Energy Park Site, hosts a large and viable Great Crested Newt population.

5.1.40 Any ponds, ditches and surrounding terrestrial habitat, that have the potential to support amphibians, including Great Crested Newt, should be avoided (through retention of such habitats) and suitably buffered to avoid impacts to amphibians. Measures should also be included avoid sedimentation and contamination of waterbodies.

5.1.41 Further surveys of the waterbodies that are within 250 m of the Energy Park Site will be required, where potential impacts relating to Great Crested Newt are likely as a result of the Scheme. In the first instance, a Habitat Suitability Index (HSI) assessment will be undertaken to categorise the suitability of the

waterbodies for Great Crested Newt. Following this, where waterbodies are identified as being suitable to support Great Crested Newt, further surveys (environmental DNA (eDNA) presence / absence surveys) of those water bodies will be required to determine presence or absence of Great Crested Newt. eDNA surveys can only be undertaken between mid-April and the end of June. If presence of Great Crested Newt is confirmed in waterbodies through eDNA, then further surveys may need to be undertaken to determine the size of the population present, which will inform the assessment of the potential impacts of the Scheme on Great Crested Newt and the need for any licencing. Such surveys can only be undertaken between early April and June however, two surveys must be undertaken on each water body between mid-April and mid-May (the peak season for Great Crested Newt).

5.1.42 Therefore, the risk of amphibians (specifically Great Crested Newt) constraining the Scheme during construction, operation or decommissioning is currently High (see **Table 8**), but will be re-assessed when further details of the Scheme are available and once the recommended present / absence surveys are completed.

Reptiles

5.1.43 The data search returned records of Grass Snake, Slow-worm and Common Lizard within 2 km of the Energy Park Site.

5.1.44 Habitat potentially suitable to support reptiles was recorded on the Energy Park Site, including streams and ditches for Grass Snake and grassland areas suitable for other reptile species, such as Common Lizard. Any potentially important habitats (i.e. grassland and minor watercourses) that are likely to support reptiles should be avoided (through retention of such habitats) and suitably buffered to avoid impacts to terrestrial invertebrates.

5.1.45 Further surveys of the habitats that could support reptiles are recommended to determine the presence or absence of any reptile species.

5.1.46 Therefore, the risk of reptiles constraining the Scheme during construction, operation or decommissioning is currently Medium (see **Table 8**) but will be re-assessed when further details of the Scheme are available and once the recommended present / absence surveys are completed.

Birds

5.1.47 The desk study returned over 200 records of bird species occurring within 2 km of the Energy Park Site, including species listed under Schedule 1 of the WCA (Ref. 10).

5.1.48 Trees, hedgerows, scrub and arable fields on Energy Park Site are likely to support nesting birds during the breeding season and also wintering birds, including those of conservation concern. The Scheme has the potential to result in the direct loss of habitat used by protected and notable bird species.

5.1.49 Further surveys of the general breeding bird assemblage, including targeted surveys for Barn Owl, will be required to determine the magnitude of impacts of the Scheme on the breeding bird assemblage. Surveys of the non-breeding (wintering) assemblages are also required to determine the species and assemblages using the Energy Park Site.

5.1.50 Therefore, the risk of breeding birds constraining the Scheme during construction, operation or decommissioning is currently High and the risk of

non-breeding birds is currently Medium / High (see **Table 8**). This will be re-assessed when further details of the Scheme are available and once the recommended breeding bird and non-breeding bird surveys are completed.

Bats

5.1.51 The data search returned records of at least five species of bat within 2 km of the Energy Park Site.

5.1.52 The UKHab survey identified numerous mature trees within the Energy Park Site that have suitable features to support bat roosts. Any features that have the potential to support roosting, commuting and foraging bats should be avoided (through retention of such habitats) and suitably buffered to avoid impacts to bats. For example, it is recommended that buffer zones around roosts or potential roosts are put in place (>15 m from the roost feature as per recommendations for offsets from woodland and trees).

5.1.53 Further surveys (a Daytime Bat Walkover (DBW) to determine the presence of potential roost features should be undertaken and if any trees or other suitable habitats for roosting bats are impacted by the Scheme, then further roost categorisation surveys (between May and September) will also be required. Nighttime Bat Walkover (NBW) surveys for a low habitat suitability site should be undertaken for commuting and foraging bats (one survey per season, spring, summer and autumn) to determine species and flight paths across the Energy Park Site to assess potential impacts of the Scheme on foraging and commuting bats. If key bat flight lines are identified, these should be retained or mitigated for (if lost).

5.1.54 Therefore, the risk of roosting bats constraining the Scheme during construction, operation or decommissioning is currently High and the risk of commuting birds is currently Medium / High (see **Table 8**). This will be re-assessed when further details of the Scheme are available and once the recommended PRA and activity surveys are completed.

Badger

5.1.55 The desk study returned one record of Badger within the Study Area.

5.1.56 The UKHab survey identified Badger activity within the Energy Park Site and several areas that could potentially support Badger (e.g. woodlands, hedgerows and field margins for foraging). Badger setts should be avoided and appropriately buffered for (i.e. a buffer of 30 m).

5.1.57 Owing to legislative provisions under the Protection of Badger Act (Ref. 15), further surveys (following standard guidelines) are required to determine the full extent of Badger presence across the Energy Park Site and in the wider ZoI (up to 50 m from the Energy Park Site).

5.1.58 Therefore, the risk of Badger constraining the Scheme during construction, operation or decommissioning is currently High (see **Table 8**) but this will be

re-assessed when further details of the Scheme are available and once the recommended Badger surveys are completed.

Otter and Water Vole

5.1.59 The data search returned several records of Water Vole within 2 km of the Scheme, although there were no recent (i.e. within the last ten years) records of Otter.

5.1.60 During the UKHab survey, potential evidence of Water Vole was recorded on site (see target notes TN3, TN9 and TN13). Furthermore, the watercourses and waterbodies on the Energy Park Site have the potential to support both Water Vole and Otter. Direct impacts to these habitats should be minimised (through retention of such habitats and using existing crossing points) and suitably buffered to avoid impacts to riparian mammals. For example, leaving a minimum working distance of 10 m from the edges of watercourses (or waterbodies) to avoid disturbance to Otter and Water Vole and to protect riparian habitats.

5.1.61 To ensure adequate baseline information on the presence of Otter and Water Vole occurring on the Energy Park Site, further riparian mammal surveys of all waterbodies and watercourses within the Energy Park Site should be undertaken. These surveys should also record any evidence of American Mink. Two surveys must be completed, one in the first half of the breeding season (April to June) and one in the second half (July to September).

5.1.62 Therefore, the risk of riparian mammals constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**) but this will be re-assessed when further details of the Scheme are available and once the recommended riparian mammal surveys are completed.

Other Priority Species

5.1.63 Records of Brown Hare and Hedgehog were returned from the during the data search and Brown Hare was recorded on the Energy Park Site during the UKHab survey.

5.1.64 Brown Hare and Hedgehog receive limited legal protection but are Species of Principal Importance on Section 41 of the NERC Act (Ref. 13) and as such, no formal surveys are recommended. However, it is suggested that the Scheme is planned to take account of likely mitigation requirements for these species. This will include timing of any site clearance (e.g. during construction) to avoid Brown Hare during their breeding season. This is concordant with the requirements for nesting birds. As such, it is recommended that site clearance and preparatory works would be undertaken over the Autumn / Winter period between September and February.

5.1.65 Therefore, the risk of Brown Hare and Hedgehog constraining the Scheme during construction, operation or decommissioning is currently Low (see

Table 8) but this will be re-assessed when further details of the Scheme are available and once all the recommended ecological surveys are completed.

Non-native Invasive Species

5.1.66 The data search returned records of 22 invasive non-native species within 2 km from the Energy Park Site. However, no invasive non-native species were recorded on the Energy Park Site during the UKHab survey.

5.1.67 No formal surveys for invasive species are recommended but any presence should be noted during other ecological surveys of the Energy Park Site. If found to be present, biosecurity measures will need to be put in place during construction to prevent the spread of invasive non-native species into and away from the Scheme. An invasive non-native species management plan should also be produced to establish the approach to management and eradication of invasive non-native species found to be present.

5.1.68 Therefore, the risk of invasive non-native species constraining the Scheme during construction, operation or decommissioning is currently Medium / High (see **Table 8**) but this will be re-assessed when further details of the Scheme are available and once all the recommended ecological surveys are completed.

6. Conclusion

6.1.1 This PEAR is based on a desk study and initial field surveys that have been used to assess the ecological constraints to the Scheme and to provide advice in respect of further surveys that will be required.

6.1.2 A summary appraisal of the recommended further ecological surveys is presented in **Table 9** below.

Table 9. Summary appraisal of ecological features and recommended further requirements.

Ecological Feature	Scale of constraint	Further requirements	Number of survey visits required	Survey period	Driver
Designated Sites	High	No direct impacts (habitat loss) to designated Sites are predicted at this stage as all are outside of the Scheme. However, this will be re-appraised as the Scheme progresses.	N/A	N/A	Habitat Regulations, WCA
Habitats – condition assessment and possibly River Morph surveys to inform BNG assessment	Medium / High	A survey to determine the condition of habitats. Other assessments such as River Morph surveys may be required to inform the BNG Assessment.	Initially one survey visit.	April to October.	Environment Act 2021
Habitat / Plants / NVC / Hedgerow	Medium / High	An NVC survey and arable plant survey to identify the presence and extent of any potential protected or notable habitats and protected or notable plant species. The surveys will focus on potential priority habitat within the Scheme. Arable plant surveys will involve walking field boundaries and comparable areas of marginal habitat only. Hedgerow surveys required where impacts are likely to occur.	Two survey visits.	May to July for flora, May to September for hedgerows.	WCA, NERC Act, UK BAP, KNPBS

Ecological Feature	Scale of constraint	Further requirements	Number of survey visits required	Survey period	Driver
Aquatic Habitats / Macrophytes / Macroinvertebrates / Fish	Medium	A scoping assessment of any aquatic habitats potentially directly or indirectly affected by the Scheme. This will include an assessment of the potential for aquatic habitats to support protected or notable species. Surveys of selected field ponds and watercourses are likely to be required and will be determined following the scoping survey.	Initially one survey visit followed by targeted species surveys, where required.	Any time of year, but March to May for scoping in advance of any further surveys that may be required between May and November.	NERC Act, UK BAP, KNPBS
Terrestrial Invertebrates	Medium / High	A scoping survey to assess the potential of areas within the Energy Park Site boundary to support protected or notable invertebrate species and assemblages. Depending on the outcomes of these surveys, further targeted survey may be required.	Initially, one survey visit, with potential for seasonal (Spring, Summer, Autumn) targeted surveys.	April to September.	WCA, NERC Act
Amphibians (including Great Crested Newt)	High	Undertake HSI assessment of all waterbodies within 250 m (where accessible) for their suitability to support Great Crested Newt. Following this, surveys to determine presence or absence of Great Crested Newt within suitable waterbodies (either by eDNA	One survey visit for HSI assessment and, where required, followed by presence / absence survey	Anytime of year for HSI, April to June for eDNA / population surveys.	Habitat Regulations, WCA, NERC Act, UK BAP, KNPBS

Ecological Feature	Scale of constraint	Further requirements	Number of survey visits required	Survey period	Driver
		or four survey visits at night) that are within 250 m of the Energy Park Site. Depending on the outcomes of these surveys (such as a positive eDNA) further surveys may be required to determine the population size and evidence of breeding).	(eDNA or four survey visits) and then up to a total of six survey visits for population survey (where required).		
Reptiles	Medium	Surveys to identify the presence or absence of reptile species across suitable habitats within the Energy Park Site.	One survey visit to place the reptile refugia followed by seven survey visits to check for reptiles.	Optimum survey months are April to May and / or September.	WCA, NERC Act, UK BAP, KNPBS
Breeding Birds	High	Surveys required to determine the breeding bird assemblage across the Scheme, including species listed on Schedule 1 of the WCA.	Six survey visits for a territory mapping survey and to determine presence, or absence, of species listed on Schedule 1 of the WCA.	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 species	Birds Directive, WCA, NERC Act, UK BAP, KNPBS

Ecological Feature	Scale of constraint	Further requirements	Number of survey visits required	Survey period	Driver
				(e.g. Hobby *Falco subbuteo*).	
Non-breeding Birds	Medium / High	Surveys required to determine the non-breeding (wintering) bird assemblage across the Scheme.	Six survey visits.	October to March.	Birds Directive, WCA, NERC Act, UK BAP, KNPBS
Bats - roosting	High	Surveys to identify potential features on trees and buildings that may support bat roosts. Depending on the findings of this survey and risk to these features, further surveys may be required to determine whether bats are present.	One survey visit to undertake a Daytime Bat Walkover (DBW) survey within the Energy Park Site.	Anytime for DBW (ideally when trees not in leaf, January to February), May to September for roost characterisation (if required).	Habitat Regulations, WCA, NERC Act, UK BAP, KNPBS
Bats – commuting / foraging	Medium / High	Transect surveys and deployment of static detectors, once in each season (Spring, Summer and Autumn) to identify important commuting or foraging areas across the Energy Park Site. Multiple transects and static detectors required to cover	Night-time Bat Walkover (NBW) in Spring, Summer and Autumn, including the deployment of static detectors.	April to September.	Habitat Regulations, WCA, NERC Act, UK BAP, KNPBS

Ecological Feature	Scale of constraint	Further requirements	Number of survey visits required	Survey period	Driver
		representative habitats across the Scheme.			
Otter	Medium / High	Undertake a presence / absence survey on watercourses that may be affected by the Scheme.	At least two survey visits.	Winter and Spring is best, but the survey can be undertaken at any time of year.	WCA
Water Vole	Medium / High	Undertake a presence / absence survey on watercourses that may be affected by the Scheme.	Two survey visits.	One survey in April to June and one survey July to September.	WCA
Badger	High	Survey to record all evidence of Badger activity across the Scheme to identify setts to avoid or that require mitigation.	One survey visit.	Any time of year, ideally when vegetation not in leaf (i.e. November to February).	Protection of Badger Act
Hedgehog and Brown Hare	Low	No further survey required, but mitigation and enhancement delivered as part of the Scheme should look to avoid disturbance to these species, retain habitats and ensure that connectivity is maintained throughout	N/A	-	NERC Act

Ecological Feature	Scale of constraint	Further requirements	Number of survey visits required	Survey period	Driver
		the Scheme and into the wider area. All species are likely to benefit from a reduction in intensively managed agricultural land.			
Invasive Non-Native Species (INNS)	Medium / High	No further investigation is required, but presence of INNS will be recorded during other ecological surveys. This will include notes on precise location and stand size. If any INNS are identified, a management plan may be required to manage and eradicate as necessary.	No specific surveys are required but invasive non-native species will be recorded during other surveys mentioned in this table.	Any time of year, but April to September is the optimal period for recording INNS plants.	WCA, IAS Order

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Annex A Figures

Figure 1: Site boundary

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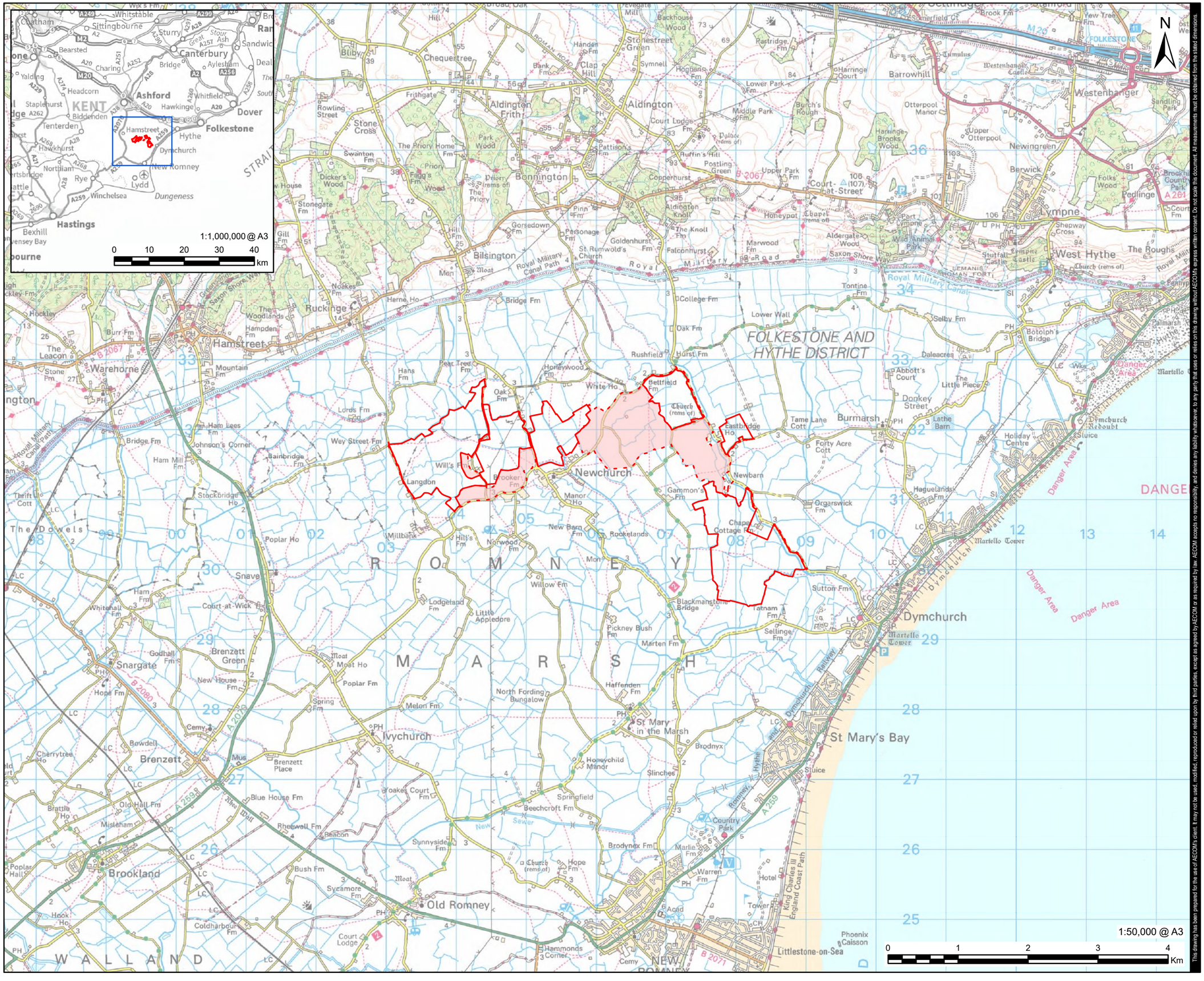
FOLKESTONE AND HYTHE DISTRICT
ROMNEY MARSH
WALLAND
Newchurch
Bonnington
Aldington
Bilsington
Ruckinge
Hamstreet
Warehorne
Ashford
Westenhanger
Lympne
West Hythe
Barrowhill
Newingreen
Berwick
Pedlinge
Otterpool Manor
Court-at-Street
Postling
Stanford
Saltwood
Hythe
Sandling Park
Folkestone
Dymchurch
St Mary's Bay
Burmarsh
Romney Marsh
Ivychurch
Old Romney
Brookland
Brenzett
Snargate
Snave
Dungeness
Littlestone-on-Sea
New Romney
Lydd
Rye
Winchelsea
Hastings
Bexhill
Tenterden
Hawkhurst
Northiam
Staplehurst
Headcorn
Biddenden
Charing
Aylesham
Sandwich
Deal
Whitstable
Chatham
Sittingbourne
Sturry
Canterbury
Bridge
Dymchurch Redoubt
Martello Tower
Danger Area
Royal Military Canal
Romney, Hythe and Dymchurch Railway
King Charles III England Coast Path
Saxon Shore Way
Roman Road
Stone Cross
Rowling Street
Frithgate
Swanton Fm
Dicker's Wood
Stonegate
Gorsedown Fm
Pinn Fm
Goldenhurst Fm
Falconhurst
Marwood Fm
Aldergate Wood
Tontine Fm
College Fm
Lower Wall
Selby Fm
Botolph's Bridge
Daleacres
Abbott's Court
Donkey Street
The Little Piece
Lathe Barn
Holiday Centre
Sluice
Martello
Bridge Fm
Oak Fm
Rushfield
Hurst Fm
Peat Tree Fm
Honeywood Fm
White Ho
Bettfield Fm
Eastbridge Ho
Tame Lane Cott
Forty Acre Cott
Newbarn
Gammon's Fm
Orgarswick Fm
Haguelands Fm
Chapel Cottage Fm
Sutton Fm
Blackmanstone Bridge
Tatnam Fm
Sellinge Fm
Pickney Bush Fm
Marten Fm
Willow Fm
Rooketands
New Barn Fm
Norwood Fm
Hill's Fm
Millbank
Poplar Ho
Lodgeland Fm
Little Appledore
Haffenden Fm
North Fording Bungalow
Brodnyx
Honeychild Manor
Slinches
Springfield
Beechcroft Fm
Brodnyx Fm
Marlie Fm
Warren Fm
Country Park
Hotel
Tower
Acad
Phoenix Caisson
Hammonds Corner
Court Lodge
Sycamore Fm
Bush Fm
Blue House Fm
Yoakes Court Fm
Rhee Wall
Old Hall Fm
Misleham
Bratlie Ho
Cherrytree Ho
Bowdell
Brenzett Place
Brenzett Green
Godhall Fm
New House Fm
Poplar Fm
Melon Fm
Spring Fm
Hope Fm
Moat Ho
Moat
Cemy
Mus
Sunnyside Fm
Beacon
Rhee Wall
Coldharbour Fm
Stockbridge Ho
Hook Ho
Poplar Hall
Thrift Cott
The Dowels
Ham Fm
Whitehall Fm
Court-at-Wick
Johnson's Corner
Ham Mill Fm
Bainbridge Fm
Wey Street Fm
Lords Fm
Ham Lees Fm
Mountain Fm
Hans Fm
Oak Fm
Langdon
Will's Fm
Brooker Fm
Manor Ho
Herne Ho
Noakes Fm
The Woodlands
Hampden Fm
Burr Fm
The Leacon
Stone Fm
Hockley
Ickley Fm
Royal Military Canal Path
Saxon Shore Way
Roman Road
Bilsington Priory (rems of)
Priory Fm
Park Wood
Priory Home Fm
Fagg's Wood
Fagg's Fm
Dicker's Wood
Stonegate Fm
Gill Fm
Hill Fm
Moat
Mon
St Rumwold's Church
Parsonage Fm
Pattison's Fm
Ruffin's Hill
Postling Green
Upper Park Fm
Court Lodge Fm
Middle Park Fm
Lower Park Fm
Hoppard Fm
Symnell
Stonestreet Green
Backhouse Wood
Ragtridge Fm
Harringe Court
Harringe Brooks Wood
Otterpool Manor
Upper Otterpool
Westenhanger Castle
Stutfall Castle
Lympne Castle
Lympne Cross
Shepway Cross
Folks' Wood
Brockhill Country Park
Court Fm
Pennyp
Palmarsh
Hythe
Danger Area
Martello Tower
Dymchurch Redoubt
Sluice
Holiday Centre
Lathe Barn
The Little Piece
Abbott's Court
Daleacres
Botolph's Bridge
Selby Fm
Tontine Fm
Lower Wall
College

Figure 2: Location of statutory sites.

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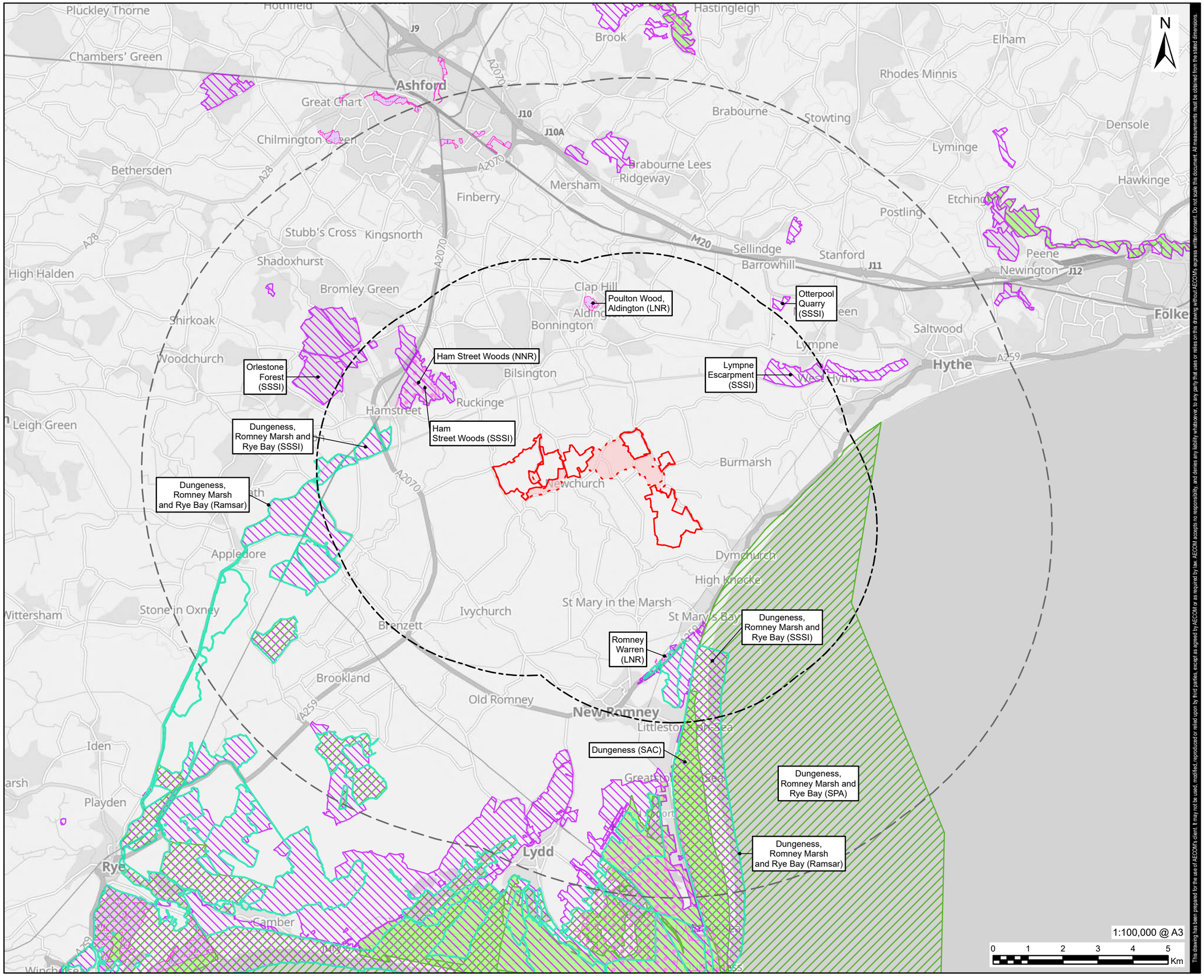

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PROJECT

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 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)

NOTES

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ISSUE PURPOSE

PEA Report

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60736659

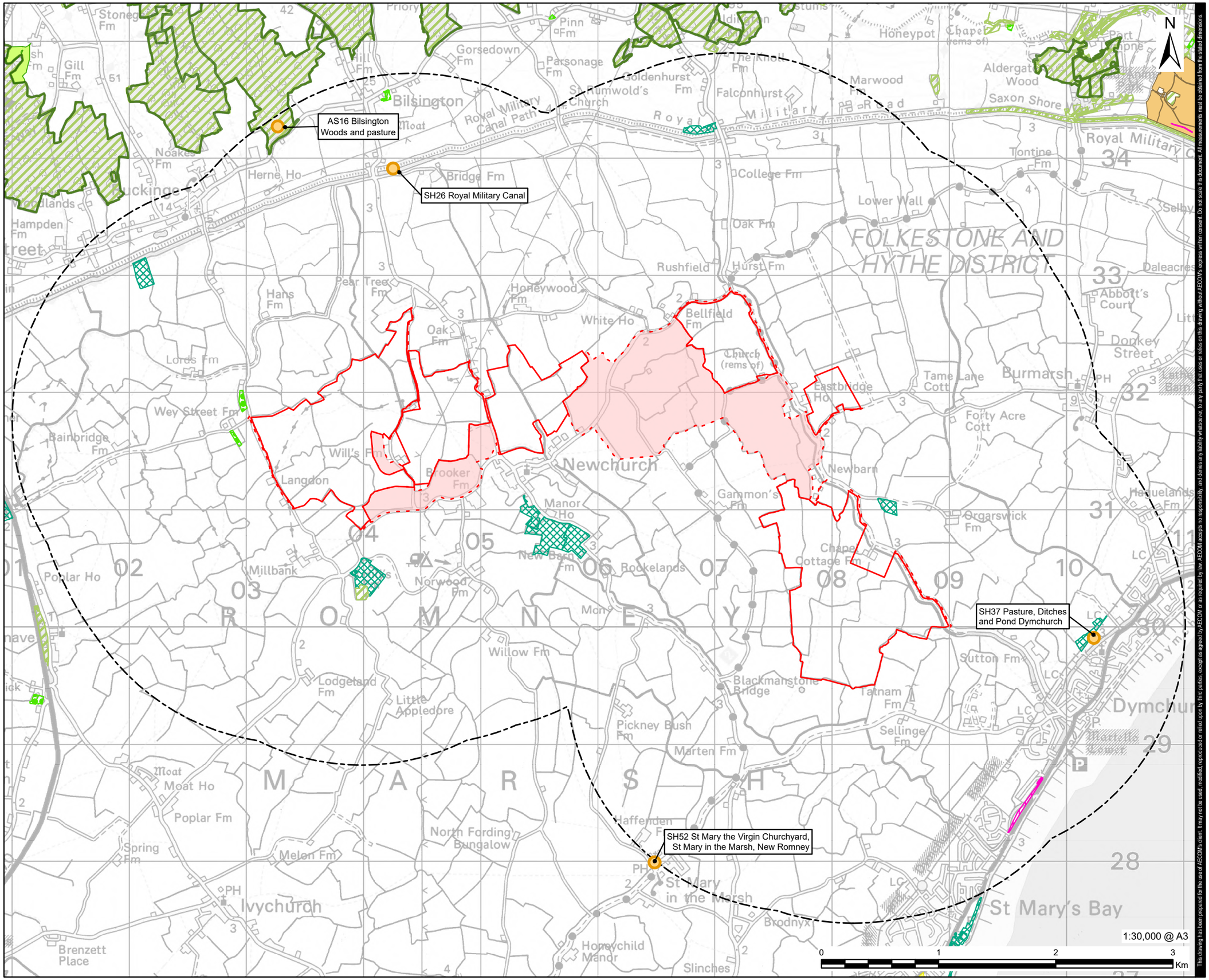
FIGURE TITLE

Location of Statutory Sites

FIGURE NUMBER

Figure 2

Figure 3: Location of non-statutory sites and priority habitats.



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PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

CONSULTANT

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

LEGEND

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

Location of Non-Statutory Sites and Priority Habitats

FIGURE NUMBER

Figure 3

Figure 4: UK Habitat map and target notes.

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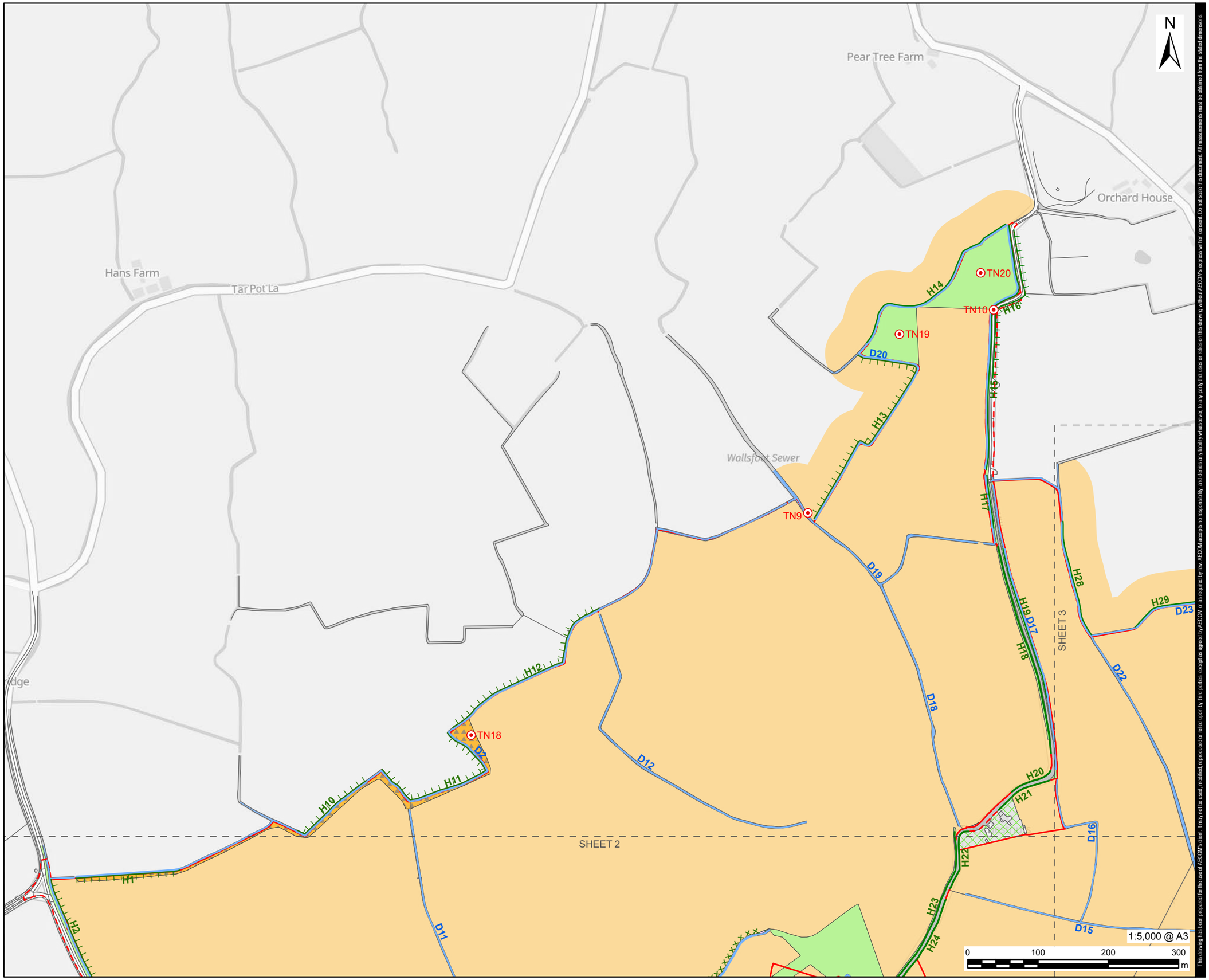

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AECOM

PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

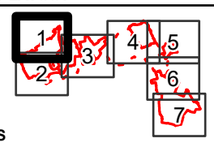
CONSULTANT

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

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Arable field margins tussocky
- Cropland - Cereal crops
- Grassland - Modified grassland
- Heathland and shrub - Bramble scrub
- Heathland and shrub - Mixed scrub
- Urban - Developed land; sealed surface
- Urban - Suburban/mosaic of developed/ natural surface
- Native hedgerow
- Native hedgerow - associated with bank or ditch
- Native hedgerow with trees
- Native hedgerow with trees - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Target note

SHEET LAYOUT



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ISSUE PURPOSE

PEA Report

PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-1

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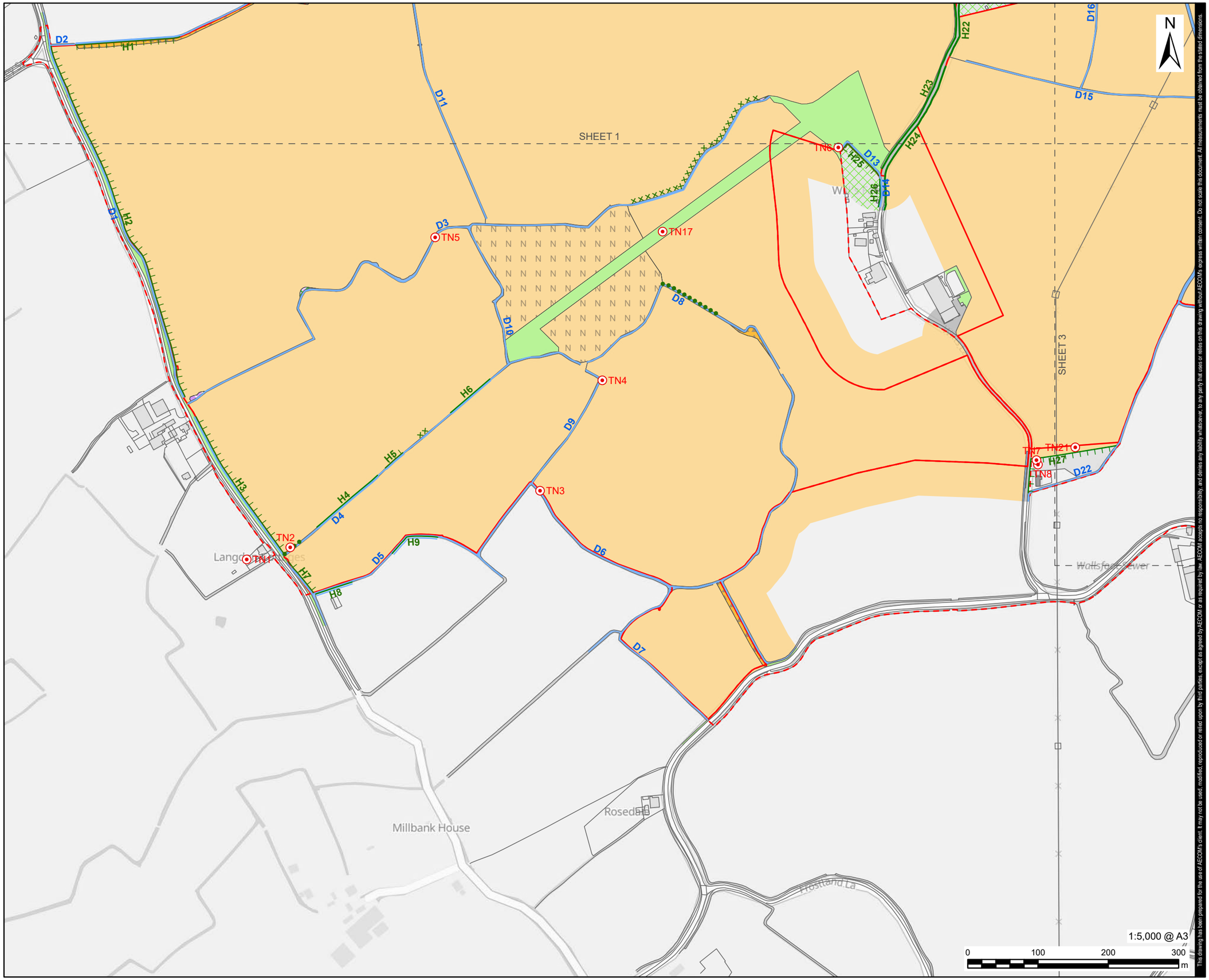

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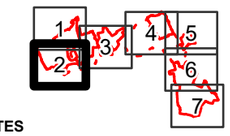
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Arable field margins tussocky
- Cropland - Cereal crops
- Cropland - Non-cereal crops
- Grassland - Modified grassland
- Heathland and shrub - Bramble scrub
- Heathland and shrub - Mixed scrub
- Heathland and shrub - Willow scrub
- Urban - Building
- Urban - Developed land; sealed surface
- Urban - Suburban/mosaic of developed/ natural surface
- Broadleaved line of trees - accociated with bank or ditch
- Native hedgerow
- Native hedgerow - associated with bank or ditch
- Native hedgerow with trees
- Native hedgerow with trees - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Target note

