



CLEVE HILL SOLAR PARK

UPDATES TO APPLICATION DOCUMENTS MITIGATION ROUTE MAP

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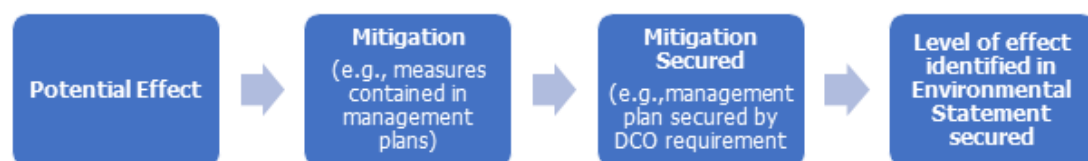
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CLEVE HILL
SOLAR PARK

1 SUMMARY AND INTRODUCTION

1. Cleve Hill Solar Park is a proposed solar photovoltaic (PV) array electricity generating facility and electrical storage facility, each with a total capacity exceeding 50 megawatts (MW), and an export connection to the National Grid (the Development).
2. An Environmental Statement (ES) and Report to Inform an Appropriate Assessment (RIAA) have been prepared on behalf of the Applicant in relation to an application to be made to the Secretary of State (SoS) for Department for Business, Energy & Industrial Strategy (BEIS), under Section 37 of the Planning Act 2008.
3. The Application is for a Development Consent Order (DCO) for the construction, operation and maintenance, and decommissioning of Cleve Hill Solar Park. The Development is classified as a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008. An Environmental Impact Assessment (EIA) has been undertaken for the Development and as such The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) apply.
4. As set out in the RIAA, Habitats Regulations Assessment (HRA) fulfils the requirements of articles 6(3) and (4) of European Council Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora (the Habitats Directive) and the first sentence of article 4(4) European Council Directive 2009/147/EC on the conservation of wild birds (the Birds Directive) as implemented in English law via the Habitats Regulations (the Conservation of Habitats and Species Regulations 2017). Under the terms of this legislation, a HRA is required before a project which may affect a European Site can be lawfully undertaken or authorised. HRA includes the competent authority carrying out an Appropriate Assessment (AA), which the RIAA is provided to inform¹.
5. This Mitigation Route Map summarises the mitigation measures identified within the ES (Table 1) and RIAA (Table 2) and sets out how they are secured.
6. This Mitigation Route Map demonstrates that the proposed mitigation measures referred to in the ES and RIAA will be implemented and the Development will therefore lead to, at worst, the effects assessed in the ES and RIAA. The logical interpretation of this is shown in the figure below in respect of the ES (also applicable to the RIAA).



7. This Mitigation Route Map is supported by Appendix A, which sets out the primary management plan and any secondary documents to which the primary plans refer. Appendix A also summarises where each plan is secured and the types of mitigation measures included in each plan or secondary document.

¹ The Planning Inspectorate (2017). Advice note ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/06/Advice-note-10v4.pdf> [accessed on 12/11/2019].

1.1 POTENTIAL EFFECTS

8. The ES assesses the potential effects of the Development, with the Development being defined by the Development Description (Chapter 5), the Outline Design Principles and embedded measures, which comprise the measures set out in the Outline Landscape and Biodiversity Management Plan (LBMP) and the Outline Construction Environment Management Plan (CEMP). As a result, potential effects that may arise in the absence of these embedded measures are not assessed. There is, therefore, a requirement for the Development to proceed with the embedded measures in place for the potential effects to be as assessed in the ES.
9. The RIAA refers back to the ES for the description of the project for which effects are assessed and, similarly to the ES, refers to embedded mitigation set out in the LBMP and CEMP. As a result, potential effects that may arise in the absence of these embedded measures are not assessed. There is, therefore, a requirement for the Development to proceed with the embedded measures in place for the potential effects to be as assessed in the RIAA.

1.2 MITIGATION MEASURES

10. This Mitigation Route Map includes all mitigation to which the Applicant is committed in the ES and RIAA, including both specific mitigation measures and embedded mitigation measures (where these are not part of the inherent design shown on plans, such as the potential location of solar PV modules in each field). It also includes all mitigation, whether to mitigate significant effects or not-significant effects.
11. Monitoring is not included in this summary unless mitigation actions rely on the findings of such monitoring. Monitoring is proposed in respect of certain aspects of the Development and any monitoring will be undertaken in accordance with the monitoring provisions of various construction and operational management plans to be approved by the relevant authorities according to the Requirements of the DCO.

1.3 SECURING THE MITIGATION MEASURES AND EMBEDDED MITIGATION MEASURES

12. This Mitigation Route Map includes cross references to the DCO, identifying where the mitigation (including both specific mitigation measures and embedded mitigation measures) is secured by Requirement.
13. References to control documents are provided to the latest version of application documentation and are up to date as of Deadline 7 of the examination.
14. The Applicant will ensure that the mitigation is delivered by making it a contractual requirement in the contract between the Applicant and the Main Contractor (during construction) and/or the Asset Management contractor (during operation). In some cases the Applicant will engage a suitably qualified and experienced consultant to deliver the mitigation.

2 MITIGATION

Table 1 - ES Mitigation

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.1) [APP-035] / [APP-202]	N/A – Embedded Mitigation	The total area of solar PV modules in each field will not exceed the solar PV module areas set out in Technical Appendix A5.1 and a total area of 176.3399 ha.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1) [APP-035] / [APP-202]	N/A – Embedded Mitigation	The minimum height of the lowest part of the solar PV modules will be 1.2 m AGL.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1) [APP-035]	N/A – Embedded Mitigation	The maximum height of highest part of the solar PV modules will be 3.9 m above ground level (AGL).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1) [APP-035]	N/A – Embedded Mitigation	The solar PV modules will be dark blue, grey or black in colour.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1) [APP-035]	N/A – Embedded Mitigation	The minimum separation at the central ridge of the array tables will be 300 mm. The minimum east-west separation between the external parameters of array tables will be 2.5 m.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.1) [APP-035]	N/A – Embedded Mitigation	String inverters will be used which will be mounted beneath the solar PV modules on the solar PV module mounting structures.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Inverters
Chapter 5 Development Description (5.4.1) [APP-035]	N/A – Embedded Mitigation	The transformers will not exceed the maximum height AGL of the solar PV modules in the same solar PV array field as set out in Technical Appendix A5.1 (except during a flood event for floating transformers).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Transformers
Chapter 5 Development Description (5.4.1) [APP-035]	N/A – Embedded Mitigation	All cable circuits within the solar PV array fields will be secured to the solar PV module mounting structures or will be underground. No new overhead lines will be constructed.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Electrical Cabling
Chapter 5 Development Description (5.4.1.1) [APP-035] / [APP-053]	N/A – Embedded Mitigation	Maximum extent of Solar PV Array fields.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Fields
Chapter 5 Development Description (5.4.1.2) [APP-035]	N/A – Embedded Mitigation	Crystalline silicone solar PV modules will be used.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1.2) [APP-035]	N/A – Embedded Mitigation	A maximum of 50 pyranometers will be located across all the solar PV array fields (including any extension in Work No. 2 & 3), not less than 100 m from the Saxon Shore Way.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1.2) [APP-	N/A – Embedded Mitigation	Maximum surface area of all of the solar PV modules within each field. Shown on the design in Figure 5.2 and set out in Technical Appendix A5.1.	DCO Requirement 2 (Detailed design approval)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
035] / [APP-053] / [APP-202]			Outline Design Principles, Table 5.1, Solar PV Array Fields
Chapter 5 Development Description (5.4.1.3) [APP-035]	N/A – Embedded Mitigation	The maximum depth of piles will be 2 m below ground level.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1.3) [APP-035]	N/A – Embedded Mitigation	The mounting structures will be bare metal in appearance.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Modules and Mounting Structures
Chapter 5 Development Description (5.4.1.5) [APP-035]	N/A – Embedded Mitigation	The transformers will be of a design suitable to protect them against flooding either through resistance or resilience measures.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Transformers
Chapter 5 Development Description (5.4.1.5) [APP-035]	N/A – Embedded Mitigation	The location of the transformers is limited to within the solar PV array fields and the scale of the transformers to not exceed 3 m in height AGL	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Transformers
Chapter 5 Development Description (5.4.1.6) [APP-035]	N/A – Embedded Mitigation	AC cables from the inverters to the transformers will be fixed to the solar PV module mounting structures before reaching ground level where they will be undergrounded or run in cable conduits above ground to reach the transformers.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Electrical Cabling
Chapter 5 Development Description (5.4.1.6) [APP-035]	N/A – Embedded Mitigation	AC cables between the transformers and the Development substation will be undergrounded.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Electrical Cabling

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.1.6) [APP-035]	N/A – Embedded Mitigation	The maximum underground cable depth will be 2 m below finished ground level or ditch bottom (except where other separation is required to avoid existing services).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Cable Circuits
Chapter 5 Development Description (5.4.1.7) [APP-035]	N/A – Embedded Mitigation	Planting and management of grassland, hedgerows, trees and areas of scrub is proposed across the site for landscape, visual and biodiversity mitigation and enhancement.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Habitat Management Areas DCO Requirements 5 and 6 (LBMP) Outline LBMP, whole document
Chapter 5 Development Description (5.4.1.8) [APP-035]	N/A – Embedded Mitigation	If there remains a surplus post construction, small mounds of site won material of up to 3 m in height may be formed in vacant areas of the Development site to provide a range of habitats for certain species.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix A - Grazing Marsh Grassland Management Plan
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The crest of the flood protection bund will be located at a height above ordnance datum (AOD) of 5.316 m to protect against the modelled 1 in 1,000 year flood event including a simulated breach of the existing coastal flood defences. The crest of the flood protection bund will be located at a height above ordnance datum (AOD) of not more than the highest point of the existing coastal sea defences.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Protection Bund
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	As much site won material from within the electrical compound area will be used to construct the bund as is reasonably practicable.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Protection Bund

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The energy storage facility will be located within the area marked as Work No. 2 & 3 on the Works Plan [APP-007].	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Energy Storage Facility
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The components of the energy storage facility will not be higher than the top of the flood protection bund.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Energy Storage Facility
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The Development substation will be located within the area marked as Work No. 2 & 3 on the Works Plan [APP-007].	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Development Substation
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The components of the Development substation will be a maximum of 13.6 m in height AOD.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Development Substation
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The dimensions of any building (i.e., a structure with a roof and walls) forming part of the Development Substation will be limited to a maximum footprint of 1,600 m ² (e.g., 40 m by 40 m) with a maximum height of 8.8 m AOD. The colour of the Development substation components which extend above the flood protection bund will be in keeping with the existing Cleve Hill Substation and/or the local vernacular.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Development Substation
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	The equipment and buildings will be designed to fit with other local infrastructure, such as the existing Cleve Hill Substation.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Development Substation

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.2) [APP-035]	N/A – Embedded Mitigation	<p>The Development substation will be located within the area marked as Work No. 2 & 3 on the Works Plan (Appendix B and Document Reference: 2.2).</p> <p>The Development substation will be located in the southeast corner of the area marked as Work No. 2 & 3 on the Works Plan, in order to minimise the length of connecting cable required to the grid connection point at the existing Cleve Hill Substation.</p>	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Development Substation
Chapter 5 Development Description (5.4.3) [APP-035]	N/A – Embedded Mitigation	The cable between the electrical compound and the existing Cleve Hill Substation will be underground.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Grid Connection
Chapter 5 Development Description (5.4.4) [APP-035]	N/A – Embedded Mitigation	The site access road will be tarmacadam between the existing site entrance and the electrical compound marked as Work No. 2 & 3 on the Works Plan.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Site Access
Chapter 5 Development Description (5.4.4) [APP-035]	N/A – Embedded Mitigation	The site access road will be of permeable stone construction to the west of the first ditch crossing west of the electrical compound marked as Work No. 2 & 3 on the Works Plan (DCO Document Reference: 2.2).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Site Access
Chapter 5 Development Description (5.4.4) [APP-035]	N/A – Embedded Mitigation	<p>A public footpath crosses the site access point from Seasalter Road and appropriate provision for pedestrian access will be maintained throughout construction and operation, with particular emphasis on the safety of users during the construction phase.</p> <p>Whilst the main phase of construction activity is undertaken to construct the spine road and in Fields A, B, C, K and L to the west of this crossing, the public footpath will be constantly supervised during construction hours to ensure public safety.</p> <p>An alternative route to link the two ends of the footpath via the Saxon Shore Way will be signposted throughout the construction phase.</p>	DCO Requirement 12 (CTMP) Outline CTMP, Appendix G - Public Rights of Way Management Plan
Chapter 5 Development Description (5.4.4) [APP-035]	N/A – Embedded Mitigation	Mammal and eel/elver friendly box-section culverts will be utilised for new and upgraded culverts.	DCO Requirement 5 (LBMP)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
			<p>Outline LBMP, Section 3, Table 1, Protection of Species and Section 4, Table 2, Aquatic Habitats</p> <p>DCO Requirement 11 (CEMP) Outline CEMP, Appendix E</p>
Chapter 5 Development Description (5.4.5) [APP-035]	N/A – Embedded Mitigation	The arable reversion habitat management area will provide a minimum of 50.1 ha of functional habitat management land for brent geese, lapwing and golden plover. The functional habitat management land will be calculated by subtracting the total area of land within 50 m of the solar PV modules and/or transformers, crest of the flood protection bund, edge of a road surface, and not within an existing designation from the total area set aside for management to the north and east of the electrical compound marked as Work No. 2 & 3 on the Works Plan (DCO Document Reference: 2.2).	<p>DCO Requirement 5 (LBMP)</p> <p>Outline LBMP, Appendix J - AR HMA Habitat Management Plan</p>
Chapter 5 Development Description (5.4.5) [APP-035]	N/A – Embedded Mitigation	The slopes of fields Y and Z where solar PV modules were previously included in early conceptual design will be managed as a lowland meadow, a UK and local biodiversity action plan priority habitat.	<p>DCO Requirement 5 (LBMP)</p> <p>Outline LBMP, Appendix B - Lowland Grassland Meadow Habitat Management Plan</p>
Chapter 5 Development Description (5.4.5) [APP-035]	N/A – Embedded Mitigation	<p>Some of the measures that will be implemented in the AR HMA include:</p> <ul style="list-style-type: none"> • Sowing with a grass/clover seed mix; • A revised water management regime; • Application of organic matter to promote growth of a nutritious grass sward; and • Controlled grazing (and/or cutting) to promote an appropriate sward length. 	<p>DCO Requirement 5 (LBMP)</p> <p>Outline LBMP, Appendix J - AR HMA Habitat Management Plan</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.5) [APP-035]	N/A – Embedded Mitigation	The aim of the LGM HMA is to establish a grassland sward with greater ecological value than the existing arable land. Arable agricultural land may be one of the most challenging types of habitat to convert/attempt sward enhancement due to its high soil fertility which promotes dominance by a limited diversity of competitive plant species which limits the establishment and success of less-competitive wildflowers and fine grasses. Consequently, grassland enhancement/ restoration is a complex process requiring monitoring and intervention over several years to ensure success, especially on sites with a long history of agricultural improvement.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix B - Lowland Grassland Meadow Habitat Management Plan
Chapter 5 Development Description (5.4.6) [APP-035]	N/A – Embedded Mitigation	Flood defence maintenance activities will include works that: <ul style="list-style-type: none"> • use the same materials as those present to date; • do not alter the plan form or cross section of the original defences; • do not provide an overall increase/reduction in flood level; and • do not require excavations of beach material deeper than 1.5 m. 	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Defence Maintenance DCO Schedule 8, Deemed Marine Licence, Part 1, 2(2)(1)(aa).
Chapter 5 Development Description (5.4.6) [APP-035]	N/A – Embedded Mitigation	Flood defence works required in an emergency can be carried out without the requirement for additional consents, and are defined as activities carried out in response to any flood, or in response to the imminent risk to property (including the Development infrastructure) from flooding.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Defence Maintenance
Chapter 5 Development Description (5.4.6) [APP-035]	N/A – Embedded Mitigation	The flood defence maintenance activities will be undertaken within the area marked as flood defences on Figure 5.2.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Defence Maintenance

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.4.7) [APP-035] / [APP-202]	N/A – Embedded Mitigation	Fencing and CCTV equipment will not exceed the maximum height AGL of the solar PV modules in the closest solar PV array field as set out in Technical Appendix A5.1.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	No lighting will be permanently operated.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting DCO Requirement 5 (LBMP) Outline LBMP, Section 3, Table 1, Protection of Species and Section 4, Table 2, Lighting DCO Requirement 11 (CEMP) Outline CEMP, Section 1.2
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	Fencing (excluding security fencing within the electrical compound (work no. 2 and 3) and temporary stock proof fencing), will be of a “deer fence” design, with wooden post supports and metal stock fencing.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	The fence will incorporate mammal gates at regular (every 50 m) intervals to avoid the fence acting as a barrier to movement of mammals through the Development site.	DCO Requirement 5 (LBMP) Outline LBMP, Section 3, Table 1, Protection of

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
			Species and Section 4, Table 2, Fencing DCO Requirement 11 (CEMP) Outline CEMP, Appendix E
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	A 1.2 m high post and wire stock fence will also be installed alongside Cleve Hill Road to prevent unauthorised access to the lowland grassland meadow habitat management area in the southeast of the Development site. Gates will be installed to ensure continued public access via the public footpath which crosses the area, and to allow vehicle access for land management.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Habitat Management Area
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	Where the cameras are adjacent to publicly accessible locations or private property, the equipment will be sensitively located, and can also be “digitally blanked” in order to prevent privacy issues.	The Data Protection Act 1998 The Information Commissioner’s Office CCTV Code of Practice 2008.
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	Visible lighting, which will be manually controlled and switch on only when activated by passive infra-red (PIR) sensors for security / emergency purposes, will be deployed around the electrical compound and at the transformers within the fields of the solar PV arrays. The lighting will be fixed to the transformers themselves rather than being stand alone. No areas of the Development will be continuously lit during operation.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 5 Development Description (5.4.7) [APP-035]	N/A – Embedded Mitigation	A permissive path will be created linking public right of way ZR484 (the Saxon Shore Way) with ZR488 along the alignment shown in green on the Rights of Way Plan [APP-008].	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Permissive Paths / Public Rights of Way
Chapter 5 Development Description (5.5.1) [APP-035]	N/A – Embedded Mitigation	Phase one of Development construction is currently anticipated to last 24 months.	DCO Requirement 4 (Phases of authorised development)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
			DCO Requirement 12 (CTMP) Outline CTMP, paragraph 1.1.6
Chapter 5 Development Description (5.5.1) [APP-035]	N/A – Embedded Mitigation	To build the solar PV array, the field identification detailed in Technical Appendix A5.1, Field Data, will be utilised. A small temporary field compound will be established in an adjacent field to serve the field under construction. Temporary construction compounds will be located adjacent to the spine road (for all fields except Q/U, V, W and X) and at least 10 m away from the nearest drainage ditch (for all fields).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Temporary Construction Compounds DCO Requirement 4 (Phases of authorised development)
Chapter 5 Development Description (5.5.1) [APP-035]	N/A – Embedded Mitigation	Construction phase two of the Development includes the establishment of the energy storage facility and is expected to last a total of up to 6 months but this could sub-phased.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.2, Phase Two - Energy Storage Facility Construction DCO Requirement 4 (Phases of authorised development)
Chapter 5 Development Description (5.5.1) [APP-035]	N/A – Embedded Mitigation	If phase two were delivered separately, it would be subject to the same design principle HGV traffic limitations set out in section 5.5.2.2 of Chapter 5 [APP-035] and would also be subject to a design principle limiting phase two construction to 6 months.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.2, Phase Two - Energy Storage Facility Construction DCO Requirement 4 (Phases of authorised development)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.5.2.1) [APP-035]	N/A – Embedded Mitigation	An Outline Construction Traffic Management Plan (CTMP) has been developed as part of the EIA which will guide the delivery of materials and staff onto the Development site during the construction phase.	DCO Requirement 12 (CTMP) Outline CTMP, whole document
Chapter 5 Development Description (5.5.2.1) [APP-035]	N/A – Embedded Mitigation	A design principle has been established in respect of maximum HGV movements of 80 HGV vehicle movements per day (40 HGVs visiting site per day).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.2, Heavy Goods Vehicle (HGV) movements
Chapter 5 Development Description (5.5.2.1) [APP-035]	N/A – Embedded Mitigation	HGV delivery hours are restricted to avoid peak times at sensitive receptors on the delivery route.	DCO Requirement 12 (CTMP) Outline CTMP, Section 6.4
Chapter 5 Development Description (5.5.2.2) [APP-035]	N/A – Embedded Mitigation	An Outline Construction Environmental Management Plan (CEMP) has been developed as part of the EIA which will guide the construction process through environmental controls in order to promote good construction practice and avoid adverse impacts during the construction phase.	DCO Requirement 11 (CEMP) Outline CEMP, whole document
Chapter 5 Development Description (5.5.2.2) [APP-035]	N/A – Embedded Mitigation	Core working hours are proposed to be between 07.00 until 19.00, Monday to Friday and 07.00 until 13.00 on a Saturday (unless in exceptional circumstances where need arises to protect plant, personnel or the environment).	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.1
Chapter 5 Development Description (5.5.2.2) [APP-035]	N/A – Embedded Mitigation	Depending on the time of year, some work lighting may be required to facilitate construction during these hours.	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.2
Chapter 5 Development Description (5.5.3) [APP-035]	N/A – Embedded Mitigation	The main temporary construction compound will be established within the electrical compound on the site of the energy storage facility prior to installation of the energy storage infrastructure.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Temporary Construction Compounds
Chapter 5 Development Description (5.5.3) [APP-035]	N/A – Embedded Mitigation	The energy storage plant will be constructed either separately, or is likely to be one of the last elements of the project to be installed and therefore this area can be utilised for construction purposes for the majority of the construction phase.	DCO Requirement 4 (Phases of authorised development)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
			DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5
Chapter 5 Development Description (5.5.3.1) [APP-035]	N/A – Embedded Mitigation	The main temporary construction compound of approximately 10,000 m ² (100 x 100 m) will be established on the energy storage facility area during the construction phase.	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5
Chapter 5 Development Description (5.5.3.2) [APP-035]	N/A – Embedded Mitigation	A small unsurfaced temporary compound with welfare facilities and storage of tools and materials will be established adjacent to each field under construction. No fuel or oil will be stored in these areas, which will generally be located adjacent to the spine road (where it provides access directly to the field) and/or at least 10 m away from the nearest drainage ditch.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Temporary Construction Compounds
Chapter 5 Development Description (5.5.4) [APP-035]	N/A – Embedded Mitigation	Depending on weather conditions during construction, temporary roadways (e.g., plastic matting) may be utilised to access parts of the Development site during construction to avoid excessive soil disturbance or compaction.	DCO Requirement 11 (CEMP) Outline CEMP, Section 5.5
Chapter 5 Development Description (5.5.5) [APP-035]	N/A – Embedded Mitigation	At the commencement of construction and following completion, a programme of landscaping and habitat creation will commence.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, whole document
Chapter 5 Development Description (5.6.2) [APP-035]	N/A – Embedded Mitigation	During operation, vegetation within the Development site will be grazed by sheep.	DCO Requirement 5 (LBMP) Appendix A – Grazing Marsh Grassland Management Plan
Chapter 5 Development Description (5.6.2) [APP-035]	N/A – Embedded Mitigation	Temporary stock fencing will be utilised to keep sheep to areas around the solar PV arrays where vegetation control is required and separate them from areas where a more relaxed grazing regime may be desirable at certain times of year, for example around the ditch edge habitats. Stocking densities and breeds used will be chosen to fit the conditions onsite.	DCO Requirement 5 (LBMP) Appendix A – Grazing Marsh Grassland Management Plan

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 5 Development Description (5.6.3) [APP-035]	N/A – Embedded Mitigation	Solar PV modules are typically cleaned using distilled or deionized water. Detergents or abrasive products are not used as they have potential to damage the solar PV modules. The run-off from cleaning would therefore be clean water and would be dealt with in the same way as rainwater.	DCO Requirement 5 (LBMP) Appendix A – Grazing Marsh Grassland Management Plan
Chapter 5 Development Description (5.7) [APP-035]	N/A – Embedded Mitigation	When the operational phase ends, the Development will require decommissioning. All solar PV array infrastructure including solar PV modules, mounting structures, cabling, inverters and transformers would be removed from the Development site and recycled or disposed of in accordance with good practice and market conditions at that time. A Decommissioning Plan, to include timescales and transportation methods, will be agreed in advance with the local planning authority and will be subject to environmental controls and legislation extant at the time.	DCO Requirement 17 (Decommissioning) Outline Decommissioning and Restoration Plan
Chapter 7 Landscape and Visual Impact Assessment (7.4.3) [APP-037]	N/A – Embedded Mitigation	New hedgerow and hedgerow tree planting on south and south eastern part of the CLS Area. Species will be native and characteristic of species found within the area. Hedgerows will consist of a double staggered row of bare root hedge plants planted at a density of five plants per linear metre.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix C – Hedgerow (with trees) Management Plan
Chapter 7 Landscape and Visual Impact Assessment (7.4.4) [APP-037]	N/A – Embedded Mitigation	Native shrub and tree shelterbelt planting concentrated to the southern and eastern areas of the CLS Area. These areas are intended to create structure to the landscape and assist in screening the panels from residential and PROW receptors. Taller trees will also be planted to provide some height matching areas of similar character between the Graveney Fruit Farms and Graveney Arable Farmlands LCA. The mix also includes species such as Poplar and Alder to provide additional structure and character.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix D – Shelterbelt Management Plan
Chapter 7 Landscape and Visual Impact Assessment (7.4.5) [APP-037]	N/A – Embedded Mitigation	The majority of the CLS Area, from where the proposed compound is located in the east to the western part of the CLS Area, will form part of the grazing marsh where land will be grazed by sheep. On the south eastern part of the CLS Area an area of lowland meadow	DCO Requirements 5 and 6 (LBMP)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		planting is proposed. This will be maintained mechanically twice per year as hay meadow. The area in the west and north of the security fence is an area of proposed grazing marsh which will be maintained mechanically one every year after September to provide habitat for nesting birds and to ensure a replenishment of the seedbank is provided each year. To the east of the site compound an area of c. 56 ha is proposed as habitat management area for over wintering birds.	Outline LBMP Appendices: A: Grazing Marsh Grassland Management Plan; B: Lowland Meadow Grassland Management Plan; and J: Arable Reversion Habitat Management Area Management Plan.
Chapter 7 Landscape and Visual Impact Assessment (7.4.6) [APP-037]	N/A – Embedded Mitigation	Areas of scrub planting, mainly concentrated on the edge adjacent to the Saxon Shore Way, and near ditches and boundaries. More scrub areas are located on the western and northern edge of the CLS Area. These areas will help to enrich the areas of grassland creating a simple habitat and a replication of existing natural scrub establishment around the perimeter of the CLS Area.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix G – Scrub Planting Management Plan
Chapter 7 Landscape and Visual Impact Assessment (7.4.7) [APP-037]	N/A – Embedded Mitigation	The electrical compound will be enclosed in a bund, for protection from potential flood risk.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Protection Bund
Chapter 7 Landscape and Visual Impact Assessment (7.4.7) [APP-037]	N/A – Embedded Mitigation	On the northern, eastern, and western, edges of the bund around the electrical compound there will be native species buffer planting. On the southern edge of the bund a native species shelterbelt will be planted which is taller in size to assist with the screening of the taller substation equipment in this part of the compound. The buffer planting consists of trees and shrubs which will create informal and natural landscape features.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix F – (Electrical Compound) Buffer Planting Management Plan
Chapter 7 Landscape and Visual Impact Assessment (7.4.8) [APP-037]	N/A – Embedded Mitigation	An area of woodland planting is proposed in front of Warm House to the south of the CLS Area. This area of woodland is proposed following consultation with the resident to assist in screening the Development. The woodland planting provides an important habitat with the local area and contributes to the landscape	DCO Requirements 5 and 6 (LBMP)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		character of Graveney Fruit Farms, linking hedgerows, shelterbelts and woodlands as part of the local green infrastructure. The role of the proposed woodland planting will be to create a visual screen along a section of the southern boundary of the Development site immediately adjacent to Warm House and north of the Graveney Fruit Farms Landscape Character Area. This will extend the influence of the landscape character area and provide a dense visual screen between Warm House and the Development.	Outline LBMP, Appendix E – Woodland Management Plan
Chapter 7 Landscape and Visual Impact Assessment (7.5.2) [APP-037]	N/A – Embedded Mitigation	The removal of the 11 kV wooden pole line would remove a detracting feature present in the baseline where it crosses the CLS Area.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Undergrounding of existing overhead line
Chapter 7 Landscape and Visual Impact Assessment (7.6.1.1) [APP-037]	N/A – Embedded Mitigation	Lighting may be used during the construction phase (dependent on the time of year) if required and will be minimised as far as possible, and where used will be directed into the works area, away from nearby properties. Careful consideration of the siting of lighting will be undertaken and lighting will be positioned to minimise the spread of light pollution, and ensure that only the task work area or compound is lit to avoid effects on properties during the construction phase. Lighting will either be controlled by operatives and will have PIR (Passive infra-red) motion sensor activated security and emergency lighting. Construction would take place in a phased approach across the site, so any lighting would be localised to one part of the site at any one time.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting DCO Requirement 4 (Phasing of authorised development)
Chapter 7 Landscape and Visual Impact Assessment (7.6.2.4) [APP-037]	N/A – Embedded Mitigation	Lighting will be used during the operational phase but will be kept to a minimum and is associated with the compound and transformer elements within the solar panel areas and will be controlled by operatives and will have PIR (Passive Infra-Red) motion sensor activated security and emergency lighting. The lighting will be fixed to the plant itself rather than standalone.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 7 Landscape and Visual Impact Assessment (7.6.3.1) [APP-037]	N/A – Embedded Mitigation	Lighting may be used during the decommissioning phase (dependent on the time of year) if required and will be minimised as far as possible. Where its use is necessary it will be directed into the works area, away from nearby properties. Careful consideration of the siting of lighting would be required with lighting positioned to minimise the spread of light, and that only the task work area or compound is lit to avoid effects on receptors during the decommissioning phase. Lighting will either be controlled by operatives and will have PIR (Passive infra-red) motion sensor activated security and emergency lighting.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 8 Ecology (8.4, para 102) [APP-038]	N/A – Embedded Mitigation	New coastal grazing marsh habitats incorporating wildflowers	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix A – Grazing Marsh Grassland Management Plan
Chapter 8 Ecology (8.4, para 102) [APP-038]	N/A – Embedded Mitigation	New native species hedgerow planting	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix C – Hedgerow (with trees) Management Plan
Chapter 8 Ecology (8.4, para 102) [APP-038]	N/A – Embedded Mitigation	Areas of shelterbelt, which will incorporate tree planting	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix D – Shelterbelt Management Plan
Chapter 8 Ecology (8.4, para 102) [APP-038]	N/A – Embedded Mitigation	Native scrub buffer planting areas	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix G – Scrub Planting Management Plan