SHEET LAYOUT



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ISSUE PURPOSE

PEA Report

PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-2

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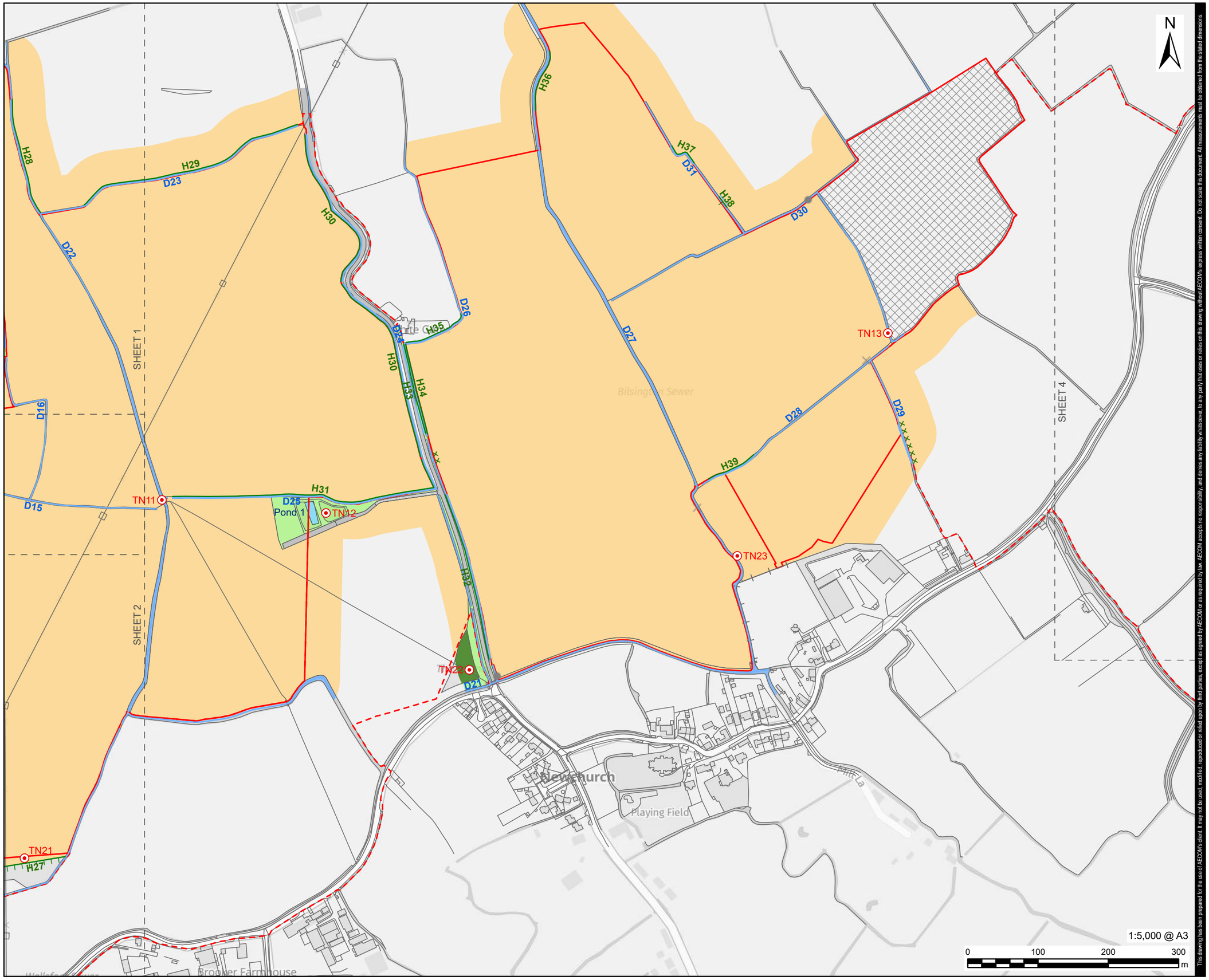

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PROJECT

Shepway Energy Park

CLIENT

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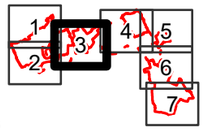
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Cereal crops
- Grassland - Modified grassland
- Lakes - Other standing water (ponds)
- Urban - Artificial unvegetated, unsealed surface
- Urban - Developed land; sealed surface
- Woodland and forest - Other woodland; broadleaved
- To be surveyed
- Native hedgerow - associated with bank or ditch
- Native hedgerow with trees
- Native hedgerow with trees - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Urban - Built linear features (fence)
- Scattered scrub
- Rural tree
- Target note

SHEET LAYOUT



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ISSUE PURPOSE

PEA Report

PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-3

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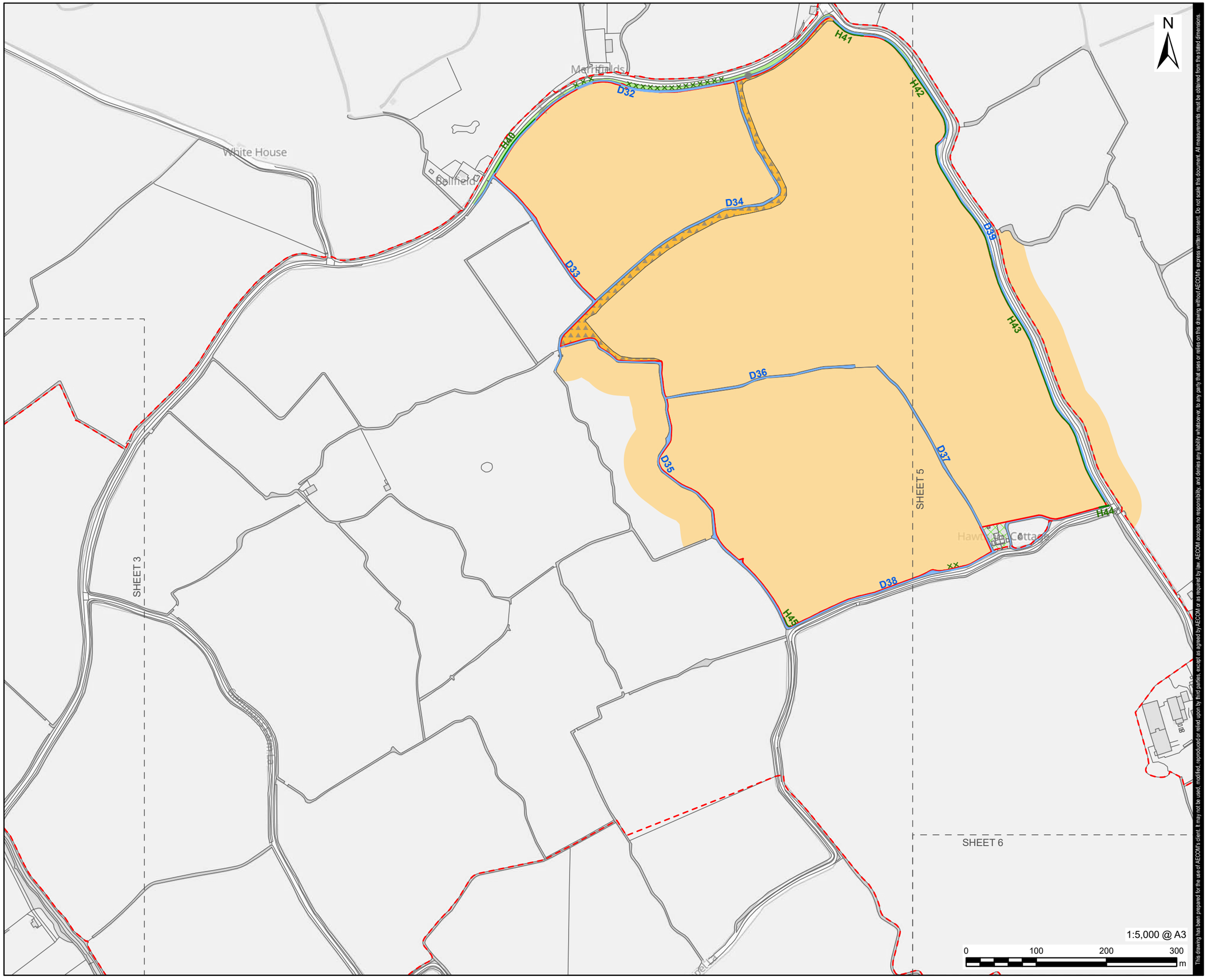

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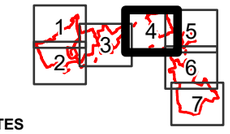
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Arable field margins tussocky
- Cropland - Cereal crops
- Grassland - Modified grassland
- Urban - Building
- Urban - Suburban/mosaic of developed/ natural surface
- Native hedgerow
- Native hedgerow - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Scattered scrub
- Rural tree
- Target note

SHEET LAYOUT



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PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-4

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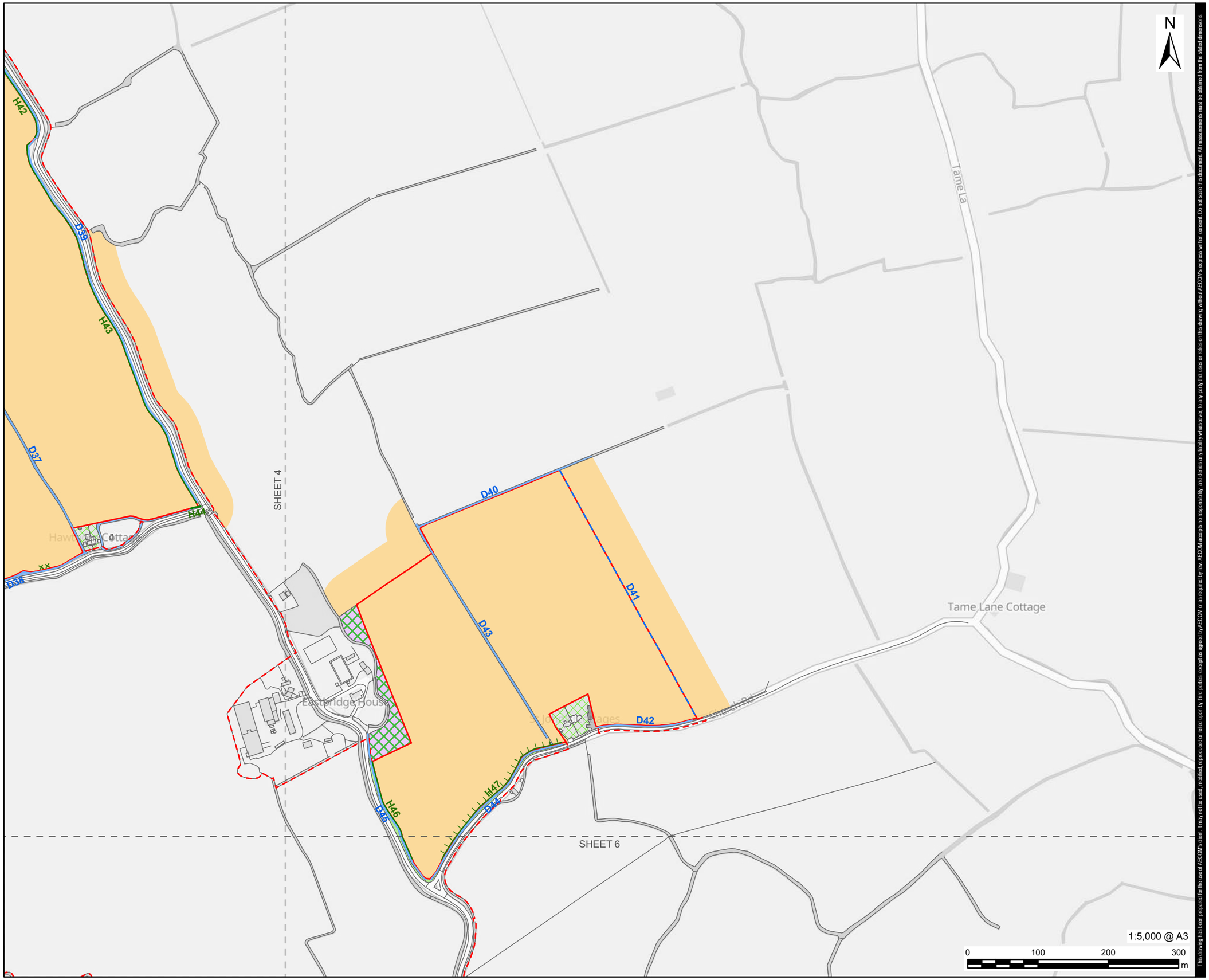

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PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

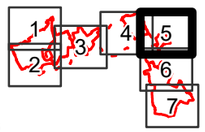
CONSULTANT

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

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Cereal crops
- Grassland - Modified grassland
- Heathland and shrub - Mixed scrub
- Urban - Building
- Urban - Developed land; sealed surface
- Urban - Suburban/mosaic of developed/ natural surface
- Native hedgerow
- Native hedgerow - associated with bank or ditch
- Native hedgerow with trees - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Dry ditch
- Target note

SHEET LAYOUT



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PEA Report

PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-5

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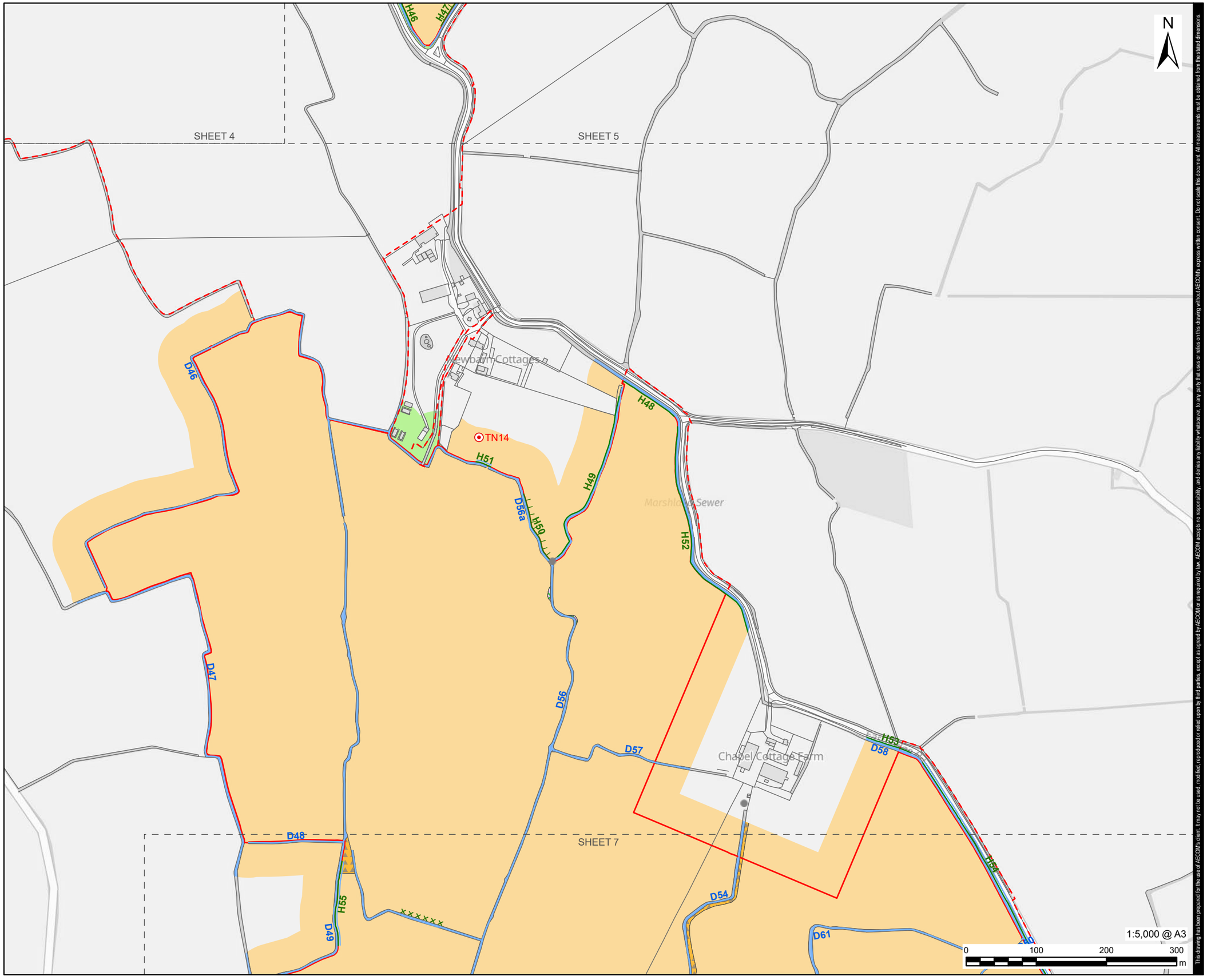

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PROJECT

Shepway Energy Park

CLIENT

SSE Newchurch Solar Limited

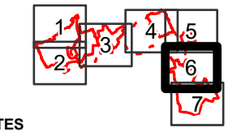
CONSULTANT

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

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Arable field margins tussocky
- Cropland - Cereal crops
- Grassland - Modified grassland
- Heathland and shrub - Mixed scrub
- Urban - Artificial unvegetated, unsealed surface
- Urban - Developed land; sealed surface
- Native hedgerow - associated with bank or ditch
- Native hedgerow with trees - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Rural tree
- Target note

SHEET LAYOUT



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PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-6

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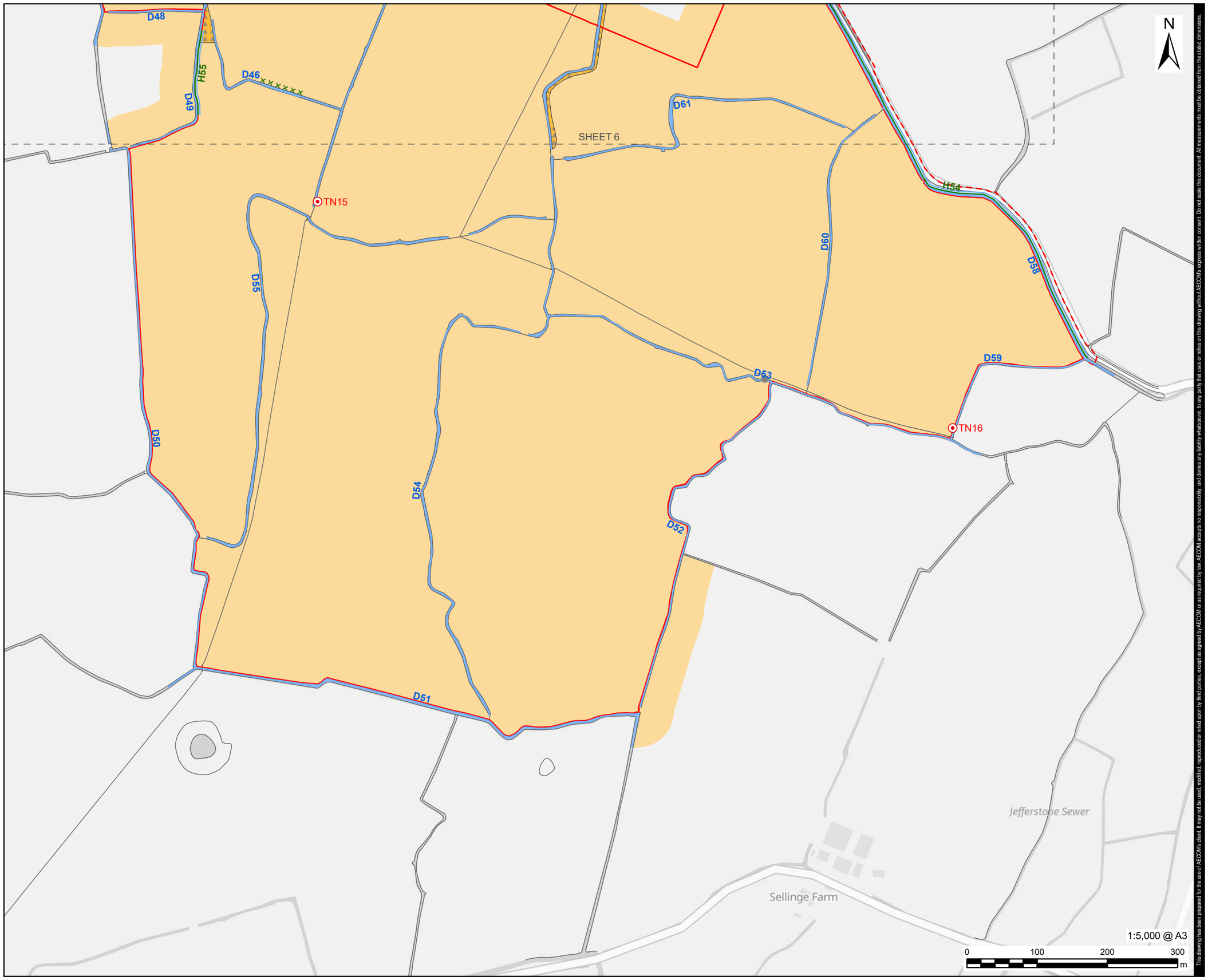

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AECOM Limited
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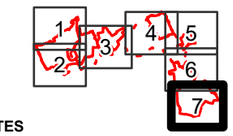
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Cropland - Arable field margins tussocky
- Cropland - Cereal crops
- Urban - Developed land; sealed surface
- Native hedgerow - associated with bank or ditch
- Scattered scrubline - associated with bank or ditch
- Other standing water
- Rural tree
- Target note

SHEET LAYOUT



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ISSUE PURPOSE

PEA Report

PROJECT NUMBER

60736659

FIGURE TITLE

UK Habitat Map and Target Notes

FIGURE NUMBER

Figure 4-7

Figure 5: Locations of waterbodies within 500 m of the Site.

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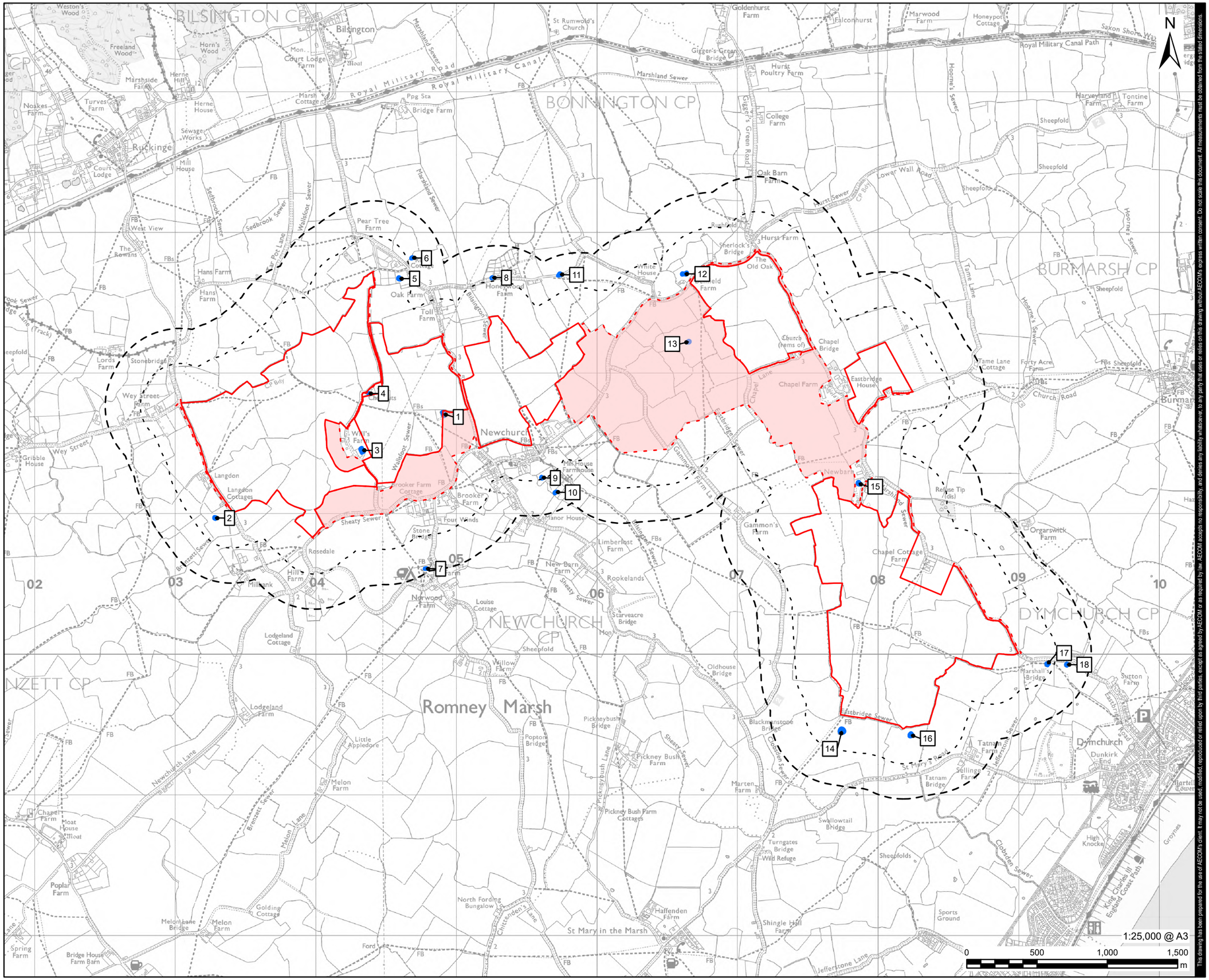

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Shepway Energy Park

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SSE Newchurch Solar Limited

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Alencon Link
Basingstoke, RG21 7PP
www.aecom.com

LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- 250m Study Area
- 500m Study Area
- Waterbodies within 500m of the Site

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ISSUE PURPOSE

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PROJECT NUMBER

60736659

FIGURE TITLE

Locations of waterbodies within 500 m of the site

FIGURE NUMBER

Figure 5

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Annex B Relevant Legislation and Planning Policy

B.1 Legislation

B.1.1 European Union (EU) and global biodiversity targets are partly delivered through a range of legislative measures, which place obligations on Member States to protect biodiversity and the natural environment. In relation to wildlife and nature conservation, three key Directives relevant to the Scheme have been adopted by the EU, namely:

- Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive);
- Directive 2009/147/EC on the conservation of wild birds (the Birds Directive); and
- Regulation (EU) 1143/2014 on the prevention and management of the introduction and spread of invasive alien species (IAS).

B.1.2 The UK is no longer a member of the EU and EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'.

B.1.3 The Secretary of State for the Environment, Food and Rural Affairs and Welsh Ministers have made changes to parts of the Conservation of Habitats and Species Regulations 2017 (2017 Regulations) so that they operate effectively. Most of these changes involve transferring functions from the European Commission to the appropriate authorities in England. All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant. They are known as the Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations).

The Conservation of Habitats and Species Regulations 2017 (as amended)

B.1.4 The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) transpose the requirements of the Habitats Directive and the Birds Directive into UK law and provide for the designation and protection of European Sites (and adapt planning and other controls for the protection of these sites). This includes Annex I (habitats) and Annex II (species) for which such European sites can be designated.

B.1.5 The Habitats Regulations (Ref 7) also provide protection for certain European Protected Species (EPS) that are listed in Schedule 2 (animals) or Schedule 5 (plants) of the Habitats Regulations. Provision is made for the granting of licenses that permit certain acts as lawful, providing the appropriate authority is satisfied that:

- the permitted activities will be carried out for specified reasons or purposes;
- there is no satisfactory alternative, and

- the activities will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

B.1.6 The latest 2019 amendment to the Habitats Regulations means that Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK no longer form part of the EU's Natura 2000 ecological network, following the UK's exit from the EU. The 2019 amendment instead created a national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes:

- existing SACs and SPAs; and
- proposed SACs and SPAs designated under these Regulations.

Wildlife and Countryside Act 1981 (as amended)

B.1.7 The Wildlife and Countryside Act (WCA) is a primary piece of UK wildlife legislation, protecting birds, other animals and plants (including vascular plants, mosses and liverworts, lichens and fungi), providing for the designation of protected areas including Sites of Special Scientific Interest (SSSIs) and promoting protection for such designated areas. The WCA also defines a list of invasive non-native species, making it illegal to release or allow to escape into the wild any listed invasive non-native animals; or to cause to grow in the wild any listed invasive non-native plants.

Wild Birds

B.1.8 The WCA makes it an offence (with exception to species listed in Schedule 2) to intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built (also (take, damage or destroy the nest of a wild bird included in Schedule ZA1) under the Natural Environment and Rural Communities Act 2006 (NERC Act)); or
- take or destroy an egg of any wild bird.

B.1.9 Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate SPAs (subject to exceptions) to provide further protection to birds. The WCA also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

Other Animals

B.1.10 The WCA makes it an offence (subject to exceptions) to intentionally kill, injure or take any wild animal listed on Schedule 5 (species relevant to this Scheme include all bat species, Great Crested Newt, Otter, Water Vole, Grass Snake, Adder and Slow Worm), and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying

such places. The WCA also prohibits certain methods of killing, injuring, or taking wild animals.

Flora, Fungi and Lichens

B.1.11 The WCA makes it an offence (subject to exceptions) to intentionally) pick, uproot or destroy:

- any wild plant listed in Schedule 8;
- unless an authorised person, to intentionally uproot any wild plant not included in Schedule 8; and
- to sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Non-native Species

B.1.12 The WCA contains measures for preventing the establishment of non-native species which may be detrimental to native wildlife, prohibiting the release of animals and planting of plants listed in Schedule 9 in England and Wales. It also provides a mechanism making any of the above offences legal through the granting of licences by the appropriate authorities.

Countryside and Rights of Way Act 2000

B.1.13 The Countryside and Rights of Way Act 2000 (CRoW Act) applies to England and Wales only. Part III of the CRoW Act deals specifically with wildlife protection and nature conservation.

B.1.14 The CRoW Act places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

B.1.15 Schedule 9 of the CRoW Act amends the Site of Special Scientific Interest (SSSI) provisions of the WCA, including increased powers for their protection and management of SSSIs. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and enhancement of SSSIs; increase penalties on conviction where the provisions are breached; and include an offence whereby third parties can be convicted for damaging SSSIs.

B.1.16 Schedule 12 of the CRoW Act amends the species provisions of the WCA 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', include an offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and obtaining wildlife tissue samples for DNA analysis, and enable heavier penalties on conviction of wildlife offences.

The Environment Act 2021

B.1.17 The Environment Act 2021 provides a post-Brexit legal framework for environmental governance and makes provision for improvements to the

natural environment. It requires the Secretary of State to set long-term targets (15-year minimum) for biodiversity.

B.1.18 The Environment Act 2021 also includes proposals to make 10% biodiversity net gain (BNG) a mandatory requirement within the planning system in England. The Act will require Nationally Significant Infrastructure Projects (NSIPs) to include a 10% BNG, however the relevant provisions regarding NSIPs are not yet in force. Other biodiversity provisions of the Act include:

- strengthened biodiversity duty on public authorities;
- Local Nature Recovery Strategies (LNRS) to support a Nature Recovery Network;
- duty upon Local Authorities to consult on street tree felling;
- strengthened woodland protection enforcement measures;
- protected site strategies and species conservation strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;
- prohibition on large UK businesses using commodities or products derived from commodities associated with wide-scale deforestation in UK commercial activities unless relevant local laws on that commodity were complied with; and
- a requirement on large UK businesses to establish a system of due diligence for each regulated commodity used in their supply chain.

Natural Environment and Rural Communities Act 2006

B.1.19 The NERC Act came into force on 1 October 2006. Section 41 of the NERC Act required the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list was drawn up in consultation with Natural England, as required by the NERC Act.

B.1.20 The Section 41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under Section 40 of the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions.

B.1.21 Fifty-six habitats and 943 species of principal importance are included on the Section 41 list. These are all the habitats and species in England that were identified as requiring action in the (now withdrawn) UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Biodiversity Framework 2024. The habitats include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and subtidal sands and gravels. In addition, the hen harrier has also been included on the

list because without continued conservation action it is unlikely that the hen harrier population will increase from its current very low levels in England.

Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

B.1.22 The EU Water Framework Directive (WFD) is transposed into law in England by the Water Environment WFD (England and Wales) Regulations 2017. The WFD follows a holistic approach to the sustainable management of water by considering the interactions between surface water (including transitional and coastal waters, rivers, streams and lakes), groundwater and water-dependent ecosystems.

B.1.23 The assessment will consider the provisions of the WFD Regulations 2017 in relation to avoiding deterioration of a water body from its current status or potential and / or not preventing future attainment of good status or potential where not already achieved.

Protection of Badgers Act 1992

B.1.24 Badgers and their setts (burrows) are protected under the Protection of Badgers Act 1992. This makes it an offence to kill or take a Badger, to cruelly ill-treat a Badger, or to interfere with a Badger sett, including disturbing a Badger while it is occupying a sett.

B.1.25 Licences to permit otherwise prohibited actions can be granted under Section 10 of the Protection of Badgers Act 1992 for various purposes. This includes licences to interfere with a Badger sett for the purpose of development as defined by Section 55(1) of the Town and Country Planning Act 1990.

B.1.26 Licences may be granted in order to close down setts, or parts of setts, prior to development or to permit activities close to a Badger sett that might result in disturbance. A licence will be required if a sett is likely to be damaged or destroyed in the course of development or if the Badger(s) occupying the sett will be disturbed.

B.1.27 Licences can be applied for at any time, but a licence for development will not normally be issued unless full planning permission has been granted. The closure of setts under licence is normally only permitted during July to November, inclusive.

Hedgerows Regulations 1997

B.1.28 The intention of the Hedgerow Regulations 1997 is to protect important countryside hedges from destruction or damage. It does not apply where planning permission has been granted. There are various other exemptions under the Hedgerow Regulations 1997, including:

- to make a new opening in substitution for an existing one that gives access to land e.g. a gate however, the old opening must be filled in within eight months;
- to obtain access to land where other means are not available or are only available at disproportionate cost; and

- for the proper management of the hedgerow. This means real management, such as coppicing but if the hedgerow is deliberately 'over-managed' this might qualify as removal.

B.1.29 If the Scheme is not exempt or subject to a current planning permission, then the landowner must serve a Hedgerow Removal Notice in writing on their local planning authority. The authority then has 42 days (which period can be extended if the applicant agrees) to determine whether or not the hedge is considered 'important' under the regulations, and if so, whether or not to issue a Hedgerow Retention Notice. The local authority does not have to issue a Retention Notice, even if the hedgerow counts as important. If they do not issue a notice for an important hedge this is often on condition that certain things are done e.g. reinstatement or replanting to a certain standard, or creation of an equivalent boundary elsewhere.

Wild Mammals (Protection) Act 2006

B.1.30 The Wild Mammals (Protection) Act 2008 (Wild Mammals Act) provides protection to wild animals against cruel and deliberate harm. Under this Act, it is considered an offence if any person mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

Invasive Alien Species (Enforcement and Permitting) Order 2019

B.1.31 The Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS Order) came into effect on 1 October 2019. This implemented the EU Invasive Alien Species Regulation 1143/2014 on the prevention and management of invasive alien plant and animal species in England and Wales, including the relevant licenses, permits and rules for keeping invasive alien species.

B.1.32 The provisions of the IAS Order will be taken account of within the assessment by ensuring invasive non-native species of special concern potentially affected by the Scheme are considered. If it is not a species of special concern, then the WCA (Section 14, Schedule 9) may still apply.

B.2 National Planning Policy

National Planning Policy Statements

B.2.1 Published National Policy Statements (NPS) relevant to solar energy that are considered practical and relevant to the Secretary of State's decision as whether to grant a Development Consent Order (DCO) for the Scheme will be taken into account within the assessment for the Scheme.

B.2.2 The NPS that are relevant to this Scheme are EN-1, EN-3 and EN-5. A summary of the paragraphs of the each NPS relevant to terrestrial ecology and nature conservation, and to the Scheme, is provided in **Table 10** below.

Table 10. Relevant NPS paragraph for ecology and nature conservation.

Relevant NPS Paragraph Reference	Requirement of the NPS
Overarching National Policy Statement for Energy	
Paragraph 4.3.1	*All proposals for projects that are subject to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project.*
Paragraph 4.3.3 to 4.3.5	*The Regulations require an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, short, medium, and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects.* *To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as employment, equality, biodiversity net gain, community cohesion, health and well-being.* *For the purposes of this NPS and the technology specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project.*
Paragraph 4.3.9	*As in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is, in the first instance, a matter of law. This NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option from a policy perspective. Although there are specific requirements in relation to compulsory acquisition and habitats sites, the NPS does not change requirements in relation to compulsory acquisition and habitats sites.*
Paragraph 4.3.10	*The applicant must provide information proportionate to the scale of the project, ensuring the information is sufficient to meet the requirements of the EIA Regulations.*

Relevant NPS Paragraph Reference	Requirement of the NPS
Paragraph 4.3.11	*In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.*
Paragraph 4.3.12	*Where some details are still to be finalised, the ES should, to the best of the applicant's knowledge, assess the likely worst-case environmental, social and economic effects of the proposed development to ensure that the impacts of the project as it may be constructed have been properly assessed.*
Paragraph 4.3.13	*To help the Secretary of State consider thoroughly the potential effects of a proposed project in cases where the EIA Regulations do not apply and an ES is not therefore required, the applicant should instead provide information proportionate to the scale of the project on the likely significant environmental, social, and economic effects.*
Paragraph 4.3.14	*References to an ES in this NPS and the technology specific NPSs should be taken as including a statement which provides this information, even if the EIA Regulations do not apply. Where the NPSs require specific information to be provided in the ES, such information should still be provided in this statement.*
Paragraph 4.3.15 to 4.3.17	*Applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility.* *In some circumstances, the NPSs may impose a policy requirement to consider alternatives.* *Where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements.*
Paragraph 4.6.1 to 4.6.2	*Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only avoid, mitigate and compensate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements.*

Relevant NPS Paragraph Reference	Requirement of the NPS
	Biodiversity net gain is an essential component of environmental net gain. Projects in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain.
Paragraph 4.6.6 to 4.6.8	*Energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, and the wider environment where possible.* *In England applicants for onshore elements of any development are encouraged to use the latest version of the biodiversity metric115 to calculate their biodiversity baseline and present planned biodiversity net gain outcomes. This calculation data should be presented in full as part of their application.* *Where possible, this data should be shared, alongside a completed biodiversity metric calculation, with the Local Authority and Natural England for discussion at the pre-application stage as it can help to highlight biodiversity and wider environmental issues which may later cause delays if not addressed.*
Paragraph 4.6.10 to 4.6.13	*Biodiversity net gain should be applied after compliance with the mitigation hierarchy and does not change or replace existing environmental obligations, although compliance with those obligations will be relevant to the question of the baseline for assessing net gain and if they deliver an additional enhancement beyond meeting the existing obligation, that enhancement will count towards net gain.* *Biodiversity net gain can be delivered onsite or wholly or partially off-site. We encourage details of any off-site delivery of biodiversity net gain to be set out within the application for development consent* *When delivering biodiversity net gain off-site, developments should do this in a manner that best contributes to the achievement of relevant wider strategic outcomes, for example by increasing habitat connectivity, enhancing other ecosystem service outcomes, or considering use of green infrastructure strategies. Reference should be made to relevant national or local plans and strategies, to inform off-site biodiversity net gain delivery. If published, the relevant strategy is the Local Nature Recovery Strategy (LNRS). If an LNRS has not been published, the relevant consenting body or planning authority may specify alternative plans, policies or strategies to use.* *In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains and benefits to communities relevant to the local area, and to national policy priorities, such as:*

Relevant NPS Paragraph Reference	Requirement of the NPS
	• reductions in GHG emissions • reduced flood risk • improvements to air or water quality, • climate adaptation, • landscape enhancement • increased access to natural greenspace, or • the enhancement, expansion or provision of trees and woodlands • The scope of potential gains will be dependent on the type, scale, and location of specific projects. Applicants should look for a holistic approach to delivering wider environmental gains and benefits through the use of nature-based solutions and Green Infrastructure.
Paragraph 4.6.15	*Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design (including any relevant operational aspects) of the project.*
Paragraph 4.6.17	*Where environmental net gain considerations have featured as part of the strategic options appraisal process to select a project, applicants should reference that information to supplement the site-specific details.*
Paragraph 5.4.4 to 5.4.5	*The highest level of biodiversity protection is afforded to sites identified through international conventions. The Habitats Regulations set out sites for which an HRA (Habitat Regulation Assessment) will assess the implications of a plan or project, including Special Areas of Conservation and Special Protection Areas.* *As a matter of policy, the following should be given the same protection as sites covered by the Habitats Regulations and an HRA will also be required:* • potential Special Protection Areas and possible Special Areas of Conservation;

Relevant NPS Paragraph Reference	Requirement of the NPS
	• listed or proposed Ramsar sites; and • sites identified, or required, as compensatory measures for adverse effects on any of the other sites covered by this paragraph.
Paragraph 5.4.8	*Development on land within or outside a SSSI, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits (including need) of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of SSSIs.*
Paragraph 5.4.12 to 5.4.13	*Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Wildlife Sites, are areas of substantive nature conservation value and make an important contribution to ecological networks and nature's recovery. They can also provide wider benefits including public access (where agreed), climate mitigation and helping to tackle air pollution.* *National planning policy expects plans to identify and map Local Wildlife Sites, and to include policies that not only secure their protection from harm or loss but also help to enhance them and their connection to wider ecological networks.*
Paragraph 5.4.15	*Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Keepers of Time, the government's policy for ancient and native trees and woodlands in England sets out the government's commitment to maintain and enhance the existing area of ancient woodland, maintain and enhance the existing resource of known ancient and veteran trees, excluding natural losses from disease and death, and to increase the percentage of ancient woodland in active management. Ancient or veteran trees found outside ancient woodland are also particularly valuable. Other types of irreplaceable habitats include blanket bog, limestone pavement, coastal sand dunes, salt marsh swards, mediterranean saltmarsh scrub and lowland fen.*
Paragraph 5.4.17	*Where the development is subject to EIA, the applicant should ensure that the ES clearly sets out any effects on internationally, nationally, and locally designated sites of ecological or geological conservation importance (including*

Relevant NPS Paragraph Reference	Requirement of the NPS
	those outside England), on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity, including irreplaceable habitats.
Paragraph 5.4.19 to 5.4.20	*The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.* *Applicants should consider wider ecosystem services and benefits of natural capital when designing enhancement measures.*
Paragraph 5.4.21 to 5.4.22	*As set out in Section 4.7, the design process should embed opportunities for nature inclusive design. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains (see Section 4.6 on Environmental and Biodiversity Net Gain). The scope of potential gains will be dependent on the type, scale, and location of each project.* *The design of energy NSIP proposals will need to consider the movement of mobile/migratory species such as birds, fish and marine and terrestrial mammals and their potential to interact with infrastructure. As energy infrastructure could occur anywhere within England and Wales, both inland and onshore and offshore, the potential to affect mobile and migratory species across the UK and more widely across Europe (transboundary effects) requires consideration, depending on the location of development.*
Paragraph 5.4.25 to 5.4.26	*The applicant should seek the advice of the appropriate Statutory Nature Conservation Body (SNCB) and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether an HRA Appropriate Assessment (AA) is required. Applicants can request and agree 'Evidence Plans' with SNCBs, which is a way to record upfront the information the applicant needs to supply with its application, so that the HRA can be efficiently carried out. If an AA is required, the applicant must provide the Secretary of State with such information as may reasonably be required to enable the Secretary of State to conduct the AA. This should include information on any mitigation measures that are proposed to minimise or avoid likely significant effects.*

Relevant NPS Paragraph Reference	Requirement of the NPS
	If, during the pre-application stage, the SNCB indicate that the proposed development is likely to adversely impact the integrity of habitat sites, the applicant must include with their application such information as may reasonably be required to assess a potential derogation under the Habitats Regulations.
Paragraph 5.4.27 to 5.4.28	*If the SNCB gives such an indication (see previous row) at a later stage in the development consent process, the applicant must provide this information as soon as is reasonably possible and before the close of the examination. This information must include assessment of alternative solutions, a case for Imperative Reasons of Overriding Public Interest (IROPI) and appropriate environmental compensation.* *Provision of such information will not be taken as an acceptance of adverse impacts and if an applicant disputes the likelihood of adverse impacts, it can provide this information as part of its application 'without prejudice' to the Secretary of State's final decision on the impacts of the potential development. If, in these circumstances, an applicant does not supply information required for the assessment of a potential derogation, there will be no expectation that the Secretary of State will allow the applicant the opportunity to provide such information following the examination.*
Paragraph 5.4.29	*It is vital that applicants consider the need for compensation as early as possible in the design process as 'retrofitting' compensatory measures will introduce delays and uncertainty to the consenting process.*
Paragraph 5.4.30	*Applicants should work closely at an early stage in the pre-application process with SNCB and Defra/Welsh Government to develop a compensation plan for all protected sites adversely affected by the development. Applicants should engage with the relevant Local Planning Authority at an early stage regarding the proposed location of compensatory measures. Applicants should also take account of any strategic plan level compensation plans in developing project level compensation plans.*
Paragraph 5.4.31	*Before submitting an application, applicants should seek the views of the SNCB and Defra/Welsh Government as to the suitability, securability and effectiveness of the compensation plan to ensure the development will not hinder the achievement of the conservation objectives for the protected site. In cases where such views are provided, the applicant should include a copy of this information with the compensation plan in their application for further consideration by the Examining Authority.*

Relevant NPS Paragraph Reference	Requirement of the NPS
Paragraph 5.4.32	*Applicants should include measures to mitigate fully the direct and indirect effects of development on ancient woodland, ancient and veteran trees or other irreplaceable habitats during both construction and operational phases.*
Paragraph 5.4.33	*Applicants should consider any reasonable opportunities to maximise the restoration, creation, and enhancement of wider biodiversity, and the protection and restoration of the ability of habitats to store or sequester carbon as set out under Section 4.6.*
Paragraph 5.4.34	*Consideration should be given to improvements to, and impacts on, habitats and species in, around and beyond developments, for wider ecosystem services and natural capital benefits, beyond those under protection and identified as being of principal importance. This may include considerations and opportunities identified through Local Nature Recovery Strategies, and national goals and targets set through the Environment Act 2021 and the Environmental Improvement Plan 2023.*
Paragraph 5.4.35 to 5.4.36	*Applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:* *during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works* *the timing of construction has been planned to avoid or limit disturbance* *during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements* *habitats will, where practicable, be restored after construction works have finished* *opportunities will be taken to enhance existing habitats rather than replace them, and where practicable, create new habitats of value within the site landscaping proposals. Where habitat creation is required as mitigation, compensation, or enhancement, the location and quality will be of key importance. In this regard habitat creation should be focused on areas where the most ecological and ecosystems benefits can be realised.* *mitigations required as a result of legal protection of habitats or species will be complied with.*

Relevant NPS Paragraph Reference	Requirement of the NPS
	Applicants should produce and implement a Biodiversity Management Strategy as part of their development proposals. This could include provision for biodiversity awareness training to employees and contractors so as to avoid unnecessary adverse impacts on biodiversity during the construction and operation stages.
Paragraph 5.4.37	*In the design of any direct cooling system the locations of the intake and outfall should be sited to avoid or minimise adverse impacts on the receiving waters, including their ecology. There should also be specific measures to minimise impact to fish and aquatic biota by entrainment and impingement or by excessive heat or biocidal chemicals from discharges to receiving waters.*
Paragraph 5.4.39	*The Government's 25 Year Environment Plan and the Environment Act 2021 mark a step change in ambition for wildlife and the natural environment. The Secretary of State should have regard to the aims and goals of the Government's Environmental Improvement Plan 2023, and in Wales the objectives of the Nature Recovery Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.*
Paragraph 5.4.41	*The benefits of nationally significant low carbon energy infrastructure development may include benefits for biodiversity and geological conservation interests and these benefits may outweigh harm to these interests. The Secretary of State may take account of any such net benefit in cases where it can be demonstrated.*
Paragraph 5.4.42 to 5.4.43	*As a general principle, and subject to the specific policies below, development should, in line with the mitigation hierarchy, aim to avoid significant harm to biodiversity and geological conservation interests, including through consideration of reasonable alternatives (as set out in Section 4.3 above). Where significant harm cannot be avoided, impacts should be mitigated and as a last resort, appropriate compensation measures should be sought.* *If significant harm to biodiversity resulting from a development cannot be avoided (for example through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then the Secretary of State will give significant weight to any residual harm.*
Paragraph 5.4.44	*The Secretary of State should consider what appropriate requirements should be attached to any consent and/or in any planning obligations entered into, in order to ensure that any mitigation or biodiversity net gain measures, if offered, are*

Relevant NPS Paragraph Reference	Requirement of the NPS
	delivered and maintained. Any habitat creation or enhancement delivered including linkages with existing habitats for compensation or biodiversity net gain should generally be maintained for a minimum period of 30 years, or for the lifetime of the project, if longer.
Paragraph 5.4.46 to 5.4.47	*Development proposals provide many opportunities for building-in beneficial biodiversity or geological features as part of good design. The Secretary of State should give appropriate weight to environmental and biodiversity enhancements, although any weight given to gains provided to meet a legal requirement (for example under the Environment Act 2021) is likely to be limited.* *When considering proposals, the Secretary of State should maximise such reasonable opportunities in and around developments, using requirements or planning obligations where appropriate. This can help towards delivering biodiversity net gain as part of or in addition to the approach set out at Section 4.6.*
Paragraph 5.4.48	*In taking decisions, the Secretary of State should ensure that appropriate weight is attached to designated sites of international, national, and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.*
Paragraph 5.4.49	*The Secretary of State must consider whether the project is likely to have a significant effect on a protected site which is part of the National Site Network (a habitat site), a protected marine site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects.*
Paragraph 5.4.50	*The Secretary of State should use requirements and/or planning obligations to mitigate the harmful[2] aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest.*

[2] In line with the principle in paragraph 4.3.8, the term 'harm' should be understood to mean 'significant harm'

Relevant NPS Paragraph Reference	Requirement of the NPS
Paragraph 5.4.52	*The Secretary of State should give due consideration to regional or local designations. However, given the need for new nationally significant infrastructure, these designations should not be used in themselves to refuse development consent.*
Paragraph 5.4.53	*The Secretary of State should not grant development consent for any development that would result in the loss or deterioration of any irreplaceable habitats, including ancient woodland, and ancient and veteran trees unless there are wholly exceptional reasons and a suitable compensation strategy exists.*
Paragraph 5.4.54	*The Secretary of State should ensure that species and habitats identified as being of importance for the conservation of biodiversity are protected from the adverse effects of development by using requirements, planning obligations, or licence conditions where appropriate.*
Paragraph 5.4.55	*The Secretary of State should refuse consent where harm to a protected species and relevant habitat would result, unless there is an overriding public interest and the other relevant legal tests are met. In this context the Secretary of State should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance or the climate resilience and the capacity of habitats to store carbon, which it considers may result from a proposed development.*
National Policy Statement for Renewable Energy Infrastructure	
Paragraph 2.10.76 to 2.10.79	*The applicant's ecological assessments should identify any ecological risk from developing on the proposed site. Issues that need assessment may include habitats, ground nesting birds, wintering and migratory birds, bats, dormice, reptiles, great crested newts, water voles and badgers.* *The applicant should use an advising ecologist during the design process to ensure that adverse impacts are avoided, minimised or mitigated in line with the mitigation hierarchy, and biodiversity enhancements are maximised.*

Relevant NPS Paragraph Reference	Requirement of the NPS
	The assessment may be informed by a 'desk study' of existing ecological records, an evaluation of the likely impacts of the solar farm upon ecological features and should specify mitigation to avoid or minimise these impacts, and any further surveys required.
Paragraph 2.10.82	*Applicants should consider how security and lighting installations may impact on the local ecology. Where pole mounted CCTV facilities are proposed the location of these facilities should be carefully considered to minimise impact. If lighting is necessary, it should be minimised and directed away from areas of likely habitat.*
Paragraph 2.10.83	*Applicants should consider how site boundaries are managed. If any hedges/scrub are to be removed, further surveys may be necessary to account for impacts. Buffer strips between perimeter fencing and hedges may be proposed, and the construction and design of any fencing should account for enabling mammal, reptile and other fauna access into the site if required to do so in the ecological report.*
Paragraph 2.10.89	*Solar farms have the potential to increase the biodiversity value of a site, especially if the land was previously intensively managed. In some instances, this can result in significant benefits and enhancements beyond Biodiversity Net Gain, which result in wider environmental gains which is encouraged.*
Paragraph 2.10.90	*For projects in England, applicants should consider enhancement, management, and monitoring of biodiversity in line with the ambition set out in the Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.*
Paragraph 2.10.100 to 2.10.101	*The applicant should consider as part of the design, layout, construction, and future maintenance plans how to protect and retain, wherever possible, the growth of vegetation on site boundaries, as well as the growth of existing hedges, established vegetation, including mature trees within boundaries. Applicants should also consider opportunities for individual trees within the boundaries to grow on to maturity.* *The impact of the proposed development on established trees and hedges should be informed by a tree survey and arboricultural/hedge assessment as appropriate.*

Relevant NPS Paragraph Reference	Requirement of the NPS
Paragraph 2.10.128 to 2.10.130	*In England, proposed enhancements should take account of the above factors and as set out in Sections 4.6 and 5.4 of EN-1 aim to achieve environmental and biodiversity net gain in line with the ambition set out in the Environmental Improvement Plan and any relevant measures and targets, including statutory targets set under the Environment Act or elsewhere.* *This might include maintaining or extending existing habitats and potentially creating new important habitats, for example by installing cultivated strips/plots for rare arable plants, rough grassland margins, bumble bee plant mixes, and wild bird seed mixes.* *Applicants are advised to develop an ecological monitoring programme to monitor impacts upon the flora of the site and upon any particular ecological receptors (such as bats and wintering birds). Results of the monitoring will then inform any changes needed to the land management of the site, including, if appropriate, any livestock grazing regime.*
National Policy Statement for Electricity Networks Infrastructure	
Paragraph 2.5.1	*When planning and evaluating the proposed development's contribution to environmental and biodiversity net gain, it will be important – for both the applicant and the Secretary of State – to supplement the generic guidance set out in EN-1 (Section 4.6) with recognition that the linear nature of electricity networks infrastructure can allow for excellent opportunities to:* *reconnect important habitats via green corridors, biodiversity stepping zones, and re-establishment of appropriate hedgerows; and/or* *connect people to the environment, for instance via footpaths and cycleways constructed in tandem with environmental enhancements.*

National Planning Policy Framework 2024

B.2.3 The National Planning Policy Framework (NPPF) was first published in 2012 and has been updated in 2018, 2019, 2021, 2023 and most recently in December 2024.

B.2.4 The NPPF states the commitment of the UK Government to minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. It specifies the obligations that the Local Authorities and the UK Government have regarding statutory designated sites and protected species under UK and international legislation and how this it to be delivered in the planning system. Protected or notable habitats and species can be a material consideration in planning decisions and may therefore make some sites unsuitable for particular types of development, or if development is permitted, mitigation measures may be required to avoid or minimise impacts on certain habitats and species, or where impact is unavoidable, compensation may be required.

B.2.5 Chapter 15 of the NPPF 'Conserving and enhancing the natural environment' sets out the requirements to consider biodiversity in planning decisions. A summary of the paragraphs of the NPPF relevant to terrestrial ecology and nature conservation, and to the Scheme, is provided below.

B.2.6 Paragraph 187 states that "Planning policies and decisions should contribute to and enhance the natural and local environment by:

- *protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;*
- *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".*

B.2.7 Paragraph 188 states that "Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing

networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries."

B.2.8 Paragraph 192 states that "To protect and enhance biodiversity and geodiversity, plans should:

- *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- *promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity".*

B.2.9 Paragraph 193 states that "When determining planning applications, local planning authorities should apply the following principles:

- *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons[3] and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."*

B.2.10 Paragraph 194 states that "The following should be given the same protection as habitats sites:

- *potential Special Protection Areas and possible Special Areas of Conservation;*

[3] For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

- *listed or proposed Ramsar sites[4]; and*
- *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites."*

B.2.11 Paragraph 195 states that "The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."

B.2.12 Paragraph 198 details that "Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- *a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;*
- *b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and*
- *c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."*

B.3 Local Planning Policy

Kent County Council Environment Policy 2020

B.3.1 The Kent County Council Environment Policy sets out commitments to reduce carbon dioxide emissions, make sure the estate and services are adapted to the future impacts and opportunities of climate change, contribute positively to Kent's character, local environmental quality and natural environment. This policy supports the priorities set out in the Kent Environment Strategy.

Folkestone and Hythe Core Strategy Review (2020)

B.3.2 Policy ENV1: Biodiversity states:

"Proposals that conserve or enhance biodiversity will be supported. Proposals for new development should identify and seek opportunities to incorporate and enhance biodiversity. In particular, development should take opportunities to help connect and improve the wider ecological networks.

Proposals should safeguard features of nature conservation interest and should include measures to retain, conserve and enhance habitats, including

[4] Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

BAP (Priority) habitats, and networks of ecological interest, including ancient woodland, water features, ditches, dykes and hedgerows, as corridors and stepping stones for wildlife.

Development that will have an adverse effect on the integrity of European protected Sites, including the Wye and Crundale Special Area of Conservation and the Dungeness, Romney Marsh and Rye Bay Ramsar and SPA sites, alone or in combination with other plans or projects, will not be permitted. Any proposal capable of affecting designated interest features of European sites should be subject to Habitats Regulations Assessment screening.

Development that will have an adverse effect on nationally designated sites, including the borough's Sites of Special Scientific Interest and National Nature Reserves, will not be permitted unless the benefits, in terms of other objectives including overriding public interest, clearly outweigh the impacts on the special features of the site and broader nature conservation interests and there is no alternative acceptable solution.

Development should avoid significant harm to locally identified biodiversity assets, including Local Wildlife Sites, Local Nature Reserves and the Ashford Green Corridor as well as priority and locally important habitats and protected species. The protection and enhancement of the Ashford Green Corridor is one of the key objectives of the Plan and therefore all proposals coming forward within or adjoining the Ashford Green Corridor should comply with Policy ENV2 in the first instance.

Where harm to biodiversity assets cannot be avoided, appropriate mitigation will be required in line with a timetable to be agreed with the Local Authority. Normally any mitigation measures will be required to be delivered on-site, unless special circumstances dictate that an off-site model is more appropriate. A financial contribution - in lieu of on-site mitigation - will only be considered in very exceptional circumstances and where it is demonstrated that the proposed mitigation is deliverable and effective.

Opportunities for the management, restoration and creation of habitats in line with the opportunities identified for the Biodiversity Opportunity Areas (BOAs) and targets set out in the Kent Biodiversity Strategy will be supported."

B.3.3 Policy ENV2: The Ashford Green Corridor states:

"The protection and enhancement of Ashford's Green Corridor is a key objective.

Development proposals within the identified Corridor designation (and proposed extensions) will be permitted, providing that it is compatible with, or

ancillary to, their principal open space use or other existing uses, and it can be demonstrated that the proposal would not cause significant harm to the overall environment, biodiversity, visual amenity, movement networks or functioning of the Green Corridor.

Other forms of development proposals within the Green Corridor will not be permitted, unless it would be in accordance with a site specific policy in this Local Plan; or where it relates to a) the redevelopment of a suitable brownfield site or b) delivers overriding benefits, and in either scenario, that it can be demonstrated that there would be no significant harm to the overall environment, biodiversity, visual amenity, movement networks or functioning of the Green Corridor.

Development proposals on land adjoining the Green Corridor shall provide suitable access and links to the existing movement networks of the adjoining Green Corridor wherever possible. They must not cause significant harm to any of the key features and functions and should make a positive contribution to the Green Corridor in respect of its environment, biodiversity, visual amenity, movement networks or functioning and its setting.

Development proposals must take into consideration the appraisals, projects and management recommendations set out for the specific areas in the Ashford Green Corridor Action Plan, including the identified proposed extension areas to the designation."

B.3.4 Policy ENV5: Protecting Important Rural Features states:

"All development in the rural areas of the Borough shall protect and, where possible, enhance the following features:

a) Ancient woodland and semi-natural woodland;

b) River corridors and tributaries;

c) Rural lanes which have a landscape, nature conservation or historic importance;

d) Public rights of way; and,

e) Other local historic or landscape features that help to distinguish the character of the local area."

Folkestone and Hythe Core Strategy Review (2020)

B.3.5 Policy CSD4: Green Infrastructure of Natural Networks states:

"1. The council will require development proposals over their lifetime:

i. To provide net gains in biodiversity at least to comply with statutory and/or national policy requirements (assuming no residual loss);

ii. To demonstrate that they protect and enhance valued landscapes, sites of biodiversity or geological value and soils, commensurate to their status and quality;

iii. So far as possible, to deliver improvements in green infrastructure (GI) assets in the district and ensure positive management of areas of high landscape quality or high costal/recreational potential identified in the Green Infrastructure Report (2011) (or any updates to this report).

2. Green infrastructure will be protected and enhanced and the loss of GI uses will not be allowed, other than where demonstrated to be in full accordance with national policy, or a significant quantitative or qualitative net GI benefit is realised or it is clearly demonstrated that the aims of this strategy are furthered and outweigh its impact on GI. Moreover:

i. The highest level of protection in accordance with statutory requirements will be given to protecting the integrity of sites of international nature conservation importance;

ii. A high level of protection will be given to nationally designated sites (Sites of Special Scientific Interest and Ancient Woodland) where development will avoid any significant impact;

iii. Appropriate and proportionate protection will be given to habitats that support higher-level designations, and sub-national and locally designated wildlife/geological sites to include Local Wildlife Sites (LWS), Kent Biodiversity Action Plan habitats, and other sites of nature conservation interest;

iv. Planning decisions will have close regard to the need for conservation and enhancement of landscape and scenic beauty in the Kent Downs Area of Outstanding Natural Beauty (AONB), which will be given the highest status of protection in relation to these issues. Development within the setting of the AONB should be sensitively located and avoid or minimise adverse impacts on the AONB. Elsewhere development must not jeopardise the protection and enhancement of the district's distinctive and diverse local landscapes, and must reflect the need for attractive and high-quality open spaces throughout the district; and

v. Planning applications will need to be supported by ecological surveys, mitigation strategies (when required) and enhancement plans, in order to follow and apply the mitigation hierarchy, as appropriate.

3. The GI network shown in Figure 5.2 and identified in supporting evidence, and other strategic open space, will be managed with a focus on:

i. Adapting to and managing climate change effects;

ii. Protecting and enhancing biodiversity and access to nature, particularly in green corridors and other GI strategic opportunities in Figure 5.2, with appropriate management of public access (including the Sustainable Access and Recreation Management Strategy for Dungeness and together with a strategic approach to the international sites as detailed above); and also avoiding development which results in significant fragmentation or isolation of natural habitats."

B.3.6 Policy CSD5: Water and Coastal Environmental Management states:

"Development should contribute to sustainable water resource management which maintains or improves the quality and quantity of surface and ground water bodies, and where applicable, the quality of the coastal environment and bathing waters.

This will be achieved by protecting or enhancing natural water reserves through sustainable design and construction, managing development in relation to wastewater infrastructure, and promoting long-term resilience to climatic pressures on the coast and water systems. Proposals must be designed to contribute to the maintenance of a sustainable supply of water resources in the district; the achievement of water management plans for the district; and the maintenance of coastal ecological habitats (through seeking to avoid the inhibition of natural coastal processes)."

Folkestone and Hythe District Council Places and Policies Local Plan (2018)

B.3.7 Policy NE2: Biodiversity of the Folkestone and Hythe District Council Places and Policies Plan states:

*"**European Sites***

Development will safeguard and protect all sites of European and Global importance, designated as Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites. Development must not result in significant adverse effects on these internationally important nature conservation sites, either alone or in combination with other projects and plans. The Council will expect development proposals to demonstrate and contribute to appropriate mitigation and management measures to maintain the ecological integrity of the relevant European site(s).

National Sites

For nationally important sites, including Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR), where developments may have a significant impact, an ecological impact assessment will be required. For proposals where impacts cannot be avoided or adequately mitigated, these will be refused, unless exceptional circumstances can be demonstrated.

Local Sites

Local sites, including Local Nature Reserves (LNR), Key Wildlife Sites (KWS) and Regionally Important Geological and Geomorphological Sites (RIGS) will be safeguarded from development, unless the benefits of the development outweigh the nature conservation or scientific interest of the site. Where development is considered necessary, adequate mitigation measures or, exceptionally, compensatory measures, will be required, with the aim of providing an overall improvement in local biodiversity and/or geodiversity. Opportunities will be sought to access and enhance the value of such sites for educational purposes, particularly in relation to promoting public awareness and appreciation of their historic and aesthetic value.

Protected Species

Development proposals that would adversely affect European Protected Species (EPS) or Nationally Protected Species will not be supported, unless appropriate safeguarding measures can be provided (which may include brownfield or previously developed land (PDL) that can support priority habitats and/or be of value to protected species).

Development and the Natural Environment

All new development will be required to conserve and enhance the natural environment, including all sites of biodiversity or geodiversity value (whether or not they have statutory protection) and all legally protected or priority habitats and species.

The District has a number of undesignated sites, which may nevertheless host rare species or valuable habitats. Where a site is indicated to have such an interest, the applicant should observe the precautionary principle and the Council will seek to ensure that the intrinsic value of the site for biodiversity and any community interest is enhanced or, at least, maintained.

Where an impact cannot be avoided or mitigated (including post-development management and monitoring), compensatory measures will be sought. The Council may, in exceptional circumstances, allow for biodiversity offsets, to prevent loss of biodiversity at the district level. Such compensation

will be directed to Biodiversity Opportunity Areas (BOAs) within the district or projects identified in the Council's Green Infrastructure Plan."

B.3.8 Policy CC6: Solar Farms states:

"The development of new solar farms, or the extension of existing solar farms, will only be acceptable where:

1. *The proposal does not have an adverse impact on the landscape character or have any adverse visual impact on the scenic beauty of the Kent Downs Area of Outstanding Natural Beauty, other sensitive local landscapes or heritage assets;*
2. *The proposal does not result in the direct loss of amenity to nearby residential properties by virtue of glare or other disturbance;*
3. *Any necessary ancillary building works are minimised so as not to adversely impact on the character of the surrounding area;*
4. *There are no adverse ecology impacts arising from the development;*
5. *A suitable landscaping and screening strategy is included with the application;*
6. *The solar panels and supporting frames are finished in an appropriate colour to minimise visual impact;*
7. *The solar panels are removed when no longer operational;*
8. *The consideration of the need for and impact of, security measures such as lights and fencing, are included in the application;*
9. *The proposal clearly indicates the installed capacity (MW) of the proposed facility; and*
10. *The solar farm will not result in the loss of the best and most versatile agricultural land*."

B.4 National Guidance

B.4.1 Guidance relevant to the assessment of the impacts of the Scheme on biodiversity includes the following documents.

Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Costal and Marine

B.4.2 The Chartered Institute of Ecology and Environmental Management (CIEEM) has produced this document to deliver practical advice for professional ecologists who undertaken an ecological evaluation in terrestrial, freshwater, coastal and marine environments. It includes good practice guidelines and is taken as the standard methodology used by ecologists across the UK.

The Environmental Improvement Plan (2023)

B.4.3 In 2023, the Government published its Environmental Improvement Plan, the first revision of the 25 Year Environment Plan to set out how the Government will work with landowners, communities and businesses to deliver each of its goals for the natural environment. An Environmental Improvement Plan is required to be prepared, updated and reported on under the Environment

Act 2021. This document continues to use the ten goals set out within the 25 Year Environment Plan with the Apex goal being to achieve 'thriving plants and wildlife' and sets interim targets pursuant to the long-term targets set under the Environment Act 2021. The Environmental Improvement Plan recognises the wider value of the environment and its contribution, such as food, clean water and air, wildlife, energy, wood, recreation and protection from hazards.

Biodiversity 2020: A strategy for England's wildlife and ecosystem services

B.4.4 Biodiversity 2020 was published in August 2011, building on the Natural Environment White Paper and setting out the strategic direction for biodiversity policy to 2020 on land (including rivers and lakes) and at sea in England.

B.4.5 Biodiversity 2020 established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. It outlines the Government's vision for the natural environment, shifting the emphasis from piecemeal conservation action towards a more integrated landscape-scale approach.

Biodiversity Guidance for Solar Developments (2014)

B.4.6 The document produced by BRE, Biodiversity Guidance for Solar Developments provides guidance to planners and the solar industry on how biodiversity can be supported on solar farms.

Natural England and Department of Environment, Food and Rural Affairs (Defra) Standing Advice (protected species) (2014)

B.4.7 Standing advice from Natural England and Defra provides guidance on protected and notable species and includes reference to the best practice approaches for survey, mitigation and compensation. Guidance is also provided on the procedure for obtaining protected species licences.

B.4.8 This advice has informed the planning of surveys and the approach to mitigating impacts upon protected species, including where necessary the requirement to submit an application for Natural England mitigation licences.

The UK Biodiversity Action Plan

B.4.9 The UK BAP was launched in 1994 and established a framework and criteria for identifying species and habitat types of conservation concern and remains an important reference material. The UK BAP was subsequently succeeded by the UK Post-2010 Biodiversity Framework (July 2012) and then again by the UK Biodiversity Framework 2024. This latest Framework has been published in response to the Kunming-Montreal Global Biodiversity Framework, which was agreed at the Fifteen Conference of the Parties (COP15) in December 2022.

B.4.10 The UK list of priority species and habitats (of which there are 943 priority species and 56 priority habitats in England) remains an important reference

source and has been used to help draw up statutory lists of priority habitats and species in England, Scotland, Wales and Northern Ireland.

B.4.11 The UK Biodiversity Framework 2024 is relevant within England in the context of Section 41 of the NERC Act. This means that priority habitats and species are material considerations in planning. These habitats and species are identified as those of conservation concern due to their rarity or a declining population trend. The objectives of the Framework have been included in the assessment of Habitat of Principal Importance (HaPI) and Species of Principal Importance (SPI).

Mitigating biodiversity impacts associated with solar wind energy development: Guidelines for project developers (2021)

B.4.12 The document produced by the Biodiversity Consultancy, Mitigating Biodiversity Impacts Associated with Solar and Wind Energy Development: Guidelines for Project Developers, aims to provide practical support for solar and wind energy developments by effectively managing risks and improving overall outcomes related to biodiversity and includes guidance and reference for the approach to impacts on biodiversity and mitigation.

Natural England's evidence review of the impacts of solar farms on birds, bats and general ecology

B.4.13 This review, published by Natural England, analysed evidence from a variety of scientific and grey literature and produced a comprehensive report on the current impacts of solar development on the ecology of a site. Emphasis was placed on birds and bats but an analysis of general ecology was also made. Future research opportunities were identified based on gaps in current literature.

Natural England's Technical Information Note TIN101 Solar parks: Maximising Environmental Benefits

B.4.14 This technical note published by Natural England provides a summary of the advice relating to solar parks, their operation, their potential impacts and the mitigation requirements for the protecting the ecology of a site, and the opportunities there may be for financial support through environmental stewardship. The aim was to help developers and landowners consider how they might maximise the environmental benefits of a solar park, whilst avoiding or minimising the risk of damaging environmental features.

The Guidelines for the Selection of Biological SSSIs

B.4.15 The Guidelines for the Selection of Biological SSSIs, published by the Joint Nature Conservation Committee (JNCC), provide the reasoning for the evaluation and selection of biological SSSIs throughout the UK. The Guidelines are intended primarily to help country nature conservation bodies

(CNCBs) in the selection of biological SSSIs but are also intended as a public statement of the selection principles for all interested parties.

State of Nature 2023 report

B.4.16 The 2023 State of Nature report is a comprehensive document that highlights the current state of the UK's natural environment. It details important findings such as since 1970, species have reduced by 19% in the UK, whilst one in six are threatened with extinction, and 151 have already become extinct since 1500. This report holds critical information on the reasons for the decline and how the UK can deliver better conservation actions to prevent this.

Birds of Conservation Concern (BoCC) 2021

B.4.17 The Birds of Conservation Concern (BoCC) published in the British Trust for Ornithology's journal British Birds is an assessment of the conservation status of all regularly occurring British birds. The lists (Red, Amber and Green) that indicate the level of conservation importance for each species, are derived from quantitative assessments from standardised criteria. The assessments are based on the most up-to-date evidence available, and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. The lists are drawn together by the UKs leading bird conservation organisations, including the Royal Society for the Protection of Birds (RSPB) and British Trust for Ornithology (BTO).

B.5 Local Guidance

The Kent Nature Partnership Biodiversity Strategy

B.5.1 The Scheme is located within the county of Kent. Formerly, the Kent Nature Partnership Biodiversity Strategy (KNPBS) provided context to inform identification of threatened or uncommon species of local relevance, alongside priorities for conservation and enhancement targeted at a local level. However, under the Environment Act 2021, Local Biodiversity Action Plans (LBAPs) are being replaced by Local Nature Recovery Strategies (LNRSs), which are a system of spatial strategies for nature which will support delivery of BNG and provide more focussed action for nature recovery. Whilst this is still being developed for Kent and with no specific habitat or species plans currently in place, this PEAR references those species formerly included on the KNPBS.

B.5.2 The KNPBS was set up to maintain, restore and create habitats that provide thriving and diverse ecosystems across terrestrial, freshwater and intertidal and marine environments. The Strategy looks to protect and recover threatened species and enhance the wildlife habitats that Kent is particularly important for. This will be achieved via four main goals of the Strategy:

- "*A rich and growing terrestrial biodiversity, underpinned by more resilient and coherent ecological networks and healthy, well-functioning ecosystems.*

- *Clean, plentiful and biologically diverse freshwater and intertidal ecosystems underpinned by implementation of a catchment based approach.*
- *A reverse in the loss of marine biodiversity and delivering clean, productive and biologically diverse oceans and seas through good management.*
- *The widest possible range of ages and backgrounds will be benefiting from the mental and physical health benefits of the natural environment; and we will have inspired the next generation to take on guardianship of the county's biodiversity*."

B.5.3 **Table 11** and **Table 12** summarise the habitats and species included within the Kent Biodiversity Strategy.

Table 11. Habitats included in the Kent Nature Partnership Biodiversity Strategy.

Broad Habitat	Habitat Type
Terrestrial	Lowland Beech and Yew Woodland
	Lowland Mixed Broadleaved Woodland
	Chalk grassland
	Lowland meadow
	Lowland dry acid grassland / Lowland heathland
	Hedgerows
	Brownfield
	Traditional Orchard
Freshwater and Intertidal	Rivers
	Chalk Streams
	Ponds
	Coastal and floodplain grazing marsh
	Intertidal mudflat and coastal saltmarsh
	Wet woodland
	Vegetated shingle
Marine	Intertidal chalk and subtidal chalk

Broad Habitat	Habitat Type
	Subtidal mud

Table 12. Species included in the Kent Nature Partnership Biodiversity Strategy.

Common Name	Scientific Name
Adder	*Vipera berus*
Adonis Blue	*Polyommatus bellargus*
Dwarf or Kentish Milkwort	*Polygala amarella*
European Eel	*Anguilla anguilla*
Harbour Seal	*Phoca vitulina*
Grey Seal	*Halichoerus grypus*
Heath Fritillary	*Melitaea athalia*
Lapwing	*Vanellus vanellus*
Nightingale	*Luscinia megarhynchos*
Sandwich tern	*Thalasseus sandvicensis*
Shrill Carder Bee	*Bombus sylvarum*
Swift	*Apus apus*
True Fox-sedge	*Carex vulpine*
Turtle Dove	*Streptopelia turtur*
Water Vole	*Arvicola amphibius*
Species Indicator	
Hedgehog	*Erinaceus europaeus*
Serotine Bat	*Eptesicus serotinus*
Common Blue	*Polyommatus icarus*
Lady Orchid	*Orchis purpurea*

Kent Landscape Information System

B.5.4 The Kent Landscape Information System is an online, interactive map showing information about Kent's biodiversity and landscapes. It was designed to supply more detailed information on Kent's landscape and biodiversity to allow for better informed decision-making by landowners, farm advisors and those involved in land planning.

Local Wildlife Sites in Kent: Criteria for Selection and Delineation of Wildlife Sites

B.5.5 This document presents a procedure for the identification of Local Wildlife Sites in Kent and draws on current best practice, as set out in the 2006 DEFRA guidance, recognising the need for a robust system which is able to withstand rigorous scrutiny. The document sets out:

- The purpose of Local Wildlife Sites in Kent;
- A set of clear criteria for identifying sites of local wildlife importance on the basis of the habitats and species present;
- An accountable process for consulting on the designation of Local Wildlife Sites; and
- How information on the boundaries and special features of Local Wildlife Sites is to be presented and disseminated.

Romney Marshes Area Internal Drainage Board Biodiversity Action Plan 2.0

B.5.6 The BAP was prepared by the Romney Marshes Area Internal Drainage Board (RMAIDB) to demonstrate the Board's commitment to fulfilling its duty as a public body to conserve and enhance biodiversity under the Environment Act 2020 and the Natural Environment and Rural Communities Act 2006.

B.5.7 The BAP identifies objectives for the conservation and enhancement of biodiversity within the drainage district and describes targets and actions that aim to deliver the objectives.

B.5.8 **Table 13Table 13** summarises the habitats and species included within the RMAIDB BAP.

Table 13. Habitats and species included in the RMAIDB BAP.

Habitat Action Plans for RMAIDB	Species Action Plans for RMAIDB
The following Habitat Action Plans are included for Romney Marsh drainage district: Rivers, streams and ditches Coastal Floodplain Grazing Marsh Coastal Vegetated Shingle Reedbeds	The following Species Action Plans are included for Romney Marsh drainage district: Greater water-parsnip Marshmallow moth Medicinal leech (*Hirudo medicinalis*) Common toad Brown trout (*Salmo trutta*) Grass snake Curlew (*Numenius Arquata*)

Habitat Action Plans for RMAIDB	Species Action Plans for RMAIDB
	Tree sparrow (*Passer montanus*) Water vole Great crested newt

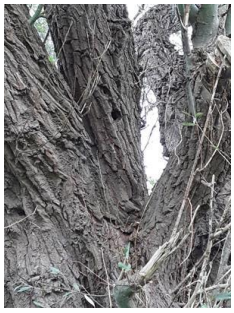
Annex C Target Notes and Photographs

C.1.1 Target Notes relating to the location of Badger setts have been removed from **Table 14** and **Figure 4**, owing to the confidentiality surrounding the reporting of locations of Badger setts.

Table 14. Target Notes and Photographs

Target Note Reference	Description	Photograph
TN1	Great Crested Newt recorded in a garden pond last year (2023) which was confirmed by the landowner.	No photograph
TN2	Willow trees - PRF - basal cavities, lifted bark and holes.	
TN3	Mammal hole (possibly Water Vole) on the bank of a wet ditch. No other signs around, so undetermined.	
TN4	Two Badger latrines.	

[5] PRF = Potential Roost Feature for bats.

Target Note Reference	Description	Photograph
TN5	One Badger latrine.	No photograph
TN6	Willow - PRF - two holes in the north-east bough and south bough and a large central cavity.	
TN7	Felled trees in an area that was once a small woodland copse.	
TN8	Logs and terracotta pipes could be hibernacula for reptiles.	

Target Note Reference	Description	Photograph
TN9	Mammal hole (possibly Water Vole) on the bank of a wet ditch. No other signs around, so undetermined.	
TN10	One fresh Badger latrine.	
TN11	Six Badger latrines.	
TN12	Two dried ponds which are now a grassland. Species include Common Nettle, Hemlock, False Oat-grass, Cleavers (*Galium aparine*), Creeping Bent, Teasle, Cow Parsley, Dove's-foot Crane's-bill, Common Mallow, Dock species and Burdock species.	

Target Note Reference	Description	Photograph
TN13	Mammal hole (possibly Water Vole) on the bank of a wet ditch. No other signs around, so undetermined.	
TN14	Barn Owl box in a tree just outside of the Site boundary.	No photograph
TN15	Four Badger latrines.	
TN16	Four Badger latrines.	No photograph
TN17	Modified grassland used as an airstrip for model planes.	No photograph
TN18	Wide field margin. Habitat is tussocky grassland with species including Cock's Foot and Cow Parsley.	No photograph
TN19 and TN20	Two set-aside modified grassland areas with scrub patches. Species include Creeping Buttercup, Vetch species, Dock species, Field Elm, Grey Willow, Hoary Ragwort, Hawthorn, Red Fescue, Creeping Thistle, Dog Rose and Curled Dock.	

Target Note Reference	Description	Photograph
TN21	Badger footprints.	
TN22	Broadleaved woodland nature reserve (Millennium Spinney) planted with wildflowers and native trees. Species include Blackthorn, Silver Birch, Spindle, Alder species, Hawthorn, Buddleia, Walnut, Hazel, Pedunculate Oak, Honeysuckle, Sycamore, Crab Apple, Rowan, Wild Service Tree and Willow species.	
TN23	One Badger latrine.	

Appendix H: Water Framework Directive Screening Assessment

Shepway Energy Park

EIA Scoping Report

Water Framework Directive Screening Assessment

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1.1 Introduction

Background

1.1.1 Shepway Energy Park ('the Scheme') will comprise the installation of solar photovoltaic (PV) modules, on-site battery energy storage system facilities (BESS) and an on-site substation across a proposed site in Kent, and associated infrastructure for connection to the National Grid. The exact routes of the Grid Connection Route and Interconnecting Cable Corridor are yet to be confirmed. The Scheme will allow for >50 megawatts (MW) of electrical generation capacity, circa 200 MW of export capacity and circa 400 MW of energy storage capacity.