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 8 Ecology (8.4, para 104) [APP-038]	N/A – Embedded Mitigation	Deer fences that will encompass the areas in which Development infrastructure is to be located will incorporate mammal gates at regular intervals to avoid the fence acting as a barrier to movement through the Development site.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Section 3, Table 1, Protection of Species
Chapter 8 Ecology (8.5.1.1 (para 112 and 116), 8.5.4.1 (para 139), 8.7.5.3 (para 169)) [APP-038]	N/A – Embedded Mitigation	The cessation of large-scale fertiliser and pesticide applications to arable land	DCO Requirements 5 and 6 (LBMP) Outline LBMP, all land use changes from arable baseline
Chapter 8 Ecology (8.5.1.1, para 117) [APP-038]	N/A – Embedded Mitigation	Lowland meadow will be created within the east and west of the core ecology study area	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix B – Lowland Meadow Grassland Management Plan
Chapter 8 Ecology (Section 8.5.1.2 (para 122), 8.5.4.3 (para 144), 8.5.5.2 (para 151), 8.5.6.3 (para 161), 8.5.8.3 (para 178), 8.5.9.3 (para 186)) [APP-038]	Potential for construction dust to affect ecology, water quality and plants and flora.	Good practice measures will be adopted during construction to control the generation and dispersion of dust such that significant impacts on neighbouring habitats will not occur. The hierarchy for mitigation will be prevention, suppression then containment. Excavation and earthworks areas will be stripped as required in order to minimise exposed areas. During excavation works, drop heights from buckets will be minimised to control the fall of materials reducing dust escape.	DCO Requirement 11 (CEMP) Outline CEMP, Section 4.4

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>Completed earthworks and other exposed areas will be covered with topsoil and revegetated as soon as it is practical in order to stabilise surfaces.</p> <p>During stockpiling of loose materials, stockpiles shall exist for the shortest possible time.</p> <p>Material stockpiles will be low mounds without steep sides or sharp changes in shape.</p> <p>Material stockpiles will be located away from the site boundary, sensitive receptors, watercourses and surface drains.</p> <p>Material stockpiles will be sited to account for the predominant wind direction and the location of sensitive receptors.</p> <p>Water bowsers will be available on site and utilised for dust suppression during roadworks/ vehicle movements when and where required.</p> <p>Daily visual inspections will be undertaken to assess need for use of water bowsers, with increased frequency when activities with high potential to generate dust are carried out during prolonged dry or windy conditions.</p> <p>Shielding of dust-generating activities will be carried out.</p> <p>Enclosed chutes, conveyors and covered skips will be used.</p> <p>Vehicles carrying dry spoil and other wastes will be covered to prevent escape of materials.</p> <p>Wheel washing and wet suppression will be provided during loading of wagons/vehicles.</p> <p>Daily visual inspections will be undertaken to assess the condition of the junction of the site track with Seasalter Road and its approaches.</p>	
Chapter 8 Ecology (Section 8.5.1.2 (para 123) [APP-038])	Risk of accidental spills leading to chemical inputs to sensitive receptors (ditches and designated sites)	During construction, machinery will be regularly maintained to ensure that there is minimal potential for fuel or oil leaks / spillages to occur. All maintenance will be conducted on suitable absorbent spill pads to minimise the potential for groundwater and surface	DCO Requirement 11 (CEMP)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>water pollution. All machinery will be equipped with drip pans to contain minor fuel spillage or equipment leakages.</p> <p>Appointed refuelling personnel will be trained in the correct methods of refuelling on site to ensure that pollution incidents are prevented and a quick response plan is implemented (see Appendix F of the CEMPS - Incident Response Plan), should a spill occur, to minimise the impact of spills.</p> <p>Fuel delivery vehicles servicing the site will only be allowed as far as the construction compound. The construction compound will include a bunded refuelling area, and operations will only be permitted where they comply with the Contractor's method statement/ requirements.</p> <p>Fuel pipes on plant, outlets at fuel tanks, etc., will be regularly checked and maintained to ensure that no drips or leaks to ground occur. The following precautions will also be installed on fuel delivery pipes:</p> <ul style="list-style-type: none"> • Any flexible pipe, tap or valve must be fitted with a lock where it leaves the container and be locked when not in use; • Flexible delivery pipes must be fitted with manually operated pumps or a valve at the delivery end that closes automatically when not in use; • The pump or valve must have a lock and be locked when not in use; • Warning notices including "No smoking" and "Close valves when not in use" shall also be displayed; and • Spill kits will be available within each plant/ vehicle on site and also located close to identified pollution sources or sensitive receptors (fuel storage areas, water course crossings, etc.). <p>Irrespective of the buffer distances to watercourses and location of refuelling points, interceptor drip trays or similar (open metal drip trays are not acceptable) will be available in accordance with standard good practice across the construction industry. Interceptor drip trays will be positioned under any stationary mobile plant to prevent oil contamination of the ground surface or water. Plant and site vehicles are to be well maintained and any vehicles leaking fluids must be repaired or removed from site immediately. Any servicing</p>	<p>Outline CEMP, Sections 4.1 and 4.2</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>operations shall take place over drip trays.</p> <p>Potentially contaminating chemicals stored on site will be kept within a secure bunded area to prevent any accidental spills from affecting hydrological resources. The bunded area will be within the construction compound and will be underlain by an impermeable ground membrane layer to reduce the potential pathways for contaminants to enter watercourses and groundwater.</p> <p>Oil storage areas will be covered in order to prevent rainwater collecting within the bunded area.</p> <p>Further detail is presented in Section 3.1 of the Outline CEMP [REP4-009]: Accidental Spillage within Construction Compounds.</p> <p>The chemicals storage area would be kept secure to prevent theft of vandalism. A safe system for accessing the storage area would be implemented by the Construction Contractor.</p>	
<p>Chapter 8 Ecology (Section 8.5.1.2 (para 124) and 8.5.4.2 (para 140)) [APP-038]</p>	<p>Risk of siltation, loss of habitat and loss of connectivity along ditch corridors as a result of upgrading the ditch crossings and construction of the electrical compound</p>	<p>Methods to be used for upgrading of ditch crossings and construction of the electrical compound, including the following.</p> <p>Major construction works (e.g., large-scale earthworks) will be minimised during heavy precipitation events.</p> <p>Minimum buffer zone distances of 5 m and 8 m from non-IDB and IDB drainage ditches, respectively will be observed for all infrastructure (with the exception of fence crossings, culverts and access tracks) and drainage ditches onsite.</p> <p>Drainage from the Development site will include elements of Sustainable Drainage Systems (SuDS) design, where appropriate. SuDS replicate natural drainage patterns and have a number of benefits:</p> <ul style="list-style-type: none"> • SuDS will attenuate run-off, thus reducing peak flow and any flooding issues that might arise downstream; • SuDS will treat run-off, which can reduce sediment and pollutant volumes in run-off before discharging back into natural drainage network; and • SuDS measures, such as lagoons or retention ponds, correctly implemented will produce suitable environments for wildlife. 	<p>DCO Requirement 11 (CEMP)</p> <p>Outline CEMP, Section 2</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>Silt traps may be utilised to trap and filter sediment-laden run-off from excavation works at the Development, including foundations for the compound and access roads.</p> <p>Good practice will be followed prior to placement of silt traps adjacent to watercourses and land drains. Silt matting may be placed at the outfall of settlement lagoons to filter sediment during times of heavy rainfall.</p> <p>The silt traps and silt matting will be monitored by the Ecological Clerk of Works (ECoW) and replaced when necessary.</p> <p>Check dams will be installed within drainage ditches at regular intervals, where appropriate.</p> <p>Check dams will facilitate the settlement of suspended solids by slowing the flow of water within the drainage ditches. Appropriately sized stone pitching will be used within the dam in order to provide a rough surface for water within the drainage ditch to pass over.</p> <p>Settlement lagoons will be implemented, where appropriate, at the electrical compound excavations. The location and management of settlement lagoons is important and will not be sited within habitat management areas.</p> <p>All settlement lagoons will be actively managed to control water levels and ensure that any runoff is contained, especially during times of rainfall. If required to achieve the necessary quality of the final run-off, further measures may include the use of flocculent to further facilitate the settlement of suspended solids.</p> <p>Settlement lagoon outflow will be regularly inspected and discharge may be pumped, when required, for maintenance purposes. Any pumping activities will be supervised and authorised by the Contractor's Project Manager.</p> <p>Treated water will be discharged onto vegetated surfaces and directed away from surface watercourses. Within all catchments, irrigation techniques, which may include the use of perforated discharge hoses, or similar, will be employed to rapidly distribute discharge across a vegetated area. This will be carried out in consultation with the ECoW.</p> <p>'Siltbusters' will be used to treat pumped/surplus water from lagoons during periods of heavy or persistent rainfall.</p>	

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>Silt mats may be used at the outfalls of settlement lagoons to further aid the settlement from earthworks drainage.</p> <p>Along the access tracks, drainage channels on the down-slope would shed track run-off to adjacent rough ground approximately every 30 m, to attenuate flow and allow natural filtration to remove sediments.</p> <p>The substation building may house a toilet facility and hand basin for visiting maintenance staff during the operational phase. Should this facility be required, rainwater will be collected from the roof of the building via a gutter and inlet pipe to fill a rain water harvesting tank.</p> <p>Effluent and waste from onsite construction personnel will be treated at a package sewage treatment plant or a septic tank and will be discharged into a drainage field, in accordance with PPG4. The system will be designed prior to the construction phase of the Development and shall be designed and approved by the EA prior to construction.</p> <p>During the construction phase, 'Porta-loo' type facilities, or equivalent, will be used and emptied by a waste contractor, therefore minimising potential effects on drainage ditches and watercourses.</p> <p>One drainage ditch, passing through the site of the electrical compound, will require diversion to ensure hydrological continuity. The section of the drainage ditch will be isolated using barriers that span the full width of the watercourse. This keeps a stretch of the ditch dry and the water is transferred downstream of the works area by mechanical assistance (pumping), until the long-term diversion, via a new ditch to the east, is operational. The pump and associated pipework need not be located in the isolated area.</p> <p>It may be necessary to pump water from upstream of the barrier to downstream of the works area, i.e., maintain 'normal' flow in the watercourse either side of the isolated reach. Depending on the gradient of the watercourse, it may also be necessary to install a full width barrier downstream of the work area to prevent ingress of water.</p>	

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		Pumps will be kept at least 10 m from the edge of the channel and on drip trays or within bunds that have a capacity 110 % of that of the fuel tank.	
Chapter 8 Ecology (Section 8.5.5.3 para 152) [APP-038]	Criminal offences occur in relation to GCN	<p>EPS Mitigation licence to be obtained from Natural England post-DCO application, which must be granted prior to any work commencing in areas of habitat supporting GCN. The method statement to be agreed with Natural England under licence will likely include, but not be limited to the following aspects:</p> <ul style="list-style-type: none"> • The population size recorded within offsite ponds will be determined in accordance with the Great Crested Newt Mitigation guidelines in the latest season prior to the start of works. • The minimum number of nights trapping will be informed by updated GCN surveys that will record the latest distribution and population size estimates within ponds. However, the minimum trapping days may be longer as trapping will need to occur until all newts are removed from site and traps fail to catch great crested newts over 5 consecutive nights. • All suitable GCN habitats will be trapped out using perimeter and drift fencing. Pitfall traps will be installed adjacent to the inside of the perimeter fence and on both sides of the internal drift fencing. Refugia such as carpet tiles will also be deployed to enhance the capture rate. • Any GCN found will be translocated to a dedicated receptor area the details of which will be agreed with Natural England. • Consequently, trapping will occur until all GCN are removed from within the development areas where this species has the potential to be impacted. <p>The removal of vegetation and a destructive search will be undertaken after a thorough hand search of the area and supervised by a suitably qualified ecologist, with a tool box talk to be given to all contractors by a suitably qualified Ecological Clerk of Works (ECoW) before works proceed.</p>	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Section 3, Table 1, Great-crested newt (GCN) construction mitigation

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 8 Ecology (Section 8.5.6.1, para 157) [APP-038]	Loss of 355 m of ditch with habitat unsuitable for water voles – opportunity for enhancement	Provision of a new c. 355 m replacement length of diverted ditch	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Drainage Ditches DCO Requirement 5 (LBMP) Outline LBMP, Appendix H - Aquatic Habitat Management Plan
Chapter 8 Ecology (Section 8.5.6.4, para 162) [APP-038]	Criminal offences occur in relation to water vole	Licencing will be agreed with Natural England and granted prior to any works commencing. Licencing will be required in areas of suitable ditch network habitat where water vole burrows are evident. Details of licencing requirements and approach can be found in Appendix H of the LBMP – the Aquatic Habitat Management Plan (AHMP).	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Section 3, Table 1, Protection of Species and Water vole Construction Mitigation Appendix H - Aquatic Habitat Management Plan
Chapter 8 Ecology (Section 8.5.7.2, para 166) [APP-038]	Disturbance to terrestrial habitats of value to bats due to lighting during the operational phase	Security lighting during the operational phase will be manually operated and on PIR sensors and will not be on continuously, and given the rural nature of the site, it is unlikely that the security lighting would be often triggered.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 8 Ecology (Section 8.5.7.4, para 170) [APP-038]	Criminal offences occur in relation to bats	Night-time lighting during construction (if installed) will be minimised as far as possible and where used will be directed into the works area, away from potential habitats of value to bats and other nocturnal creatures, if compatible with operational Health and Safety procedures. Any lighting required for public safety and security purposes near bat roosts or bat flight lines have the potential to alter the	DCO Requirement 5 (LBMP) Outline LBMP, Section 3, Table 1, Protection of Species and Section 4, Table 2, Lighting