1.1.2 A full description of the Scheme is included in **Chapter 2: The Scheme** of the Environmental Impact Assessment (EIA) Scoping Report.

1.1.3 This Water Framework Directive (WFD) Screening Assessment has been produced at the scoping stage of the Scheme, which has been commissioned by SSE Newchurch Solar Ltd (hereafter referred to as 'the Applicant'). In particular, this report relates to **Chapter 15: Water Environment** of the EIA Scoping Report.

Study Area

1.1.4 The Energy Park Site is located within the administrative areas of Ashford Borough Council (ABC) and Folkestone and Hythe District Council (FHDC). 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.

1.1.5 The Energy Park Site comprises of 6 land parcels, which are hereafter referred to as the 'Sites'. The total area of the Energy Park Site is approximately 418.6 hectares (ha).

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

1.1.7 Interconnecting cables connecting the infrastructure across the Sites will be required. The location of the cable routes is being considered through survey and design. The routes of the interconnecting cables will be designed to avoid sensitive receptors as far as possible. The Study Area includes the Interconnecting Cable Corridor Search Area.

1.1.8 For the purposes of this assessment, and consistent with **Chapter 15: Water Environment** of the EIA Scoping Report, a general Study Area (Zone of Influence) of 1km from the Scheme boundary (including both the Energy Park Site and Interconnecting Cable Corridor Search Area) has been considered to identify water bodies that are hydrologically connected to the Scheme and have the potential to be directly impacted by the activities associated with it. This 1km Study Area is shown in **Figure 15-1: Surface Water Features and their Attributes**. However, given that impacts may propagate downstream, relevant risks have been checked for downstream connecting WFD water bodies. Professional judgement has been applied to identify the extent to which such features are considered.

1.1.9 The Study Area falls across only one WFD surface water body catchment:

- Romney Marsh between Appledore and West Hythe Water Body (GB107040019700).

1.1.10 There are also several tributaries / additional watercourses present within the Study Area; these are predominantly unnamed agricultural ditches, drains and springs. It should be noted that WFD requirements apply equally to all watercourses regardless of whether they are Environment Agency reportable reaches.

1.1.11 There is one WFD Coastal Water Body downstream of the Study Area:

- Kent South Water Body (GB640704540001).

1.1.12 The Study Area is also underlain by one WFD groundwater body:

- Kent Romney Marsh Water Body (GB40702G503900).

Introduction to the Water Framework Directive

1.1.13 The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (Ref. 1), commonly referred to as the Water Framework Directive (WFD), aims to protect and enhance the water environment.

1.1.14 The WFD takes a holistic approach to sustainable management of the water environment by considering interactions between surface water, groundwater and water-dependent ecosystems. Ecosystem conditions are evaluated according to interactions between classes of biological, chemical, physico-chemical and hydromorphological elements known as 'Quality Elements'.

1.1.15 Under the WFD, ‘water bodies’ are the basic management units, defined as all or part of a river system or aquifer. Waterbodies form part of a larger ‘river basin district’ (RBD), for which ‘River Basin Management Plans’ (RBMPs) are used to summarise baseline conditions and set broad improvement objectives. RBMPs are produced every six years, in accordance with the river basin management

planning cycle. The current RBMPs are in Cycle 3 that were published in 2022. The Scheme interacts with the South East RBMP (Ref. 2).

1.1.16 In England, the Environment Agency (the EA) is the competent authority for implementing the WFD, although objectives are delivered in partnership with other public bodies and private organisations, for example local planning authorities, water companies, rivers trusts, and private landowners and developers.

1.1.17 The EA is also responsible for managing flood risk and other activities on Main Rivers. Local planning authorities or drainage boards are typically responsible for consenting activities on Ordinary Watercourses. Local planning authorities are typically responsible for highways drains, and landowners are typically responsible for ditches and watercourses within their property including piped watercourses and culverts. While the EA is ultimately responsible for enforcing the WFD on any water body, local authorities are required to plan and consent WFD related activities on Ordinary Watercourses.

1.1.18 As part of its regulatory and statutory consultee role on planning applications and environmental permitting (under the Environmental Permitting Regulations (England and Wales) 2016), the EA and WFD-partnering organisations, must consider whether proposals for new developments have the potential to:

- Cause a deterioration of any quality element of a water body from its current status or potential; and / or
- Prevent future attainment of good status or potential where not already achieved.

1.1.19 Regulation 33 of the Water Environment Regulations 2017 (i.e. the WFD) states that public bodies *"must, in exercising their functions so far as affecting a river basin district, have regard to - (a) the river basin management plan for that district as approved under regulation 31, and (b) any supplementary plan prepared under regulation 32."*. The Scheme must therefore reflect water body improvement priorities as outlined in the South East RBMP (Ref. 2).

1.1.20 In determining whether a development is compliant or non-compliant with the WFD objectives for a water body, the EA and partnering organisations must also consider the conservation objectives of any Protected Areas (e.g. Natura 2000 sites or water dependent Sites of Special Scientific Interest (SSSIs)) and adjacent WFD water bodies, where relevant.

1.2 Methodology

WFD Methodology

1.2.1 There are no fixed methods for WFD assessment. The nature of the water environment and the breadth of the legislation mean that assessments are tailored to proposals on a case-by-case basis.

1.2.2 The following general guidance is available which has been applied for this assessment:

- Environment Agency (2016a). Water Framework Directive risk assessment. How to assess the risk of your activity (Ref. 3).
- Environment Agency (2016b). Protecting and improving the water environment. Water Framework Directive compliance of physical works in rivers (Ref. 4).
- The Planning Inspectorate (2024), Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Ref. 5).

1.2.3 A stepwise approach consisting of screening, scoping and impact assessment phases is generally followed in order to:

- rationalise the levels of WFD assessment and impact mitigation that are required; and
- verify that proposals meet the requirements of the WFD.

1.2.4 The general approach is described by the Planning Inspectorate (2024): Advice on the Water Framework Directive (Ref. 5) and briefly summarised below.

Stage 1: Screening

1.2.5 Screening identifies the zone of influence of a proposed development, and if proposed activities pose a risk to the water environment. It is used to identify if there are activities that do not require further consideration for WFD objectives, for example activities which have been ongoing since before the current RBMP plan cycle and which have thus formed part of the baseline.

Stage 2: Scoping

1.2.6 Scoping is used to identify any potential impacts of the proposed activities to specific WFD receptors and their water quality elements. This involves review of WFD impact pathways, shortlisting which WFD water bodies and quality elements could or could not be affected by proposed activities, and collecting baseline information from the relevant RBMP on the status and objectives for each water body.

Stage 3: Impact Assessment

1.2.7 This involves rationalised assessment of water bodies and quality elements that could be affected by proposed activities, in order to identify any areas of WFD

non-compliance. Proposed activities are reviewed in terms of both positive and negative impacts, and the baseline mitigation measures, enhancements, and contributions to the WFD objectives described in the RBMP. Any proposed activities with potentially deleterious impacts are reviewed simultaneously with their corresponding mitigation proposals, to determine a net effect on WFD objectives.

Mitigation Commitments

1.2.8 Proposed mitigation activities relied upon to demonstrate compliance at any of the stages referred to above must be appropriately defined and sufficiently secured. Mitigation could be secured through Development Consent Order (DCO) requirements, or other legally binding methods.

Further Assessment if WFD Derogation is to be Considered by Applicant

1.2.9 For information, WFD Regulation 17 and Regulation 19 set out 'last resort' planning and legal processes for WFD derogation that are not part of this report. Case review of any proposed justification by an applicant would be a matter for the Secretary of State, and is likely to require a substantial body of multi-disciplinary evidence. As explained in the assessment sections below, no derogation has been considered herein because it is assessed that the Scheme will not impede achievement of WFD objectives.

1.2.10 Where the potential for deterioration of water bodies is identified, and the "*body of water is so affected by human activity or its natural condition is such that the achievement of the environmental objectives set would be infeasible or disproportionately expensive*", it is possible for an applicant to present further assessments in the context of WFD Regulation 17. Derogation has not been considered herein and would require detailed further analyses of options, environmental impacts and business cases, for WFD and all relevant legislation pertaining to planning and sustainability. For WFD context, WFD Regulation 17 covers part of the procedures for WFD derogation, including but not limited to that "*the environmental and socio-economic needs served by such human activity cannot be achieved by other means which are a significantly better environmental option not entailing disproportionate costs*".

1.2.11 Where the potential for "*failure is the result of new modifications to the physical characteristics of the body of surface water or alterations to the level of the body of groundwater*", it is possible for an applicant to present further assessments in the context of WFD Regulation 19. Regulation 19 is also still commonly referred to as Article 4.7 of the original EU Directive. Derogation has not been considered herein and as above would require detailed further analyses. For WFD context, WFD Regulation 19 covers part of the procedures for WFD derogation, including but not limited to that:

- “All practicable steps are taken to mitigate the adverse impact on the status of the body of water”.
- “The reasons for the modifications or alterations, or for the sustainable development activities, are of overriding public interest”.
- “The benefits to the environment and to society of achieving the environmental objectives are outweighed by the benefits of the new modifications or alterations, or of the sustainable development activities, to human health, to the maintenance of human safety, or (in the case of modifications or alterations) to sustainable development”.
- “The beneficial objectives served by the modifications or alterations, or by the sustainable development activities, cannot, for reasons of technical feasibility or disproportionate cost, be achieved by other means which are a significantly better option”.

Desk Study

1.2.12 A desk-based study was carried out to capture information pertaining to the Scheme that is not attainable through Site survey. A review of relevant information relating to the Study Area was undertaken to develop a baseline for WFD catchments, watercourses and surrounding areas. The following data sources were used for the desk study:

- Environment Agency WFD data (Ref. 6);
- Defra’s Multi-agency geographical information for the countryside website (MAGIC) (Ref. 7);
- Historical maps (Ref. 8);
- Geology and soil data (Ref. 9 and Ref. 10);
- Aerial photography (Ref. 11);
- Hydrological information (Ref. 12); and
- Climate information (Ref. 13).

Field Survey

1.2.13 At the time of writing, no site walkover has been undertaken, and so it is not possible to establish in detail the baseline conditions of watercourses local to the Scheme.

1.2.14 A site walkover would be required to aid further assessment and would be undertaken to inform the ES. This would focus on surface watercourses within the Study Area, observing their current character and condition, the presence of existing risks and any potential pathways for construction and operation impacts from the Scheme. The walkover would follow ‘fluvial audit’ principles (Ref. 14) and focus on aspects such as valley form, river type, substrate characteristics, bank material, and erosional and depositional processes. These observations

would then be considered within the context of the WFD to establish a baseline for each of the Hydromorphological Quality Elements.

Consultation

1.2.15 An initial consultation meeting was undertaken with the Environment Agency on 19th December 2024.This provided an introductory project overview and outlined the assessments to be undertaken with regard to the water environment, including the WFD Screening. Further consultation will be undertaken as the Scheme progresses.

Limitations and Assumptions

1.2.16 This WFD screening assessment has been undertaken based on the design information that is described in **Chapter 2: The Scheme** of the EIA Scoping Report. Where there is uncertainty in the design, reasonable assumptions have been made and these are described at relevant points within this assessment. Where there are material changes to the design elements at the Environmental Statement (ES) submission stage or if it is determined that proposed embedded mitigation cannot be implemented as currently proposed for whatever reason, then this would be reflected in the WFD assessment submitted at that stage.

1.2.17 This assessment relies entirely on published data sources as no hydromorphological, or ecological surveys are yet to be conducted. While the available data is considered robust enough for defining receptor importance, there may be inherent uncertainties or gaps in the data. Uncertainty regarding baseline conditions will be reduced in future assessment stages after site surveys have been conducted.

1.2.18 Further information on limitations and assumptions is detailed in **Chapter 15: Water Environment** of the EIA Scoping Report.

1.3 WFD Screening

WFD Screening

1.3.1 The purpose of the WFD screening stage is to identify a zone of influence of the Scheme and to determine whether that influence has the potential to adversely impact upon WFD water body receptors. The screening stage also identifies specific components of the Scheme that could affect receptor water bodies' WFD status and carries them forward to subsequent stages of the assessment process. Water body receptors or activities that are screened out are not carried forward, and justification is provided.

Screening of WFD Water Bodies

1.3.2 The Scheme interacts with one WFD surface water body and one WFD groundwater body. There is also a coastal WFD waterbody approximately 1.6 km downstream of the Scheme boundary. WFD Screening of this is provided in **Table 1**. Smaller tributaries within the WFD water body catchment that may be impacted by the Scheme are considered within this assessment. Any other remaining downstream waterbodies not mentioned below are considered sufficiently far downstream to avoid impacts of the Scheme or would not interact with the Scheme and are therefore screened out of further assessment.

Table 1. Screening of WFD water bodies potentially impacted by the Scheme

WFD Water Body	Screening Outcome	Justification
Romney Marsh between Appledore and West Hythe Water Body (GB107040019700)	In	WFD water body may be indirectly impacted by the Scheme because it is located within the Study Area and due to a range of activities that would interact with the local watercourse network during construction, operation, and decommissioning phases of the Scheme. Potential impacts would include, but are not limited to, receiving surface water runoff, spillages, fine sediment, and organic material.
Kent South Water Body (GB640704540001)	Out	This is a coastal water body downstream of the 'Romney Marsh between Appledore and West Hythe Water Body' but has been screened out of further assessment based on the distance downstream of the Study Area and the dilution effects arising from the size of the water body in comparison to any impact, which would be minimal.
Kent Romney Marsh Water Body (GB40702G503900)	In	Activities relating to the construction, operation, and decommissioning of the Scheme have been assessed in terms of their potential impact upon this groundwater body. There are potential anticipated impacts to a WFD water body, therefore assessment of impacts to groundwater are scoped in.

Screening of Activities

1.3.3 As described in **Chapter 2: The Scheme** of the EIA Scoping Report, the Scheme comprises a number of activities, some of which may present a potential risk to the WFD status of water bodies. These components and activities are listed in **Table 2** together with a screening assessment.

Table 2. Screening of the Scheme's activities against WFD Water Bodies

Activity	Description	Screening Outcomes	Justification
Solar PV modules and mounting structures	Solar PV modules convert sunlight into electrical current (as direct current, DC). Individual modules are typically up to 2.5 m long and up to 1.3 m 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. 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 under development is up to 750 W). The modules are fixed to a mounting structure in rows known as 'strings'. Various factors will help to inform the number and arrangement of modules in each string, and it is likely some flexibility will be required to accommodate future technology developments. There are various types of PV module mounting structures. While fixed south facing mounts are the most commonly seen on the solar PV facilities in the UK, the ongoing technological advances and economic	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	This activity is unlikely to have an impact on these water bodies but has been screened in for future assessment due to current design uncertainty, which makes it impossible to categorically rule out any impact. Below is a list of design recommendations that, if followed, should mean that there is no impact. • Solar PV modules should not be installed within 10 m of watercourses so that there are no direct hydromorphological impacts. This will also allow a riparian buffer to be maintained and access to the watercourse for the EA and Romney Marshes Internal Drainage Board (IDB), as applicable. • Solar PV modules do not contain any liquid that could contaminate rainwater and so there is minimal pollution risk arising from runoff. It is assumed that the solar PV panels be cleaned every year, and it is assumed that a tractor mounted cleaning system utilising clean water without cleaning products/chemicals would be used. • The solar PV modules should be held above ground on narrow (<100 mm) diameter piled legs to prevent sealing the ground with an

Activity	Description	Screening Outcomes	Justification
	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. Each string of modules will be mounted on a metal rack, known as a frame. The frames are usually supported by galvanised steel poles typically driven up to 1 m into the ground depending on local geology, topography, etc. Other foundation types may be considered, depending on these factors.		impermeable surface and so allow any rainwater to infiltrate the ground. • To limit the potential for channelisation from rainfall dripping off the end of the panels, the areas between, under and surrounding the Solar PV modules should be planted with native grassland. This planting would intercept and absorb rainfall running off the modules, preventing it from concentrating and potentially forming channels in the ground. The land will no longer require any fertilisation or other treatments for crop growing, therefore the current pollution associated with agriculture will be removed.
Supporting Infrastructure: Inverters, Transformers and Switchgear	The supporting infrastructure comprises inverters, transformers, and switchgear. 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 to the National Grid. Inverters are sized to deal with the level of voltage and current, which is output from the strings of PV modules. Transformers are required to step up the voltage of the electricity generated	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	This activity is unlikely to have an impact on these water bodies but has been screened in for future assessment due to current design uncertainty, which makes it impossible to categorically rule out any impact. Below is a list of design recommendations that, if followed, should mean that there is no impact. • Supporting infrastructure should not be located within close proximity (<10 m) of surface water bodies so there is no mechanism for direct hydromorphological or water quality impacts to surface water bodies.

Activity	Description	Screening Outcomes	Justification
	across the Energy Park Site from low voltage produced by the PV panels to medium voltage to high voltage ready for transmission to a National Grid Substation. 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. The Applicant is currently exploring the configuration of these supporting infrastructure. 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.		• Transformers would be installed with suitable bunds to contain any oil spillage in case of an oil leakage event. Bunds would be designed to contain at least 110% of the volume of the oil so that there is some tolerance to prevent breaching of the bund. • A Flood Risk Assessment (FRA) and Outline Surface Water Drainage Strategy should be developed and implemented to provide attenuation of surface water runoff from areas of hardstanding associated with the BESS Area and the on-site Substation. In accordance with planning policy guidance (Ref. 15), runoff from the Scheme should be attenuated so that no increase in surface water discharge rates and to provide water quality treatment of runoff water.
Battery Energy Storage Facility	The Scheme will include an associated battery energy storage system. The battery energy storage system is designed to provide peak generation and grid balancing services to the National Electricity Transmission System (NETS). It will do this primarily	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700)	This activity is unlikely to have an impact on these water bodies but has been screened in for future assessment due to current design uncertainty, which makes it impossible to categorically rule out any impact. Below is a list of design recommendations that, if followed, should mean that there is no impact.

Activity	Description	Screening Outcomes	Justification
	by allowing excess electricity generated from the solar PV to be stored in batteries and dispatched at strategic times of the day. There are a number of different designs for the battery energy storage system that will be explored as part of the iterative design process. The maximum height of the battery energy storage system will be 4.5m, 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. Batteries will likely be housed within enclosures (also referred to as units). The precise number of enclosures 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. 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	Kent Romney Marsh Water Body (GB40702G503900)	• The BESS Area should not be located within close proximity (<10 m) of surface water bodies so there is no mechanism for direct hydromorphological or water quality impacts to surface water bodies. • An FRA and Outline Surface Water Drainage Strategy should be developed and implemented to provide attenuation of surface water runoff from areas of hardstanding associated with the BESS Area and the On-Site Substation. In accordance with planning policy guidance (Ref. 15), runoff from the Scheme should be attenuated so that no increase in surface water discharge rates and to provide water quality treatment of runoff water. • In the unlikely event of a malfunction to one of the BESS Containers, there should be a range of controls that would activate depending on the extent and severity of the event. In case the malfunction progresses to a catastrophic fire event then the requirements of an Outline Battery Safety Management Plan (OBSMP) would be implemented. An outline version of this plan would be included in the ES. Water should be stored on the site for firefighting purposes. Any

Activity	Description	Screening Outcomes	Justification
	require; investigations are ongoing to determine this. As the system is AC-coupled, the battery energy storage system, transformers, and dedicated switchgear will be located together in one or more 'centralised' areas, which can be installed, operated, and maintained easily. Each battery energy storage system will require a heating, ventilation, and air conditioning (HVAC) system to ensure the efficiency 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. 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. As the Scheme design develops, the likely configuration of equipment will be determined based upon environmental and technical		potentially contaminated fire water would be captured and temporarily stored before testing and being released or pumped out for off-site disposal if required. BESS Containers will also have an internal and sealed fire suppression system to prevent chemicals from escaping. Consultation with the emergency services will be undertaken as part of the Applicant's pre-application work. On the basis of these controls, impacts from firewater would likely be screened out of further assessment.

Activity	Description	Screening Outcomes	Justification
	factors. A reasonable worst-case scenario will be assessed in the ES.		
Onsite and Offsite Cabling	Low and medium voltage onsite electrical cabling is required to connect the various elements of the Scheme and the Sites. 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. 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. Data cables (typically	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	Cabling, specifically its installation, has the potential to impact these water bodies and so has been screened in for future assessment once the design has been confirmed. Below is a list of recommendations that, if followed, should minimise the risk of an impact: • If watercourse crossing is required, it should be done using trenchless techniques such as horizontal directional drilling (HDD) where ground conditions allow. • Launch and receive pits required for HDD (or similar) should be located at least 10 m from the channel margins and the depth of the crossing should be at least 1.5 m below the bed. This will minimise the risk of indirect impact to the watercourse from uncontrolled releases of construction site runoff that may include high levels of fine sediment, oils and drilling muds and will avoid physical disturbance of the waterbody. • The potential for drilling fluids to break out into the watercourse should be mitigated by a site-specific hydraulic breakout risk assessment that would be developed post consent.

Activity	Description	Screening Outcomes	Justification
	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.		• Should open cut trenching be required, then a pre-works hydromorphological and riparian survey would be undertaken to provide a baseline against which reinstatement would be measured. During the works, water flow would be maintained by fluming or over-pumping, water quality monitoring undertaken would be undertaken pre, during and post works. Once silt fences, geotextile matting or straw bales would be used initially to capture mobilised sediment until settled. Monitoring would be undertaken post-works to check vegetation re-establishment.
On-Site Substation	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. 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.	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	This activity is unlikely to have an impact on these water bodies but has been screened in for future assessment due to current design uncertainty, which makes it impossible to categorically rule out any impact. Below is a list of design recommendations that, if followed, should ensure that there is no impact. • The substation should not be located within close proximity of surface water bodies so that there are no mechanisms for hydromorphological impacts to surface water bodies. • An FRA and Outline Surface Water Drainage Strategy should be developed and implemented

Activity	Description	Screening Outcomes	Justification
			to provide attenuation of surface water runoff from areas of hardstanding associated with the substation. In accordance with planning policy guidance (Ref. 15), runoff from the Scheme should be attenuated so that no increase in surface water discharge rates and to provide water quality treatment of runoff water. • Excavation of foundations could be subject to ingress of groundwater, with potential for high groundwater across the Site. Appropriate construction methodologies would be required as outlined in a Construction Environmental Management Plan (CEMP), associated Water Management Plan (WMP) and if required a Construction Dewatering Strategy.
Electricity Export Connection to National Grid	The Scheme aims to be connected to the National Grid via a new NGET substation located along the Sellindge to Dungeness OHL (overhead line). The Grid Connection Route will be defined once the substation location is disclosed by NGET The electricity will be exported via a 400 kV circuit. Each circuit may comprise up to three power cables. An earth cable and a fibre optic cable may also be laid alongside the	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	There is potential for excavations and channel crossings to generate impacts upon WFD surface water and groundwater receptors and so this activity has been screened in for future assessment once the design has been confirmed. Below is a list of design recommendations that, if followed, should minimise the risk of an impact. • All watercourses should be crossed by trenchless techniques such as horizontal directional drilling (HDD) where possible.

Activity	Description	Screening Outcomes	Justification
	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.		• Launch and receive pits required for HDD should be located at least 10 m from the channel margins. This will minimise the risk of indirect impact to the watercourse from uncontrolled releases of construction site runoff that may include high levels of fine sediment, oils and drilling muds and will avoid physical disturbance of the waterbody. • The potential for drilling fluids to break out into the watercourse should be mitigated by a site-specific hydraulic breakout risk assessment that would be developed post consent. • Should open cut trenching be required, then a pre-works hydromorphological and riparian survey would be undertaken to provide a baseline against which reinstatement would be measured. During the works, water flow would be maintained by fluming or over-pumping, water quality monitoring would be undertaken pre, during and post works. Once complete, silt fences, geotextile matting or straw bales would be used initially to capture mobilised sediment until the watercourse has settled. Monitoring

Activity	Description	Screening Outcomes	Justification
			would be undertaken post-works to check vegetation re-establishment.
Operations and Maintenance	Permanent operations and maintenance storage areas will be established onsite. This would comprise welfare buildings approximately 10 m x 15 m and up to 4.5 m in height, parking provisions, and spares buildings approximately 10 m x 15 m and up to 6.5 m in height. These would be strategically located to ensure good access to welfare from anywhere on the Energy Park Site.	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	This activity is unlikely to have an impact on these water bodies but has been screened in for future assessment due to current design uncertainty, which makes it impossible to categorically rule out any impact. Below is a list of design recommendations that, if followed, should mean that there is no impact. • New structures should not be located within close proximity of surface water bodies so that there are no mechanisms for hydromorphological impact to surface water bodies. • If welfare facilities are required, foul water should be captured within a sealed cess pit and/or temporary facilities (e.g. portable welfare units) and treated off-site. • Excavation of foundations could be subject to ingress of groundwater, with potential for high groundwater across the Site. Appropriate construction methodologies would be required as outlined in a Construction Environmental Management Plan (CEMP), associated Water Management Plan (WMP) and if required a Construction Dewatering Strategy.

Activity	Description	Screening Outcomes	Justification
Fencing and Security	A security fence will enclose the operational areas of the Energy Park Site. The fence is likely to be up to 3 m in height. It is anticipated that this fencing could be of palisade or 358 mesh type. PRoWs that cross the Energy Park Site will be preserved with the fence installed either side of them, plus an appropriate offset to the PROW, and possibly screening measures such as vegetation. Pole mounted internal facing closed circuit television (CCTV) systems, infrared cameras and/or 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 high. The CCTV cameras will capture an area outside of and along the fencing line. Lighting may be installed on CCTV columns, and throughout the Site perimeter, and throughout the Site located next to critical equipment (MV stations, welfare buildings, etc.). Lighting is expected to be used only in emergency situations or during critical maintenance activities. It is not	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	This activity is unlikely to have an impact on these water bodies but has been screened in for future assessment due to current design uncertainty, which makes it impossible to categorically rule out any impact. Below is a list of design recommendations that, if followed, should mean that there is no impact. • Fencing should not be located within close proximity of surface water bodies (at least 10m away).

Activity	Description	Screening Outcomes	Justification
	expected that the Site will be continuously lit during the operational phase.		
Access Tracks	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).	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	Access tracks have the potential to impact these water bodies and so have been screened in for future assessment once the design has been confirmed. Below is a list of recommendations that, if followed, should minimise the risk of an impact: • Access tracks should not be located within close proximity (<10 m) of surface water bodies, except where crossings are required, so that there is no mechanism for direct hydromorphological or water quality impacts to surface water bodies. • Open span crossings with abutments set back from the channel margins should be implemented when watercourse crossing is required. • To achieve WFD compliance, there should be no increase in culverts across the Study Area. If modification of existing culverts is required then it should be done so with a view to maintaining connectivity along the watercourse for aquatic species and riparian mammals, where these are shown to be present. • Kent County Council's (KCC) Land Drainage Policy (Ref. 20) states that culverting should not

Activity	Description	Screening Outcomes	Justification
			be considered as a viable option as part of new developments until other options have been thoroughly explored, such as clear open span bridges, revision of site layout to incorporate an 'open watercourse', and diversion of a watercourse in an environmentally sympathetic channel and corridor. Where culverts are unavoidable, KCC expect them to be restricted to a minimum and to see appropriate mitigation for any negative impacts
Surface Water Drainage	An Outline Surface Water Drainage Strategy will be included in the DCO application. The detailed operational drainage design will be carried out pre-construction with the objective of ensuring 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,	**In:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	Drainage design and outfalls have the potential to impact these water bodies depending on the approach adopted (e.g discharge to ground or surface watercourses, design of outfalls), and so has been screened in for future assessment once the drainage design has been confirmed.

Activity	Description	Screening Outcomes	Justification
	then new sections of drainage will be constructed. The design of new drainage systems will be based on the Flood Risk Assessment (FRA) and hydrological assessment. The drainage design will also ensure sufficient treatment for diffuse pollution in surface water runoff across the Scheme, notably in the newly required areas of hardstanding.		
Biodiversity and Landscaping	The Scheme will involve field boundary enhancement and the planting of seed mixes within the solar PV area. Planting of hedges and small trees will also be used to provide screening where suitable. 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. 21). The Scheme design will aim to achieve BNG levels greater than the minimum 10% required by the Environment Act 2021.	**Out:** Romney Marsh between Appledore and West Hythe Water Body (GB107040019700) Kent Romney Marsh Water Body (GB40702G503900)	Landscape and biodiversity enhancements are unlikely to impart direct impacts to WFD quality element receptors. Replacing existing impactful land use practices such as arable and cattle farming with native grasses would have indirect benefits to WFD receptors; therefore, this element is screened out of further assessment.

Screening of WFD Quality Elements

1.3.4 As outlined in **Table 2**, the Scheme comprises a number of activities that present a potential risk to the WFD status of water bodies. The specific WFD quality elements that may be impacted upon as a result of the Scheme are described in **Table 3**.

WFD Element	Screening Outcome	Justification
Biological Quality Elements		
Fish	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities, or potential chemical spillages during construction could affect water quality and therefore impact fish. Similarly, pollutants in operational surface water runoff (including spillages) from new areas of hardstanding could also impact on water quality, and thereby the fish element. Any direct physical works to watercourses during construction (e.g. open-cut trenching or culverting) could impact on habitat quality.
Invertebrates	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities, or potential chemical spillages during construction could affect water quality and therefore impact invertebrates. Similarly, pollutants in operational surface water runoff (including spillages) from new areas of hardstanding could also impact on water quality, and thereby the invertebrate element. Any direct physical works to watercourses during construction (e.g. open-cut trenching or culverting) could impact on habitat quality.
Macrophytes and Phytobenthos Combined	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities, or potential chemical spillages during construction could affect water quality and therefore impact macrophytes and phytobenthos. Similarly, pollutants in operational surface water runoff (including spillages) from new areas of hardstanding could also impact on water quality, and thereby the macrophytes and phytobenthos element. Any direct physical works to watercourses during construction (e.g. open-cut trenching or culverting) could impact on habitat quality.
Macroalgae	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities, or potential chemical spillages during construction could affect water quality and therefore impact macroalgae. Similarly, pollutants in operational surface water runoff (including spillages) from new areas of

WFD Element	Screening Outcome	Justification
		hardstanding could also impact on water quality, and thereby the macroalgae element. Any direct physical works to watercourses during construction (e.g. open-cut trenching or culverting) could impact on habitat quality.
Phytoplankton	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities, or potential chemical spillages during construction could affect water quality and therefore impact phytoplankton. Similarly, pollutants in operational surface water runoff (including spillages) from new areas of hardstanding could also impact on water quality, and thereby the phytoplankton element. Any direct physical works to watercourses during construction (e.g. open-cut trenching or culverting) could impact on habitat quality.
Physico-chemical Quality Elements		
Thermal conditions	In	Increased culverting would increase shading of watercourses and impact thermal conditions as a result. As the final design has not been confirmed, this element has been screened in.
Oxygenation conditions	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities and/or operational drainage.
Salinity	Out	Possible increase in fine sediment and organic material delivered to water body from excavation activities and/or operational drainage.
Acidification status	In	Chemical spillages during construction and/or operation could alter acidification conditions.
Nutrient conditions	In	Possible increase in fine sediment and organic material delivered to water body from excavation activities and operational runoff. However, it is anticipated that nutrient conditions would improve over the current baseline whereby there are existing pressures on watercourses in the study area from agricultural pollutants.

WFD Element	Screening Outcome	Justification
Hydromorphological Supporting Elements		
Quality and Dynamics of Water Flow	In	Increased culverting or the use of intrusive techniques in the installation of the underground cabling would have an impact on flow within watercourses found across the Study Area.
Connection to Groundwater Bodies	Out	No risks to the connection between surface watercourses and groundwater have been identified.
River Continuity	In	Increased culverting or the use of intrusive techniques in the installation of the underground cabling would have an impact on continuity of watercourses found across the Study Area.
River Depth and Width Variation	In	Increased culverting or the use of intrusive techniques in the installation of the underground cabling would have an impact on channel depth and width of watercourses found across the Study Area.
Structure and Substrate of the Riverbed	In	Increased culverting or the use of intrusive techniques in the installation of the underground cabling would have an impact on bed substrate of watercourses found across the Study Area.
Groundwater Quality Elements		
Quantitative Elements	In	There are potential temporary impacts from groundwater ingress to excavations. Drainage arrangements for the Scheme have yet to be designed and could include discharge to ground which may affect this element.
Chemical Elements	In	There are potential temporary impacts from groundwater ingress to excavations. Drainage arrangements for the Scheme have yet to be designed and could include discharge to ground which may affect this element.

1.4 Baseline

Topography and Land Use

1.4.1 The topography across the Energy Park Site, Interconnecting Cable Corridor Search Area, and the wider Study Area is relatively flat and consistent throughout, being below 10 m above ordnance datum (AOD) given its location wholly within Romney Marsh on the coastal fringe of the English Channel.

1.4.2 The Study Area is contained within land that is predominantly used for agriculture, mainly of an arable nature, with small patches of woodland, grassland and isolated residences located across the area (Ref. 20). The village of Newchurch is located within the Study Area, as well as the outskirts of the village of Dymchurch to the southeast of the Study Area.

1.4.3 Romney Marsh is partly below sea level and consists of reclaimed land which requires a complex drainage system to ensure suitability for agricultural use and prevention of flooding. There is a dense network of drains across the area, many known as ‘sewers’. These drains are managed by the Romney Marshes Area IDB and the EA. The drains can receive water for irrigation purposes from the Royal Military Canal when rainfall is low, with the canal being located immediately to the north of the study area (see Figure 15.1), or when water levels across the marsh are high, water can be discharged from the drains within the marsh via pumping stations back to the Royal Military Canal, or via a number of sluices and outfalls to the sea at St Mary’s Bay.

Hydrogeology, Soils, and Groundwater

1.4.4 The bedrock and superficial geology for the Study Area is identified by the BGS GeoIndex online mapping (Ref. 9). The Study Area is wholly underlain by the Tunbridge Wells Sand Formation, which comprises of sandstone, siltstone and silty sand rhythms with finely bedded mudstones and thin limestones formed during the cretaceous period. The bedrock geology is overlain by Tidal Flat Deposits formed during the quaternary period comprised of unconsolidated sediment, mainly mud and/or sand, due to proximity to the sea and the tidal influence.

1.4.5 A review of the Study Area on the Soilscapes website (Ref. 10) shows the area is underlain by loamy and clayey soils of coastal flats with naturally high groundwater.

Hydrology

1.4.6 Based on the Meteorological Office website (Ref. 13), the nearest rainfall station is Dungeness B (NGR: TR0815116831; 5 mAOD) which is positioned approximately 15 km to the south of the Study Area. Using data from this weather station, for the period 1981 to 2010, it is estimated that the Study Area experiences approximately 705 mm of rainfall per year, with it raining more than

1 mm on approximately 115 days per year, which are both low in the UK context. This is relevant to the whole Study Area.

Historical Channel Change

1.4.7 In general, the watercourses within the Study Area have experienced little change over time. The watercourses within the Study Area are straightened and artificial channels which have likely been modified for agricultural purposes. There has been little to no change in these channels since the first OS maps were published in the early 1900s, therefore it is assumed that these channels would have been modified prior to this (Ref. 8).

WFD Water Bodies

WFD Status

1.4.8 The Study Area falls within one WFD surface water body catchment ('Romney Marsh between Appledore and West Hythe Water Body'). There are many tributaries, and additional watercourses present within the Study Area; these are predominantly unnamed agricultural ditches, drains, and springs. There is one coastal water body, Kent South Water Body, downstream of the surface water body and so hydrologically connected to it, however this was screened out of further assessment due to the distance downstream and the size of the coastal water body which means that any impact would be diluted.

1.4.9 In the 2019 assessment of chemical status, the EA introduced new methods and expanded their evidence base, leading to all water bodies failing chemical status. These changes rendered the assessment incomparable to previous years' evaluations. The failures are attributed to four groups of global pollutants (uPBTs): polybrominated diphenyl ethers (PBDEs), which are a group of brominated flame retardants; mercury; certain polycyclic aromatic hydrocarbons (PAHs); and perfluorooctane sulfonate (PFOS), a type of per- and polyfluoroalkyl substance (PFAS). These pollutants resulted in a failing classification, as there is no available technical solution for improvement, rendering it technically infeasible. Consequently, the EA has determined that, in Cycle 3, the Chemical classification item does not require assessment. Further details regarding the WFD classifications of the screened in water body are given in **Table 3**.

Table 3. WFD Classification (2022 data) for WFD Surface Water Body Underlying the Study Area (screened in)

Classification Item	Romney Marsh between Appledore and West Hythe Water Body
Water Body ID	GB107040019700
Hydromorphological designation	Artificial
Ecological	Moderate
Biological quality elements	Good
Physico-chemical quality elements	Moderate
Hydromorphological Supporting Elements	Supports good
Hydrological Regime	Supports good
Supporting elements (Surface Water)	Moderate
Mitigation Measures Assessment	Moderate or less
Specific pollutants	High
Chemical	Does not require assessment
Priority hazardous substances	Does not require assessment
Priority substances	Does not require assessment
Other pollutants	Does not require assessment

Groundwater

1.4.1 The Scheme us underlain by one groundwater body. A summary of the WFD status of this groundwater body is given in **Table 4**.

Table 4. WFD Classification (2022 data) for WFD Groundwater Body Underlying the Study Area

Classification Item	Kent Romney Marsh Water Body
Water Body ID	GB40702G503900
Overall Water Body	Poor
Quantitative	Good
Quantitative Status element	Good
Quantitative Dependent Surface Water Body Status	*Good*
Quantitative GWDTEs test	*Good*
Quantitative Saline Intrusion	*Good*
Quantitative Water Balance	*Good*
Chemical (GW)	Poor
Chemical Status element	Poor
Chemical Dependent Surface Water Body Status	*Poor*
Chemical Drinking Water Protected Area	*Poor*
Chemical GWDTEs test	*Good*
Chemical Saline Intrusion	*Good*
General Chemical Test	*Good*
Supporting elements (Groundwater)	
Prevent and Limit Objective	*Active*
Trend Assessment	*Upward trend*
Classification Item	Kent Romney Marsh Water Body

Baseline Characteristics Against WFD Quality Elements

Biological Quality Elements

1.4.2 There has been no EA freshwater fish surveying within the Study Area in the past 10 years. There are three surveying sites within the Romney Marsh between Appledore and West Hythe Water Body, all of which are located on the Royal Military Canal (at TR 00506 32497, TR 10259 34325, and TR 03939 33873). Between 2015 and 2024 a range of species were recorded at these sites including common bream (*Abramis brama*), perch (*Perca fluviatilis*), pike (*Esox lucius*), roach (*Rutilus rutilus*), rudd (*Scardinius erythrophthalmus*), ruffe (*Gymnocephalus cernuus*), silver bream (*Abramis bjoerkna*), tench (*Tinca tinca*), and gudgeon (*Gobio gobio*) (Ref. 16).

1.4.3 There are no EA invertebrate sampling points within the Study Area that are on record. There are however 22 sites within the Romney Marsh between Appledore and West Hythe Water Body, of which 12 are on the Royal Military Canal. Macroinvertebrate surveys will be carried out on watercourses within the Study Area which will provide an indication of the habitat diversity and the presence of any water quality pressures within the potentially affected watercourses (Ref. 16).

1.4.4 There are no EA macrophyte sampling points within the Study Area. Macrophyte surveys will be carried out in the macrophyte survey season (June – September). Site selection will be informed by a site walkover with scoping of macrophyte, macroinvertebrate, and fish surveys as required.

Physico-chemical Quality Elements

1.4.5 Baseline water quality within the Study Area is accessible via the EA's Water Quality Archive website (Ref. 17). There is only one monitoring site within the Study Area. However, there are several others located within 2km of the Study Area. These are all detailed in **Table 5**.