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>distribution of artificial lighting on site, which may impact on the flight and foraging behaviour of bats present in the area. Light levels during construction (and post construction) should be carefully managed to ensure they do not impact on potential bat foraging/commuting habitat such as hedgerows, waterbodies, ditches and marginal habitats. The following approach based on BCT guidelines can help when designing the lighting strategy for the site:</p> <ul style="list-style-type: none"> • Lighting in ecologically sensitive areas within the core study area such as ditch habitats, and towards sensitive habitats outwith the core study area such as: trees and mature habitats, and the adjacent South Bank of the Swale LNR will be avoided; • The siting of lights will avoid locations where lighting could reflect off solar panels and other reflective surfaces; • Lighting will be positioned to minimise the spread of light to, at, or below horizontal and ensure that only the task work area or compound (during the construction phase) or security area (operational phase) is lit; • Flat cut-off lanterns or accessories will be used to shield or direct light to where it is required, with the height of lighting columns optimised to ensure light spill is minimised and non-target areas are not lit; • The demarcation of works areas (temporary and permanent) with white lining, good signage and LED cats eyes to reduce lighting requirements in the core study area. Ensure only high-risk areas of the core study area are lit, allowing headlights or torchlight to provide any necessary illumination at other times; • Lights will be limited to such that there are dark periods within the core study area. This will include measures such as the use of adaptive lighting, to reduce lighting intensity from lights, adjustment to the timing of lighting within the core study area, and provision of motion sensitive lighting to suit human health and safety as well as wildlife needs; and • Technical specifications to lighting will include the use of narrow spectrum light sources to lower the range of species affected by lighting, the use of light sources that emit minimal ultra-violet light, with a lighting peak no higher than 550 nm. White and blue wavelengths of the light spectrum will be 	

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>avoided to reduce insect attraction, and where white light sources are required in order to manage the blue short wave length content they should be of a warm /neutral colour temperature.</p>	
<p>Chapter 8 Ecology (Section 8.5.8.4, para 179) [APP-038]</p>	<p>Criminal offences occur in relation to reptiles</p>	<p>Any work commencing in areas of suitable field margin habitat where reptiles are evident will need to commence following the Reptile Mitigation Strategy (RMS) set out below. This will be implemented during the construction phase of the Development. The RMS includes the following aspects:</p> <ul style="list-style-type: none"> • The trapping of reptiles will be completed in suitable weather and temperatures between April and the end of September and prior to construction activity. Beyond this timeframe, reptiles are likely to begin finding sites for hibernating and ecology core study area clearance cannot be undertaken as it would present a significant risk to any reptiles present; • Habitats of value to reptiles that will be removed as part of the substation construction and associated works, and at each of up to 26 ditch crossings will be fenced off with Temporary Reptile Fencing (TRF). This will ensure that any captured reptiles do not re-enter each of the construction zones; • Reptile refugia tins and felts will be placed within the proposed construction zone, to attract reptiles that need to be translocated. The tins and felts will be left within these areas for a minimum of a week and preferably a fortnight to allow reptiles to familiarise themselves with these features; • The Development contains good habitat for supporting a population of reptiles, with only small areas of habitat requiring removal (totalling c. 0.13 ha) and extensive areas of adjacent suitable reptile habitat being retained. Given the small size of habitat to be lost, it is anticipated that this would only affect a 'low' population of reptiles. Current guidance states that a minimum 30 days of trapping (plus five clear days) be undertaken however, the area of habitat loss is incredibly small. On this basis, it is expected that a minimum of sixteen days trapping of reptiles followed by five clear days of trapping (where reptiles have not been observed or caught) within each 	<p>DCO Requirements 5 and 6 (LBMP) Outline LBMP, Section 3, Table 1, Reptile Construction Mitigation</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>construction zone will be required, with translocation of any caught reptiles released to adjacent habitat;</p> <ul style="list-style-type: none"> On completion of the translocation period, part of the TRF will need to be taken down, with strimming activity taking place towards this opening to allow any remaining reptiles to escape in the unlikely event of their presence. Habitat manipulation using a strimmer and under the supervision of a suitably experienced ecologist will take place in warm weather conditions. This will require a high cut at 100 mm, with strimming activity taking place towards the opening to allow any remaining reptiles to escape. This will be followed by a low cut to ground the following day; and Once the habitat has been cleared to ground level, and until such time as the construction activity is likely to take place, it will be necessary to ensure that habitats are not allowed to grow back beyond 50 mm to ensure that reptiles are not attracted back into these areas. <p>The implementation of the RMS will need to take place as guided by the ECoW and with consideration to the timings and requirements of other protected species works activities and licencing. This will be considered with respect to water vole and great crested newts. Details on approach can also be seen in Technical Appendix A5.4, Outline Construction Environment Management Plan (CEMP).</p>	
Chapter 8 Ecology (Section 8.6) [APP-038]	Lack of confidence in the protection of ecological receptors during the construction phase	The provision of an Ecological Clerk of Works (ECoW).	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.4
Chapter 8 Ecology (Section 8.6) [APP-038]	Potential construction phase adverse effects of disturbance to, or loss of, Important Ecological Features (IEF) habitat and IEF species, such as the ditch system and adjacent riparian habitats, and semi-improved neutral grassland	<p>To minimise any potential adverse effects of disturbance to, or loss of, Important Ecological Features (IEF) habitat and IEF species, such as the ditch system and adjacent riparian habitats, and semi-improved neutral grassland, under the Outline Construction Environmental Management Plan (CEMP), the following measures will be implemented:</p> <ul style="list-style-type: none"> Prior to and during the construction phase, the Ecological Clerk of Works (ECoW) will provide contractor briefings to ensure as 	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.4

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>far as practicable that impacts from construction activities are minimised; and</p> <ul style="list-style-type: none"> Use of measures such as temporary fencing and signing of retained IEF habitats and areas of importance to IEF species where at potential risk from construction activity, including the use of covers over, or escape ramps to allow egress from, excavations. <p>To minimise the potential adverse effects to IEF species from their presence within construction areas where the growth of new habitats prior to the start of the construction phase is required, under the Outline CEMP, the following measures will be implemented:</p> <ul style="list-style-type: none"> Use habitat management measures, such as mowing or grazing of grassland habitats within the solar PV fields, such that the grassland maintains a short sward and does not encourage the colonisation of this habitat by IEF species from neighbouring extant habitat; and The timing and requirement for habitat management within each field is to be confirmed by the ECoW following site observations during the construction phase. <p>These are part of the role of the ECoW, as set out in Section 1. 4 of the Outline CEMP [6.4.5.4].</p>	
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	All development of solar arrays and energy storage is in the arable land within the Development site and does not directly affect grazing marsh habitats.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Tables and Energy Storage Facility
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	All electrical cabling will be fixed to mounting structures or undergrounded.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1 Electrical Cabling

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	Lighting – sensors only. No continuous lighting.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	<p>The Outline LBMP sets out the measures incorporated into the design of the Development to provide biodiversity mitigation and enhancement:</p> <p>Arable Reversion Habitat Management Area (AR HMA): approximately 56 hectares (ha) of arable land is proposed for reversion to grassland managed for wintering birds.</p> <p>The existing grazing marsh extending over 37 ha at the east end of the site identified as the FGM HMA is included to provide support to the landowner for the ongoing management of the SSSI (Figure 9.3).</p> <p>Lowland Grassland Meadow Habitat Management Area (LGM HMA) is the establishment of lowland meadow grassland on 32.4 ha of previously cropped arable land for the benefit of birds and other fauna.</p> <p>The LBMP also sets out measures for management of the land between and around the solar panels as coastal grazing marsh extending over approximately 48 ha, approximately 27 ha of which forms large grassland areas between the arrays.</p>	DCO Requirement 5 (LBMP) Outline LBMP, Appendix A - Grazing Marsh Grassland Management Plan Appendix B - Lowland Grassland Meadow Habitat Management Plan Appendix J - Arable Reversion Habitat Management Area Management Plan Appendix K - Freshwater Grazing Marsh Habitat Management Area Management Plan
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	Implementation of a CEMP, which will guide the construction process through environmental controls in order to promote good construction practice and avoid adverse impacts during the construction phase.	DCO Requirement 11 (CEMP) Outline CEMP, whole document
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	Implementation of SPA CNMP which sets out management measures to be applied during construction to maintain noise levels below set thresholds within the SPA.	DCO Requirement 13 (SPA CNMP) Outline SPA CNMP, whole document

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	The proposed AR HMA for wintering bird species will be developed in approximately 56 ha of what is currently arable land to the east of the proposed substation location, with the aim of providing mitigation for loss of foraging resources for wintering birds, particularly brent geese, lapwing and golden plover. The approach to its management is set out in detail in the Outline LBMP (Technical Appendix A5.2). In summary, the arable land will be converted to a 'permanent' grassland, sowed during the construction phase, with application of organic fertiliser (e.g., farmyard manure) and grazed and/or cut during the summer (and as necessary during the course of the winter) to provide a nutritious short sward favoured by foraging brent geese, lapwing and golden plover.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	The proposed FGM HMA is an area of approximately 37 ha of grazing marsh forming part of The Swale SSSI/SPA/Ramsar site adjacent to the east of the AR HMA. Following consultation, opportunities were identified to improve the management of this area to bring additional benefits over and above the baseline for biodiversity and the designated interests of the Swale and therefore this land has been included within the Development site boundary so that its management can be delivered and controlled via the DCO. In particular, water management and controlled grazing are likely to be fundamental to achieving the desired outcomes for this area. The details of the management will be adaptive and subject to consultation and agreement with Natural England. In response to consultation responses, however, any benefits the Development may bring to this area are not considered to be mitigation of effects, because the current objectives for the area to be in favourable condition should be assumed to be successfully delivered in the future baseline scenario.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix K - FGM HMA Management Plan
Chapter 9 Ornithology (Section 9.4) [APP-039]	N/A - Embedded Mitigation	The aim of the LGM HMA is to establish a grassland sward with greater ecological value than the existing arable land. The conversion from arable to grassland enhancement/ restoration is a complex process requiring intervention over several years to ensure its success.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix B - Lowland Grassland Meadow Grassland Management Plan

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 9 Ornithology (9.5.2.1) [APP-039]	Noise and visual stimuli during construction and decommissioning of the Development may cause disturbance to breeding, foraging and resting/roosting birds both within the Development site and beyond its boundaries, such as in the adjacent freshwater grazing marsh/reedbeds and intertidal habitats of the Swale.	<ul style="list-style-type: none"> Lighting in ecologically sensitive areas within the core study area such as ditch habitats, and towards sensitive habitats outwith the core study area such as: trees and mature habitats, and the adjacent South Bank of the Swale LNR will be avoided; The siting of lights will avoid locations where lighting could reflect off solar panels and other reflective surfaces; Lighting will be positioned to minimise the spread of light to, at, or below horizontal and ensure that only the task work area or compound (during the construction phase) or security area (operational phase) is lit; Flat cut-off lanterns or accessories will be used to shield or direct light to where it is required, with the height of lighting columns optimised to ensure light spill is minimised and non-target areas are not lit; The demarcation of works areas (temporary and permanent) with white lining, good signage and LED cats eyes to reduce lighting requirements in the core study area. Ensure only high-risk areas of the core study area are lit, allowing headlights or torchlight to provide any necessary illumination at other times; Lights will be limited to such that there are dark periods within the core study area. This will include measures such as the use of adaptive lighting, to reduce lighting intensity from lights, adjustment to the timing of lighting within the core study area, and provision of motion sensitive lighting to suit human health and safety as well as wildlife needs; and Technical specifications to lighting will include the use of narrow spectrum light sources to lower the range of species affected by lighting, the use of light sources that emit minimal ultra-violet light, with a lighting peak no higher than 550 nm. White and blue wavelengths of the light spectrum will be avoided to reduce insect attraction, and where white light sources are required in order to manage the blue short wave length content they should be of a warm /neutral colour temperature. 	DCO Requirement 11 (CEMP) Outline CEMP, Appendix E DCO Requirement 5 (LBMP) Outline LBMP, Section 3, Table 1, Protection of Species and Section 4, Table 2, Lighting
Chapter 9 Ornithology (9.5.2.1) [APP-039]	Noise and visual stimuli during construction and decommissioning of the Development may cause disturbance to breeding, foraging and	Mitigation to address these potential impacts is set out in the following documents: <ul style="list-style-type: none"> Landscape and Biodiversity Management Plan (LBMP) 	DCO Requirement 5 (LBMP) Outline LBMP

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
	<p>resting/roosting birds both within the Development site and beyond its boundaries.</p> <p>Reduced foraging, resting and breeding opportunities are likely to cause negative effects as a result of decreased survival and productivity of individuals.</p> <ul style="list-style-type: none"> • Within Intertidal habitat seaward of Mean High Water Springs (MHWS) within the SPA/Ramsar Site: non-breeding season. • Within grazing marsh and reedbed habitat within the SPA/Ramsar Site to the north and west of the solar panel development area in the coastal strip landward of the sea wall: breeding season. • Within arable land within the solar panel development area: breeding and non-breeding season 	<ul style="list-style-type: none"> • Construction Environmental Management Plan (including Breeding Bird Protection Plan) • Special Protection area Construction Noise Management Plan (SPA CNMP) <p>Species specific sections provide more detail of the specific mitigation measures to address impacts on specific receptors in the sections below.</p>	<p>DCO Requirement 11 (CEMP) Outline CEMP, Appendix B - Breeding Bird Protection Plan</p> <p>DCO Requirement 13 (SPA CNMP) Outline SPA CNMP</p>
Chapter 9 Ornithology (9.5.2.2) [APP-039]	Operational Noise Disturbance	The noise assessment states that with applied mitigation, the operational noise levels will be 8 dB below a threshold 50 dB(A) significance criteria for ecological receptors and concluded that the "effect of operational noise on the identified ecological receptors is therefore assessed as negligible, and not significant in terms of the EIA Regulations."	DCO Requirement 15 (Operational noise)
Chapter 9 Ornithology (9.5.2.2) [APP-039]	<p>No specific flood defence works over and above those likely to be undertaken on an ongoing basis by the Environment Agency to maintain the current standard of protection are currently proposed.</p> <p>For the purposes of this assessment, the assumption is made that there will be no change in the flood defence works over and above the future baseline.</p>	<p>Flood defence maintenance activities will include works that:</p> <ul style="list-style-type: none"> • use the same materials as those present to date; • do not alter the plan form or cross section of the original defences; • do not provide an overall increase/reduction in flood level; and • do not require excavations of beach material deeper than 1.5 m. 	<p>DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Defence Maintenance</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>Examples of flood defence maintenance activities that satisfy the above criteria are provided in ES Chapter 5: Development Description [APP-035].</p> <p>If maintenance works are required that exceed these design principles, separate consents will be sought.</p>	
Chapter 9 Ornithology (9.5.2.2) [APP-039]	Other than the manned substation, there will be no continuous lighting of the Development, with lighting restricted to the security sensor lighting.	No lighting will be permanently operated. Operational lighting will be directed within the order limits i.e., not principally towards land outside the order limits.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting DCO Requirements 5 and 6 (LBMP) Outline LBMP, Section 3, para 11, Table 1
Chapter 9 Ornithology (9.5.2.6) [APP-039]	Fugitive dust emissions and track-out dust during construction and decommissioning have the potential to affect ecological receptors.	Good practice measures will be adopted during construction to control the generation and dispersion of dust such that significant impacts on neighbouring habitats will not occur. The hierarchy for mitigation will be prevention, suppression then containment. Excavation and earthworks areas will be stripped as required in order to minimise exposed areas. During excavation works, drop heights from buckets will be minimised to control the fall of materials reducing dust escape. Completed earthworks and other exposed areas will be covered with topsoil and revegetated as soon as it is practical in order to stabilise surfaces. During stockpiling of loose materials, stockpiles shall exist for the shortest possible time. Material stockpiles will be low mounds without steep sides or sharp changes in shape. Material stockpiles will be located away from the site boundary, sensitive receptors, watercourses and surface drains. Material stockpiles will be sited to account for the predominant wind direction and the location of sensitive receptors.	DCO Requirement 11 (CEMP) Outline CEMP, Section 4.4