Table 5. Available water quality data within, and immediately, outside of the Study Area (Ref. 17)

Watercourse	Sampling point	ID	Comment	Summary
Marshland Sewer	Footbridge At Eastbridge Road	SO-E0007367	Within the Study Area, just north-west of Dymchurch at TR 09785 29441.	Relatively new sampling point, 29 samples taken during 2024, testing for 19 determinands overall. testing for 19 microbial determinands. Intestinal Enterococci and Escherichia coli both fall within the Poor Bathing Water Quality standard (for inland or coastal waters).
Royal Military Canal	Bilsington	SO-E0001479	Outside of the Study Area but within 2 km of the Energy Park Site. Located south of Bilsington at TR 04100 33900.	102 samples taken between 2000 and 2024, testing for 24 determinands overall. In 2024, pH averaged 7.7 indicating circum-neutral water and 10th percentile dissolved oxygen was 53.4% indicating Poor status against WFD standards (Ref. 23). There is evidence of elevated nitrate and orthophosphate values, indicating probable pressure from agricultural pollution.
Royal Military Canal	Rmc At Bonnington	SO-RSN0857	Outside of the Study Area but within 2 km of the Energy Park Site. Located north-east of the Site at TR 05730 34338.	12 samples taken during 2022, testing for 17 determinands overall. In 2024, pH averaged 8.03 indicating circum-neutral to slightly alkaline water and 10th percentile dissolved oxygen was 48.9% indicating Poor status against WFD standards (Ref. 23). There is evidence of elevated nitrate and orthophosphate values, indicating probable pressure from agricultural pollution.
Hoorne's Sewer	Footbridge At Lyndhurst Road	SO-E0007368	Outside of the Study Area but within the 2 km of the Energy Park Site. Located north of Dymchurch at TR 10076 29639.	Relatively new sampling point, 29 samples taken during 2024, testing for five microbial determinands overall. Intestinal Enterococci and Escherichia coli both fall within the Poor Bathing Water Quality standard (for inland or coastal waters).

Sluice at Dymchurch Road (the point in which flow from Marshland Sewer, Hoorne's Sewer and Clobsden Sewer meet, before flowing via a culvert under the A259 and through a sluice, into the Kent South coastal water body)	Sluice At Dymchurch Road	SO-E0007366	Outside of the Study Area but within the 2 km of the Energy Park Site and is the confluence point for the Main Rivers and named and unnamed Ordinary Watercourses across the Site and the Study Area. Located at the coast of Dymchurch at TR 10021 29148.	Relatively new sampling point, 29 samples taken during 2024, testing for 19 microbial determinands. Intestinal Enterococci and Escherichia coli both fall within the Poor Bathing Water Quality standard (for inland or coastal waters).

Hydromorphological Quality Elements

1.4.6 At the time of writing, there have been no hydromorphological walkover surveys and so the condition and quality of watercourse within the Study Area has not been assessed. This will be done at the Preliminary Environmental Impact (PEI) stage.

1.4.7 A short desk study has been undertaken to assess the characteristics of the watercourses in the study area. In time, this will be supported by a full walkover survey at a later stage of assessment.

1.4.8 The Study Area does not cover any WFD designated watercourses, but each of the Sites interacts with a network of watercourses, likely to be drainage channels. Based on aerial imagery and historical mapping, these channels appear to be artificial and heavily modified due to their straight and uniform nature and so are unlikely to possess significant hydromorphological value (though this will be examined in more detail during the site walkover) (Ref. 10). The artificial nature of these watercourses is also implied by the presence of loamy and clayey soils with high groundwater that would be consistent with coastal floodplains (Ref. 8, Ref. 9).

1.5 Construction, Operation and Decommissioning Impacts

Potential Construction Impacts

1.5.1 There are a number of adverse impacts to the water environment which may occur from the construction activity for the Scheme, including:

- Pollution of surface water (and any designated ecology sites that are water dependent) due to deposition or spillage of soils, sediments, oils, fuels, or other construction chemicals, or through uncontrolled site run-off including dewatering of excavations;
- Temporary impacts on the hydromorphology of watercourses from open-cut watercourse crossings or temporary vehicle access as may be required; and
- Potential impacts on groundwater resources, local water supplies (licenced and unlicenced abstractions) and potentially the baseflow to watercourses from temporary dewatering of excavations or changes in hydrology.

1.5.2 Further details are provided in **Chapter 15: Water Environment** of the EIA Scoping Report.

Construction Mitigation

1.5.3 Where possible, potentially significant adverse impacts will be avoided through embedded design measures. However, where this is not possible, additional mitigation, or potentially compensation measures, may be required. These will be determined and developed as part of an iterative design and impact assessment process. The iterative design process aims to manage pollution

risk, manage flood risk, manage works in, under, over and adjacent to water features, and manage any dewatering required during construction. Construction phase impacts will likely be mitigated through the implementation of standard construction techniques and mitigation measures, as are described in a wide range of good practice publications.

1.5.4 A construction stage Construction Environmental Management Plan (CEMP) and Water Management Plan (WMP) will detail the procedures and methods that must be followed to minimise the potential environmental effects of construction activities. This would include procedures to prevent pollutants entering the drainage system or discharging directly to surface water features or to ground. It would also describe the procedures in the event of an environmental emergency, for example a fuel or chemical spillage.

1.5.5 Measures for the management of fine sediment in surface water runoff as a result of construction activities to be detailed in the CEMP should include, but may not necessarily be limited to, the following:

- All reasonably practicable measures will be taken to prevent the deposition of fine sediment or other material in, and the pollution by sediment of watercourses, arising from construction activities. The measures will accord with the principles set out in industry guidelines.
- Where possible, works adjacent to watercourses will be undertaken during the drier months of the year. When undertaking works, periods of wet weather will be avoided, to minimise the risk of generating runoff contaminated with fine particulates. If working during wet weather periods is unavoidable, mitigation measures will need to be implemented to control fine sediment laden runoff.
- To protect watercourses from fine sediment runoff, any removed topsoil/subsoil will be stored a minimum of 20 m from watercourses, on flat lying land (and further if the ground is sloping, subject to onsite risk assessment and observational monitoring). Where this is not possible, and it is to be stockpiled for longer than a two-week period, the material will either be covered with geotextile mats, seeded to promote vegetation growth or other measures to limit fine sediment laden runoff.
- Where semi-mobile large plants (e.g., cranes) need to work on the channel banks, the banks should be stabilised to minimise bank collapse and erosion of fine sediment in watercourses.
- Mud deposits will be controlled using wheel washing facilities at entry and exit points to the construction works area (at least 10 m from watercourses) and/or other times as considered necessary.
- Equipment and plant will be washed out and cleaned in designated areas within the construction works area (at least 10 m from watercourses), where runoff can be isolated for treatment. If not suitable to dispose of on site, contaminated wastewater should be disposed of off-site at appropriate facilities.

- Debris and other material will be prevented from entering watercourses, through maintenance of a clean and tidy site, provision of clearly labelled waste receptacles, grid covers and the presence of site security fencing.

1.5.6 Measures for the management of spillages and leaks as a result of construction activities to be detailed in the CEMP should include, but may not necessarily be limited to, the following:

- An Emergency Response Plan or similar entitled plan would be prepared and included in the CEMP and implemented by the Contractor(s) on site.
- Spill kits and oil absorbent material (e.g., plant nappies) will be carried on all mobile plants and located at high-risk locations across the construction works area and regularly topped up. All construction workers will receive spill response training and toolbox talks.
- All spills to be cleaned up immediately, with resultant wastes (soils, rags, and absorbent material) appropriately stored and disposed of by an appropriately licensed waste contractor as controlled waste. All spills reported and investigated as required.
- Re-fuelling will take place in designated areas within the compound with drip trays/plant nappies and on flat land, at least 20 m from the water body. Certain semi-mobile large plants (e.g., cranes) may need to be re-fuelled in-situ, within 20 m of the water body and would require site-specific risk assessments by the Contractor(s).
- Biodegradable lubricant and hydraulic oils should be used for all vehicles and plant within the Scheme, where possible.
- Storage of fuel would be in accordance with The Control of Pollution (Oil Storage) (England) Regulations (2001). Safety Data Sheets (SDSs) for all chemicals stored on-site will be kept on file and made available on-site.
- Any potentially contaminating substances (e.g., cement/adhesives) stored on site, will be in leak-proof containers and stored at least 20 m away from watercourses (except for in fixed/large plants associated with the construction). The containers would be protected by temporary impermeable bunds (or drip trays for small containers) with a capacity of 110% of the maximum stored volume.
- Any permanent oil storage tanks and temporary storage of 200 L or more of oil in drums and mobile bowsers (and their ancillary pipe work, valve, filters, sight gauges etc.) must be stored in a secondary containment system e.g., bunding or drip trays.
- Cement mixing and washing areas should be situated on an impermeable designated area, at least 20 m away from the water body and should have settlement and re-circulation systems for water reuse, to minimise pollution risk. Contaminated wastewater from cement works cannot be

discharged into water bodies and should be disposed of off-site at appropriate facilities.

- All plant and equipment will be regularly serviced to reduce emissions and the chance of leaks/spillage, ideally off-site. If servicing is required to be completed on-site, then control measures must be implemented to contain potential hydrocarbon leaks during servicing (e.g., drip trays when changing oil).
- Temporary environmental screens will be erected, sufficient to prevent construction debris oils, chemicals, or other construction materials from entering any watercourse/ drain for the duration of the works.
- The Scheme site is to be secure to prevent any vandalism that could lead to a pollution incident.
- The Contractor's method statement should make specific reference to measures for the protection of river quality.

1.5.7 In accordance with The Wildlife and Country Act 1981 it is an offence to plant or otherwise cause to grow in the wild any plant listed in Part II of Schedule 9 of the Act. Measures for the control of the spread and colonisation of invasive, non-native species (INNS) as a result of construction activities to be detailed in the CEMP should include, but may not necessarily be limited to, the following:

- Prior to land clearance, earth works and construction activities, the site should be inspected for the presence of INNS. All occurrence of INNS should be recorded on plans to be retained by the Contractor(s) for reference.
- A site management plan would be prepared and implemented by the Contractor(s) on site, that sets out the measures for the control of the spread and colonisation of INNS within and beyond the Scheme site.
- Potential treatment and management of INNS and contaminated soils should operate within the conditions in Treatment and disposal of invasive non-native plants: RPS 178 (Ref. 18).
- During activities that will disturb the INNS, temporary environmental screens will be erected, sufficient to prevent INNS propagules (e.g., plant fragments) from entering watercourses and travelling downstream. Any material trapped by the screens should be disposed of appropriately.
- Contaminated waste (e.g., plant fragments, infected soils) must be sent to landfill site or incineration facility that has the correct type of permit to deal with the identified INNS and notify the EA that this has been carried out.
- Screened and/or sieved soils from sites with Japanese Knotweed cannot be reused at any other sites than where it came from, within 50 m of watercourses, existing amenity areas and in places that may be used by people or livestock.

- Vehicles that have been in areas of INNS should be washed down and visually inspected for the presence of plant propagules, at least 20 m from watercourses, to prevent the spread of INNS species downstream and to other sites.

1.5.8 The Contractor(s) should continuously monitor the water quality within the Scheme site and downstream of the site, throughout construction.

1.5.9 Should there be an uncontrolled discharge of construction site runoff (laden within fine sediment) or in the event of a chemical spillage (e.g., fuel), construction works should immediately stop, and action should be taken to contain the pollution event. The Contractor(s) should contact the EA to seek advice on how to proceed with the pollution event containment and clean up.

Potential Operational Impacts

1.5.10 There are a number of general adverse impacts to the water environment which may occur from operation activity, including:

- Impacts on surface or groundwater quality from site run-off and the potential for accidental spillages during maintenance activities;
- Impacts on surface or groundwater quality as a result of the use of firewater in the event of a fire in the BESS Area;
- Impacts on hydrology including subsequent impacts on aquatic habitats and water-dependent nature conservation sites;
- Permanent hydromorphological impacts to watercourses;
- Impacts on groundwater resources (flows and level); and
- Impacts on the rate and volumes of surface water run-off entering local watercourses.

1.5.11 Further details on the operation and maintenance activities are provided in **Chapter 15: Water Environment** of the EIA Scoping Report.

Operational Mitigation

1.5.12 The operation will take place in accordance with an Operational Environmental Management Plan (OEMP), a framework version of which will be submitted alongside the DCO Application. This will set out the general environmental principles to be followed during the operation of the Scheme. The Framework OEMP will be used as the basis for a detailed OEMP to be prepared prior to commencement of operation.

1.5.13 The Framework OEMP will outline how the operational mitigation measures will be implemented and will set out the monitoring and auditing activities designed so that such mitigation measures are carried out, and that they are effective.

1.5.14 The key elements of the Framework OEMP will include:

- An overview of the Scheme and associated operation programme;
- Prior assessment of environmental impacts (through the EIA);

- Reduction of potential adverse impacts through design and other mitigation measures;
- Monitoring of effectiveness of mitigation measures;
- Corrective action procedure; and
- Links to other complementary plans and procedures.

1.5.15 An Outline Surface Water Drainage Strategy will be prepared and submitted within the ES for the Scheme. The design of drainage systems aims to result in no significant increases in flood risk downstream, during storms up to and including the 1 in 100 (1%) annual probability design flood, with an allowance for climate change.

1.5.16 Careful consideration of the SuDS features, in keeping with local planning policy and through liaison with the LLFA, the Romney Marshes IDB and the EA, will be undertaken so that the Outline Surface Water Drainage Strategy adequately attenuates and treats runoff from the Scheme, whilst minimising flood risk to the Site and surrounding areas.

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

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

Potential Decommissioning Impacts

1.5.19 Potential impacts from the decommissioning of the Scheme are similar in nature to those during construction, as some ground works will be required to remove infrastructure installed.

1.5.20 When the operation and maintenance phase ends, the Energy Park Site would be decommissioned. All Solar PV Panels, mounting piles and concrete blocks, cabling, inverters, transformers, switchgear, BESS and the containerised unit of the Operations and Maintenance Hub would be removed from the Energy Park Site and recycled or disposed of in accordance with good practice and market conditions at that time.

1.5.21 Should the Grid Connection Cable and Interconnecting Cables be decommissioned, the mode of their decommissioning would be dependent upon government policy and good practice at that time. Currently, the most environmentally acceptable option is 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.

1.5.22 As such, decommissioning impacts would be less than those during construction and would be mitigated by measures set out within the Framework Decommissioning Environmental Management Plan (DEMP).

Decommissioning Mitigation

1.5.23 The decommissioning will take place in accordance with the Framework DEMP, which will be submitted alongside the DCO Application. The Framework DEMP will detail the measures that would be undertaken during decommissioning to mitigate the temporary effects on the water environment.

1.5.24 The key elements of the Framework DEMP include:

- An overview of the Scheme and associated decommissioning programme;
- Prior assessment of environmental impacts (through the EIA);
- Reduction of potential adverse impacts through mitigation measures;
- Monitoring of effectiveness of mitigation measures;
- Corrective action procedure; and
- Links to other complementary plans and procedures.

1.6 Conclusion

This screening assessment has considered the potential impacts of the Scheme to the following surface, coastal, and groundwater bodies:

- Romney Marsh between Appledore and West Hythe Water Body (GB107040019700);
- Kent South Water Body (GB640704540001); and
- Kent Romney Marsh Water Body (GB40702G503900).

1.6.1 Of these, the coastal water body Kent South was screened out of further assessment based on its proximity to the Site.

1.6.2 Numerous Scheme activities remain screened in at this stage of assessment and so will require further consideration as the design of the Scheme develops. These following activities have been screened in:

- Solar PV modules and mounting structures;
- Supporting Infrastructure: Inverters, Transformers and Switchgear;
- Battery Energy Storage System;
- Onsite and Offsite cabling;
- Grid Connection Substation;
- Electricity Export Connection to National Grid;
- Operation and Maintenance Hub;
- Fencing and Security;
- Access Tracks; and
- Surface Water Drainage and Outfalls.

1.6.3 The next stage would be to complete WFD Scoping (Stage 2 of the WFD staged approach) once further Scheme detail is available, to determine whether the screened in activities could affect any WFD element for those waterbodies screened in. The requirement for Stage 3 (detailed assessment) would be determined upon completion of Stage 2. It is anticipated that the Stage 2 WFD Scoping assessment would be included as an appendix to the Preliminary Environmental Information Report.

1.6.4 At this stage, it is considered that provided that the mitigation, recommendations, and best practices listed throughout this assessment, but specifically in **Table 2** and **Construction, Operation and Decommissioning Impacts**, are followed, it is not anticipated that there would be any deterioration in water body status or prevention of future improvement as a result of the Scheme. However, this will be confirmed at a later stage of assessment as design information and any subsequent proposed mitigation develops.

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Ref. 20 OSM Land Use Land Cover (n.d.) Online maps. Available at: https://osmlanduse.org/#5/4.30995/51.49072/0/

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Appendix I: Land Contamination Preliminary Risk Assessment

Shepway Energy Park

EIA Scoping Report

Land Contamination Preliminary Risk Assessment

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The site reconnaissance consisted of a general external inspection of the site aimed at identifying any obvious signs of potential sources of ground contamination affecting the site. Similarly, the site visit excluded detailed consideration of the ecological or archaeological aspects of the site, and if such are believed to be of potential significance then it is recommended that specialist advice is sought.

Any risks identified in this **Report** are perceived risks, based on the information reviewed during the Desk Study and therefore partially based on conjecture from available information. The study is limited by the non-intrusive nature of the work and actual risks can only be assessed following a physical investigation of the site.

The opinions expressed in this **Report** and the comments and recommendations given are based on a desk assessment of readily available information and an initial site reconnaissance by an AECOM Engineer. At this stage intrusive investigations have yet to be undertaken at site to establish actual ground and groundwater conditions and to provide data for an assessment of the geo-environmental status of the site.

Reference to historical Ordnance Survey (OS) maps and / or data provides invaluable information regarding the land use history of a site. However, it should be noted that historical evidence will be incomplete for the period pre-dating the first edition and between the release of successive maps and / or data.

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Executive Summary

On the instructions of SSE Newchurch Solar Limited (the Client), AECOM Limited (AECOM) has carried out a Land Contamination Preliminary Risk Assessment of the Shepway Energy Park (hereafter referred to as the 'Scheme') to support delivery of a Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES) as part of the Development Consent Order (DCO) application process. The Scheme is located within the Romney Marsh area of Kent, between the towns of Ashford, Folkestone and Rye (hereafter referred to as the 'Site').

It should be noted that this executive summary does not form a standalone document and should be read in conjunction with the AECOM Land Contamination Preliminary Risk Assessment.

Report Purpose	The assessment is required to support the Preliminary Environmental Information Report (PIER) and Environmental Statement (ES) as part of the Development Consent Order (DCO) process for the Scheme. We understand the Client's reporting requirements are to identify potential constraints associated with ground contamination (if any) at the Site which may impact upon its Scheme and determine whether additional works are required characterise these potential constraints.
Background	The Site is located within the administrative areas of Ashford Borough Council and Folkestone and Hythe District Council, Kent. It is largely situated to the north and east of the village of Newchurch. The Energy Park Site is approximately centred on National Reference (NGR) SE756330.
Site Setting and Historical Land use	The Site is situated around the village of Newchurch in Kent in the Romney Marsh region. The Site is located in a relatively flat and low-lying region southeast of the Royal Military Canal. Topography to the north of the Royal Military Canal is hilly and significantly elevated in comparison to Romney Marsh. The Site is rural in nature with isolated adjacent residential developments. Ruins of former housing facilities were observed during the site reconnaissance. A review of the earliest available historical maps revealed the Site to have been presumed agricultural land with adjacent sporadic residential and commercial developments. Currently, the majority of the Site continues to operate as agricultural land with some residential and commercial developments located adjacent to the Site. 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 Newchurch Village website documents that the Newchurch Advanced Landing Ground (ALG) operated in the west of the Site during World War II. This was a temporary ALG operating between July 1943 and September 1944 with two runways, various dispersal areas, blister hangers, tents, firing bays, gun site and a fuel store.
Contaminated Land Risk Assessment	Potential sources of contamination have been identified within the Site boundary relating to the historical use of the Site as agricultural land with adjacent sporadic residential and commercial developments. The Newchurch Village website documents that the Newchurch ALG operated in the west of the Site during World War II. This was a temporary ALG operating between July 1943 and September 1944 with two runways, various dispersal areas, blister hangers, tents, firing bays, gun site and a fuel store. The Newchurch ALG is a potential historical source of contamination. Current uses of the site also represent potential sources of contamination such as the Made Ground. Potential off-site sources of contamination include Made Ground associated with farmland and Newchurch, agricultural land, tanks, historical landfills and the wider former Newchurch ALG. The Scheme proposes a solar farm development. However, residential developments are located adjacent to the Site, therefore, human health off-site is a sensitive receptor. Furthermore, the water environment is considered to be a sensitive receptor, with drainage ditches located on-site, resulting in the migration of contamination (if present) to surface waterbodies. The built environment is considered a sensitive receptor as the Scheme includes on-site buildings and infrastructure. Based on the available Desk Study information, the risk to the Site with respect to contaminated land ranges from Very Low to Moderate risk although the majority of risks were Low to Moderate / Low.
Recommendations	There are four V1 impacts mapped within the vicinity of the Newchurch ALG, three of these are located on-site. Therefore, it is recommended that a detailed UXO Risk Assessment is undertaken, as per the CIRIA guidance. Ground investigation is recommended to assess the potential pollutant linkages, support earthworks and develop the design of the Scheme. It is recommended that the ground investigation be designed in accordance with the UK Specification for Ground Investigation (version 3). The investigation is to be designed to assess the migration of ground gas from the historical landfill located 6m to the east of the Site and to assess potential contamination sources associated with the Newchurch ALG and associated facilities.

1. Introduction

1.1 Terms of Appointment

1.1.1 On the instructions of SSE Newchurch Solar Limited (the Client), AECOM Limited (AECOM) has carried out a Land Contamination Preliminary Risk Assessment of the Shepway Energy Park (hereafter referred to as the 'Scheme'). The Scheme, which includes the Energy Park Site and the Interconnecting Cable Corridor Search Area, is located within the Romney Marsh area of Kent, between the towns of Ashford, Folkestone and Rye (hereafter referred to as the 'Site').

1.1.2 The assessment is required to support the Preliminary Environmental Information Report (PEIR) and Environmental Statement (ES) as part of the Development Consent Order (DCO) application process for the Scheme.

1.1.3 The Site location is shown on **Figure 1** in Error! Reference source not found. and includes the Energy Park Site and the Interconnecting Cable Corridor Search Area.

1.1.4 Full access to the Interconnecting Cable Corridor Search Area was not available at the time of reporting, these areas were observed from the land boundaries and public right of ways as part of the site reconnaissance. Should access be granted, these areas may be reviewed at a later date and the Preliminary Risk Assessment will then be updated if necessary. It is also noted that 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.

1.2 Background and Proposed Development

1.2.1 The Site is located within the administrative areas of Ashford Borough Council and Folkestone and Hythe District Council, Kent. It is largely situated to the north and east of the village of Newchurch. The Energy Park Site is approximately centred on National Grid Reference (NGR) SE756330.

1.2.2 The maximum extent of land that is expected to be included within the DCO application for the PV modules, internal infrastructure, landscaping, biodiversity enhancement and interconnecting cable corridor as part of the Scheme is shown on **Figure 1** in Error! Reference source not found.**.** The Site would allow for an anticipated export of circa 400 megawatts (MW) electrical capacity.

1.2.3 The Scheme is anticipated to require the construction and enabling works which includes the following:

- Battery Energy Storage System (BESS);
- Solar Array;
- On-site buildings such as switchgear, control and storage building(s);
- Biodiversity Enhancement Areas;
- Interconnecting Cable Corridors; and

- Grid Connection Route – To be determined following disclosure of the proposed Newchurch National Grid Substation by National Grid Energy Transmission (NGET).

1.2.4 The full details of the Scheme are detailed in **Chapter 2** of the Shepway Energy Park Scoping Report.

1.3 Aims and Objectives

1.3.1 The objective of this Preliminary Risk Assessment is to characterise the environmental setting and sensitivity across the Site, along with the potential for contamination to exist and the pathways through which contamination may come into contact with sensitive receptors given the Scheme. The Preliminary Risk Assessment includes the following key activities:

- Review of aerial imagery for the Site layout and terrain evaluation to provide a current description of the Site's layout and setting within the local area;
- Review of historical land uses for the Site and surrounds with a particular emphasis on identifying potential on-site and off-site contamination sources, and potential for Made Ground;
- A review of the Site's geological (including available British Geological Survey (BGS) borehole records, hydrological and hydrogeological setting, publicly available non-coal and coal mining records and geo-environmental information to build up an understanding of the Site setting and surrounding environmental sensitivity;
- Request and review relevant records held by the Local Authority Contaminated Land Officer along with public regulatory records provided within Groundsure Reports purchased for the Site;
- Review of any available records provided by the Client;
- Review other relevant publicly available records including (but not limited to) the Zetica bomb risk maps, UK Radon website, flooding information to further inform the assessment;
- Develop a preliminary Conceptual Site Model (CSM) for the Site to identify the potential contamination sources, pathways, and receptors for consideration in the context of the potential development followed by a preliminary qualitative risk assessment for the Site;
- Summarise identified geo-environmental and land quality risks; and
- Recommendations for further geo-environmental assessments, if required.

1.4 Sources of Information

1.4.1 This report has been prepared using a combination of published records (e.g. BGS, Environment Agency (EA)). These include statutory records and historical mapping supplied within a Groundsure Report, published geological and hydrogeological mapping, historical borehole records and observations made during the site reconnaissance.

1.4.2 The following information sources have been used to inform this assessment:

- Groundsure Enviro+Geo+Map Insight (ref. GS-NP8-I8H-BF2-9LK), dated 20 December 2024;
- The Mining Remediation Authority (https://datamine-cauk.hub.arcgis.com/https://mapapps2.bgs.ac.uk/coalauthority/home.html) (accessed April 2025);
- British Geological Survey (BGS) (GeoIndex – British Geological Survey (bgs.ac.uk)) (accessed April 2025);
- Environmental Agency Catchment Data Explorer (https://environment.data.gov.uk/catchment-planning/) (accessed April 2025);
- Gov.uk Flood Risk (https://flood-map-for-planning.service.gov.uk/) (accessed April 2025);
- Zetica UXO Map (Risk Maps | Zetica UXO) (accessed April 2025);
- UK Radon Map (UKradon - UK maps of radon) (accessed April 2025);
- Defra Magic Maps (https://magic.defra.gov.uk) (accessed April 2025);
- Topography map (United Kingdom topographic map, elevation, terrain (topographic-map.com)) (accessed April 2025); and
- Google Earth satellite imagery (Google Earth) (accessed April 2025).

1.4.3 Specific information sources are referenced throughout the document.

1.5 AECOM Report Approach

1.5.1 Detailed information relating to AECOM's approach to this report is included within **Annex B**. This should be read in conjunction with the report, and contains information on the general approach to reporting, specific limitations of relevant sections and information on the approach to risk assessment utilised.

2. Site Information

2.1 Site Details

2.1.1 The Site description and location details are summarised in **Table 1** below:

Table 1 Site Details

Item	Summary
National Grid Reference	SE756330
Size	Approximately 657 hectares
Site Location	The Site is situated within Romney Marsh, a sparsely populated wetland in Kent. The Site is located within the administrative areas of Ashford Borough Council and Folkestone and Hythe District Council, Kent. It is largely situated to the north and east of the village of Newchurch.
Current Use	The Site consists of various agricultural fields and adjacent sporadic residential and commercial development (see Drawing 1 in Error! Reference source not found.). All fields are used for arable farming. Residential developments, a hostel, bakery and commercial development are located adjacent to the Site.
Surrounding Land Uses	Surrounding land uses include: • **North** – Predominantly agricultural land with sparsely populated areas north of the Site. • **East** – Predominantly agricultural land. • **South** – Predominantly agricultural land with the larger townland of Newchurch south of the Site. • **West** - Predominantly agricultural land with sparsely populated areas west of the Site.

2.2 Site Reconnaissance

2.2.1 An external inspection of the Site was completed by a suitably qualified and experienced AECOM Engineer on 23rd December 2024. The aim of the visit was to identify the range of activities carried out on the Site and any obvious potential sources of ground contamination issues.

2.2.2 The Site is situated around the village of Newchurch in Kent in the Romney Marsh region. The Site is located in a relatively flat and low-lying region, southeast of the Royal Military Canal. Topography to the north of the Royal Military Canal is hilly and significantly elevated in comparison to Romney Marsh.

2.2.3 The Site is rural in nature with ruins of former housing facilities were observed during the site reconnaissance.

2.2.4 Brooker Farm own the majority of the Site to the west of Newchurch and use the land for arable agricultural purposes such as growing wheat and sunflowers. Brooker Farm is located directly south of the Site on Newchurch Lane and consists of various farm buildings, material storage and various tanks (both mobile and fixed). A drainage ditch is located to the South of the road and flows towards the east.

2.2.5 The Site includes a portion of Wills Lane in the west of the Site, the Site does not include Berryplants Ltd Wills Farm Building and various residential properties. Chestnut House is also in the excluded region adjacent to Wills Lane. Vegetable patches were observed at this property, presumably used for the growing of produce for home consumption. Overhead cables run parallel to Wills Lane which is bound to the east and west by agricultural fields. The drainage ditches along the road flow towards the south.

2.2.6 The west of the Site is situated along Marsh Road. Drainage ditch excavations are currently being undertaken to the west of the Site. Off-site to the west is used for agricultural purposes and includes sheep grazing. Surface water ponding was observed in the field in the far west of the Site.

2.2.7 Newchurch Road runs north/south to the south of the Site and has a large volume of traffic with drainage ditches to either side of the Road. Both commercial and residential properties are located along this road.

2.2.8 The village of Newchurch consists of residential properties with the occasional commercial property with a pub/restaurant. “The Street” then runs east towards Gigger’s Green Road/Eastbridge Road. Along “The Street” is the West Gate Industrial Estate located directly to the south of the Site which hosts various commercial developments.

2.2.9 Eastbridge Road is the easternmost section of the Site and is bounded to the east by a drainage ditch and further agricultural land and to the west by agricultural land. Orgarswick Farm is located on this road.

2.2.10 Eastbridge Road continues south towards the town of Dymchurch which includes a fire department and rail line to the northwest of the Town.

2.2.11 Gammon’s Farm Lane runs to the west of the southeast of the Site and is bounded by various agricultural fields and drainages ditches and leads back to “The Street”.

2.2.12 A photographic record of the visit is included as **Annex C**. The main findings of the site reconnaissance are summarised in **Table 2**.

Table 2 Walkover Information Summary

Item	Summary
Topography	The Site is located in a relatively flat and low-lying region southeast of the Royal Military Canal. Topography to the north of the Royal Military Canal is hilly and significantly elevated in comparison to Romney Marsh. Various drainage channels and ditches were observed on-site where surface water is expected to drain to. Made Ground is not expected in the agricultural land but is likely to be present underneath farm buildings, adjacent to roads and around the village of Newchurch.
Bulk hazardous storage	Above ground storage tanks were observed in multiple farms adjacent to the Site, these included fixed tanks and mobile tanks that can be towed across agricultural fields (including on-site fields). All tanks observed appeared well maintained and in good condition. No obvious evidence of underground services were observed. Above ground services including electricity cables and pylons were observed both on-site and adjacent to the Site. No evidence of spillages or leaks were observed; however, it was not possible to access the whole of the Site, including the interconnecting cable corridor area. No spill kits were observed but the farms adjacent to the site were not fully accessible.
Soil Quality	The soil appeared to be in good condition and recently used for arable agriculture. No obvious odours, staining, or oily deposits were observed on agricultural land or farmland across the Site.
Drainage	Drainage across the Site is likely to be localised to the drainage ditches that segregate fields. Surface water ponding was observed at the Site which suggests there is poor infiltration across the Site. Drains along the roadside were observed in the village of Newchurch. Water was observed in multiple drainage ditches across the Site. Where flow was observed, it was towards the south and east of the Site and relatively slow. Some drainage ditch water appeared stagnant. Where water was observed, no odours, staining or oily sheens were observed.
Asbestos containing materials (ACM)	Whilst no asbestos containing material (ACM) was identified as part of the site reconnaissance, the presence of asbestos cannot be discounted. During the site reconnaissance, ruins of buildings were encountered and there is also the potential for asbestos to be present in the shallow soils as a result of the remnants of brake pads from the local road network in the past. It is also possible that ACM could be present within the Made Ground / fill material.

3. Historical Land Use

3.1 Introduction

3.1.1 Historical Ordnance Survey (OS) maps of the Site and the wider environs were provided in the Groundsure Map Insight Report (scales 1:2,500, 1:10,560 and 1:10,000) and from publicly accessible aerial photography and these are reviewed in this section. The historical OS maps date between 1871 and 2024. Copies of these maps are available upon request as part of the Groundsure Map Insight Report.

3.2 Site and Surrounding Area History

3.2.1 **Table 3** presents a summary of the main features present on and within up to a 500m of the Site boundary.

Table 3 Summary of Historical Mapping

Date/s	Key Features on-site	Key Features off site
pre-1900	Southwest • The Site is predominantly agricultural lands with various tree lines and drainage channels segregating land parcels. • Various sheepfolds are located on-site. • A small northern section of Brooker's farm is located within the Site boundary. Northwest • Waltsfoot sewer is mapped in the northwest of the Site. Centre • The Site is predominantly agricultural lands with various tree lines and drainage channels segregating land parcels.	Southwest • Off-Site is predominantly agricultural lands with various tree lines and drainage channels segregating land parcels. Detached cottages are also noted within 500m of the Site. • Brooker's farm in located adjacent south of the Site. • Various sheepfolds within 500m of the Site. • Millbank located approximately 450m southwest of the Site. • Langden is located adjacent west of the Site. • Small ponds and excavations located within 500m of the Site. Northwest • Will's Farm is located to the northwest of the Site. • Various agricultural fields, "oxpound", sheepfold, guide post and Peartree Farm located within 500m northwest of the Site. • Small surface waterbodies noted within 500m northwest of the Site.

Date/s	Key Features on-site	Key Features off site
	• A small pond is located in the south-central region of the Site. • A small pond is located in the north-central region of the Site. • Various sheepfolds are located on-site. Southeast • The Site is predominantly agricultural lands with various tree lines and drainage channels segregating land parcels. • A small pond is located in the southwest region of the Site. • Various sheepfolds are located on-site. Northeast • The Site is predominantly agricultural lands with various tree lines and drainage channels segregating land parcels.	South • Various agricultural fields, farms and farm buildings, sheepfold, drains and housing within 500m south of the Site. • Newchurch Village located adjacent south of the Site. • Tower Mill (corn) is located adjacent south of the Site. • A stone bridge is located approximately 200m south of the Site. North • Various agricultural fields, farms and farm buildings, sheepfold, drains and housing within 500m north of the Site. Southeast • Various agricultural fields, farms and farm buildings, sheepfold, drains, housing and a church within 500m southeast of the Site. • Various ponds mapped within 500m southwest of the Site. Northeast • Chapel farm is located to the northeast of the Site. • Various agricultural fields, farms and farm buildings, sheepfold, drains and housing within 500m northeast of the Site. • Church remains are mapped adjacent northeast of the Site.
1900-1910	• No obvious changes in the southwest, northwest, centre, southeast and northeast of the Site.	• No obvious changes to the southwest of the Site. • No obvious changes to the south of the Site. • Oak Farm is located approximately 250m northwest of the Site.

Date/s	Key Features on-site	Key Features off site
		• Additional farms and methodist chapel developed to the north of the Site. • No obvious changes to the southeast of the Site with the exception of a church within 500m. • No obvious changes to the northeast of the Site.
1910-1930	• No mapping available.	• No mapping available to the southwest, northwest, south, north, southeast and northeast of the Site.
1930-1940	• No obvious changes to the southwest, northwest, centre, southeast and northeast of the Site.	• No obvious changes to the southwest of the Site. • No obvious changes to the north, southeast and northeast of the Site. • Wey Street Farm located approximately 200m west of the Site. • Minor housing developments mapped south of the Site and the minor expansion of Newchurch Village.
1940-1950	• No mapping available.	• No mapping available to the southwest, northwest, south, north, southeast and northeast of the Site.
1950-1960	• Sheep washes mapped in the southeast of the Site.	• No obvious changes to the southwest, northwest, south, north, southeast and northeast of the Site.
1960-1970	• No mapping available.	• No mapping available to the southwest, northwest, south, north, southeast and northeast of the Site.

Date/s	Key Features on-site	Key Features off site
1970-1980	• Drains and sheaty sewer mapped in the southwest of the Site. • Various on-site drains mapped on-site. • Small ponds in the centre of the Site are no longer mapped. • Ponds in the southeast of the Site have been infilled and additional drains have been mapped. • No obvious changes to the northeast of the Site.	• Additional residential cottages, roads, drains and sewers are mapped to the southwest and northwest of the Site. • Additional residential housing, drains, and a piggery are located to the south of the Site and Newchurch Village has expanded. • Additional drains and farms mapped to the north of the Site. • The church mapped adjacent to the southeast of the Site is now mapped as Chapel Cottage Farm. • Additional drains have been mapped to the southeast and northeast of the Site. • Additional drains and Chestnuts residential property to the northwest of the Site.
1980-1990	• No mapping available.	• No mapping available to the southwest, northwest, south, north, southeast and northeast of the Site.
1990-2000	• Drain in the northwest of the Site has been infilled.	• Drain to the northwest of the Site has been infilled. • Further development in Newchurch Village.
2000-2010	• No obvious changes in the southwest and northwest of the Site. • Two surface waterbodies approximately 60m wide are mapped in the centre of the Site. • Further ponds have been infilled in the southwest of the Site.	• Development of the Millbank estate to include additional structures within 500m southwest of the Site. • No major developments to the northwest of the Site with the exception of additional residential developments. • No major developments to the south, centre and east of the Site.

Date/s	Key Features on-site	Key Features off site
2010-2020	• No obvious changes in the southwest, northwest, centre, southeast and northeast of the Site.	• Small mapped pond is no longer visible 50m south of the southwest of the Site. • No obvious changes to the south, southwest, north, southeast and northeast of the Site.
2020-2024	• No obvious changes in the southwest, northwest, centre, southeast and northeast of the Site.	• No obvious changes to the southwest of the Site. • Pond approximately 400m north of the northwest of the Site is no longer mapped. • No obvious changes to the south, north, southeast and northeast of the Site.

3.2.2 Google Earth Pro mapping is available between 1940 and 2024. The 1940 and 1960 maps show that the area has historically been used for agricultural purposes. The recent imagery shows the development of Newchurch Village and the development of some isolated residential and commercial properties.

3.2.3 According to online sources[1], there were multiple ALGs in the Romney Marsh area with one located to the northwest of Newchurch during World War II. ALGs consist of airstrips to allow for the take-off and landing of smaller wartime aircrafts. According to reports, the ALG location is different to the indicative location provided by Zetica with the majority of the ALG located within the Energy Park Site in the west of the Site.

3.2.4 The Newchurch ALG operated in the west of the Site during World War II. This was a temporary ALG operating between July 1943 and September 1944. The ALG consisted of a north-south (1,400 yard) and an east-west (1,600 yard) runway with various dispersal areas, blister hangers, tents, firing bays, gun site and a fuel store in the south of the airfield. Small roads and paths ran parallel to the runways.

[1] https://newchurchvillage.org/history/newchurch-ww2/advanced-landing-ground/ and https://romneymarshhistory.co.uk/alg

3.3 Summary of Potential Historical Contamination Sources

3.3.1 This section summarises potential contamination on-site and in the vicinity of the Site associated with historical features identified in **Section 3.2**. These include:

- **Made Ground** – A review of the historical mapping shows that historical waterbodies and drains have been infilled. The adjacent substation and pylons would also be a source of Made Ground. Contaminants of Potential Concern (CoPC) include metals and metalloids, cyanides (total, free), Semi-Volatile Organic compounds (SVOCs), Volatile Organic compounds (VOCs), petroleum hydrocarbons (TPHs), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), pH and Asbestos Containing Material (ACM) / asbestos and ground gases;
- **Agricultural Land** – The Site and its surroundings in all directions have various types of agricultural land. CoPCs include metals and metalloids, SVOCs, VOCs, PAH, pesticides / herbicides, sulphate, sulphide, ammoniacal nitrogen and pathogens; and
- **Airfield** – The west of the Site had been used as an airfield between 1943 and 1944. CoPCs include metals and metalloids, cyanides (total, free), SVOCs, VOCs, petroleum hydrocarbons, PCBs, pH, ACM/asbestos and glycols.

4. Environmental Setting

4.1 Introduction

4.1.1 The Environmental Settings chapter is based on an interpretation of specific datasets for the purpose of producing the Land Contamination Preliminary Risk Assessment.