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>Water bowzers will be available on site and utilised for dust suppression during roadworks/ vehicle movements when and where required.</p> <p>Daily visual inspections will be undertaken to assess need for use of water bowzers, with increased frequency when activities with high potential to generate dust are carried out during prolonged dry or windy conditions.</p> <p>Shielding of dust-generating activities will be carried out.</p> <p>Enclosed chutes, conveyors and covered skips will be used.</p> <p>Vehicles carrying dry spoil and other wastes will be covered to prevent escape of materials.</p> <p>Wheel washing and wet suppression will be provided during loading of wagons/vehicles.</p> <p>Daily visual inspections will be undertaken to assess the condition of the junction of the site track with Seasalter Road and its approaches.</p>	
Chapter 9 Ornithology (9.5.3.2) [APP-039]	Construction / decommissioning disturbance to dark-bellied brent geese	<p>Prior to the start of construction, the Development will also include the reversion of the 56 ha grassland in the AR HMA north of the Cleve Hill substation. Sowing of the AR HMA grassland will occur prior to any construction occurring during the winter, therefore the AR HMA will be capable of providing resources to dark-bellied brent geese during the first winter of the construction phase; however, it is adjacent to the main site access route and the movements of construction traffic might reduce the attractiveness of southern parts of the AR HMA at this time. The IECS Waterbird Disturbance Mitigation Toolkit suggests 300 m as a zone in which mitigation should be considered, therefore the assessment of construction disturbance takes the precautionary view that the AR HMA would not be capable of supporting lapwing in part (approximately 35%) of its extent during the construction phase. In combination with the newly growing grassland in the remainder of the Development site during the first winter season, there is considered to be sufficient extent of suitable habitat beyond a zone of disturbance (of up to 300 m for lapwing) to provide resources to support lapwing equivalent in numbers supported in the pre-development baseline.</p>	<p>DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan</p> <p>DCO Requirement 4 (Phases of authorised development)</p> <p>DCO Requirement 13 (SPA CNMP) Outline SPA CNMP, whole document</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>If Phase 2 of the Development is completed separately from Phase 1, construction activities undertaken between 1st March and 31st August will be controlled using the methodology set out in the SPA CNMP to ensure there is no additional disturbance to wintering lapwing using the AR HMA.</p>	
Chapter 9 Ornithology (9.5.3.2) [APP-039]	Habitat Loss/Change to dark-bellied brent geese	<p>To mitigate for impacts of loss of foraging resources on dark-bellied brent goose, lapwing, and golden plover, an Arable Reversion Habitat Management Area (AR HMA) will be developed in an extensive area of c. 56 ha to the east of the Development, with the aim of providing alternative foraging resources.</p> <p>The management of the mitigation grassland will be focussed on provision of optimal foraging conditions for dark-bellied brent goose. This will involve grazing and/or cutting during the summer (and as necessary during the course of the winter) and application of organic fertiliser (e.g. farmyard manure) to provide a nutritious short sward favoured by foraging brent geese, lapwing and golden plover. The manure will be sourced from ivermectin free cattle (where possible) to avoid adverse effect on invertebrates.</p> <p>Measures will also be included to increase the water levels around the AR HMA and in doing so, enhance the habitat present for target bird species. The specifics of the water control measures are detailed in Appendix H.</p>	DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan
Chapter 9 Ornithology (9.5.3.8) [APP-039]	Construction / decommissioning disturbance to teal	<p>The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.</p>	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5 DCO Requirement 4 (Phasing of authorised development)
Chapter 9 Ornithology (9.5.3.9) [APP-039]	Construction / decommissioning disturbance to little egret	<p>The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for</p>	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.	DCO Requirement 4 (Phasing of authorised development)
Chapter 9 Ornithology (9.5.3.9) [APP-039]	Habitat Loss/Change to little egret	<p>The aim of the Aquatic Habitat Management Plan is to establish a ditch system with greater ecological value than what is currently extant. In addressing this aim, prescriptions will be defined for the three key phases of the Development:</p> <ul style="list-style-type: none"> • Pre-construction: measures required before infrastructure construction begins in order to prepare the ditch systems by the removal of invasive or vigorous macrophyte growth. • Construction: measures required during and immediately following construction to establish new aquatic habitats (where required). • Operation: monitoring and management measures for the duration of the operational period. <p>The AHMP follows best practice published by Natural England and the Wildlife Trusts, specialist seed distributors, and others.</p> <p>Timings for individual activities are provided in the text and should be integrated into the Development construction and operation programmes when these are developed.</p> <p>There will also be creation of a new 0.5 ha reedbed located between the solar park and AR HMA within an existing ditch. The reedbed will comprise common reed (<i>Phragmites australis</i>) and Branched Bur-reed (<i>Sparganium erectum</i>). The aim of this habitat will be to create additional habitat for invertebrates and birds such as, reed warbler and Cetti's Warbler. Other bird species will also benefit from the creation of this reedbed habitat.</p>	DCO Requirement 5 (LBMP) Outline LBMP, Appendix H - Aquatic Habitat Management Plan
Chapter 9 Ornithology (9.5.3.12) [APP-039]	Construction / decommissioning disturbance to lapwing	Prior to the start of construction, the Development will also include the reversion of the 56 ha grassland in the AR HMA north of the Cleve Hill substation. Sowing of the AR HMA grassland will occur prior to any construction occurring during the winter, therefore the AR HMA will be capable of providing resources to lapwing during the first winter of the construction phase; however, it is adjacent to the main site access route and the movements of construction	DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>traffic might reduce the attractiveness of southern parts of the AR HMA at this time. The IECS Waterbird Disturbance Mitigation Toolkit suggests 300 m as a zone in which mitigation should be considered, therefore the assessment of construction disturbance takes the precautionary view that the AR HMA would not be capable of supporting lapwing in part (approximately 35%) of its extent during the construction phase. In combination with the newly growing grassland in the remainder of the Development site during the first winter season, there is considered to be sufficient extent of suitable habitat beyond a zone of disturbance (of up to 300 m for lapwing) to provide resources to support lapwing equivalent in numbers supported in the pre-development baseline.</p> <p>If Phase 2 of the Development is completed separately from Phase 1, construction activities undertaken between 1st March and 31st August will be controlled using the methodology set out in the SPA CNMP to ensure there is no additional disturbance to wintering lapwing using the AR HMA.</p>	<p>DCO Requirement 4 (Phases of authorised development)</p> <p>DCO Requirement 13 (SPA CNMP)</p> <p>Outline SPA CNMP, whole document</p>
Chapter 9 Ornithology (9.5.3.12) [APP-039]	Habitat Loss/Change to lapwing	<p>To mitigate for impacts of loss of foraging resources on dark-bellied brent goose, lapwing, and golden plover, an Arable Reversion Habitat Management Area (AR HMA) will be developed in an extensive area of c. 56 ha to the east of the Development, with the aim of providing alternative foraging resources.</p> <p>The management of the mitigation grassland will be focussed on provision of optimal foraging conditions for dark-bellied brent goose. This will involve grazing and/or cutting during the summer (and as necessary during the course of the winter) and application of organic fertiliser (e.g. farmyard manure) to provide a nutritious short sward favoured by foraging brent geese, lapwing and golden plover. The manure will be sourced from ivermectin free cattle (where possible) to avoid adverse effect on invertebrates.</p> <p>Measures will also be included to increase the water levels around the AR HMA and in doing so, enhance the habitat present for target bird species. The specifics of the water control measures are detailed in Appendix H.</p>	<p>DCO Requirement 5 (LBMP)</p> <p>Outline LBMP, Appendix J - AR HMA Management Plan</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 9 Ornithology (9.5.3.12) [APP-039]	Construction / decommissioning disturbance to golden plover	<p>Prior to the start of construction, the Development will also include the reversion of the 56 ha grassland in the AR HMA north of the Cleve Hill substation. Sowing of the AR HMA grassland will occur prior to any construction occurring during the winter, therefore the AR HMA will be capable of providing resources to golden plover during the first winter of the construction phase; however, it is adjacent to the main site access route and the movements of construction traffic might reduce the attractiveness of southern parts of the AR HMA at this time. The IECS Waterbird Disturbance Mitigation Toolkit suggests 300 m as a zone in which mitigation should be considered, therefore the assessment of construction disturbance takes the precautionary view that the AR HMA would not be capable of supporting lapwing in part (approximately 35%) of its extent during the construction phase. In combination with the newly growing grassland in the remainder of the Development site during the first winter season, there is considered to be sufficient extent of suitable habitat beyond a zone of disturbance (of up to 300 m for lapwing) to provide resources to support lapwing equivalent in numbers supported in the pre-development baseline.</p> <p>If Phase 2 of the Development is completed separately from Phase 1, construction activities undertaken between 1st March and 31st August will be controlled using the methodology set out in the SPA CNMP to ensure there is no additional disturbance to wintering lapwing using the AR HMA.</p>	<p>DCO Requirement 4 (Phases of authorised development)</p> <p>DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan</p> <p>DCO Requirement 13 (SPA CNMP) Outline SPA CNMP, whole document</p>
Chapter 9 Ornithology (9.5.3.12) [APP-039]	Habitat Loss/Change to golden plover	<p>To mitigate for impacts of loss of foraging resources on dark-bellied brent goose, lapwing, and golden plover, an Arable Reversion Habitat Management Area (AR HMA) will be developed in an extensive area of c. 56 ha to the east of the Development, with the aim of providing alternative foraging resources.</p> <p>The management of the mitigation grassland will be focussed on provision of optimal foraging conditions for dark-bellied brent goose. This will involve grazing and/or cutting during the summer (and as necessary during the course of the winter) and application of organic fertiliser (e.g. farmyard manure) to provide a nutritious</p>	<p>DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>short sward favoured by foraging brent geese, lapwing and golden plover. The manure will be sourced from ivermectin free cattle (where possible) to avoid adverse effect on invertebrates.</p> <p>Measures will also be included to increase the water levels around the AR HMA and in doing so, enhance the habitat present for target bird species. The specifics of the water control measures are detailed in Appendix H.</p>	
Chapter 9 Ornithology (9.5.3.15) [APP-039]	Habitat Loss/Change to wintering curlew	<p>To mitigate for impacts of loss of foraging resources on dark-bellied brent goose, lapwing, and golden plover, an Arable Reversion Habitat Management Area (AR HMA) will be developed in an extensive area of c. 56 ha to the east of the Development, with the aim of providing alternative foraging resources.</p> <p>The management of the mitigation grassland will be focussed on provision of optimal foraging conditions for dark-bellied brent goose. This will involve grazing and/or cutting during the summer (and as necessary during the course of the winter) and application of organic fertiliser (e.g. farmyard manure) to provide a nutritious short sward favoured by foraging brent geese, lapwing and golden plover. The manure will be sourced from ivermectin free cattle (where possible) to avoid adverse effect on invertebrates.</p> <p>Measures will also be included to increase the water levels around the AR HMA and in doing so, enhance the habitat present for target bird species. The specifics of the water control measures are detailed in Appendix H.</p> <p>The AR HMA will therefore provide improved conditions that may be favoured by small numbers of foraging and roosting curlew.</p>	DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan
Chapter 9 Ornithology (9.5.3.22) [APP-039]	Construction / decommissioning disturbance to green sandpiper	<p>The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.</p>	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5 DCO Requirement 4 (Phasing of authorised development)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 9 Ornithology (9.5.3.25) [APP-039]	Construction / decommissioning disturbance to breeding marsh harrier	<p>The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.</p> <p>Areas within the site boundary within up to 500 m of any construction activities scheduled during the breeding season will be surveyed for nesting marsh harriers following best practice, published methodology (e.g. Hardey et al. (2013) Raptors: A field guide for surveys and monitoring; Edition 3). In the event that a nest site of marsh harrier is identified, a 500 m exclusion zone will be enforced immediately around the nest location and no works will be permitted in this area until an ecologically-sensitive and legally compliant solution is in place, or until it can be confirmed by the ECoW that the nest has been vacated. The area will be clearly marked and site personnel will be informed of the sensitivity of the area. A disturbance risk assessment will be completed by the ECoW and the exclusion zone will be amended as appropriate, ensuring that any disturbing or damaging impact on nesting marsh harriers is avoided.</p> <p>Upon natural conclusion of the breeding attempt (once breeding has finished and all adults and young have vacated the nest), works may re-commence in the exclusion zone.</p>	<p>DCO Requirement 4 (Phasing of authorised development)</p> <p>DCO Requirement 11 (CEMP)</p> <p>Outline CEMP, Section 1.5 and Appendix B - Breeding Bird Protection Plan, Section 12.4.3.1)</p>
Chapter 9 Ornithology (9.5.3.25) [APP-039]	N/A - embedded mitigation	The solar PV array fields will be located as shown as Work No. 1 on the Works Plan [APP-007]. This will secure the minimum separation between fields set out in the ES.	<p>DCO Requirement 2 (Detailed design approval)</p> <p>Outline Design Principles, Table 5.1, Solar PV Array Fields</p>
Chapter 9 Ornithology (9.5.3.26) [APP-039]	Construction / Decommissioning disturbance to breeding farmland bird community	<p>The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.</p> <p>With regard to Schedule 1 breeding birds, as well as all breeding birds, the BBPP appended to the CEMP and the Outline SPA CNMP</p>	<p>DCO Requirement 11 (CEMP)</p> <p>Outline CEMP, Section 1.5 and Appendix B - Breeding Bird Protection Plan, Section 12.4.3</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>set out protective measures to ensure that disturbance to nesting Schedule 1 birds is avoided and that damage or harm to nesting birds in general is avoided.</p>	
<p>Chapter 9 Ornithology (9.5.3.26) [APP-039]</p>	<p>Habitat Loss/Change to breeding farmland bird community</p>	<p>The majority of the Development site will experience change when arable fields are replaced with solar panels surrounded by grassland between the tables and arrays and there is establishment of the AR HMA and LGM HMA resulting in substantial gains in the presence of diverse grassland habitat. The LBMP includes measures to improve the quality of the ditches and extent of reedbed throughout the Development site, with further enhancements made including planting of hedgerows, scrub and trees.</p> <p>The habitat management measures implemented with the Development will improve conditions for breeding species associated with the field margin and boundary habitats. This would provide a positive effect for those species as a result of additional nesting opportunities and supporting habitats. It is considered that breeding birds such as reed bunting, reed warbler and sedge warbler will continue to utilise the ditch habitats in the wide networks between the solar panel arrays. The hedgerow, scrub and tree enhancements will provide additional resources for species such as song thrush, dunnock, whitethroat, linnet and yellowhammer. Ditch enhancements and other measures set out in the Aquatic Habitats Management Plan will enhance conditions for Cetti's warbler and possibly bearded tit.</p> <p>Open habitat species that breed within or at the edges of the arable fields include lapwing, skylark and yellow wagtail. These species are expected to be displaced by the installation of solar panels. However, the LBMP includes measures for the management of habitats around the solar panel arrays as well as in some of the undeveloped blocks of land within the Development site (other than the AR HMA at the east end of the site). The AR HMA includes the conversion of approximately 56 ha of arable land to grassland aimed at provision of foraging resources for wintering geese and waders. During the summer, the AR HMA will be a grazed grassland and is likely to provide nesting opportunities for species such as lapwing. The LGM HMA sets out the establishment</p>	<p>DCO Requirements 5 and 6 (LBMP) Outline LBMP, whole document</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>of 13.3 ha of wildflower rich habitat in fields in the south-east (parcels Y and Z) and in the west of the site. These measures are expected to provide enhanced conditions for breeding lapwing, skylark and yellow wagtail. There is some uncertainty with regards to the breeding opportunities in the new grassland areas between the solar arrays (in total amounting to 26.7 ha across the site), as these species prefer more open habitats than the grassland between the arrays might provide. Lapwings are unlikely to nest in those areas between arrays, whereas in some areas, the extents between the edges of the arrays are likely to be large enough to accommodate skylark and possibly yellow wagtail.</p>	
<p>Chapter 9 Ornithology (9.5.3.27) [APP-039]</p>	<p>Construction / Decommissioning disturbance to wintering farmland bird community</p>	<p>The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.</p>	<p>DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5</p> <p>DCO Requirement 4 (Phasing of authorised development)</p>
<p>Chapter 9 Ornithology (9.5.3.27) [APP-039]</p>	<p>Habitat Loss/Change to wintering farmland bird community</p>	<p>The majority of the Development site will experience change when arable fields are replaced with solar panels surrounded by grassland between the tables and arrays and there is establishment of the AR HMA and LGM HMA resulting in substantial gains in the presence of diverse grassland habitat. The LBMP includes measures to improve the quality of the ditches and extent of reedbed throughout the Development site, with further enhancements made including planting of hedgerows, scrub and trees.</p> <p>The habitat management measures implemented with the Development will improve conditions for breeding species associated with the field margin and boundary habitats. This would provide a positive effect for those species as a result of additional nesting opportunities and supporting habitats. It is considered that breeding birds such as reed bunting, reed warbler and sedge warbler will continue to utilise the ditch habitats in the wide networks between the solar panel arrays. The hedgerow, scrub and tree enhancements will provide additional resources for species such as song thrush, dunnock, whitethroat, linnet and</p>	<p>DCO Requirements 5 and 6 (LBMP)</p> <p>Outline LBMP, whole document</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>yellowhammer. Ditch enhancements and other measures set out in the Aquatic Habitats Management Plan will enhance conditions for Cetti's warbler and possibly bearded tit.</p> <p>Open habitat species that breed within or at the edges of the arable fields include lapwing, skylark and yellow wagtail. These species are expected to be displaced by the installation of solar panels. However, the LBMP includes measures for the management of habitats around the solar panel arrays as well as in some of the undeveloped blocks of land within the Development site (other than the AR HMA at the east end of the site). The AR HMA includes the conversion of approximately 56 ha of arable land to grassland aimed at provision of foraging resources for wintering geese and waders. During the summer, the AR HMA will be a grazed grassland and is likely to provide nesting opportunities for species such as lapwing. The LGM HMA sets out the establishment of 13.3 ha of wildflower rich habitat in fields in the south-east (parcels Y and Z) and in the west of the site. These measures are expected to provide enhanced conditions for breeding lapwing, skylark and yellow wagtail. There is some uncertainty with regards to the breeding opportunities in the new grassland areas between the solar arrays (in total amounting to 26.7 ha across the site), as these species prefer more open habitats than the grassland between the arrays might provide. Lapwings are unlikely to nest in those areas between arrays, whereas in some areas, the extents between the edges of the arrays are likely to be large enough to accommodate skylark and possibly yellow wagtail.</p>	
Chapter 9 Ornithology (9.5.3.28) [APP-039]	Construction / decommissioning disturbance to barn owl	The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5 DCO Requirement 4 (Phasing of authorised development)
Chapter 9 Ornithology (9.5.3.28) [APP-039]	Habitat Loss/Change to barn owl	The majority of the Development site will experience change when arable fields are replaced with solar panels surrounded by grassland between the tables and arrays and with the	DCO Requirement 5 (LBMP) (Appendix A – Grazing Marsh Grassland)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		establishment of large extents of grassland in the AR HMA (56 ha) and LGM HMA (13.3 ha). The LBMP includes measures to improve the quality of the ditch margins and convert arable land to grassland throughout the Development site, resulting in a further 26.7 ha of suitable grassland foraging habitat.	Management Plan, Section 6.9.2)
Chapter 9 Ornithology (9.5.3.29) [APP-039]	Construction / decommissioning disturbance to peregrine	The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5 DCO Requirement 4 (Phasing of authorised development)
Chapter 9 Ornithology (9.5.3.29) [APP-039]	Habitat Loss/Change to peregrine	To mitigate for impacts of loss of foraging resources on dark-bellied brent goose, lapwing, and golden plover, an Arable Reversion Habitat Management Area (AR HMA) will be developed in an extensive area of c. 56 ha to the east of the Development, with the aim of providing alternative foraging resources. The management of the mitigation grassland will be focussed on provision of optimal foraging conditions for dark-bellied brent goose. This will involve grazing and/or cutting during the summer (and as necessary during the course of the winter) and application of organic fertiliser (e.g. farmyard manure) to provide a nutritious short sward favoured by foraging brent geese, lapwing and golden plover. The manure will be sourced from ivermectin-free cattle (where possible) to avoid adverse effect on invertebrates. Measures will also be included to increase the water levels around the AR HMA and in doing so, enhance the habitat present for target bird species. The specifics of the water control measures are detailed in Appendix H.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix J - AR HMA Management Plan
Chapter 9 Ornithology (9.5.2.5) [APP-039]	N/A embedded mitigation	The Development includes a number of embedded, designed-in good construction practice measures that are set out in the Outline CEMP with the specific aim of avoiding adverse effects caused by increased sediment loading or pollution in the local hydrological environment.	DCO Requirement 11 (CEMP) Outline CEMP, whole document

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		In the long-term, during operation of the Development, there will be a substantive reduction in the application of herbicides, pesticides and fertiliser below the current baseline use for arable farming practice at the site. The ecological and hydrological assessments predict a net positive effect on local habitats as a result.	DCO Requirement 5 (LBMP) Outline LBMP, all land use changes from arable baseline
Chapter 10 Hydrology (Section 10.4 (para 123) and 10.5.1.2 (paras 144, 147 and 153)) [APP-040]	Erosion and sedimentation effects on surface hydrology	The following minimum buffer zone distances have been established for all infrastructure (with the exception of fence crossings, culverts and access tracks) and drainage ditches onsite: <ul style="list-style-type: none"> • Non-IDB maintained ditches: 5 m; and • IDB maintained ditches: 8 m. 	DCO Requirement 11 (CEMP) Outline CEMP, Section 2 DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Fields
Chapter 10 Hydrology (Section 10.4 (para 126), 10.5.1.11 (paras 210 and 212) and 10.5.2 (para 223)) [APP-040]	N/A – Embedded Mitigation	Grassland will be established by directly sowing a seed mix into the prepared ground prior to the construction phase	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix A – Grazing Marsh Grassland Management Plan of the Outline LBMP
Chapter 10 Hydrology (Section 10.4 (para 127)) [APP-040]	N/A – Embedded Mitigation	Water management measures and water quality monitoring measures to control surface water run-off and drain hardstanding and other structures during the construction and operation of the Development.	DCO Requirement 11 (CEMP) Outline CEMP, Sections 2 to 7
Chapter 10 Hydrology (Section 10.4 (para 131) and 10.5.1.8 (paras 185, 188, 191, 195 and 200)) [APP-040]	Flood risk to solar farm infrastructure	<ul style="list-style-type: none"> • Critical infrastructure within the Development (the electrical compound) has been designed to be resistant to a 1 in 1,000 year plus climate change (year 2070) defended breach (breach 2) event. To achieve the required level of protection, an uninterrupted flood protection bund with a height of 5.3 m AOD 	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Flood Protection Bund and Flood Defence Maintenance

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>will encircle the substation and battery storage compound to protect the critical infrastructure against this type of event;</p> <ul style="list-style-type: none"> • Non-flood sensitive infrastructure forming the wider development (PV arrays, cabling, inverters and transformer stations) has been designed to be resilient to a 1 in 1,000 year plus climate change (year 2070) defended (wave overtopping) event; and • A freeboard allowance of 300 mm has been applied to maximum flood depths for the 1 in 1,000 year breach scenario for the substation, in accordance with Table 2 of the Engineering Design Standard, EDS 07-0106 Substation Flood Protection (2016) and ETR138. 	
Chapter 10 Hydrology (Section 10.5.1.1 (paras 139, 142)) [APP-040]	Construction and operation phase effects of chemical spills on surface and sub-surface hydrology.	Measures in the Outline CEMP sections 3 and 4, including vehicle speed limits, regular maintenance, provision of absorbent spill pads/kits, impermeable geotextile membranes and the management of fresh concrete.	DCO Requirement 11 (CEMP) Outline CEMP, Sections 3 and 4
Chapter 10 Hydrology (Section 10.5.1.2 (paras 144, 145, 146, 149 and 154)) [APP-040]	Construction and operation phase effects of erosion and sedimentation on surface and sub-surface hydrology.	<p>Planting of grass seed prior to construction, as set out in the Outline LBMP.</p> <p>Measures such as silt traps and buffer strips, settlement lagoons, swales, interception bunds, isolating works in watercourse crossings from the water environment by coffer dams and over pumping, impermeable ground membrane layers and banded areas as set out in sections 2, 6 and 7 of the Outline CEMP.</p>	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix A – Grazing Marsh Grassland Management Plan DCO Requirement 11 (CEMP) Outline CEMP, Sections 2, 6 and 7
Chapter 10 Hydrology (Section 10.5.1.3 (para 156) and 10.5.2 (para 224)) [APP-040]	Construction and operation phase effects of impediments to flow on surface and sub-surface hydrology.	<p>Measures such as box culverts, cross drainage, the use of shallow drainage ditches and prevention of blockages as set out in section 5 of the Outline CEMP.</p> <p>The dimensions (width and depth) of the redirected ditch will be kept as close to the baseline scenario to ensure conveyance of</p>	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Drainage Ditches

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		water, unless otherwise agreed with consultees. The final length of the drainage ditch diversion will be greater than the original stretch.	DCO Requirement 11 (CEMP) Outline CEMP, Section 5
Chapter 10 Hydrology (Section 10.5.1.4 (para 163)) [APP-040]	Construction and operation phase effects on soil interflow patterns.	The detailed site drainage design will take into account any severance of saturated areas to ensure hydrological connectivity is maintained.	DCO Requirement 9 (Surface and foul water drainage)
Chapter 10 Hydrology (Section 10.5.1.5 (paras 170 and 172)) [APP-040]	Construction and operation phase effects of compaction of soils on surface and sub-surface hydrology.	Maintenance of existing drainage infrastructure, supplemented where necessary by drainage dams/cross-drains, as set out in sections 2 and 5 of the Outline CEMP. Depending on weather conditions during construction, temporary roadways (e.g., plastic matting) may be utilised to access parts of the Development site during construction to avoid excessive soil disturbance or compaction, as set out in section 5 of the Outline CEMP.	DCO Requirement 11 (CEMP) Outline CEMP, Sections 2 and 5
Chapter 10 Hydrology (Section 10.5.1.7 (para 182)) [APP-040]	Migration of pollutants from contaminated land.	Any excavations in proximity to the seven historical sheepfolds will be tested and appropriate action taken (if required) in accordance with The Environmental Protection Act 1990.	DCO Requirement 11 (CEMP) Outline CEMP, Section 7.1
Chapter 11 Cultural Heritage and Archaeology (Section 11.4 (para 130), 11.4.2 (para 134), 11.4.3 (para 137), 11.5.2.3 (para 159, 163 and 168) and 11.5.2.4 (para 185)) [APP-041]	Visibility of the solar farm from Graveney, with associated indirect effects on settings of heritage features. Effects on the Historic Landscape Character of the Core ASA.	No solar infrastructure is proposed in Field Y. The provision of screening in the form of planting to the southeast of the solar farm infrastructure.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Fields DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix C – Hedgerow with Trees Management Plan, and

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
			Appendix D – Shelterbelt Management Plan
Chapter 11 Cultural Heritage and Archaeology (Section 11.4.1 (para 132), 11.4.2 (para 134) and 11.4.3 (para 137)) [APP-041]	<p>Direct impacts on the following heritage features: sheepfold on Cleve Marshes (WA37), outfarm on Nettle Hill (WA38), Farmstead south of Graveney Hill Farm (WA41), Decoy pond (WA59), mound (WA101), mound (WA102), 2 mounds (WA103), Sheepfold (WA113), former sea wall (WA120), linear cropmark (WA140), cropmark (WA141) and the very eastern extent of the area covered by the Starfish bombing decoy.</p> <p>Indirect effects on built heritage assets to the east of the Core ASA.</p> <p>Effects on the Historic Landscape Character of the Core ASA.</p>	No solar infrastructure is proposed in the eastern part of the Core Archaeological Survey Area.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Fields
Chapter 11 Cultural Heritage and Archaeology (Section 11.4.3 (para 136)) [APP-041]	Effects on the Historic Landscape Character of the Core ASA	Preservation of the internal boundaries which divide the Core ASA.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Fields
Chapter 11 Cultural Heritage and Archaeology (Section 11.6.1.1) [APP-041]	Direct effects to archaeological remains during the construction phase	<p>A programme of archaeological works which would preserve archaeological remains by record. A draft is provided in Technical Appendix A11.4: Outline Written Scheme of Investigation (DCO Document Reference 6.4.11.4).</p> <p>It is proposed that a programme of archaeological investigation be undertaken within the electrical compound location. The scope, extent and detail will be agreed with Kent County Council in the form of a Written Scheme of Investigation. The purpose is to afford an opportunity to identify and record any buried archaeological remains in this area, which is the largest specific piece of ground disturbance within the Development. This area is also closest to</p>	DCO Requirement 10 (WSI) Outline WSI, paragraph 4.8