4.1.2 The environmental setting including the topography, geology, hydrogeology and hydrology are the key factors that influence the way in which contaminants in the soil or groundwater can be transported on- or off-site, and also the way in which contamination can affect applicable receptors including controlled waters and users of the Site.

4.1.3 The environmental setting of the Site has been assessed by making reference to the information sources detailed in **Section 1.4**.

4.2 Hydrology

Surface Water Features

4.2.1 The Environment Agency (EA), the Groundsure Report and other publicly available sources have been reviewed to identify relevant hydrological features on-site and in the surrounding area. The report identified over 300 water bodies on-site and over 150 within 50m of the Site which are both on the ground surface and underground. These are predominantly drainage ditches and classified as an inland river not influenced by normal tidal action, the Groundsure Report state that these water courses contain water year-round (in normal circumstances).

4.2.2 The Site is situated in Romney Marsh between the Appledore and West Hythe Water Body catchment which had Moderate ecological status in 2022 and the same classification as in 2019. In 2019, Romney Marsh between the Appledore and West Hythe Water Body catchment had a chemical status listed as failed, an assessment in 2022 was indicated as not being required. The Groundsure Report also notes the Site is situated in the New Sewer at new Romney catchment which had a Moderate ecological status in 2022 and the chemical rating of failed.

4.2.3 There are various surface waterbodies on-site associated with the Romney Marsh wetlands.

Surface Water Abstractions / Discharges

4.2.4 According to the Groundsure Report, there are seven surface water abstractions mapped on-site and a further three within 250m of the Site. These are summarised in **Table 4**.

Table 4 Surface Water Abstractions

Location	Name	Details	Source	Start Date	Annual Volume (m^3)
On-site	A Frith & Sons Ltd (historical)	Spray Irrigation - Direct	Southern Region Surface Waters	16/07/1984	30,000
On-Site	Cragg	Spray Irrigation - Direct	Southern Region Surface Waters	20/01/1966	2,455
3m Northwest	Cragg	Spray Irrigation - Direct	Southern Region Surface Waters	20/01/1966	2,455
15m west	Cragg	Spray Irrigation - Direct	Southern Region Surface Waters	20/01/1966	2,455
20m northwest	A Frith & Sons Ltd (historical)	General Farming & Domestic	Southern Region Surface Waters	02/07/1991	3,550

4.3 Geology

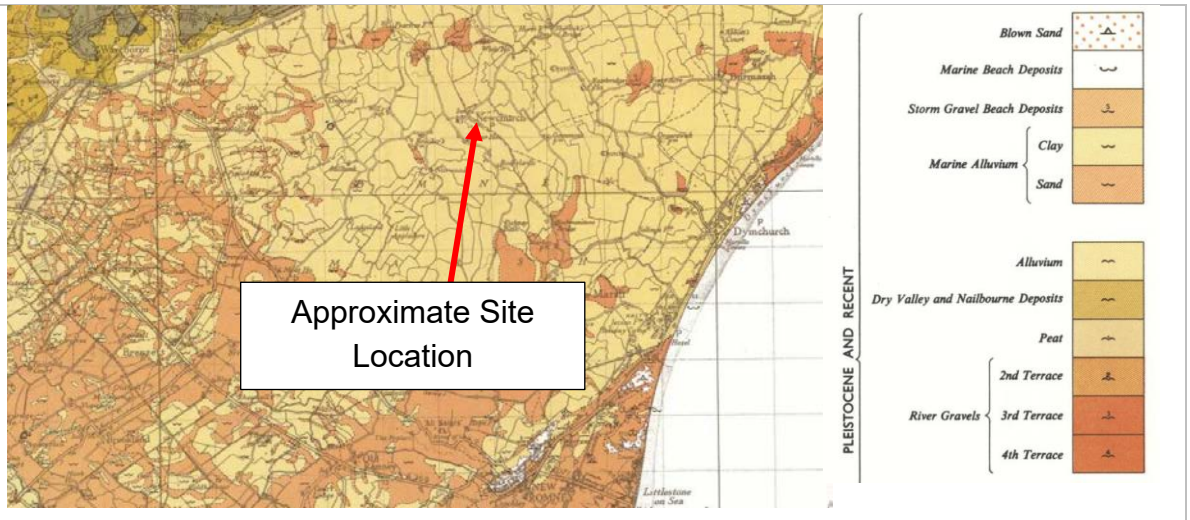
Published Geology

4.3.1 The published BGS 1:50,000 scale geological map (305 & 306, “Folkestone & Dover”, 1990) and the BGS Onshore GeoIndex have been reviewed along with the Groundsure Geo-Insight Report to determine the published geology underlying the Site.

Table 5 Geological Succession from Published Mapping

Group	Stratum	Published Description	Approx Thickness (m)
Superficial Deposits	**Tidal Flat Deposits** Indicated to be present beneath the entire Site.	*"Tidal flat deposits, including mud flat and sand flat deposits, form extensive nearly horizontal marshy land in the intertidal zone that is alternately covered and uncovered by the rise and fall of the tide. They consist of unconsolidated sediment, mainly mud and/or sand. They may form the top surface of a deltaic deposit".*	None recorded or not applicable
Bedrock	**Tunbridge Wells Sand Formation** Indicated to be present beneath the entire Site.	*"Predominantly fine- to medium-grained sandstone, siltstone and silty sand rhythms with finely-bedded mudstones and thin limestones".*	Approximately 75m

4.3.2 An extract of the BGS map for the site is included as **Plate 4-1** below.



C6/02-CSL British Geological Survey © UKRI. All rights reserved.

Plate 4-1 Superficial Geology

4.3.3 According to the BGS GeoIndex online mapping, there is no artificial ground mapped at the Site. The entire Site is underlain by tidal flat superficial deposits, including mud flat and sand flat deposits. The sand deposits indicate that the superficial deposits would have higher contaminant mobility, if present.

4.3.4 The bedrock geology underlying the entire Site consists of the Tunbridge Wells Sand Formation, a predominantly fine- to medium-grained sandstone, siltstone and silty sand rhythms with finely bedded mudstones and thin limestones. The Tunbridge Wells Sand Formation is of Cretaceous date overlain by clay and silt tidal flat deposits which formed since the last glaciation, approximately 12,000 years ago.

4.3.5 This geological context is the result of coastal changes somewhat unique to the area of the Romney Marsh. Broadly, the Site 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.

BGS Historical Borehole Records

4.3.6 AECOM has searched the BGS historical borehole record database for relevant records relating to the site and immediate surrounding area. 2 No. boreholes (TR03SW1 and TR03SE1) has been referenced in producing this report, TR03SW1 is summarised in **Table 6** below. According to the BGS database, TR03SE1 is located approximately 200m south of the Site and is a public well where the data uploaded to the BGS database is a description of a public well, which states the well was sunk through clay to 60 feet.

Table 6 Summary of BGS Historical Borehole Record

Borehole No.	Strata	Depths	Description
TR03SW1 – 15m west of the Site	Made Ground	0 - ½ foot below ground level (ft bgl)	*Turf and mould*
	Drift	½ - 66 ft bgl	Various sands and clays with shells and peat inclusions.
	Hasting Beds	66 – 566 ½ ft bgl	Blue to light-blue silty clays with lignite inclusions. Mottled clay has also been observed. Clay becomes hard with depth

4.3.7 The bedrock encountered in the borehole above is logged as the Hasting Beds (ferruginous sandstones, siltstones and shales), these are mapped by the BGS approximately 3km south of the Site. The BGS online maps indicate the Tunbridge Wells Sand Formation underlies the Site.

4.3.8 Copies of these exploratory hole records are included as **Annex D**.

Quarrying

4.3.9 According to the Groundsure Report, no mining or ground working activities have been undertaken within 500m of the Site.

4.4 Hydrogeology

Aquifer Classification & Groundwater Vulnerability

4.4.1 Groundwater bodies are classified by the EA under the Water Framework Directive, whereby water bodies are classed as High, Good, Moderate, Poor or Bad. A search of EA's online database was conducted regarding the groundwater quality beneath the Site. The Site is situated in Romney Marsh between the Appledore and West Hythe Water Body catchment which had Moderate status in 2022. The chemical status failed in 2019 for mercury and its compounds and polybrominated diphenyl ethers (PBDE) in 2019, according to the EA, the chemical status is indicated as not requiring assessment in 2022.

4.4.2 The majority of the superficial deposits underlying the Site are classified as an unproductive aquifer. An unproductive aquifer is defined as strata that are largely unable to provide usable water supplies and are unlikely to have surface water and wetland ecosystems dependent on them.

4.4.3 The Tunbridge Wells Sand Formation (and the Hasting Beds) are classified as a Secondary A aquifer. Secondary A aquifers are described as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to river.

4.4.4 According to the Magic Map provided by Defra, the groundwater vulnerability is classification ranges from low to medium-high.

4.4.5 The Groundsure Report shows the Site is underlain by an unproductive superficial aquifer and a Secondary A bedrock aquifer and that the vulnerability is low.

4.4.6 According to the Groundsure Report, the Site is located within the Kent Romney Marsh Water Framework Directive groundwater body. The groundwater body has a poor overall rating from 2019 which includes a poor chemical rating.

Licensed Groundwater Abstractions and Source Protection Zones

4.4.7 No Licensed Groundwater Abstractions have been identified within 500m of the Site. No groundwater abstraction Source Protection Zones have been identified within 1km of the Site.

Preliminary Hydrogeological Model and Flow Direction

4.4.8 Groundwater flow direction within the shallow superficial aquifer will likely be influenced by the local topography and surface water features. Mapping indicates that the local topography is relatively flat with an undulating surface where groundwater is likely to flow to local drainage ditches.

4.4.9 The nature and extent of groundwater bodies within the area is unknown, as such, limited certainty can be placed on this preliminary groundwater flow direction which should be further characterised by ground investigation if required.

5. Regulatory Information and Consultation

5.1 Introduction

5.1.1 The key relevant features that characterise the Site and surrounding area are summarised in this section, along with an indication of the risk to the land quality of the Site. Generally, any regulated activities within 250m of the Site could, depending upon their nature, represent potential off-site sources of contamination.

5.2 Regulatory Database Review

5.2.1 **Table 7** summarises information obtained from the regulatory database information contained in the Groundsure Report. All data suppliers are referenced in the Groundsure Report.

5.2.2 Regulatory information is excluded from the table below where it is not within the specified distances, where there is no information for the given topic or where entries are duplicated.

Table 7 Summary of Regulatory Information

Subject	Number present		Details
	On site	0-250m	
Regulatory Processes			
Discharge Consents	2	6	The two on-site licensed discharges are for treated effluent (sewage) to Romney Marsh and a freshwater river adjacent to Newchurch Lane in the south of the Site. The other eight are also for treated effluent (sewage) to be discharged to freshwater, drains and sewers.
Pollution Incidents to Controlled Waters	2	0	Both recorded events are from 19/05/2003 from sewage material being released causing a Category 3 (Minor) impact on water and air.
Licensed Waste Management Facilities and Industrial Land Uses			
Historical Landfills	0	4	BGS state that the Orgarswick Refuse Tip (no risk to aquifer) is 155m east of the Site. The Local Authority state there are two refuse tips within 250m of the Site, these are mapped south of Orgarswick Lane and are likely to refer to the Orgarswick Refuse Tip identified by the BGS.

Subject	Number present		Details
	On site	0-250m	
			The EA state that there is a historical landfill east of the Site operated by Romney Marsh Rural District Council for inert, industrial, commercial, household and liquid sludge. This landfill operated between 1938 and 1976, this is likely to refer to the Orgarswick Refuse Tip identified by the BGS.
Waste Exemptions	73	175	There are various waste exemptions on-site and within 250m of the Site. The majority of the exemptions on-site are for the storage of sludge. Other examples are the use of waste in construction, storage of waste in secure containers, burning waste in the open and preparatory treatments (bailing, sorting, shredding etc.).
Sensitive Land Uses			
Sites of Special Scientific Interest (SSSI) Impact Risk Zone	3	0	The Groundsure Report specifies the type of developments requiring consultation, these include solar infrastructure, there are 3 SSSI Impact Zones located on-site.
Areas of Outstanding Natural Beauty	0	1	Kent Downs Area of Outstanding Natural Beauty is located directly adjacent to the northeast corner of the Site. (the Groundsure Report states that the Site is within the AONB due to its close proximity to the Site Boundary)
Listed Buildings	0	9	Two of the nine listed buildings are within 50m of the Site. These are the Old Oak, 6m northeast of the Site and Eastbridge Church Ruins 15m north of the interconnecting cable area and 20m south of the Site.
Scheduled Ancient Monuments	0	3	World War II underground operational post is 5m east of the Site. “Moat and associated closes at Marshall's Bridge” is 90m southeast of the Site. Eastbridge Church (ruins) is located 15m north of the interconnecting cable area and 20m south of the Site.

5.2.3 No entries were recorded for the following:

- Regulatory Processes: Contaminated Land Register Entries and Notices, Prosecutions Relating to Controlled Waters, Enforcement and Prohibition Notices, Integrated Pollution Controls, Integrated Pollution Prevention and Control, Local Authority Integrated Pollution Prevention and Control, Local Authority Pollution Prevention and Controls, Local Authority Pollution Prevention and Control Enforcements, Prosecutions Relating to Authorised Processes, Registered Radioactive Substances, Substantiated Pollution Incident Register and Water Industry Act Referrals.
- Licensed Waste Management Facilities and Industrial Land Uses: Active or Recent Landfill and Licensed Waste Sites.
- Hazardous Substances: Control of Major Accident Hazards Sites (COMAH), Explosive Sites, Notification of Installations Handling Hazardous Substances (NIHHS), Planning Hazardous Substance Consents and Planning Hazardous Substance Enforcements
- Sensitive Land Uses: Sites of Special Scientific Interest (SSSI), Conserved Wetland Sites (Ramsar), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Local Nature Reserves (LNR), World Heritage Sites and National Parks.

5.2.4 The Groundsure Report noted 3 on-site surface ground working locations, a pond in 1871 (centre of the Site), a pond between 1871 and 1939 (south of the Site) and a pond between 1871 and 1957 (northeast of the Site).

5.2.5 A further 10 locations have been noted within 250m of the Site. These workings are largely ponds with the occasional refuse heap and a graveyard. The surface workings are dated between 1871 and 1979.

5.2.6 The past land use section of the Groundsure Report states that there was a tank or trough mapped in the south of the Site in 1872. A further 5 historical tank locations have been mapped within 250m of the Site, these are largely “unspecified tanks” from between 1872 and 1999.

5.3 Regulatory Consultation

Third-Party Consultation

5.3.1 No third-party consultation has been undertaken as part of this report.

Planning Information

5.3.2 The Folkestone and Hyde District Council web-based planning portal was reviewed to identify whether there are existing planning permissions which relate to the Site area. There are multiple planning applications in and surrounding the village of Newchurch, these include extensions to existing dwellings and small-scale construction project in relation to agricultural and commercial activities, namely workshops, garages and outbuildings for home offices. There are examples of multiple demolition applications for farm buildings and residential dwellings. This includes the proposal of the

demolition of existing block and brick built agricultural units at Brooker Farm (south of the Site) dated September 2024 and the demolition of a workshop and outbuildings at Cater Bungalow, Newchurch (November 2024). No desk study or ground investigation information is provided for these on the planning portal.

5.3.3 Provided that the requirements of relevant policy and legislation relating to land contamination and remediation are integrated within the design and appropriate mitigation measures are applied during the demolition and construction phases of each of the identified applications, the proposed works should not lead to contamination issues.

Environment Agency Flooding Data

5.3.4 The Groundsure Report states the following flood risk data:

- **Flooding from Rivers and Sea** – Very low to medium. Most of the Site has a very low risk with areas of low in the southeast and medium in the centre and west of the Site.
- **Surface Water Flooding** – The highest risk on-site is a 1 in 30-year flood, 0.3m – 1.0m, these are mapped in sporadic locations across the Site. Most of the Site has no risk or 1 in 1000 risks between 0.1m and 0.3m.
- **Groundwater Flooding** – The majority of the Site has a high risk of groundwater flooding with regions of moderate-high risk in the east of the Site.
- **Coastal Flooding** - The Site is situated in Flood Zone 3.

5.3.5 The entire Site is situated in the EA flood zone 3. Land within flood zone 3 has a high probability of flooding from rivers and the sea, the EA state that land within flood zone 3 need to carry out a flood risk assessment (FRA) as part of the planning application for the Scheme.

5.3.6 A formal flood risk assessment is outside the scope of this report.

Mining Remediation Authority and Preliminary Mine Gas Risks

5.3.7 AECOM have reviewed the Mining Remediation Authority web based interactive map, which indicates that the site is not located within the Mining Remediation Authority Coal Mining Reporting Area. This indicates there should not be a risk from coal mining as the Site is not located within an area of historical coal mining. Therefore, no further assessment required.

Unexploded Ordnance

5.3.8 To assess the potential risks from Unexploded Ordnance (UXO) at the site, the Zetica Unexploded Bomb Risk Map[2] was used in April 2025. The Zetica Bomb Risk Map for the site and surrounding area indicated that Low risk

[2] Risk Maps | Zetica UXO

area (**Annex E**), which is defined by Zetica as an '*area indicated as having 15 bombs per 1000 acres or less*'. An airfield was identified approximately 200m north of Newchurch Village and two UXO finds were recorded within 400m south of Newchurch Village.

5.3.9 According to the Newchurch Village website, Newchurch Advanced Landing Ground (ALG) Airfield[3] operated in the west of the Site during World War II. This was a temporary ALG operating between July 1943 and September 1944 with two runways (east-west and north-south orientation).

5.3.10 Four V1 impacts have been noted in the vicinity of the runways. One to the west of Wills Lane (within the Energy Park Site), two in the fields east of the road north of Newchurch Lane (one in the Energy Park Site and one in the Interconnecting Corridor Search Area) and one to the west of Newchurch (off-site).

5.3.11 As per the CIRIA guidance[4], the location of the Newchurch ALG on-site would trigger the need for a detailed UXO Risk Assessment.

5.4 Radon

5.4.1 The UK Health Security Agency's UK Radon website[5] was reviewed in April 2025 to determine potential radon risks for the Site.

5.4.2 According to the website, the Site including the proposed extension of the current substation area is located within an area where less than 1% of homes are above the action level for radon gas.

5.4.3 The above is also confirmed by the Groundsure Report, which can be provided upon request.

[3] https://newchurchvillage.org/history/newchurch-ww2/advanced-landing-ground/

[4] CIRIA Unexploded ordnance (UXO) risk management guide for land-based projects (C785)

[5]UK Health Security Agency, 2022. *UK maps of radon* [online]. Available from: UKradon - UK maps of radon

6. Conceptual Site Model and Risk Assessment

6.1 Introduction

6.1.1 The preliminary CSM has been developed to identify potentially complete contaminant linkages that may require further investigation to assess their existence and / or potential significance. The potential sources of contamination on or in the vicinity of the Site, receptors on or near the Site, and pathways on or near the Site are discussed within the following sub-sections.

6.1.2 A summary of the applicable legislative and planning framework, and AECOM's approach to assessment used in the following sections is presented in **Annex B**.

6.2 Sources of Potential Contamination

6.2.1 Based on the site setting, history and land-uses described in preceding sections, the following sources of contamination and contaminants of potential concern (CoPC) listed in **Table 8** have been identified.

6.2.2 The CoPC are based on information provided in the Department of Environment Industry Profiles and AECOM's industry experience.

Table 8 Potential Sources of Contamination

Source	Description	CoPC
Made Ground	A review of the historical mapping shows that historical waterbodies and drains have been infilled. The farms, farm buildings and areas surrounding Newchurch would also be a source of Made Ground.	Metals and metalloids, cyanides, SVOCs, VOCs, TPH, PAHs, PCBs, pH, ACM / asbestos and ground gases.
Agricultural Land	The Site and its neighbouring sites in all directions have various types of agricultural land.	Metals and metalloids, SVOCs, VOCs, PAHs, pesticides / herbicides, sulphate, sulphide, ammoniacal nitrogen and pathogens.
Historical Landfill	The Desk-Study found the Orgarswick historical landfill is located 155m east of the Site and has been used for inert, industrial, commercial, household and liquid sludge wastes.	Metals and metalloids, SVOCs, VOCs, TPH, PAH, PCBs, Dioxins & furans, Sulphide, pH, ACM/asbestos, Ammoniacal nitrogen and per-and poly fluoroalkyl substances (PFAS).

Source	Description	CoPC
Airfield	According to the Zetica UXO report and historical information, a World War 2 airfield was located within the site area, to the west / northwest of Newchurch. Features identified include fuel storage, hangars, runways	Metals and metalloids, Cyanides (total, free), SVOCs, VOCs, TPH, PCBs, pH, ACM/asbestos and Glycols.

Ground Gas Sources

6.2.3 The identified sources of ground gas have been further characterised in **Table 9** below using BS 8576:2013 "*Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)*" – Figure 6 to determine the ground gas generation potential of the sources.

Table 9 Potential Sources of Contamination

Source	BS 8576 Ground Gas Generation Potential	Justification
Natural Ground	Very Low	The natural ground at the Site is likely to be tidal flat superficial deposits which BS8576 indicates are likely to have a low degradable organic content and a very low gas generation potential.
Made Ground	Very Low	Limited Made Ground is anticipated on-site. Made Ground is likely to be encountered around Newchurch and surrounding farm and residential buildings and roads. The Made Ground is unlikely to contain significant amounts of degradable organic material.
Infilled Waterbodies	Very Low	Various waterbodies were identified as part of the historical map review which appear to be filled in. These waterbodies are relatively small in size; therefore, they are considered unlikely to be a significant source of ground gas generation.
Historical Landfill	High	A historical landfill was noted 155m east of the Site. This landfill operated between 1938 and 1976. According to BS 8576:2013, a landfill operating between 1945 and 1960s can have a Low or Moderate ground gas generating potential and landfills operating between mid-1960s to early 1990s have a High gas generating potential. As this operated in the periods of High potential, this classification has been used to be conservative.

6.3 Potential Receptors

6.3.1 Potential receptors associated with the Site are shown on **Table 10.**

Table 10 Potential Receptors

Receptor Group	Receptor	Description
Human Health	Construction and Maintenance Workers	The construction workers and the maintenance workers involved in the Energy Park Site.
	Site Users and Site Visitors	The users of the Energy Park Site once it is operational.
	Adjacent Site Users	Residential and commercial development users adjacent to the Energy Park Site.
	Trespassers	Trespassers on the Energy Park Site. Currently there are no barriers preventing the public entering the Site and there are public right of way access routes through the Sites.
Controlled Waters	Secondary-A Aquifer	Tunbridge Wells Sand Formation and the Hasting Beds bedrock underlying the Sites.
	Unproductive Aquifer	Superficial Tidal Flat Deposits underlying the Sites.
	Surface waters	Drainage ditches are located across the Sites and adjacent to the Sites.
Built Environment	Buildings & Infrastructure: Concrete	Hardstanding will be used at the Energy Park Site as well as adjacent concrete such as farmland and Newchurch. The Scheme includes supporting infrastructure such as inverters, transformers, switchgear and the inclusion and arrangement of battery energy storage systems. Field substations will normally be mounted on concrete foundations, although other types of foundations may be used depending on the local geology. Therefore, concrete is expected to

Receptor Group	Receptor	Description
		be present below ground, this concrete will be at most risk.
	Buildings & Infrastructure: Structures with enclosed spaces	On-site and also off-site structures including residential and commercial properties. This also includes the proposed on-site buildings.
	Buildings & Infrastructure: Services	Services used to serve the on-site and surrounding land use, this includes services for residential and commercial properties.

6.4 Potential Pathways

6.4.1 Potential pathways associated with the Scheme are shown in **Table 11.**

Table 11 Potential Pathways

Pathway Group	Pathway
Human Health	Ingestion of soil and dust
	Inhalation of dust - indoors and outdoors
	Dermal contact - indoors and outdoors
	Vapour intrusion and inhalation – indoors and outdoors
	Gas ingress – explosive atmosphere
	Gas ingress – inhalation
Controlled Waters	Leaching and vertical migration through unsaturated zone
	Lateral migration in groundwater
	Vertical migration in groundwater
	Direct run-off
	Baseflow from groundwater to surface water
	Migration via preferential pathways (services trenches, faults etc)

Pathway Group	Pathway
Built Environment	Gas intrusion - explosion
	Direct contact - corrosion
	Direct contact - permeation of water pipes

6.5 Discounted Sources / Pathways / Receptors

6.5.1 The following sources, pathways and receptors are discounted from the conceptual site model with the justification presented:

Table 12 Discounted Sources / Pathways / Receptors

Group	Discounted Item	Justification
Receptors	Scheduled Ancient Monuments	World War II underground operational post is 5m east of the Site. “Moat and associated closes at Marshall's Bridge” is 90m southeast of the Site. Eastbridge Church (ruins) is located 15m north of the interconnecting cable area and 20m south of the Site. However, the Scheme is unlikely to cause structural damage to these sites.
	Listed Buildings	Two of the nine listed buildings are within 50m of the Site. These are the Old Oak, 6m northeast of the Site and Eastbridge Church Ruins 15m north of the interconnecting cable area and 20m south of the Site. However, the Scheme is considered unlikely to cause structural damage to these listed buildings.
	Sensitive Land Uses	There are no SSSI, Ramsar, SAC, SPA, LNR, World Heritage Sites and National Parks within 250m of the Site.

6.6 Preliminary Risk Assessment

6.6.1 AECOM’s approach to the preliminary risk assessment follows the guidance outlined in CIRIA C552 and is described in further detail in **Annex B**.

6.6.2 The qualitative preliminary risk assessment of the possible linkages of the above sources, exposure and transport pathways and receptors is provided in the **Table 13** below.

Table 13 Summary of Preliminary CSM and Risk Assessment

Source	Receptor		Exposure Pathway	Probability	Consequence	Risk Category	Justification
On-site Contamination sources including areas of Made Ground, an airfield and agricultural land.	**Human Health – On-site**	Construction and Maintenance Workers	Inhalation of contaminants in soil-derived dust and asbestos fibres.	Low	Medium	**Moderate / Low**	The risk to construction workers during the excavation and construction phases in terms of potential exposure to high concentrations of contaminants is considered to be low for much of the Site given the historical and current land uses identified. However, a higher risk could exist in some areas, for example in parts of the former airfield historically used for fuel storage. Ground gas or vapours have the potential to be present in confined spaces including excavations. Should gross contamination be identified during the construction phase, then this may pose a potential acute risk to construction works. It is likely to be able to be effectively managed through good health and safety practices and protocols. Adoption of appropriate dust suppression techniques may also be required.
			Ingestion of soil and dust	Low	Medium	**Moderate / Low**	
			Dermal contact – outdoors	Low	Medium	**Moderate / Low**	
			Vapour intrusion and inhalation – indoors and outdoors	Low	Medium	**Moderate / Low**	
			Gas ingress – inhalation	Unlikely	Medium[6]	**Low**	
		Site Users and Site Visitors and Trespassers	Ingestion of soil and dust Inhalation of dust - indoors and outdoors Dermal contact - outdoors Vapour intrusion and inhalation – indoors and outdoors	Low	Medium	**Moderate / Low**	There is the potential for Made Ground and other sources of contamination to be present. In areas of soft cover there is a higher possibility of exposure for future site users. The potential for significant ground gas or vapours across much of the Site is considered low, however there is the potential for site users and visitors to encounter ground gas and vapours in the proposed on-site buildings. There is the potential for asbestos to be present in the shallow soils as a result of demolition works and made ground on-site and potentially historically from its use of asbestos in vehicle brake pads, for example associated with the adjacent local road network in the past.
	Human Health – Off-site	Adjacent Site Users	Inhalation of dust - indoors and outdoors Vapour intrusion and inhalation – indoors and outdoors Gas ingress – explosive atmosphere Gas ingress – inhalation	Unlikely	Medium	**Low**	There is the potential for Made Ground and other sources of contamination to be present in some areas of the Site, for example associated with the former airfield. Residential properties are located directly adjacent to the Site, including properties growing produce. On-site gas source generation potential has been identified as very low and the potential for significant migration off-site is unlikely. There is the potential for asbestos to be present in the shallow soils as a result of demolition works on- and off-site could become airborne if disturbed.

[6] Source severity has been downgraded to 'Medium' as ground gas sources identified have a 'Very Low ground gas generation potential on-site and vapour sources are considered to be limited in potential concentration and extent. Therefore, ground gas sources are unlikely to generate significant concentrations capable of meeting the 'Severe' severity rating as defined in CIRIA C552.

Source	Receptor		Exposure Pathway	Probability	Consequence	Risk Category	Justification
		Secondary A Aquifers	Leaching of contaminants in the unsaturated zone to groundwater in underlying aquifers.	Unlikely	Medium	**Low**	Historical mapping shows that the Site has largely been used for agricultural purposes where machinery has operated. If contamination is present, it is likely that this will drain to surface water bodies due to the nature of the subsoil and aquifer classification. It is unlikely that contamination associated with historical and current uses of the Site would have a significant impact on the underlying Secondary A associated with the bedrock where cohesive Tidal Flat Deposits are present. However, the potential for migration will increase where sand is present.
			Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifers.	Unlikely	Medium	**Low**	
	Water Environment		Lateral migration of contaminated groundwater with discharge to surface watercourses as base flow.	Low	Medium	**Moderate / Low**	The site reconnaissance found that the Site includes and is bounded by multiple drainage ditches. Some of these ditches were either dry or had stagnant water with no obvious flow. Where flow was encountered it was towards the south and east, likely towards Hoorne's Sewer which discharges to the sea. Only limited potential sources of contamination have been identified across much of the site from historical and current uses. However, this could be higher in some areas such as parts of the former airfield. If contamination is present, it is likely that this will drain to surface water bodies due to the nature of the subsoil and aquifer classification. The potential risk from run-off will increase where excavations and stockpiling is undertaken near to surface water features.
		Surface Waters	Discharge of contaminants entrained in surface water run-off followed by overland flow and discharge.	Low	Medium	**Moderate / Low**	
	The Built Environment	Buildings & Infrastructure: Concrete	Direct contact - corrosion	Likely	Mild	**Moderate / Low**	There is a potential for aggressive ground conditions associated with existing strata such as the tidal flat deposits and also possibly former land uses which could represent a risk to buried concrete. Building are proposed on-site, however, the potential for ground gas generation is likely to be very low across much of the Site. The potential risks to water pipes is likely to be low although this could increase in some areas associated with former and current land uses.
		Buildings & Infrastructure: Structures with enclosed spaces	Gas intrusion - explosion	Unlikely	Medium[6]	**Low**	
		Buildings & Infrastructure: Services	Direct contact - permeation of water pipe	Low	Mild	**Low**	
Off-site contamination sources including off-	**Human Health – On-site**	Construction and Maintenance Workers	Inhalation of dust - indoors and outdoors	Low	Medium	**Moderate / Low**	The risk to construction workers during the excavation and construction phases in terms of potential exposure to contaminants migrating onto the site is considered to be low for much of the Site given the nearby historical and current land uses identified.

Source	Receptor		Exposure Pathway	Probability	Consequence	Risk Category	Justification
site Made Ground, agricultural land, tanks, historical landfill and wider former airfield.			Vapour intrusion and inhalation – indoors and outdoors Gas ingress – inhalation				However, this risk could be higher in some areas, in particular associated with the historical landfill 155m east of the Site from the migration of ground gases or vapours or contaminants in shallow groundwater. No information has been obtained to indicate whether this landfill was lined or capped. Should gross contamination be identified during the construction phase, then this may pose a potential acute risk to construction works. It is likely to be able to be effectively managed through good health and safety practices and protocols.
		Site Users, Site Visitors and Trespassers	Inhalation of dust - indoors and outdoors Vapour intrusion and inhalation – indoors and outdoors Gas ingress – inhalation	Low	Medium	**Moderate / Low**	Contaminants associated with off-site sources such as historical tanks and the landfill 155m east of the Site have the potential to impact on-site receptors if confined spaces or enclosed buildings are located near to them. However, the risk in other areas is likely to be low.
	Water Environment	Secondary A Aquifer, Unproductive Strata	Lateral migration of contaminants in groundwater to groundwater at the site	Unlikely	Medium	**Low**	The risk from migration of contaminants from off-site sources is likely to be low for the majority of the site based on the land uses identified. However, a higher risk could be present in some areas associated with nearby historical tanks, the landfill 155m east of the Site or wider areas of the former ALG.
		Existing and future structures	Direct contact of contaminants in soil and / or groundwater	Low	Mild	**Low**	The Scheme includes PV modules and on-site buildings with limited services on-site and, therefore, the probability of impact is low.
	The Built Environment	Buildings & Infrastructure: Structures with enclosed spaces	Gas intrusion - explosion	Low	Severe	**Moderate**	The historical landfill located 155m east of the Site contains inert, industrial, commercial, household and liquid sludge waste, this is a potential source of ground gas which has the potential to migrate onto the Site. According to BS 8576:2013, a landfill operating between 1945 and 1960s can have a Low or Moderate ground gas generating potential and landfills operating between mid-1960s to early 1990s has a High potential. As this operated in the periods of High potential, this classification has been used to be conservative, therefore, the consequence is considered severe. There is the potential that cable corridors could provide preferential pathways for gas migration such as towards the proposed on-site buildings. However, the risk for much of the site is considered to be low given the nearby historical and current land uses identified.

7. Conclusions and Recommendations

7.1 Conclusions

7.1.1 The Energy Park Site is situated around the village of Newchurch in Kent in the Romney Marsh region. The Energy Park Site is located in a relatively flat and low-lying region southeast of the Royal Military Canal. The site reconnaissance found that residential and commercial properties are located adjacent to the Site. The site reconnaissance also found that the Site includes and is bounded by multiple drainage ditches which are likely to be connected to Hoorne's Sewer which discharges to the sea.

7.1.2 The entire Energy Park Site is underlain by tidal flat superficial deposits which are classified as an unproductive aquifer and the underlying Tunbridge Wells Sand Formation which are classified as a Secondary A aquifer.

7.1.3 Potential sources of contamination have been identified within the Energy Park Site boundary relating to the historical use of the Sites as agricultural land with adjacent sporadic residential and commercial developments. The Newchurch Village website documents that the Newchurch ALG operated in the west of the Energy Park Site during World War II. This was a temporary ALG operating between July 1943 and September 1944 with two runways, various dispersal areas, blister hangers, tents, firing bays, gun site and a fuel store. The Newchurch ALG is a potential historical source of contamination. Current uses of the Sites also represent potential sources of contamination such as the Made Ground and farm buildings.

7.1.4 Potential off-site sources of contamination include Made Ground associated with farmland and Newchurch, agricultural land, tanks, historical landfill (155m east of the Site) and the wider former Newchurch ALG.

7.1.5 Made Ground is considered likely to be present around farmland and Newchurch relating to the historical land use at the Energy Park Site. This could pose potential risks to human health and the water environment should contamination be present. There is some potential for contaminants to migrate on to site from the surrounding current and past industrial activities in surrounding areas.

7.1.6 Based on the available Desk Study information, the risk to the Energy Park Site with respect to contaminated land ranges from **Very Low** to **Moderate** risk although the majority of risks were **Low** to **Moderate / Low**.

7.1.7 A summary of potential risks associated with the Energy Park Site is presented in **Table 14.**

Table 14 Summary of potential land contamination risks

Issue	Linkage Summary	Risk (C552)	Discussion
Human Health	On-site sources impacting on-site human health receptors	Low to Moderate / Low	Contamination sources including areas of Made Ground, Newchurch ALG and agricultural land which has the potential to impact on-site receptors such as construction workers.
	On-site sources impacting off-site human health receptors	Low	Contamination sources including areas of Made Ground, Newchurch ALG and agricultural land on-site gas source generation potential has been identified as very low and the potential for significant migration off-site is unlikely.
	Off-site sources impacting on-site human health receptors	Moderate / Low	Contamination sources including off-site Made Ground, agricultural land, tanks, historical landfills and the wider Newchurch ALG site which has the potential to impact on-site receptors such as construction workers.
Controlled Waters	On-site sources migrating to the Secondary A Aquifer	Low	If contamination is present, it is likely that this will drain to surface water bodies due to the nature of the subsoil and aquifer classification.
	On-site sources migrating through baseflow to a surface water body	Moderate / Low	The Site includes and is bounded by multiple drainage ditches. If contamination is present, it is likely that this will drain to surface water bodies due to the nature of the subsoil and aquifer classification.

Issue	Linkage Summary	Risk (C552)	Discussion
	On-site sources migrating to surface water by run-off	Moderate / Low	The Site includes and is bounded by multiple drainage ditches. If contamination is present, it is likely that this will drain to surface water bodies due to the nature of the subsoil and aquifer classification.
	Off-site sources impacting the Secondary A Aquifer and Unproductive Strata	Low	The risk from migration of contaminants from off-site sources is likely to be low for the majority of the site based on the land uses identified. However, a higher risk could be present in some areas associated with nearby historical tanks, the landfill or wider areas of the former ALG.
Built Environment	On-site sources impacting Buildings & Infrastructure	Low to Moderate / Low	There is a potential for aggressive ground conditions on-site. The potential for ground gas generation is likely to be very low across much of the Site. The potential risks to water pipes is likely to be low although this could increase in some areas associated with former and current land uses identified. Building are proposed on-site, however, the potential for ground gas generation is likely to be very low across much of the Site.
	Off-site sources impacting existing and	Low	The Scheme includes PV modules and on-site buildings with limited services on-site and, therefore, the probability of impact is low.

Issue	Linkage Summary	Risk (C552)	Discussion
	future structures		
	Off-site historical landfill gas migrating to on-site properties	Moderate	Further investigation is required to assess the migration of ground gas from the historical landfill located 155m to the east of the Site.

7.2 Recommendations

7.2.1 Once the layout and nature of the Scheme are finalised a ground investigation will be required in order to inform the detailed design of the Site.

7.2.2 There are four V1 impacts mapped within the vicinity of the Newchurch ALG, three of these are located on-site. Therefore, it is recommended that a detailed UXO Risk Assessment is undertaken, as per the CIRIA guidance, prior to the ground investigation (or any activity which involves breaking ground) to inform the risks and mitigation requirements.

7.2.3 A geo-environmental ground investigation should be designed with due consideration of the requirements of BS 10175:2011 (+A2 2017) to support the Scheme design (including earthworks and foundation design) and to confirm potential risks associated with / mitigation requirements of potential contamination sources.

7.2.4 It is recommended that the ground investigation includes the following:

- Characterisation of the ground conditions to ascertain more certainty in geotechnical and contaminated land assessments;
- Sampling and analysis of soil, groundwater and stockpiled material to confirm the presence / absence of contaminants;
- Ground gas and groundwater monitoring to confirm the presence / absence of contamination and elevated ground gas concentrations;
- Preparation of a preliminary engineering assessment for the Site; and
- Preparation of a generic quantitative assessment of risks to human health and controlled waters.

7.2.5 It is recommended that the ground investigation be designed in accordance with the UK Specification for Ground Investigation (version 3). The investigation is to be designed to assess the migration of ground gas from the historical landfill located 155m to the east of the Site and to assess

potential contamination sources associated with the Newchurch ALG and associated facilities operating between 1943 and 1944.

7.2.6 AECOM understands that the works associated with the Scheme will be undertaken in compliance with Construction Design and Management (CDM) 2015 regulations. Prior to work commencing, a health and safety risk assessment should be carried out by the appointed Principal Contractor / developed in accordance with current health and safety regulations. This assessment should cover potential risks to construction staff, permanent site staff and the local population. Based on the findings of this risk assessment, appropriate mitigation measures should be implemented during the construction period.

7.2.7 The greatest potential for generation of dust will be during the Site works and therefore dust generation should be kept to a minimum in accordance with general best practice, as outlined in, for example, ‘Environmental Good Practice on Site’, CIRIA Publication C692 to reduce this risk.