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		where archaeological remains were recorded during archaeological works for the adjacent onshore connection works substation. Implementation of an appropriate scheme of archaeological investigation would lead to preservation by record.	
Chapter 12 Noise and Vibration (Sections 12.1.2 (para 8) and 12.4.1 (para 114)) [APP-042]	Construction and decommissioning road traffic noise at residential properties along Head Hill Road and Seasalter Road	Core working hours are proposed to be between 07.00 until 19.00, Monday to Friday and 07.00 until 13.00 on a Saturday (unless in exceptional circumstances where need arises to protect plant, personnel or the environment). In addition to this, a start-up and close down period for up to an hour before and after the core working hours is proposed. This does not include the operation of plant or machinery likely to cause a disturbance. Deliveries of plant and materials by HGV to site shall only take place by designated routes and within times agreed with the Council, as set out in the Construction Traffic Management Plan (CTMP) [REP4-014].	DCO Requirement 12 (CTMP) Outline CTMP, Section 5.3
Chapter 12 Noise and Vibration (Section 12.4.1 (para 114)) [APP-042]	Construction and decommissioning road traffic noise at residential properties associated with peak traffic flows	Where practicable, the work programme will be phased.	DCO Requirement 4 (Phasing of authorised development)
Chapter 12 Noise and Vibration (Section 12.4.2 (para 116)) [APP-042]	Construction and operation noise from electrical infrastructure at residential properties	<ul style="list-style-type: none"> • A large bund, will be built around the electrical compound, which will significantly reduce noise from the electrical compound at surrounding residential properties and ecological designations; • Where possible, the distance from the nearest residential receptors to the substation and energy storage facility and onsite transformers and string inverters was maximised; • Noise emissions from equipment will be a consideration in the selection of equipment, and where possible the quietest available equipment will be installed; • Where required, manufacturer-supplied noise mitigation will be installed; • Where possible, noise generating equipment will be enclosed / containerised; • An appropriately-sized conductor arrangement will be selected to minimise noise; • Damage to overhead lines will be avoided; and • Conductors will be kept clean and free of surface contaminants during stringing / installation. 	DCO Requirement 15 (Operational noise)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 12 Noise and Vibration (Section 12.5.2.4 (para 163)) [APP-042]	Construction vibration effects on ecological receptors	Provision of an ECoW to take action should vibration from construction be observed to be having an effect on ecological receptors.	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.4
Chapter 12 Noise and Vibration (Section 12.6.1.2 (para 219)) [APP-042]	Construction noise effects on birds associated with the Swale SPA	The Outline SPA Construction Noise Management Plan (CNMP) [REP3-008] will be updated prior to construction setting out the final mitigation options based on the equipment planned to be used on site.	DCO Requirement 13 (SPA CNMP) Outline SPA CNMP, whole document
Chapter 12 Noise and Vibration (Section 12.6.2, 12.6.4 (para 252) and 12.6.4 (para 264)) [APP-042]	Operation phase noise at residential properties – confidence that the final, detailed design will meet specified noise limits	In order to ensure that such mitigation is implemented and give confidence that it will be effective, prior to the start of construction, the predictions of noise levels will be repeated based on the actual detailed design, specific models of plant and specific mitigation measures. This will be required to show that predicted noise levels are below the relevant rating level noise limit.	DCO Requirement 15 (Operational noise)
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.4) [APP-043]	N/A - Embedded Mitigation	The measures set out within the Outline LBMP will be implemented, including specifically: <ul style="list-style-type: none"> • New coastal grazing marsh habitats and lowland meadow planting (Appendix A); • New native species hedgerow planting (Appendix C); • Areas of shelterbelt, which will incorporate tree planting (Appendix D); and • Native scrub buffer planting areas (Appendix G). 	DCO Requirement 5 (LBMP) Outline LBMP, Appendix A - Grazing Marsh Grassland Management Plan Appendix C - Hedgerow (with Trees) Management Plan Appendix D - Woodland Management Plan Appendix G - Scrub Planting Management Plan
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.4)	N/A - Embedded Mitigation	The solar PV array fields will be located as shown as Work No. 1 on the Works Plan [APP-007]. This will secure the minimum separation between fields set out in the ES.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Solar PV Array Fields

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
[APP-043]			
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.4) [APP-043]	N/A - Embedded Mitigation	Fencing (excluding security fencing within the electrical compound (work no. 2 and 3) and temporary stock proof fencing), will be of a "deer fence" design, with wooden post supports and metal stock fencing.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Fencing and security measures including CCTV and lighting
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.4) [APP-043]	N/A - Embedded Mitigation	CCTV camera fields of view will cover the fences, but not locations on the PRoW.	The Data Protection Act 1998 The Information Commissioner's Office CCTV Code of Practice 2008.
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.4) [APP-043]	N/A - Embedded Mitigation	Technical Appendix A5.2, Landscape and Biodiversity Management Plan, sets out that the corridor, along which ZR485 will run, will be managed as Grazing Marsh Grassland, except for where the spine road crosses it, which would be compacted stone.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, Appendix A - Grazing Marsh Grassland Management Plan
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.4) [APP-043]	Operation phase opportunity for enhancement of recreational resources	One permissive path is proposed through the Recreation Core Study Area, as shown on Figure 13.1 [6.2.13]. This would be available as a footpath only, given that public rights of access to either end are also as Public Footpaths (ZR488 and ZR484/CW55), rather than bridleways. This would follow field boundaries through the Development site, for the most part with solar PV modules on both sides, albeit set back c. 10 m on either side at the southern half, and c. 20 m on either side for the northern half. The northern half of the route follows an existing track with a stone surface. The southern half will be grassed.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Permissive Paths / Public Rights of Way
Chapter 13 Socio-economics, Tourism,	Construction phase effects on tourism	Once mitigation measures are considered, the residual effects of traffic and transport on all routes except Seasalter Road and Hill	DCO Requirement (CTMP) 12

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Recreation and Land Use (Section 13.5.1.3) [APP-043]		Head Road will be negligible. Given this is a small route in the context of the local tourism industry and is not required for general access to the large majority of tourism attractions identified in section 13.3.3, it is concluded that the magnitude of effect will be Negligible at the level of Swale, Canterbury and Kent.	
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.5.1.4) [APP-043]	Construction phase effects on ZR692	ZR692 crosses the private road to Cleve Hill Substation, where it meets Seasalter Road. As set out in the PRoW Management Plan, appended to the Construction Traffic Management Plan, the existing gates provided either side of the access road will be maintained and additional signage provided to warn PRoW users of the crossing point and to advise them to only cross when it safe to do so.	DCO Requirement (CTMP) 12 Outline CTMP, Appendix G - PRoW Management Plan
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.5.1.4) [APP-043]	N/A - Embedded Mitigation	HGV movements during the construction phase will not exceed 80 movements per day (e.g., 40 vehicles entering and leaving site in one day).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.2, Heavy Goods Vehicle (HGV) movements
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.5.1.4) [APP-043]	Construction effects on recreational bird and wildlife watchers	The habitat management area in the northeast of the Recreational Core Study Area will be managed to be of improved value to birds of importance to the Swale designated area (brent geese, lapwing and golden plover). It is expected that these species will use this area more intensively than in the baseline scenario once the Development is operational, and the construction phase will be a transition between the baseline and the operational phase. Following construction, the ditch habitats will also be improved, as set out in Chapter 8: Ecology. Both of these areas will provide improved opportunity for watching birds and other wildlife than in the baseline scenario.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix H - Aquatic Habitat Management Plan Appendix J, Arable Reversion Habitat Management Area Habitat Management Plan
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.5.2.2)	Operational phase changes to the visual environment around footpaths and other recreational receptors	Chapter 8: Ecology concludes that biodiversity across the site will increase, with the Development, with particular enhancement of the ditch network across the site, which is where the majority of biodiversity within the site currently exists.	DCO Requirements 5 and 6 (LBMP) Outline LBMP, all measures

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
[APP-043]			
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.5.2.2) [APP-043]	Operational Effects on bird and wildlife watchers	The habitat management area in the northeast of the Recreational Core Study Area will be managed to be of improved value to birds of importance to the Swale designated area (brent geese, lapwing and golden plover). It is expected that these species will use this area more intensively than in the baseline scenario once the Development is operational. Following construction, the ditch habitats will also be improved, as set out in Chapter 8: Ecology. Both of these areas will provide improved opportunity for watching birds and other wildlife than in the baseline scenario.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix H - Aquatic Habitat Management Plan Appendix J, Arable Reversion Habitat Management Area Habitat Management Plan
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.5.2.3) [APP-043]	Effects on land use during construction and operation	Post-construction, the land will largely be able to return to its natural state pre-agricultural cultivation which will allow microbiota and organic matter, crucial to soil health and environmental processes, to colonise the soil. This will have a regenerative effect upon the topsoil and subsoil layers. In order to mitigate the loss of arable farmland, the areas around and under the solar PV modules will be seeded with a grass and wildflower mix before construction starts and, post-construction, sheep will be allowed to graze. It is expected these measures will allow a greater biodiversity of plant species compared to the current monoculture cultivation, although the growth of some species will be limited by sheep grazing. The Development will benefit land use in terms of the health and structure of the soil which will improve through the re-establishment of organic matter, which will have suffered due to years of intensive agriculture.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix A - Grazing Marsh Grassland Management Plan
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.6.1) [APP-043]	Construction phase opportunities for economic enhancement by use of local contractors	The Applicant will seek to raise awareness within the local community of, supply chain and employment opportunities, in order to promote local socioeconomic benefits.	DCO Requirement 16 (Local skills, supply chain and employment) Outline Skills, Supply Chain and Employment Plan, whole document

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.6.1) [APP-043]	Construction phase effects on access to public rights of way	A separate Public Rights of Way (PRoW) Management Plan has been developed which is provided as Appendix G to the Outline Construction Traffic Management Plan (CTMP), which is Technical Appendix A14.1 [6.4.14.1] of the ES. This sets out management measures to mitigate direct effects on users of the PRoW network around the Recreation Core Study Area.	DCO Requirement 12 (CTMP) Outline CTMP, Appendix G - PRoW Management Plan DCO Requirement 7 (Public rights of way diversions)
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.6.1) [APP-043]	Construction phase effects on recreational resource users	Information will be provided to the public about where construction is taking place within the site, and this will be updated on a month to month basis. Subject to the agreement of relevant landowners and rights holders, information notices will be placed at either end of the stretch of the Saxon Shore Way/ZR484/CW55 that passes the Development site, on the Cleve Hill Solar Park website and at Faversham Tourist Information Centre. Specific locations for which permission has been or will be granted will be agreed with Kent County Council prior to the commencement of construction. The notices will also highlight other paths in the area that recreational users might consider as alternatives. This text is provided in the PRoW Management Plan, which is Appendix G to the Construction Traffic Management Plan [6.4.14.1].	DCO Requirement 12 (CTMP) Outline CTMP, Appendix G - PRoW Management Plan DCO Requirement 7 (Public rights of way diversions)
Chapter 13 Socio-economics, Tourism, Recreation and Land Use (Section 13.6.2) [APP-043]	Operational maintenance of PRoW and permissive footpath	Creation of habitat and the creation of a new permissive path, as well as grassing and maintaining the surfaces of the paths ZR488 and ZR485 that pass through the Development site.	DCO Requirement 5 (LBMP) Outline LBMP, Appendix A - Grazing Marsh Grassland Management Plan Appendix B - Lowland Grassland Meadow Habitat Management Area
Chapter 14 Access and Traffic (Section 14.4.1)	N/A - Embedded Mitigation	If Phase Two is undertaken separately from Phase One, it will not exceed a total construction duration of 6 months.	DCO Requirement 2 (Detailed design approval)

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
[APP-044]			Outline Design Principles, Table 5.2, Phase Two – Energy Storage Facility Construction DCO Requirement 4 (Phases of authorised development)
Chapter 14 Access and Traffic (Section 14.4.1) [APP-044]	N/A - Embedded Mitigation	The construction of the solar park will proceed on a field by field basis (a plan showing the fields is provided in the Outline Design Principles document, submitted with the application for consent for the Development) to ensure that solar park construction impacts are limited to only part of the site at any one time.	DCO Requirement 11 (CEMP) Outline CEMP, Section 1.5 DCO Requirement 4 (Phases of authorised development)
Chapter 14 Access and Traffic (Section 14.4.1) [APP-044]	N/A - Embedded Mitigation	HGV movements during the construction phase will not exceed 80 movements per day (e.g., 40 vehicles entering and leaving site in one day).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.2, Heavy Goods Vehicle (HGV) movements
Chapter 14 Access and Traffic (Section 14.4.2) [APP-044]	Effects on public rights of way users.	A separate PRoW Management Plan has been developed which is provided as Appendix G to the CTMP.	DCO Requirement 7 (Public rights of way diversions) DCO Requirement 12 (CTMP) Outline CTMP, Appendix G - PRoW Management Plan
Chapter 14 Access and Traffic (Section 14.4.4) [APP-044]	N/A - Embedded Mitigation	An Outline Decommissioning and Restoration plan has been produced to accompany the ES. It is expected that a Decommissioning Traffic Management Plan would be produced and agreed with the Local Highways Authority prior to decommissioning commencing.	DCO Requirement 17 (Decommissioning) Outline DRP, paragraph 5

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
<p>Chapter 14 Access and Traffic (Section 14.5) [APP-044]</p>	<p>Traffic generated during the construction phase</p>	<p>The outline CTMP details the routeing of HGVs, and control measures ensuring the effect of construction traffic on the surrounding network is kept as low as possible. This includes:</p> <ul style="list-style-type: none"> • Traffic timing and routeing strategies; • Staff routeing and minibuses; • Staff travel planning; • PRow Management; • Vehicle cleaning; • Highways conditions surveys; • Information packs and communication; • Speed restrictions; • Delivery management systems; • Temporary signage; • Traffic marshals; and • Where possible construction traffic will be restricted to outside school opening and closing timings. <p>The outline CTMP, which is appended to this report, is accompanied by a Travel Planning Statement, Traffic Incident Management Plan and PRow Management Plan.</p> <p>Vehicles travelling to and from the Development will be required to use specific construction traffic routes and will be carefully programmed in order to manage the number of HGVs travelling on the local road network at a time. Furthermore, a number of timing restrictions are proposed to avoid HGV movements at Graveney Primary School during school start/finish times. This will also be effective in limiting vehicle movements on the local highway network during traditional peak periods. This will reduce the potential effects of construction traffic on delays, severance, and fear and intimidation.</p> <p>Temporary signage will be positioned along the construction traffic routes to the Development and temporary speed limits for construction vehicles will also be introduced through sensitive areas. In addition, all drivers of vehicles to the site will be briefed in detail regarding the content of the outline CTMP and any proposed traffic management measures. As such, it is not expected that any significant increased risk of road accidents would result from the proposed construction traffic.</p>	<p>DCO Requirement 12 (CTMP) Outline CTMP, whole document</p>