Annex A Figures

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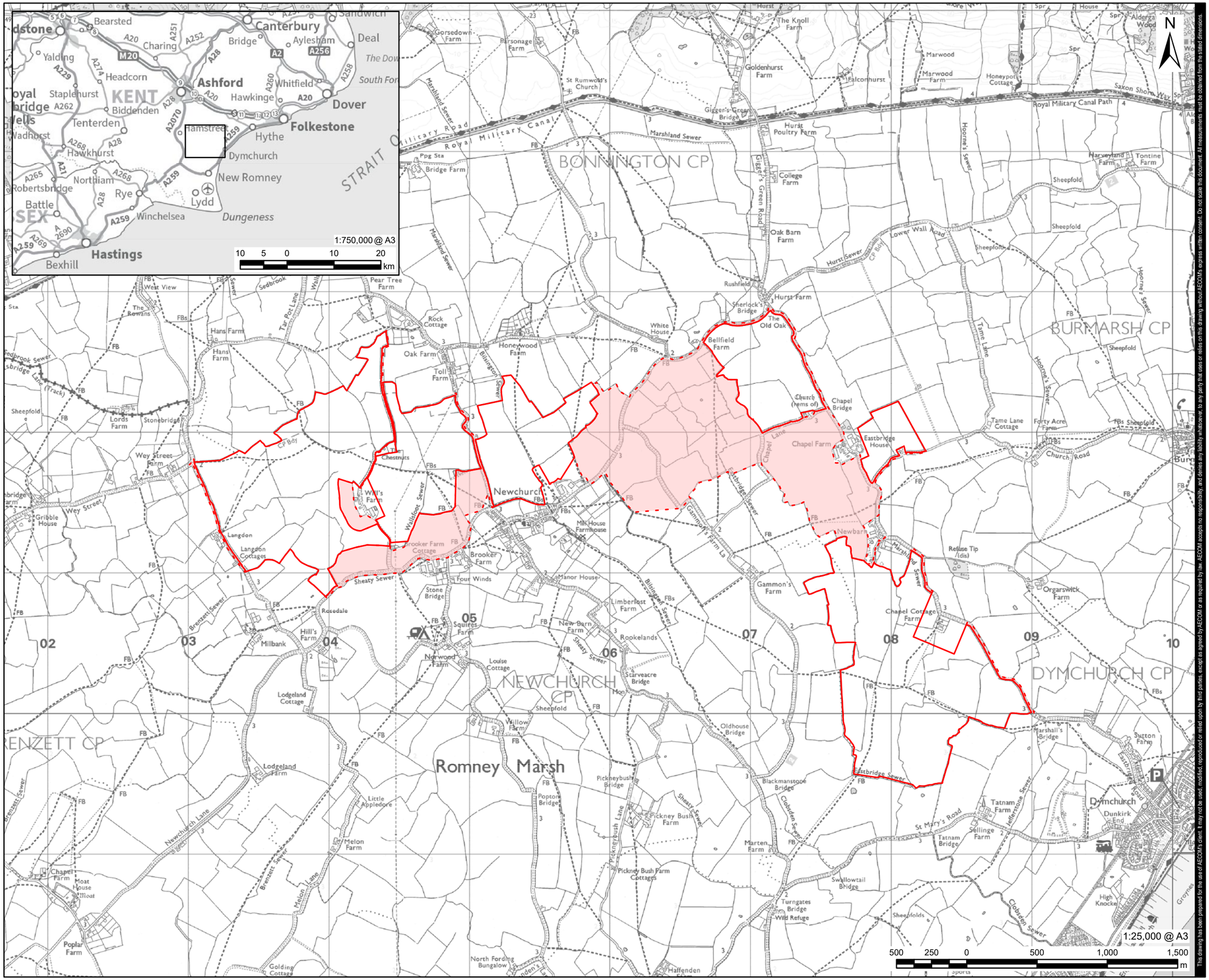

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Shepway Energy Park

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area

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ISSUE PURPOSE

Preliminary Risk Assessment (Contaminated Land)

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60736659

FIGURE TITLE

Site Location

FIGURE NUMBER

Figure 1

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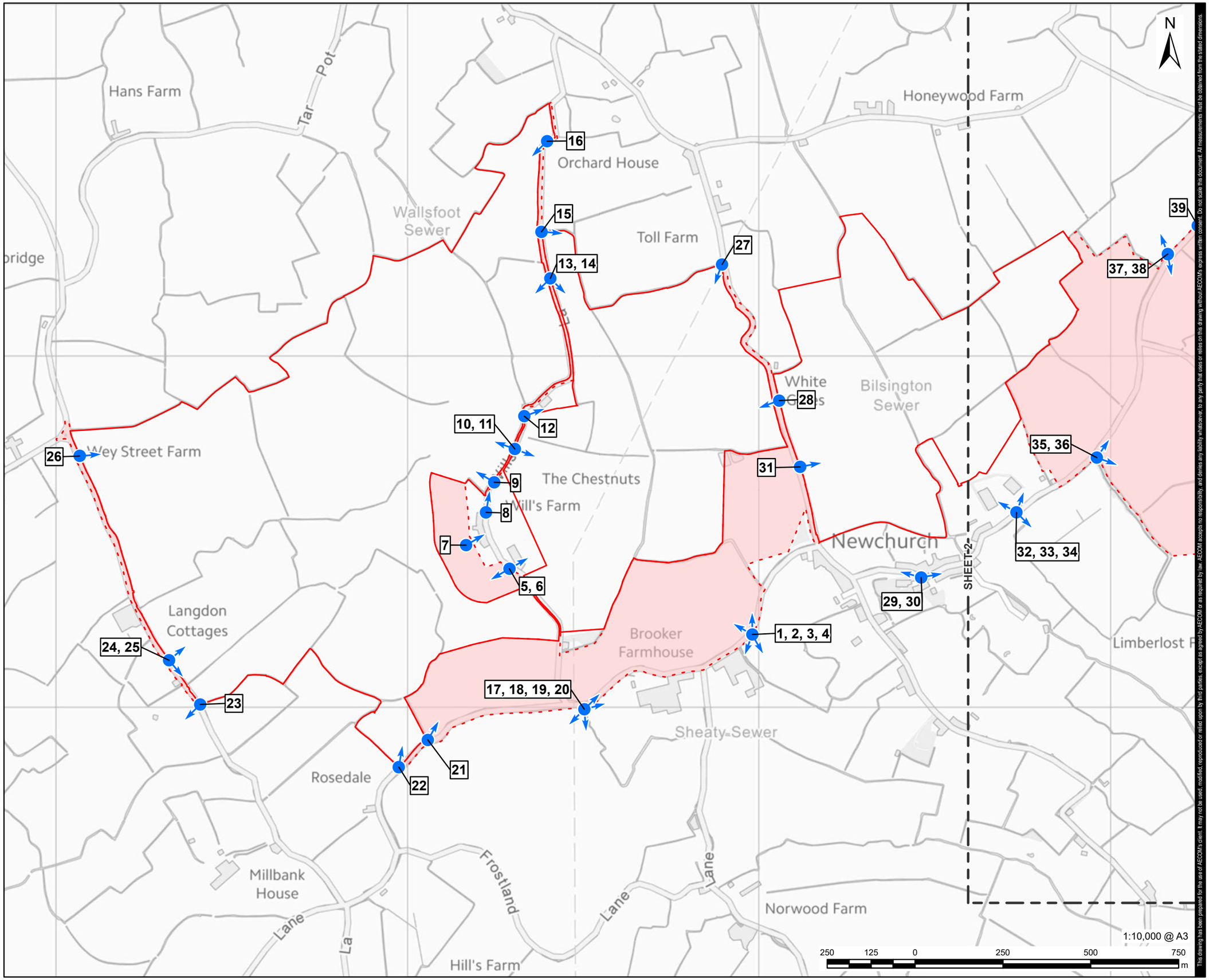

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LEGEND

- Energy Park Site
- Interconnecting Cable Corridor Search Area
- Photograph Location

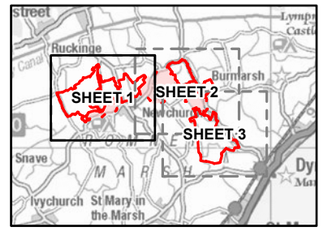

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FIGURE TITLE

Photograph Locations and Directions
Sheet 1 of 3

FIGURE NUMBER

Figure 2

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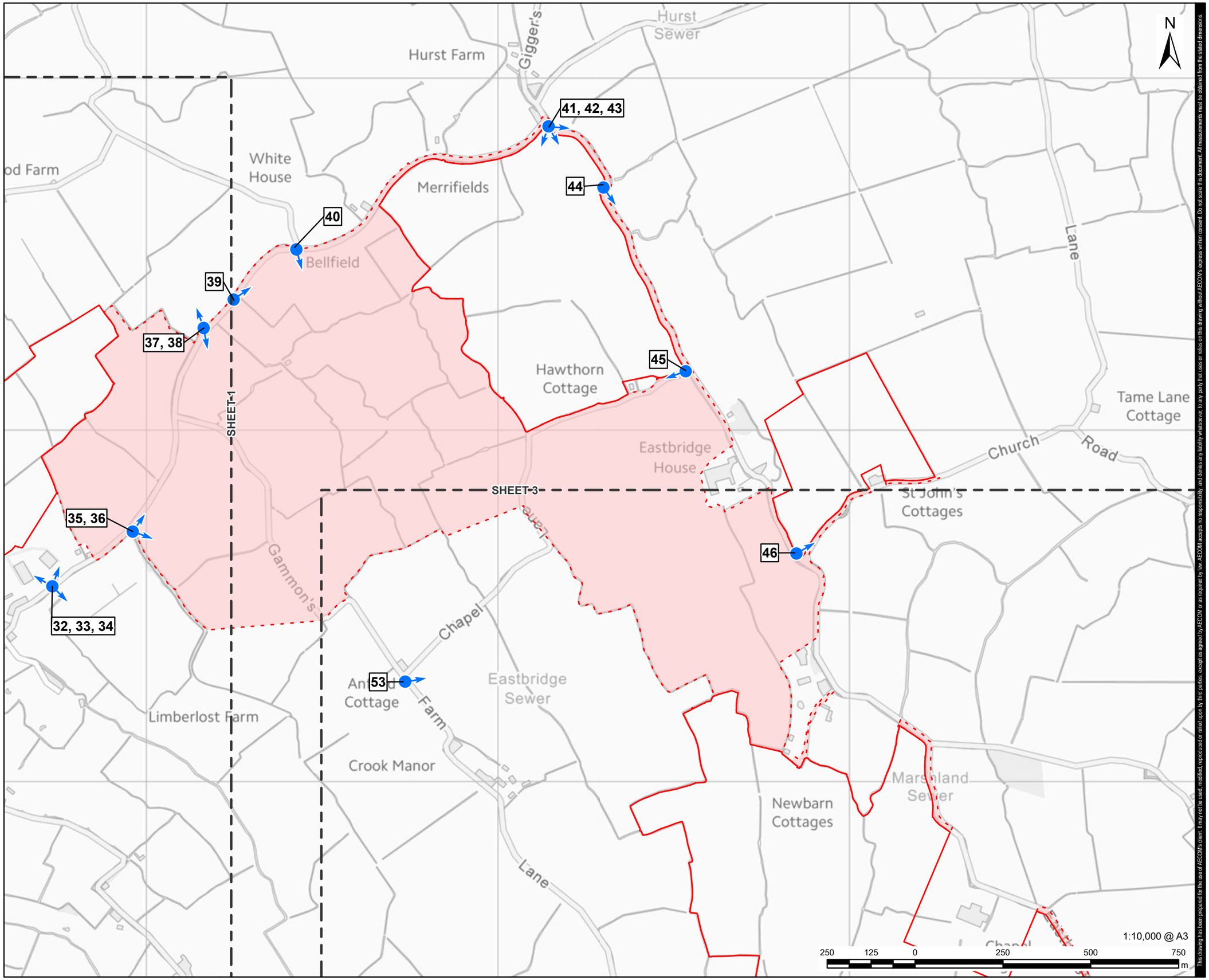

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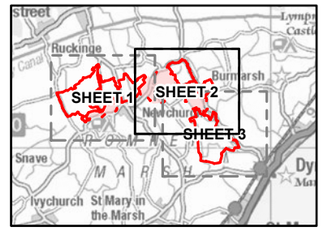

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FIGURE NUMBER

Figure 2

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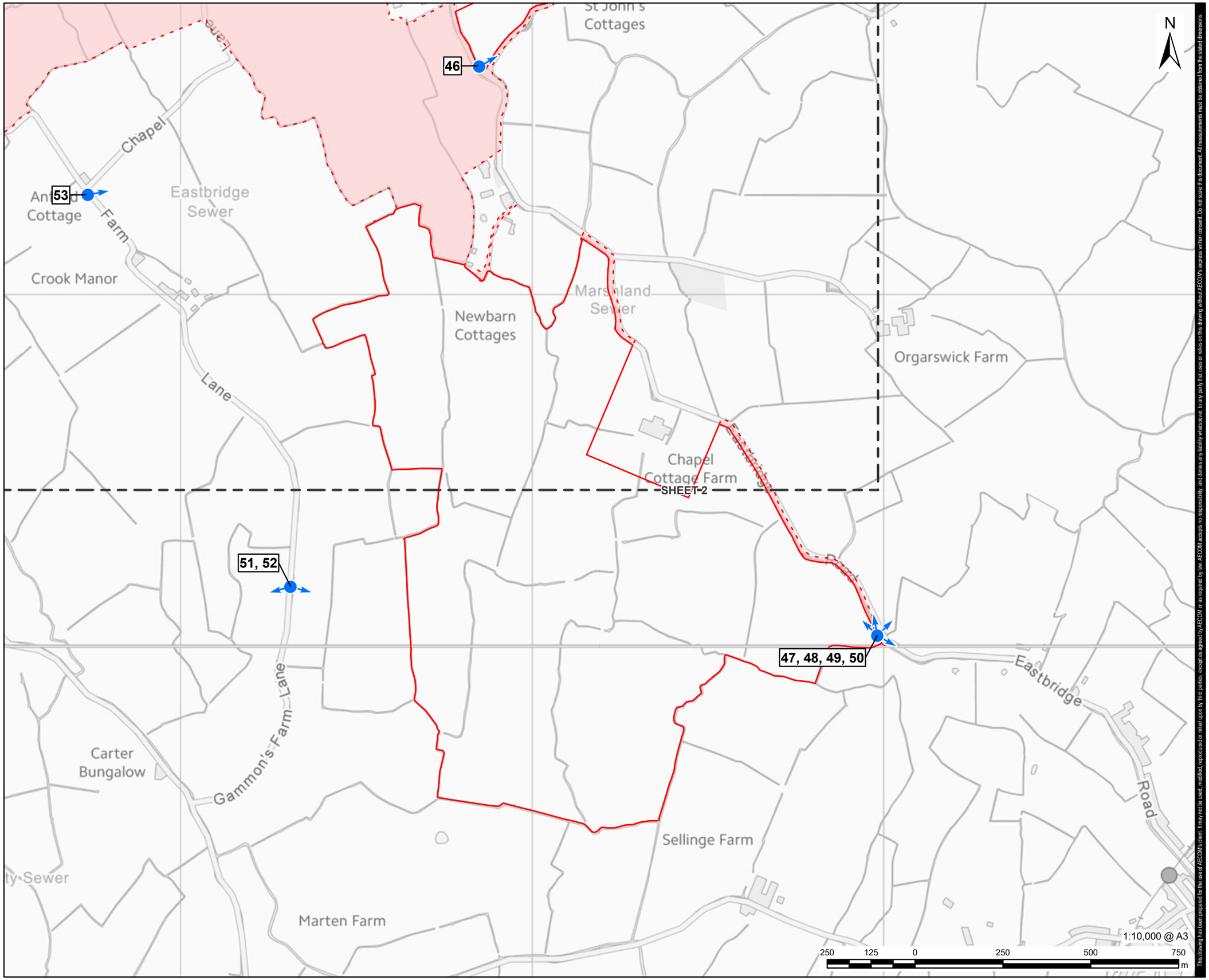

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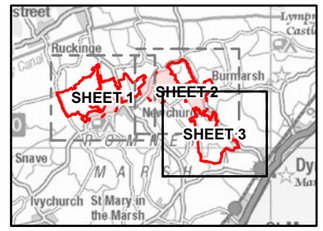

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FIGURE TITLE

Photograph Locations and Directions
Sheet 3 of 3

FIGURE NUMBER

Figure 2

Annex B Approach to Reporting

B.1 Legislative Context and Guidance

B.1.1 Where this report relates to existing or proposed planning applications, it considers the contents of the Town and Country Planning Act 1990 (as amended), the National Planning Policy Framework and considers the potential implications of Part 2A of the Environmental Protection Act 1990 (Part 2A) and the associated Contaminated Land (England) Regulations 2006 and Contaminated Land Statutory Guidance (2012).

B.1.2 This report has been prepared in general accordance with the technical guidance and procedures described in the UK Government guidance Land Contamination: Risk Management (2019) and its predecessor, Model Procedures for the Management of Land Contamination, Contaminated Land Report (CLR) 11 (Department of Food and Rural Affairs (Defra)/Environment Agency, 2004), British Standard (BS) 5930:2015 (as amended) Code of Practice for Site Investigations (BSI), BS:EN 1997 Eurocode 7 – Geotechnical Design (BSI) and BS 10175:2011 (as amended) Investigation of Potentially Contaminated Sites – Code of Practice (BSI).

B.2 Historical Map Review

B.1.3 AECOM notes that only indicative map scales are provided. Where dates are stated, these refer to the dates of maps on which the features are present, have changed use or are no longer annotated, and do not necessarily refer to the exact dates of existence of a particular feature. Development that may have occurred between map editions is recorded as occurring on the latter published map, hence there are some limitations to the accuracy to the date of development unless supplementary evidence is available.

B.3 Conceptual Site Model Derivation

B.1.4 The CSM is aimed at identifying possible risks, if any, arising from substances used or deposited on-site, or from other sources of land contamination. Both past and current potentially contaminative land uses have been considered. It is based on the Scheme described in **Section 1** of this report.

Assessment Framework

B.1.5 The site, in terms of potential land contamination, will be regulated by the Local Authority under the Town and Country Planning Act 1990 (as amended), taking account of the National Planning Policy Framework 2024, with the Environment Agency, Natural England and English Heritage acting as potential statutory consultees.

B.1.6 Environmental liabilities can arise through provisions contained within statutory legislation including Part 2A of the EPA 1990, the Environmental Damage (Prevention and Remediation) Regulations 2009, the Water Resources Act 1991, the Groundwater Regulations 2009 and the Water Act 2003.

B.1.7 Current best practice recommends that the determination of health hazards due to contaminated land is based on the principle of risk assessment, as outlined in the Statutory Guidance to Part 2A (2012) and Land Contamination: Risk Management (LCRM).

B.1.8 The “suitable for use” approach is adopted (as outlined in the Contaminated Land Statutory Guidance) for the assessment of contaminated land where remedial measures are undertaken where unacceptable risks to human health or the environment are realised taking into account the use (or proposed use) of the land in question and the environmental setting.

B.1.9 The risk assessment process for environmental contaminants is based on a source-pathway-receptor analysis. These terms can be defined as follows:

- **Source:** hazardous substance that has the potential to cause adverse impacts;
- **Pathway:** route whereby a hazardous substance may come into contact with the receptor: examples include ingestion of contaminated soil and leaching of contaminants from soil into watercourses; and
- **Receptor:** target that may be affected by contamination: examples include human occupants/ users of site, water resources (surface waters or groundwater), or structures.

B.1.10 For a risk to be present, there must be a relevant / viable contaminant linkage; i.e. a mechanism whereby a source impacts on a sensitive receptor via a pathway.

B.1.11 AECOM have determined the potential sources, pathways and receptors to assess potential risks / liabilities and constraints associated with the site in its current condition prior to any proposed development. Risks associated with the proposed development have also been assessed based on the future land use scenario. specified, including any potential sources of contamination, potential receptors and potential contaminant pathways identified during this desk based assessment.

B.4 Approach to Risk Assessment

B.1.12 Current best practice recommends that the determination of hazards due to contaminated land is based on the principle of risk assessment, as outlined in the Environment Agency guidance on LCRM.

B.1.13 For a risk to be present, there must be a viable contaminant linkage; i.e. a mechanism whereby a source impacts on a sensitive receptor via a pathway.

B.1.14 Assessments of risks associated with each of these contaminant linkages are discussed in the following sections.

B.1.15 Using criteria broadly based on those presented in the CIRIA C552, the magnitude of the risk associated with potential contamination at the Site has been assessed. To do this an estimate is made of:

- The magnitude of the potential consequence (i.e. severity);
- The magnitude of probability (i.e. likelihood).

- The severity of the risk is classified according to the criteria in **Table B.1.**

Table B.1 Description of Severity of Risk

Severity	Definition	Examples (as defined by C552)
Severe	Short-term (acute) risk to human health likely to result in "significant harm" as defined by Environmental Protection Act 1990, Part IIA. Short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Catastrophic damage to buildings \ property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definitions of ecological systems Within the Draft Circular on Contaminated Land, DETR, 2000).	• High concentrations of cyanide on the surface of an informal recreation area. • Major spillage of contaminants from site into controlled water. • Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health ("significant harm" as defined in DETR 2000). Pollution of sensitive water resources (note: Water Resources Act contains no for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem. (note: the definitions of ecological systems within Draft Circular on Contaminated Land, DETR, 2000).	• Concentrations of a contaminant from site exceed the generic, or site-specific assessment criteria. • Leaching of contaminants from a site to a major or minor aquifer. • Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ("significant harm" as defined in the Draft Circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings / structures / services or the environment.	• Pollution of non-classified groundwater. • Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human	• The presence of contaminants at such concentrations that

Severity	Definition	Examples (as defined by C552)
	health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, Structures and services.	protective equipment is required during site works. • The loss of plants in a landscaping scheme. • Discoloration of concrete.

B.1.16 The probability of the risk occurring is classified according to the criteria in **Table B.2.**

Table B.2 Likelihood of Risk Occurrence

Likelihood	Definition	Example
High	There is a pollutant linkage and an event that either appears very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.	• The contaminant linkage exists or is very likely to exist in the short term, and / or may also be linked to visual / olfactory evidence of that linkage being present and active in some cases. • The conditions are such that there is no foreseeable reason to suggest that a source-pathway-receptor linkage is not occurring and required mediums for a contamination source to pass through / within to reach a receptor are all present.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.	• The conditions are such that there are very few foreseeable reasons to suggest that a source-pathway-receptor linkage is not occurring, and that all or most of the required mediums for a contamination source to pass through / within to each a receptor are present.
Low Likelihood	There is pollutant linkage and circumstances are	• The source, pathway and receptor linkage may exist and it is possible

Likelihood	Definition	Example
	possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.	that contamination could reach a receptor in certain circumstances. The site conditions indicate that there are limiting factors in the pathway mediums / generation potential of the source / or presence of the receptor.
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.	• The source, pathway and receptor may exist in certain circumstances, but the contaminant linkage is improbable in the short term and in the long term.

B.1.17 An overall evaluation of the level of risk is gained from a comparison of the severity and probability, as shown in **Table B.3.**

Table B.3 Risk based on Comparison of Likelihood and Severity

Likelihood	Severity: SEVERE	MEDIUM	MILD	MINOR
HIGH	Very High	High	Moderate	Moderate/Low
LIKELY	High	Moderate	Moderate/Low	Low
LOW	Moderate	Moderate/Low	Low	Very Low
UNLIKELY	Moderate/Low	Low	Very Low	Very Low

B.1.18 Further description of the classified risks as defined by CIRIA C552 is provided below.

Very high risk

B.1.19 There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

High risk

B.1.20 Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.

Moderate risk

B.1.21 It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.

Low risk

B.1.22 It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.

Very low risk

B.1.23 It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that this harm if realised would normally be mild or minor.

Discussion of Acute Risk to Construction Workers

B.1.24 AECOM understands that the proposed development works will be undertaken in compliance with Construction Design and Management (CDM) 2015 regulations.

B.1.25 Prior to work commencing, a health and safety risk assessment should be carried out by the appointed Principal Contractor / developed in accordance with current health and safety regulations. This assessment should cover potential risks to construction staff, permanent site staff and the local population. Based on the findings of this risk assessment, appropriate mitigation measures should be implemented during the construction period.

B.1.26 The greatest potential for generation of dust will be during the Site works and therefore dust generation should be kept to a minimum in accordance with general best practice, as outlined in, for example, 'Environmental Good Practice on Site', CIRIA Publication C692 to reduce this risk.

B.1.27 The risk to construction workers during the excavation and construction phases in terms of potential exposure to high concentrations of contaminants is considered to be low given the historic and current land uses identified at the Site. Should gross contamination be identified during the construction phase, then this may pose a potential acute risk to construction works. It is likely to be able to be effectively managed through good health and safety practices and protocols. Adoption of appropriate dust suppression techniques would also mitigate the degree of potential particulate migration off-site.

Annex C Site Photographic Record

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 1	**Date:** 23/12/2024

Brooker Farm looking north to the agricultural field.

Photo No. 2	**Date:** 23/12/2024

Brooker Farm looking northwest to the agricultural field and access road.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 3	**Date:** 23/12/2024

Brooker Farm looking south to the farm store.

Photo No. 4	**Date:** 23/12/2024

Brooker Farm looking south to the tanks.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 5	**Date:** 23/12/2024
Berryplants Ltd building on Wills Lane.	

Photo No. 6	**Date:** 23/12/2024
The field opposite Berryplants Ltd.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 7	**Date:** 23/12/2024
Building and vehicles no longer in use.	

Photo No. 8	**Date:** 23/12/2024
Road between two Energy Park Site boundaries (Wills Lane).	

ANNEX C – SITE PHOTOGRAPHIC RECORD

Client Name: SSE Newchurch Solar Limited	Project Name: Shepway Energy Park	Project No.: 60736659

Photo No.	Date:
9	23/12/2024

Drainage ditch adjacent to Wills Lane.

Photo No.	Date:
10	23/12/2024

Field to the east of Wills Lane.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 11	**Date:** 23/12/2024
Field to the west of Wills Lane.	

Photo No. 12	**Date:** 23/12/2024
Pond within a residential property east of Wills Lane.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 13	**Date:** 23/12/2024
Looking west from the north side of Wills Lane.	

Photo No. 14	**Date:** 23/12/2024
Looking east from the north side of Wills Lane.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 15	**Date:** 23/12/2024

Drainage Ditch on the northern section of Wills Lane (east).

Photo No. 16	**Date:** 23/12/2024

Drainage Ditch on the northern section of Wills Lane (west).

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 17	**Date:** 23/12/2024

Looking off-site to the south of Wills Lane.

Photo No. 18	**Date:** 23/12/2024

Looking east to the south of Wills Lane.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 19	**Date:** 23/12/2024
Looking southwest to the southeast of Wills Lane (stockpile).	

Photo No. 20	**Date:** 23/12/2024
Looking east to the south of Wills Lane (stockpile).	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 21	**Date:** 23/12/2024

Looking onto the Site from the southwest of the Site.

Photo No. 22	**Date:** 23/12/2024

Looking onto the Site from the southwest of the Site.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 23	**Date:** 23/12/2024
Sheep grazing to the west of the Site.	

Photo No. 24	**Date:** 23/12/2024
Western section of the Site.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 25	**Date:** 23/12/2024

Drainage works on the western section of the Site.

Photo No. 26	**Date:** 23/12/2024

Northwest of the Site.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 27	**Date:** 23/12/2024

Northern boundary of the Site looking south towards the Site.

Photo No. 28	**Date:** 23/12/2024

Central section of the Site looking towards an agricultural field.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 29	**Date:** 23/12/2024
Newchurch main street “The Street” (west).	

Photo No. 30	**Date:** 23/12/2024
Newchurch main street “The Street” (east).	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 31	**Date:** 23/12/2024
Central section of the Site looking towards an agricultural field.	

Photo No. 32	**Date:** 23/12/2024
West Gate Industrial Estate.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 33	**Date:** 23/12/2024
West Gate Industrial Estate.	

Photo No. 34	**Date:** 23/12/2024
South of West Gate Industrial Estate.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 35	**Date:** 23/12/2024
Southeast view from “The Street”.	

Photo No. 36	**Date:** 23/12/2024
“The Street”, looking east.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 37	**Date:** 23/12/2024
North of the Site (off-site).	

Photo No. 38	**Date:** 23/12/2024
North of the Site (on-site).	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 39	**Date:** 23/12/2024

Drainage ditch along the north of the Site.

Photo No. 40	**Date:** 23/12/2024

North of the Site from Frogmore Lane.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 41	**Date:** 23/12/2024
Northeastern boundary of the Site (looking south).	

Photo No. 42	**Date:** 23/12/2024
Northeastern boundary of the Site (looking southwest).	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 43	**Date:** 23/12/2024

Looking off-site to the East.

Photo No. 44	**Date:** 23/12/2024

Large drainage ditch to the east of the Site.

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 45	**Date:** 23/12/2024
Chapel Lane looking west.	

Photo No. 46	**Date:** 23/12/2024
Eastern extent of the Site.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 47	**Date:** 23/12/2024

Southeast of the Site (looking southeast).

Photo No. 48	**Date:** 23/12/2024

Southeast of the Site (looking east).

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 49	**Date:** 23/12/2024

Southeast of the Site (looking northwest).

Photo No. 50	**Date:** 23/12/2024

Southeast of the Site (looking northwest).

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 51	**Date:** 23/12/2024
Gammon's Farm Lane looking east.	

Photo No. 52	**Date:** 23/12/2024
Gammon's Farm Lane looking west.	

AECOM	ANNEX C – SITE PHOTOGRAPHIC RECORD	
Client Name: SSE Newchurch Solar Limited	**Project Name: Shepway Energy Park**	**Project No.: 60736659**

Photo No. 53	**Date:** 23/12/2024
Gammon's Farm Lane looking east.	

Annex D BGS Borehole Records

British Geological Survey

BGS ID: 605513 : BGS Reference: TR03SE1
British National Grid (27700) : 605430,131300

TR03/8

TR 0543 3130

305/25 Romney Marsh R.D.C., Public Well, Newchurch. (Disused)

W.S.K. p. 187. Surface +9. Saline. *Before 1901.*

Drift)
? W) 60 60

British Geological Survey
BGS ID: 605513 : BGS Reference: TR03SE1
British National Grid (27700) : 605430,131300

All the sandy beds thin markedly towards the south until, in the south of the Clay Cross-Derby district, they die out. A small number of collieries work seams in this part of the East Midlands Coalfield.

Millstone Grit Series

The major outcrop in this section lies to the north and east of the Carboniferous Limestone of the Derbyshire Massif, with a thin strip bordering the western edge. The strata are flexed on all three sides into a series of folds of varying intensity. Along the north-west, north and north-eastern edges of the massif the shallow Mam Tor Syncline lies between the massif and the Edale Anticline, in the core of which the oldest Millstone Grit strata are exposed. The easterly continuation of the shallow syncline forming Kinderscout lies to the north of the Edale Anticline with, still further north, the anticlinal Alport Dome. The oldest Millstone Grit strata again crop out in this structure. Along the eastern and western margins of the limestone area, the strata are flexed into a series of sub-parallel, roughly north-south trending folds of varying amplitude.

Around Edale the maximum total thickness of the Millstone Grit Series is about 3,300 ft. A thinning occurs in a southern and a south-westerly direction, and the total thickness diminishes through about 1750 ft in the Hathersage-Frogatt area to 1370 ft in the extreme south-eastern part of the outcrop. Most of the thinning between Edale and Frogatt takes place in the strata below the Kinderscout Grit Group, the upper groups remaining relatively constant in thickness. Further south, considerable thinning also occurs in the upper groups. Details of the general succession in the section are given below.-

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 605513 : BGS Reference: TR03SE1
British National Grid (27700) : 605430,131300

TR03/8

Romney Marsh Rural District.

Writing of this district, in his Report to the Local Government Board, November 1901, p. 2, Dr. W. W. E. FLETCHER says: "There is no public water service. Throughout the district great difficulty is experienced in obtaining supplies of water for domestic use. All the wells seen by me were of the shallow surface type, dry-steined with bricks or stone, and obviously fed by sub-soil water. According to my information, wells of this character alone can be used; for, if they be carried to a greater depth than that to which the loose sub-soil extends, they enter a peaty bed, and the water becomes dark-coloured and unpleasant to the taste; while, if sunk still deeper into gravel underlying clay which is subjacent to the peaty bed . . the water obtained is too brackish for use."

A public well "about thirty yards outside the churchyard" at Newchurch "is said to be a 'tube well' sunk through clay to a depth of 60 feet, and the water is alleged to contain 40 to 50 grains of sodium chloride per gallon. . . At Old Romney a well was observed only four yards distant from a privy cesspit. At Brookland there are at least two wells which are said to yield ample supply of water at all seasons; but, speaking of the district generally, as would be expected when reliance is put upon surface wells, the supplies run short in summer and during prolonged drought."

30/26 D-W 60 60

MP I.I 30/7/64

Newchurch well sited 5/2/80 Disused.

Sited on Rem 1 81 NE-W

CW 20.3.47

DATA Bank

Published in
'Water Supply of Kent,' p. 187

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

TR 03/9 A

TR 03 SW 305 25

RECORD OF WELL (SHAFT OR BORE)

1" N.S. 305
1" O.S.
Grid Ref. TR03/9

At Ruckmore, Near Ashford. 03 21 31 13

Town or Village ____ County Kent/Sussex Six-inch quarter sheet ____

Exact site ____ (A rough sketch-map or a tracing from a map is very desirable)

in parish of 305

Level of ground surface above sea-level (O.D.) ____ ft. If well starts below ground surface, state how far ____ ft.

Shaft ____ ft., diameter ____ ft. Bore ____ ft. Diameter of bore: at top ____ ins.; at 26 ins.

Details of permanent lining tubes (internal diameters preferred) ____

Water struck at depths of (feet) ____

Rest-level of water below / above top of well ____ feet. Suction at ____ feet. Yield on ____ hours' / days' test ____ gallons per ____ (with pump of capacity ____ g.p.h.); depressing water level to ____ feet below top. Time of recovery ____ hrs. Amount normally pumped daily ____ g.p.h. for ____ hours.

Quality (attach copy of analysis if available) La Grand. S. & C.

Sunk by La Grand for Mr Linde E. Myers Date of work c. 1904.

Information from L. Charles E. Pacey Esq. W.S.B.2/179.

(For Survey use only) GEOLOGICAL CLASSIFICATION.	NATURE OF STRATA (and any additional remarks).	THICKNESS Feet.	THICKNESS Inches.	DEPTH Feet.	DEPTH Inches.
	Clay	4			
	Sandy pond.	1	6		
	Fine grey sand.	3			
	Sand & hard bands of peat	2			
	Soft light blue clay	5	6		
	Grey sand	7			
	Sand & few shells.	11			
	Sand.	12			
	Soft light-blue clay & bands of peat	9			
	Hard Roman sand & stone.	11			
	Grey silty clay & sand.	14			
	Hard sand & thin seams of sand.	8			
	Hard blue silty clay	19			
	" " " & lignite	15			
	Band of lignite with little blue clay	1			
	Blue silty clay & little lignite	4			
	Light blue clay	5			
	Mottled "	2			
	Light-blue "	7			
	Little lignite "	3			
	Hard silty " & thin bands of stone	2			
	" " " & little lignite	8			
	" sandy " (like soft stone)	2			
	Hard blue sandy clay	30			
	Sand & lignite.	3			
	Sand clay & lignite	4			
	Sandy clay	1			
	Clay & sandstone hitched	6			
	Hard clay & bands of stone (Rock bed at 204')	9		211	

Deepened to 356'
" 476 in 1906.

For Survey use only

GEOLOGICAL SURVEY AND MUSEUM, SOUTH KENSINGTON, LONDON, S.W.7.

Date received: 4 DEC 1929 | G.S.M. Office File No. | Site marked on 1" map (see symbol)

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

TR 03/9 B

TR03 SW 2 ~~305~~ 205 TR03/9 B
07 2 3/3

~~26~~ 8

~~Hastings~~ (should have been entered as Newchurch).
LARKDON FARM, about 1¼ miles S.W. of the church, Newchurch.
1906.

Pit 8 feet, or more?, the rest a boring of 6 inches diameter.

From copies of the record, communicated by Mr. R. Lees and Mr. C. J. GILBERT.

(Words in these brackets from "remarks" at the side of one section.)
[Notes in these brackets from specimens.]

		Thickness.	Depth.
		Ft.	Ft.
Turf and mould		1	1
[Alluvium]	Clay, with shells (dipping sharp to east)	4	44
	Loam sand	1½	6
	Fine grey sand [clayey]	3	9
	Sand and mud, with bands of peat. (A little water)	2	11
	Soft light-blue clay. (Grey sand) [grey sandy clay]	5½	16½
	Grey sand, with a few shells. (Water)	30	46½
	Soft light-blue clay, with bands of peat	9	55½
	Brown sand, mixed with pebbles and stones of various kinds. (Water)	10½	66
[? Weald Clay]	Grey silty clay in bands, with thin veins of sand	4	70
	Sand, with thin veins of wood, lignite or coal. (Water. Sand hard) ...	16	86
	Blue silty clay or gault. (A few thin veins of silty clay in the upper part of the sand) [grey sandy clay]	34	120
	Blue gault or silty clay, with a lot of lignite, the same continuous, with not so much lignite. [Sandy clay, with plant remains]	7	127
	Light-blue or weald clay [grey] ...	5	132
	Mottled clay [pale]	2	134
	Light-blue or weald clay	7	141
	Mixed clay, with a show of lignite [pale brownish clay, with plant-remains]	5	146
	Silty clay, with a thin band of stone and some lignite [pale]	10	156
[? Hastings Beds]	Hard blue sandy clay (varying in character) [pale fine clayey sand, a lower specimen coarser and less clayey]	33	189
	Lignite and sand in veins or bands	3	192
	Hard blue sand and clay [pale clayey sand]	5½	194½
	Mixed clay and stones, with a show of shells at 208 feet...	25½	220
	Hard sand with stones and clay; the greatre part of the cores wash away	24	244
	Light-blue and mottled clay ...	3	247
	Dark hard, dry clay	3	250
	Hard silt, varying in colour, sandy in places, some lignite [pale clay at 300 and 323 feet]	71	321
	Hard dark mixed clay	9	330
	Hard blue silty clay [Brown clay at 333 feet]	19	349
	Hard and soft bands, nearly all washed away to slurry [Pale clay at 351 feet]	7	356

Published in
'Water Supply of
Kent', p. 234, 235, 236, 237 235, 6, 7.

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey
BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

a) TR 032 312
b) " 0317 3122.

TR03/9A+B

305/26 Langdon Farm, Ruckinge

(a) (Filled in). W.S.K. p. 187. Surface +9. Shaft 223. *Before 1906.*
(b) Trial. W.S.K. p. 235. Surface +9. Shaft 9; rest bore 6 in. When depth 327, overflowed at 60 g.p.h. Bore plugged at c. 200 down to keep out unsuitable water. *LeGrand, 1906.*
Overflowed. *1940.* Overflowed. *1947.*

(b) Made ½	Turf and mould ...	½	½
	Clay with shells ...	4	4½
	Loam sand ...	1½	6
	Fine grey sand (clayey) ...	3	9
Drift 65½	Sand and mud with bands of peat	2	11
	Soft light-blue clay (grey sandy clay)	5½	16½
	Grey sand with a few shells	30	46½
	Soft light-blue clay, with bands of peat	9	55½
	Brown sand, mixed with pebbles and stones of various kinds ...	10½	66
	Grey silty clay in bands, with thin veins of sand ...	4	70
	Sand, with thin veins of wood, lignite or coal ...	16	86
	Blue silty clay ...	34	120
Has 500½	Blue silty clay, with lignite	7	127
	Light-blue or weald clay	5	132
	Mottled clay ...	2	134
	Light-blue or weald clay ...	7	141
	Mixed clay, with a show of lignite	3	144
	Silty clay, with a thin band of stone and some lignite ...	10	154
	Hard blue sandy clay ...	32	186
	Lignite and sand in veins or bands	3	189
	Hard blue sand and clay ...	5½	194½
	Mixed clay and stones with shells at 206 feet	15½	210
	Hard sand with stones and clay ...	34	244
	Light-blue and mottled clay ...	3	247
	Dark hard, dry clay ...	3	250
	Hard silt, varying in colour, sand in places, some lignite	71	321
	Hard dark mixed clay ...	9	330
	Hard blue silty clay ...	19	349
	Hard and soft bands (pale clay) ...	7	356
	Bands of clay and sand, some lignite	42	398
	Hard sandy clay, with lignite ...	5½	403½
Has	Very hard stone ...	1	404½
	Hard silty clay, dries nearly white	13½	418
	Lignite and sand ...	1	419
	Sandy clay, with small pieces of rock or stone, pyrites, lignite ...	51	470
	Hard sandy clay, 6 inches of sand at the base	4½	474½
	Clay, with sand and stone ...	8½	483
	Sandy clay or hard clay, with bands of sand	15	498
	Hard clay, mottled? ...	7½	505½
	Stones and bands of clay ...	4½	510
	Mixed coloured clay, some very dark	8	518
	Very dark blue clay ...	5	523
	Mixed coloured clay, some hard ...	21	544
	Cuts hard, like stone; last 3 feet more clay	22½	566½

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey
BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

Stage	Group (with general thickness)	Formation	Formation thickness
G	Rough Rock Group 100-270 ft	(Rough Rock	0 - 130 ft
		(Shales	50 - 140 ft
R_2	Middle Grit Group 370-1200 ft	(Sandstone (Redmires Flags)	0 - 45 ft
		(Shale	-
		(Sandstone (Chatsworth or Rivelin Grit)	Up to 500 ft
		(Shale	-
		(Sandstone (Roaches Grit)	Up to 400 ft
		(Shale	-
R_1	Kinderscout Grit Group 130-1500 ft	Complex changes occur: see text.	
H) E_2) E_1)	Over most of area consist of "Edale Shales": sandstones developed in extreme north. 150-700+ ft	see text.	

Within the Rough Rock Group the Rough Rock (sensu stricto) is well developed in the north and extreme south-east of the section but in the central part, especially on the eastern side of the Derwent Valley, it is thin or absent; the whole of the Rough Rock Group then consists of shales.

The Middle Grit Group includes several important sandstone aquifers, of which the Chatsworth (or Rivelin) Grit is probably the most important. In the Edale area this sandstone varies from 30 to 100 ft thick. South-east from Edale, on the eastern side of the Derwent Valley, thickening occurs and the sandstone is split into two parts by shale to form a complex up to 500 ft thick. Further south, the lower sandstone dies out, and the upper maintains a thickness of 70 to 125 ft. The Roaches (or Ashover) Grit, at the base of the Middle Grit Group, is absent in the extreme south of the section and is up to 400 ft thick in the central part (east of the Derwent Valley) but thins northwards and splits into two separate sandstones in the extreme north. Both of these sandstones vary in thickness, the upper sandstone from zero up to 210 ft, and the lower sandstone from zero up to 100 ft. There is a lithological change northwards from a medium to coarse pebbly sandstone into a fine-grained sandstone with interbedded shales and mudstone. The Redmires Flags are an impersistent development of flaggy, fine- to medium-grained sandstones with occasional pebbly bands. They are absent in the

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British Geological Survey

BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

[redacted]

38 TR03/9A

A

Ruckinge. LANGDON FARM.

Ordn. Map 305, new ser.; Geol. Map 4.
Information from Mr. E. LORD, 1906.

Some years ago a well was sunk to the depth of 223 feet, when fresh water was found after passing through rock, and it is said that a seam of coal [lignite] was found. For details of the beds near here see the account of a trial-boring on p. 235.

Visited 5/2/40. Site of bore located. Details less certain. Still overflows (loose).

J.A.R.

Information from Mr. Homewood that the bore was plugged ~~at the bore~~ at about 200 ft deep as the water from 586 ft. down was unfit for use.

9509/30 305/26 9th July 1940.

Sited on Key 1 81 NW-E.
Bore still overflows.
2 wells on farm are in ditches, one by garage - both filled in.

C.S. 20.3.47

Published in
'Water Supply of
Kent,' p. 187

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

ADDITIONAL INFORMATION SHEET

Licence No. 305/26 TR03/9A

Date of completion of well catalogue .....

Date of publication .....

.....

.....

Additional Sheet No. .....

DATE	*	ADDITIONAL INFORMATION	INIT.
14/7/70	A	Made) Drift) no details 223 Has)	mjc
		DATA Bank	

FILMED .....

* Insert Well Reference Letter, If More Than One Well At Site

P.T.O.

Section 6	Pumping test	Observ. well	Recorder	E.R. log

Geological Survey, Water Department South Kensington, London, S.W.7.

(4130) Wt.34984/P.S.127 5m 9/63 G.W.B.Ltd. Gp.663

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 606386 : BGS Reference: TR03SW1
British National Grid (27700) : 603200,131300

DATE	*	ADDITIONAL INFORMATION	INIT.

BGS British Geological Survey

BGS ID: 606387 : BGS Reference: TR03SW2
British National Grid (27700) : 603200,131300

TR03SW/2 305 TR03/98 26 B

		Thickness.	Depth.
		Ft.	Ft.
[? Hastings Beds]	Beds of clay and sand, some lignite	42	386
	Hard sandy clay, with lignite [pyrites]	5½	423½
	Very hard stone [calcareous, with pyrites]	1	424½
	Hard silty clay, dries nearly white	13½	438
	Lignite and sand	1	439
	Sandy clay, with small pieces of rock or stone, mundic, lignite; 6 inches of hard stone [calcareous] and mundic at base	31	470
	Hard sandy clay, 6 inches of sand at base [pale clay; pale grey fine sand, and pale brownish sand] ...	4½	474½
	Clay, with sand and stone [grey] ...	8½	483
	Sandy clay or hard clay, with bands of sand	15	498
	Hard clay, mottled ?	7½	505½
	Stone and bands of clay [indistinct shells]	4½	510
	Mixed coloured clay, some very dark	8	518
	Very dark blue clay	5	523
	Mixed coloured clay, some hard ...	21	544
	Chin hard, fire stone; last 3 feet more clay. Mr. LOAD notes this as hardish clay, that soon sets, of various colours	22½	566½

The last core [calcareous stone] is marked as from 376 feet. The boring was then abandoned.

From 127 to 247 feet the figures for depths are made a foot in excess of those here given; from 258 to 401½ feet, 2 feet in excess; at 418 feet, 2½ feet in excess; from 419 to 566½ feet, 2 feet in excess.

According to Mr. LOAD, water overflowed at the rate of about 4 gallon a minute when the boring was 227 feet deep.

Published in 'Water Supply of Kent', p. 2-87

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 606387 : BGS Reference: TR03SW2
British National Grid (27700) : 603200,131300

a) TR 032 312
b) " 0317 3122.

TR03/9A+B

305/26 Langdon Farm, Ruckinge

(a) (Filled in). W.S.K. p. 187. Surface +9. Shaft 223. *Before 1906.*
(b) Trial. W.S.K. p. 235. Surface +9. Shaft 9; rest bore 6 in. When depth 327, overflowed at 60 g.p.h. Bore plugged at c. 200 down to keep out unsuitable water. *LeGrand, 1906.*
Overflowed. *1940.* Overflowed. *1947.*

(b) Made ½		Turf and mould ...	½	½
		Clay with shells ...	4	4½
		Loam sand ...	1½	6
		Fine grey sand (clayey) ...	3	9
	Drift 65½	Sand and mud with bands of peat	2	11
		Soft light-blue clay (grey sandy clay)	5½	16½
		Grey sand with a few shells	30	46½
		Soft light-blue clay, with bands of peat	9	55½
		Brown sand, mixed with pebbles and stones of various kinds ...	10½	66
		Grey silty clay in bands, with thin veins of sand ...	4	70
		Sand, with thin veins of wood, lignite or coal ...	16	86
		Blue silty clay ...	34	120
	Has 500½	Blue silty clay, with lignite	7	127
		Light-blue or weald clay	5	132
		Mottled clay ...	2	134
		Light-blue or weald clay ...	7	141
		Mixed clay, with a show of lignite	3	144
		Silty clay, with a thin band of stone and some lignite ...	10	154
		Hard blue sandy clay ...	32	186
		Lignite and sand in veins or bands	3	189
		Hard blue sand and clay ...	5½	194½
		Mixed clay and stones with shells at 206 feet	15½	210
		Hard sand with stones and clay ...	34	244
		Light-blue and mottled clay ...	3	247
		Dark hard, dry clay ...	3	250
		Hard silt, varying in colour, sand in places, some lignite	71	321
		Hard dark mixed clay ...	9	330
		Hard blue silty clay ...	19	349
		Hard and soft bands (pale clay) ...	7	356
		Bands of clay and sand, some lignite	42	398
		Hard sandy clay, with lignite ...	5½	403½
	Has	Very hard stone ...	1	404½
		Hard silty clay, dries nearly white	13½	418
		Lignite and sand ...	1	419
		Sandy clay, with small pieces of rock or stone, pyrites, lignite ...	51	470
		Hard sandy clay, 6 inches of sand at the base	4½	474½
		Clay, with sand and stone ...	8½	483
		Sandy clay or hard clay, with bands of sand	15	498
		Hard clay, mottled? ...	7½	505½
		Stones and bands of clay ...	4½	510
		Mixed coloured clay, some very dark	8	518
		Very dark blue clay ...	5	523
		Mixed coloured clay, some hard ...	21	544
		Cuts hard, like stone; last 3 feet more clay	22½	566½

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey
BGS ID: 606387 : BGS Reference: TR03SW2
British National Grid (27700) : 603200,131300

Stage	Group (with general thickness)	Formation	Formation thickness
G	Rough Rock Group 100-270 ft	(Rough Rock	0 - 130 ft
		(Shales	50 - 140 ft
R_2	Middle Grit Group 370-1200 ft	(Sandstone (Redmires Flags)	0 - 45 ft
		(Shale	-
		(Sandstone (Chatsworth or Rivelin Grit)	Up to 500 ft
		(Shale	-
		(Sandstone (Roaches Grit)	Up to 400 ft
		(Shale	-
R_1	Kinderscout Grit Group 130-1500 ft	Complex changes occur: see text.	
H) E_2) E_1)	Over most of area consist of "Edale Shales": sandstones developed in extreme north. 150-700+ ft	see text.	

Within the Rough Rock Group the Rough Rock (sensu stricto) is well developed in the north and extreme south-east of the section but in the central part, especially on the eastern side of the Derwent Valley, it is thin or absent; the whole of the Rough Rock Group then consists of shales.

The Middle Grit Group includes several important sandstone aquifers, of which the Chatsworth (or Rivelin) Grit is probably the most important. In the Edale area this sandstone varies from 30 to 100 ft thick. South-east from Edale, on the eastern side of the Derwent Valley, thickening occurs and the sandstone is split into two parts by shale to form a complex up to 500 ft thick. Further south, the lower sandstone dies out, and the upper maintains a thickness of 70 to 125 ft. The Roaches (or Ashover) Grit, at the base of the Middle Grit Group, is absent in the extreme south of the section and is up to 400 ft thick in the central part (east of the Derwent Valley) but thins northwards and splits into two separate sandstones in the extreme north. Both of these sandstones vary in thickness, the upper sandstone from zero up to 210 ft, and the lower sandstone from zero up to 100 ft. There is a lithological change northwards from a medium to coarse pebbly sandstone into a fine-grained sandstone with interbedded shales and mudstone. The Redmires Flags are an impersistent development of flaggy, fine- to medium-grained sandstones with occasional pebbly bands. They are absent in the

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British Geological Survey

BGS ID: 606387 : BGS Reference: TR03SW2
British National Grid (27700) : 603200,131300

30 TR03/9B

~~Ruckinge (should have been entered as~~ **Newchurch).**

LANGDON FARM, about 1¼ miles S.W. of the church, Newchurch.
1906.

Pit 9 feet, or more ?, the rest a boring of 6 inches diameter.

From copies of the record, communicated by Mr. E. LORD and Mr. C. J. GILBERT.

(Words in these brackets from "remarks" at the side of one section.)
{Notes in these brackets from specimens.}

		Thickness.	Depth.
		Ft.	Ft.
Turf and mould		½	½
[Alluvium] 66	Clay, with shells (dipping sharp to east)	4	4½
	Loam sand	1½	6
	Fine grey sand {clayey}	3	9
	Sand and mud, with bands of peat. (A little water)	2	11
	Soft light-blue clay. (Grey sand) {grey sandy clay}	5½	16½
	Grey sand, with a few shells. (Water)	30	46½
	Soft light-blue clay, with bands of peat	9	55½
	Brown sand, mixed with pebbles and stones of various kinds. (Water)	10½	66
[? ~~Weald~~ Clay]	Grey silty clay in bands, with thin veins of sand	4	70
	Sand, with thin veins of wood, lignite or coal. (Water. Sand hard) ...	16	86
	Blue silty clay or gault. (A few thin veins of silty clay in the upper part of the sand) {grey sandy clay}	34	120
	Blue gault or silty clay, with a lot of lignite, the same continues, with not so much lignite. {Sandy clay, with plant remains}	7	127
	Light-blue or weald clay {grey} ...	5	132
	Mottled clay {pale}	2	134
	Light-blue or weald clay	7	141
	Mixed clay, with a show of lignite {pale brownish clay, with plant-remains}	3	144
	Silty clay, with a thin band of stone and some lignite {pale}	10	154
	Hard blue sandy clay (varying in character) {pale fine clayey sand, a lower specimen coarser and less clayey}	32	186
	Lignite and sand in veins or bands	3	189
	Hard blue sand and clay {pale clayey sand}	5½	194½
	Mixed clay and stones, with a show of shells at 206 feet...	15½	210
[? Hastings Beds]	Hard sand with stones and clay; the greater part of the cores wash away	34	244
	Light-blue and mottled clay ...	3	247
	Dark hard, dry clay	3	250
	Hard silt, varying in colour, sandy in places, some lignite {pale clay at 300 and 323 feet}	71	321
	Hard dark mixed clay	9	330
	Hard blue silty clay {Brown clay at 332 feet}	19	349
	Hard and soft bands, nearly all washed away to slurry {Pale clay at 351 feet}	7	356

? Hastings Beds.

J.G.S. 3/12/56.

Published in 'Water Supply of Kent', p. 235, 236, 237

Contact BGS: ngdc@bgs.ac.uk

British Geological Survey

BGS ID: 606387 : BGS Reference: TR03SW2
British National Grid (27700) : 603200,131300

305/26

RECORD OF WELL (SHAFT OR BORE)

1" N.S. 305
1" O.S.
Grid Ref. TR03/9B

At Ruckmore, Near Ashford.
Town or Village County Kent Six-inch quarter sheet
Exact site (A rough sketch-map or a tracing from a map is very desirable)
in parish of

305/26 B

Level of ground surface above sea-level (O.D.) ft. If well starts below ground surface, state how far ft.
Shaft ft., diameter ft. Bore ft. Diameter of bore: at top ins.; at ins.
Details of permanent lining tubes (internal diameters preferred)

Water struck at depths of (feet)
Rest-level of water below above top of well feet. Suction at feet. Yield on hours' days' test
gallons per (with pump of capacity g.p.h.); depressing water level to feet
below top. Time of recovery hrs. Amount normally pumped daily g.p.h. for hours.
Quality (attach copy of analysis if available)
Sunk by Le Grand for Mr. Lewis S. Myer Date of well c.1904.
Information from 2. Charles St; Piccadilly W. S.B.2/179.

Le Grand S. & C.

(For Survey use only). GEOLOGICAL CLASSIFICATION.	NATURE OF STRATA (and any additional remarks).	THICKNESS Feet.	THICKNESS Inches.	DEPTH Feet.	DEPTH Inches.
	Clay	4			
	Loamy sand.	1	6	5	6
	Fine grey sand.	3		8	6
	Sand, hard & banks of peat	2		10	6
	Soft light blue clay	5	6	16	0
	Grey sand.	7		23	0
	Sand & few shells.	11		34	0
	Sand.	12		46	0
	Soft light blue clay & bands of peat	9		55	0
	Hard brown sand & stone.	11		66	0
	Grey silty clay & sand.	14		80	0
	Hard sand & thin seams of wood.	8		88	0
	Hard blue silty clay	19		107	0
	" " " " & lignite	15		122	0
	Band of lignite with little blue clay	1		123	0
	Blue silty clay & little lignite	4		130	0
	Light blue clay	5		135	0
	Mottled "	2		137	0
	Light blue "	7		144	0
	Little lignite & "	3		147	0
	Hard silty " & thin bands of stone	2		149	0
	" " " & little lignite	8		157	0
	" sandy " (like soft stone)	2		159	0
	Hard blue sandy clay	30		189	0
	Sand & lignite.	3		192	0
	Sand, clay & lignite	4		196	0
	Sandy clay	1		197	0
	Clay & Sandstone mixed	6		203	0
	Hard clay & bands of stone (few shells at 206')	9		211	0

* Deepened to 356'
" 476 in 1906.

GEOLOGICAL SURVEY AND MUSEUM, SOUTH KENSINGTON, LONDON, S.W.7.

For Survey use only

Date received	G.S.M. Office File No.	Site marked on 1" map (use symbol)
DEC 1939		

(*11815) Wt.29051/O.369 10,000 9/39 A.& E.W.Ltd. Gp.686

Contact BGS: ngdc@bgs.ac.uk

BGS ID: 606387 : BGS Reference: TR03SW2
British National Grid (27700) : 603200,131300

TR03AB

		Thickness.	Depth.
		Ft.	Ft.
[? Hastings Beds]	Bands of clay and sand, some lignite	42	398
	Hard sandy clay, with lignite {pyrites}	5½	403½
	Very hard stone {calcareous, with pyrites}	1	404½
	Hard silty clay, dries nearly white	13½	418
	Lignite and sand	1	419
	Sandy clay, with small pieces of rock or stone, mundic, lignite; 6 inches of hard stone {calcareous} and mundic at base	51	470
	Hard sandy clay, 6 inches of sand at base {pale clay, pale grey fine sand, and pale brownish sand} ...	4½	474½
	Clay, with sand and stone {grey} ...	8½	483
	Sandy clay or hard clay, with bands of sand	15	498
	Hard clay, mottled ?	7½	505½
	Stone and bands of clay {indistinct shells}	4½	510
	Mixed coloured clay, some very dark	8	518
	Very dark blue clay	5	523
	Mixed coloured clay, some hard ...	21	544
	Cuts hard, like stone; last 3 feet more clay. Mr. LORD notes this as hardish clay, that soon sets, of various colours	22½	566½

Note: Change 'mundic' to 'pyrite' or 'pyritous'.

The last core {calcareous stone} is marked as from 575 feet. The boring was then abandoned.

From 127 to 247 feet the figures for depths are made a foot in excess of those here given; from 250 to 404½ feet, 2 feet in excess; at 418 feet, 2½ feet in excess; from 419 to 566½ feet, 2 feet in excess.

According to Mr. LORD, water overflowed at the rate of about a gallon a minute when the boring was 327 feet deep.

Published in 'Water Supply of Kent', p. 237

Contact BGS: ngdc@bgs.ac.uk

Annex E Zetica UXO Risk Mapping / Preliminary UXO Desktop Report

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 603980,131633

This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**
Transport | **Docks** | **Luftwaffe targets**
Utilities | **Bombing decoy** | **Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density.
Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

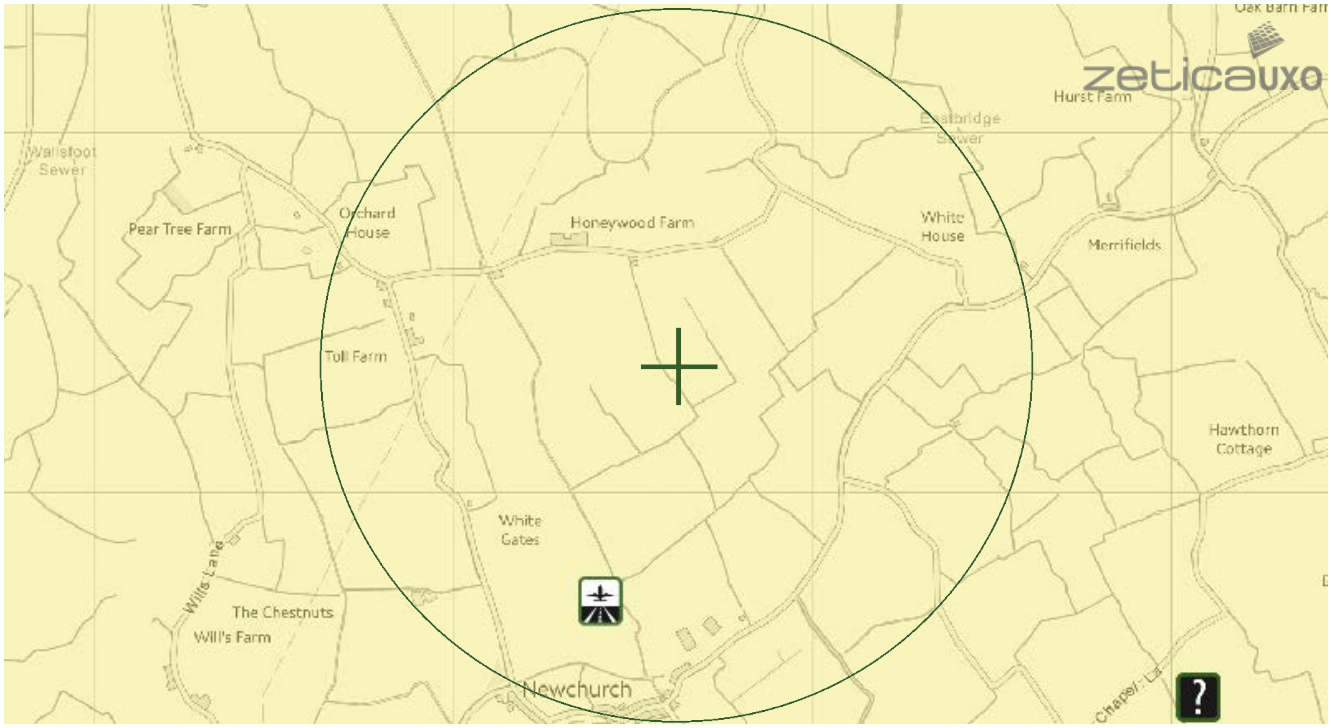
The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 605593,132359



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**

Transport | **Docks** | **Luftwaffe targets**

Utilities | **Bombing decoy** | **Airfields**

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UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 605381,131459

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Miltary | **Industry** | **UXO find** | **Other**
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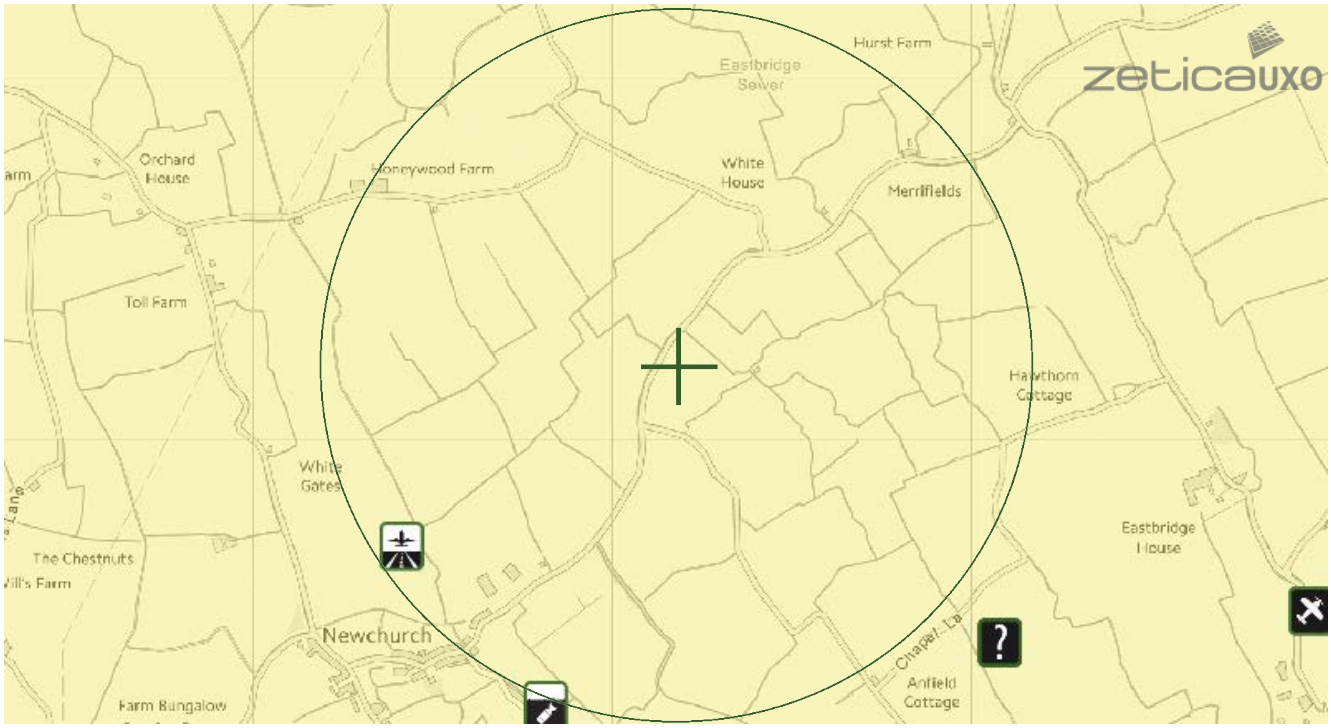
UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 606149,132209



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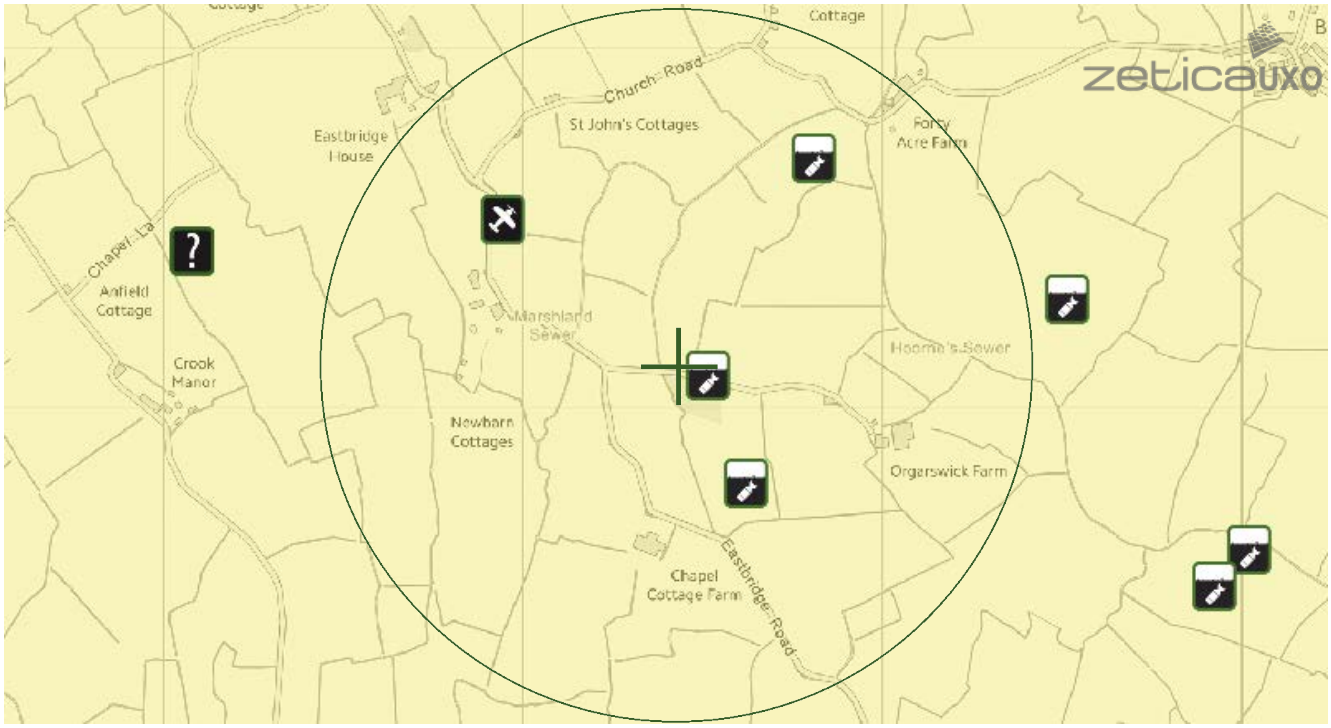
UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 608397,131122



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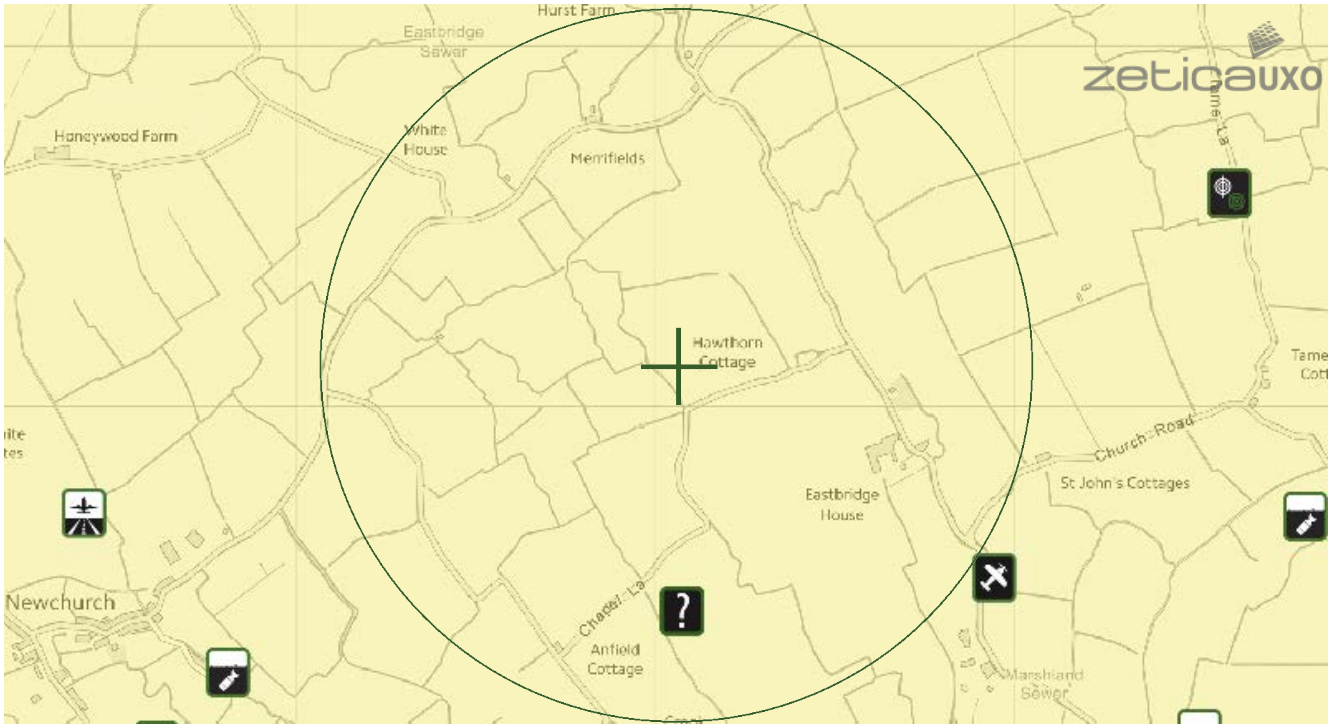
UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 607031,132118



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Map Centre: 607903,131585

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Appendix J: Long List of Major Accidents and Disasters

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Ref	Major accident or disaster	Relevant for short list?	Why?	Potential receptors	Covered already in Proposed ES? If so, where?
1	**Geological disasters**				
1.1	Landslides	No	The risk of landslides will be considered as part of the geotechnical design, ensuring that the risk is designed out, both in terms of the vulnerability of the Scheme to these types of events; however given the flat nature of the land this risk is considered minimal. The Scheme is not anticipated to increase the risk of landslip happening onsite or elsewhere (it is not substantially heavy, and the Site is relatively flat); it will not significantly change the erosion potential of the soil or stability of the land.	N/A	N/A
1.2	Earthquakes	No	The Scheme is not located in a geologically active area and as such earthquakes are not considered to be a real risk or serious possibility.	N/A	N/A
1.3	Sinkholes	No	The risk of sinkholes will be considered as part of the geotechnical design and the construction method and Scheme design amended if needed, ensuring that the risk is designed out, both in terms of the vulnerability of the Scheme to these types of events, and also in terms of the potential for the Scheme to increase the risk of such an event happening.	N/A	N/A
2	**Hydrological disasters**				
2.1	Floods	Yes	Both the vulnerability of the Scheme to flooding, and its potential to exacerbate flooding, will be covered in the Flood Risk Assessment, and also reported in the ES (both in terms of the risk to the Scheme and increased risk caused by the Scheme).	Property and people in areas of increased flood risk.	**Chapter 15 Water Environment** (including Flood Risk Assessment). Mitigation will be considered and, where necessary, incorporated into the Scheme design.
2.2	Limnic eruptions	No	Not applicable as there are no lakes nearby.	N/A	N/A
2.3	Tsunami/Storm surge	No	Not applicable as the Scheme is not in a coastal location.	N/A	N/A

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3	**Meteorological disasters**				
3.1	Blizzards	No	The Scheme is considered to be no more vulnerable than any other development. It will be designed to cope with the UK climate and extreme weather events; blizzards should not affect the Scheme integrity.	N/A	N/A
3.2	Cyclonic storms	No	Although there are storms in the UK, their destructive force tends to be much less than in other parts of the world and the Scheme is not particularly vulnerable to any potential effects. It will be designed for the British climate and weather extremes.	N/A	N/A
3.3	Droughts	No	Droughts are only considered as a disaster due to water shortages for essential services and where there are indirect impacts on food production, loss of soils etc. The Scheme is not considered to be vulnerable to drought.	N/A	N/A
3.4	Thunderstorms	No	As the Scheme includes metal components, there is a risk of lightning strikes. However, these risks will be removed or reduced through inbuilt control systems and can be scoped out at this stage.	N/A	N/A
3.5	Hailstorms	No	The Scheme is considered to be no more vulnerable than any other development.	N/A	N/A
3.6	Heat waves	No	While impacts are expected as a result of projected temperature increases (due to climate change), these temperature increases are not expected to have a significant impact on the Scheme. It is anticipated that the cooling systems for the battery energy storage systems, will regulate temperatures to within safe conditions.	N/A	No
3.7	Tornadoes	No	Although there are tornadoes in the UK, their destructive force tends to be much less than in other parts of the world and the Scheme is not particularly vulnerable to any potential effects.	N/A	No
3.8	Fires	Yes	There may be some potential for fire as a result of the battery storage element of the Scheme. However, the battery energy storage system will include automatic control, cooling, shutdown, and suppression systems, which are designed to	Local residents, habitats and species.	Framework Battery Safety Management Plan

Ref	Major accident or disaster	Relevant for short list?	Why?	Potential receptors	Covered already in Proposed ES? If so, where?
			regulate temperatures to within safe conditions to minimise the risk of fire. A Framework Battery Safety Management Plan will be prepared for the Scheme. The development of the Plan will be considered in the iterative design of the Scheme ensuring that design requirements to ensure fire safety (such as ensuring adequate provision of land for water storage) and management of any firewater runoff are captured. This will also be cognisant of the current (at it's time of writing) industry standards and norms in relation to the topic. It is anticipated that this will be a stand-alone report submitted alongside the DCO application.		
3.9	Air Quality Events	No	The Scheme is not located within any Air Quality Management Areas (AQMA). The nearest AQMA is in Canterbury Centre. This AQMA will not be affected by the Scheme. Although there are likely to be emissions during construction and decommissioning of the Scheme, it is considered that these can be managed through the implementation of a Construction Environmental Management Plan. Good practice measures will be set out in a Framework Construction Environmental Management Plan to be appended to the ES.	N/A	N/A
4	**Transport**				
4.1	Road Accidents	Yes	The risk posed by construction/operation/decommissioning traffic on the Local Road Network will be considered in the Transport chapter of the ES. The risk posed by spillage from hazardous loads as a result of a road traffic accident during construction or decommissioning will be considered in the Water Environment chapter of the ES. The potential for glint and glare to affect road users will be considered within a technical appendix to the ES if any risks are identified.	Aquatic environment Road users	**Chapter 14 Transport and Access** **Chapter 15 Water Environment** Glint and Glare Study Mitigation will be considered and, where necessary, incorporated into the Scheme design.
4.2	Rail Accidents	No	There a no railway lines located within 1 km. The nearest is Romney Hythe and Dymchurch Steam Railway.	N/A	N/A
4.3	Aircraft Disasters	Yes	The potential for Glint and Glare to affect aircraft has been scoped out as a standalone ES Chapter. The assessment of impacts upon Hamilton Farm Airfield, Harringe Court Airstrip; and Woodridge / Meadow Farm Field Airfield will be addressed in a Glint and Glare Technical Appendix	Pilots and aircraft	**Chapter 16 Other Environmental Topics** Glint and Glare Study

Ref	Major accident or disaster	Relevant for short list?	Why?	Potential receptors	Covered already in Proposed ES? If so, where?
5	**Engineering Accidents/Failures**				
5.1	Bridge Failure	No	Not applicable as no bridges are anticipated to be used or constructed as part of Scheme.	N/A	N/A
5.2	Tunnel Failure or Fire	No	None nearby.	N/A	N/A
5.3	Dam Failure	No	No nearby Dams.	N/A	N/A
5.4	Flood Defence Failure	Yes	This will be covered in the Flood Risk Assessment and will also be reported in ES, both in terms of the risk to the Scheme and increased risk caused by the Scheme.	Property and people in areas of increased flood risk.	**Chapter 15 Water Environment** Mitigation will be considered and, where necessary, incorporated into the Scheme design.
5.5	Mast and Tower Collapse	No	Not applicable as there are no masts or towers nearby.	N/A	N/A
5.6	Building failure or fire	No	No buildings are close enough to the Scheme for it to be affected by building failure or fire.	N/A	N/A
5.7	Utilities failure (gas, electricity, water, sewage, oil, communications)	Yes	The Scheme has the potential to affect existing utility infrastructure below ground. To identify any existing infrastructure constraints, both consultation and a desk-based study will be undertaken.	Employees and local residents	**Chapter 16 Other Environmental Topics** Consultation with relevant utilities providers is a routine part of solar development and consultees will include water, gas and electricity utilities providers and telecommunications providers as appropriate. Information obtained from consultation will be used to inform the layout design.
6.	**Industrial Accidents**				
6.1	Defence industry	No	Not applicable as there is no defence manufacturing nearby.	N/A	N/A

Ref	Major accident or disaster	Relevant for short list?	Why?	Potential receptors	Covered already in Proposed ES? If so, where?
6.2	Energy Industry (fossil fuel)	No	Not applicable as there is no energy industry (fossil fuel) nearby.	N/A	N/A
6.3	Nuclear Power	No	Not applicable as there are no nuclear power stations nearby. Dungeness power station is 12km away and is due to be decommissioned by 2028.	N/A	N/A
6.4	Oil and gas refinery/storage	No	Not applicable as there is no relevant industry nearby.	N/A	N/A
6.5	Food Industry	No	Not applicable as there is no relevant industry nearby.	N/A	N/A
6.6	Chemical Industry	No	Not applicable as there no relevant industry nearby.	N/A	N/A
6.7	Manufacturing Industry	No	Not applicable as there no relevant industry nearby.	N/A	N/A
6.8	Mining / Extractive Industry	Yes	There is the potential for current or past quarrying activity in the vicinity to lead to unstable ground conditions. However, the risk will be considered as part of the geotechnical design, ensuring that the risk is designed out.	Employees and local residents	N/A
7	**Terrorism/Crime/Civil unrest**	No	The Scheme is unlikely to be a target for these types of incidents due to its rural location and low number of exposed targets.	N/A	N/A
8	**War**	No	The Scheme is no more vulnerable than any other infrastructure.	N/A	N/A
9	**Unexploded Ordnance (UXO)**	Yes	The western extent of the Site was part of Newchurch Advanced Landing Ground (ALG) during World War II. This was a temporary ALG operating between July 1943 and September 1944 with two runways, various dispersal areas, blister hangers, tents, firing bays, gun site and a fuel store. Four V1 impacts have been noted in the vicinity of the runways.	Human Health	UXO Risk Assessment A UXO Risk Assessment will be conducted prior to ground investigation to establish the risk of UXO on Site. This follows the findings of Appendix I: Preliminary Risk Assessment (PRA) of the Scoping Report.
10	**Disease**				
10.1	Human disease	No	The Scheme is considered no more vulnerable than any other infrastructure.	N/A	N/A
10.2	Animal disease	No	The Scheme is considered no more vulnerable than any other infrastructure.	N/A	N/A

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10.3	Plant disease	Yes	New planting may be susceptible to biosecurity issues, such as the increased prevalence of pests and diseases, due to climate change.	Habitats and species	**Chapter 8 Ecology and Nature Conservation** **Chapter 9 Landscape and Visual Amenity** (including Landscape and Ecology Management Plan) The planting design will take account of biosecurity risks through a wider mix of species including some non-natives.

sse Renewables