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
		<p>It is the intention to keep all PRow routes in proximity to the site intention open during construction of the Development. Two metre high fencing will be placed between the PRow and Development equipment and infrastructure, and CCTV will not directly cover any PRow.</p> <p>Where the PRow borders the site, but is not directly impacted, appropriate fencing will be provided to form a safe corridor for users. This will regularly be inspected to ensure it is in good condition. This will mitigate against the potential effects to pedestrian amenity.</p>	
Chapter 14 Access and Traffic (Section 14.6) [APP-044]	Adverse effect on cycling amenity along Seasalter Road.	<p>There are likely to be some minor beneficial effects for the National Cycle Route through the improvement of the road surface both before and during construction.</p> <p>The majority of HGV movements are expected during the hours of 09.30 to 15.30 Monday to Friday.</p>	DCO Requirement 12 (CTMP) Outline CTMP, Section 6.13 and Section 6.4
Chapter 15 Climate Change (Section 15.4.1) [APP-045]	N/A - Embedded Mitigation	<p>The transformers will be resistant to flooding to a depth at least equivalent to the field flood level (+ 300 mm) above ground level as set out for each field in Appendix A (of the Outline Design Principles).</p> <p>The flood protection bund will entirely enclose the energy storage facility and the Development substation.</p> <p>The crest of the flood protection bund will be located at a height above ordnance datum (AOD) of not less than 5.316 m to protect against the modelled 1 in 1,000 year flood event including a simulated breach of the existing coastal flood defences.</p> <p>Flood defence maintenance activities will be undertaken within the area marked as Work No. 9 on the Works Plan [APP-007].</p> <p>Flood defence works required in an emergency can be carried out without the requirement for additional consents, and are defined as activities carried out in response to any flood, or in response to the imminent risk to property (including the Development infrastructure) from flooding.</p>	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Transformers, Flood Protection Bund, Flood Defence Maintenance

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 16 Air Quality (Section 16.4.3) [APP-046]	Construction Phase Vehicle Emissions	HGV movements during the construction phase will not exceed 80 movements per day (e.g., 40 vehicles entering and leaving site in one day).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.2, Heavy Goods Vehicle (HGV) movements
Chapter 16 Air Quality (Section 16.4.5.2) [APP-046]	Construction and decommissioning phase effects on local air quality - dust generation	<ul style="list-style-type: none"> • Excavation and earthworks areas will be stripped as required in order to minimise exposed areas; • During excavation works, drop heights from buckets will be minimised to control the fall of materials reducing dust escape; • Completed earthworks and other exposed areas will be covered with topsoil and re-vegetated as soon as it is practical in order to stabilise surfaces. • During stockpiling of loose materials, stockpiles shall exist for the shortest possible time; • Material stockpiles will be low mounds without steep sides or sharp changes in shape; • Material stockpiles will be located away from the site boundary, sensitive receptors, watercourses and surface drains; • Material stockpiles will be sited to account for the predominant wind direction and the location of sensitive receptors; • Water bowsers will be available on site and utilised for dust suppression during roadworks/ vehicle movements when and where required; • Daily visual inspections will be undertaken to assess need for use of water bowsers, with increased frequency when activities with high potential to generate dust are carried out during prolonged dry or windy conditions; • Shielding of dust-generating activities; • Use of enclosed chutes, conveyors and covered skips; • Covering vehicles carrying dry spoil and other wastes to prevent escape of materials; • Provision of wheel washing and wet suppression during loading of wagons/vehicles; and • Daily visual inspections will be undertaken to assess the condition of the junction of the site track with Seasalter Road and its approaches. 	DCO Requirement 11 (CEMP) Outline CEMP, Section 4.4 DCO Requirement 17 (DRP) Outline DRP, paragraph 5

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 16 Air Quality (Section 16.4.5.3) [APP-046]	Construction and decommissioning phase effects on local air quality - Emissions from Non-Road Mobile Machinery (NRMM)	Recommended mitigation measures in relation to Non-Road Mobile Machinery (NRMM) are detailed below: <ul style="list-style-type: none"> • All NRMM should use fuel equivalent to ultra-low sulphur diesel (fuel meeting the specification within EN590:2004); • All NRMM should comply with either the current or previous EU Directive Staged Emission Standards (97/68/EC, 2002/88/EC, 2004/26/EC). As new emission standards are introduced the acceptable standards will be updated to the most current standard; • All NRMM should be fitted with Diesel Particulate Filters conforming to defined and demonstrated filtration efficiency (load/duty cycle permitting). • The on-going conformity of plant retrofitted with Diesel Particulate Filters, to a defined performance standard, should be ensured through a programme of on-site checks; • Implementation of energy conservation measures including instructions to throttle down or switch off idle construction equipment; switch off the engines of trucks while they are waiting to access the site and while they are being loaded or unloaded; and ensure equipment is properly maintained to ensure efficient energy consumption; and • NRMM and plant should be well maintained. If any emissions of dark smoke occur then the relevant machinery will stop immediately and any problem rectified. 	DCO Requirement 11 (CEMP) Outline CEMP, Section 4.1 DCO Requirement 17 (DRP) Outline DRP, paragraph 5
Chapter 17 Miscellaneous Issues (section 17.5.4.1) [APP-047]	N/A – Embedded Mitigation	The site access road will be located at least the minimum 'pillar of support' clearance distances specified by National Grid away from the overhead line towers on the ZV 400 kV transmission route (as referred to in Document Reference: 6.4.17.2).	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Internal Access Tracks

ES Chapter [Doc. Ref]	Potential Effect	Mitigation	Where Secured
Chapter 17 Miscellaneous Issues (section 17.5.4.2) [APP-047]	N/A – Embedded Mitigation	The existing 11 kV overhead line will be removed and replaced with an underground 11 kV cable. These works will be undertaken within the Order Limits. The undergrounding will cease within the order limits, at which point the line will become overhead (as existing) before crossing outside the order limits.	DCO Requirement 2 (Detailed design approval) Outline Design Principles, Table 5.1, Undergrounding of Existing Overhead Line
Chapter 17 Miscellaneous Issues (section 17.6.1) [APP-047]	N/A – Embedded Mitigation	A Site Waste Management Plan (SWMP) will be agreed as part of the Outline CEMP prior to the commencement of construction.	DCO Requirement 11 (CEMP) Appendix A - Site Waste Management Plan
ES Clarification Note on north/south access options [AS-048]	Worst-case scenario effects relating to the two on-site access route options ("north" and "south"), for physical changes and visual effects, disturbance to species of bird and other fauna associated with protected/mitigation areas, increase in rainfall run-off rates, risk to unknown buried archaeology, traffic volumes and associated secondary effects of noise and air quality along Seasalter Road and Head Hill Road and potential damage to electrical cables.	The southern access option will be used, and not the northern access option.	The Works Plan The Streets and Access Plan

Table 2 - RIAA Mitigation

RIAA Section (Doc. Ref)	Potential Effect	Mitigation	Where Secured
Section 5.2.5.1: Noise and visual disturbance during construction and decommissioning	Visual disturbance to the wintering and breeding bird assemblage of the European Site during construction and decommissioning, from lighting.	Lighting mitigation measures set out in the Outline CEMP such as pointing lights away from the SPA and avoiding unnecessary light spill onto adjacent areas	DCO Requirement 11 (CEMP) Outline CEMP (Section 1.2)

RIAA Section (Doc. Ref)	Potential Effect	Mitigation	Where Secured
Section 5.2.5.1: Noise and visual disturbance during construction and decommissioning (Deadline 7 document reference 5.2, Revision B)	Noise and visual disturbance to wintering or breeding birds during construction and decommissioning cannot therefore be discounted, with regards to the wintering and breeding bird assemblage of the European Site.	Mitigation is therefore proposed to reduce the magnitude of effects as set out in the Outline SPA CNMP, Outline BBPP and Outline CEMP.	DCO Requirement 11 (CEMP) and DCO Requirement 13 (SPA CNMP)
Section 5.2.5.1: Noise and visual disturbance during construction and decommissioning (Deadline 7 document reference 5.2, Revision B)	Noise and visual disturbance during construction and decommissioning to the wintering and breeding bird assemblage of the European Site.	A Decommissioning Environmental Management Plan (DEMP), to include timescales and transportation methods, as well as noise management measures, will be agreed in advance with the local planning authority in consultation with appropriate stakeholders	DCO Requirement 17(11) (DRP)
Section 5.2.5.5 and 6.1.3: Hydrological changes (Deadline 7 document reference 5.2, Revision B)	Adverse changes to surface water quality in the European Site during construction and decommissioning, which could have consequential effects on the bird or invertebrate communities, in the highly unlikely event that a catastrophic failure of fuel or cement carrying construction vehicles close to the drains closest to the SPA were to occur.	Mitigation set out in the CEMP (Technical Appendix 10.2 of the ES) describes the good construction (and decommissioning) practice measures to be undertaken that result in no effect of hydrological impacts.	DCO Requirement 11 (CEMP) Outline CEMP (Sections 2 to 8, and Appendix F - Incident Response Plan)
Section 5.2.5.6 and 6.1.4: Deposition of dust (Deadline 7 document reference 5.2, Revision B)	Adverse impacts of dust soiling of habitats within The Swale SPA/Ramsar Site caused by earthworks and track-out during construction and decommissioning.	Mitigation set out in the Outline CEMP describes the good-practice measures to be adopted during construction (with similar measures applicable during decommissioning) to control the generation and dispersion of dust such that significant impacts on neighbouring habitats will not occur.	DCO Requirement 11 (CEMP) Outline CEMP, Section 4.4 DCO Requirement 17 (DRP) Outline DRP, paragraph 5

RIAA Section (Doc. Ref)	Potential Effect	Mitigation	Where Secured
Section 6.1.1.1: Intertidal habitats: non-breeding season (Deadline 7 document reference 5.2, Revision B)	Noise disturbance during construction to the wintering and breeding bird assemblage of the European Site.	In order to minimise the noise exceeding 55 dB LAmax reaching the SPA from the piling rig, the embedded mitigation will apply in all areas where it is demonstrated in the Outline SPA CNMP that piling noise has the (unmitigated) potential to exceed 55 dB beyond Mean High Water Springs (MHWS).	DCO Requirement 13 (SPA CNMP) Outline SPA CNMP (section 7)
Section 6.1.1.2: Grazing marsh/reedbed (north/west): breeding season (Deadline 7 document reference 5.2, Revision B)	Disturbance to breeding birds of the breeding assemblage of the SPA.	Construction noise exceeding 65 dB LAmax / LAeq at the SPA boundary will be avoided during the bird breeding season, defined as 1 March to 31 August inclusive.	DCO Requirement 13 (SPA CNMP) Outline SPA CNMP (section 4)
Section 6.1.2.1: Habitat Loss for brent goose, lapwing and golden plover (Deadline 7 document reference 5.2, Revision B)	Habitat loss for the wintering and breeding bird assemblage of the European Site.	An undeveloped area of the Development site was identified for habitat management to provide foraging and resting/roosting opportunities for geese and other waterbirds. This has been referred to as the AR HMA.	DCO Requirements 5 and 6 (LBMP) Outline LBMP (Appendix J)
Section 6.1.2.7: Habitat Loss for marsh harrier (Deadline 7 document reference 5.2, Revision B)	Habitat loss for the wintering and breeding bird assemblage of the European Site.	The extents of open habitats that will be managed to provide enhanced foraging for marsh harrier between the arrays are substantial, with minimum set back of 15 m either side of the ditch banks separating the arrays across the majority of the site (in places this could extend up to 80 m at some points between arrays).	Outline Design Principles, Figure 1 and Table 5.1. DCO Requirements 5 and 6 (LBMP) Outline LBMP (Appendix A)

APPENDIX A: PRIMARY AND SECONDARY MANAGEMENT PLANS

PRIMARY MITIGATION DOCUMENT	SECONDARY DOCUMENTS	HOW SECURED	TYPES OF MEASURES INCLUDED
Outline Design Principles	-	DCO Requirement 2	Sets maximum and, where relevant, minimum design parameters and principles against which likely significant environmental effects have been assessed
Outline LBMP	-	DCO Requirements 5 and 6	Covers vegetation management and biodiversity measures during the construction and operational phases
Outline LBMP	Appendix A - Grazing Marsh Grassland MP	DCO Requirements 5 and 6	Prescribes management of vegetation and habitat (both existing and new) proposed as part of the Development For each habitat type, the timing, ground preparation, seed mixes/planting requirements, management/maintenance measures, protected species licencing requirements, monitoring and remedial measures.
Outline LBMP	Appendix B - Lowland Meadow Grassland MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix C - Hedgerow (with trees) MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix D - Shelterbelt MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix E - Woodland MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix F - Electrical Compound Buffer Planting MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix G - Scrub Planting MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix H - Aquatic Habitats MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix I - Pillbox Bat Roost Creation	DCO Requirements 5 and 6	
Outline LBMP	Appendix J - Arable Reversion Habitat Management Area (HMA) MP	DCO Requirements 5 and 6	
Outline LBMP	Appendix K - Freshwater Grazing Marsh Habitat Management Area Management Plan	DCO Requirements 5 and 6	
Outline WSI	-	DCO Requirement 10	
Outline CEMP	-	DCO Requirement 11	Working hours, Provision of an Ecological Clerk of Works, Lighting management/controls, Noise management/controls, Ecology/ornithology, by cross-reference to the outline LBMP (a primary measure), Hydrology and water quality protection measures, Air quality protection measures, specifically relating to dust creation, Materials management, Waste management, Road construction methods, Pollution prevention measures
Outline CEMP	Appendix A - Outline Site Waste Management Plan	DCO Requirement 11	Measures to control the movement and storage of waste at the site
Outline CEMP	Appendix B - Outline Breeding Bird Protection Plan	DCO Requirement 11	Monitoring and control measures to minimise impacts on breeding birds
Outline CEMP	Appendix F - Incident Response Plan	DCO Requirement 11	Measures to deal with a pollution incident onsite
Outline CTMP	-	DCO Requirement 12	Controls over traffic movements to/from the site. Routes, timing, monitoring and control staff, compliance, proposed signage and speed restrictions, highway condition surveys, traffic management, management structure/group
Outline CTMP	Appendix C - Construction vehicle routeing	DCO Requirement 12	Routes to be used by construction vehicles
Outline CTMP	Appendix F - Outline traffic incident management plan	DCO Requirement 12	Management of traffic in the event of an incident
Outline CTMP	Appendix G - Public Rights of Way management plan	DCO Requirements 7 and 12	Construction-phase management of footpaths physically affected to ensure safe access
Outline CTMP	Appendix H - Travel Planning Statement	DCO Requirement 12	Modes of transport to be used during construction, co-ordination, awareness

PRIMARY MITIGATION DOCUMENT	SECONDARY DOCUMENTS	HOW SECURED	TYPES OF MEASURES INCLUDED
Outline SPA CNMP	-	DCO Requirement 13	Construction equipment choice, noise attenuation measures and operational methods to limit noise at the SPA boundary and Mean High Water Springs (MHWS)
Outline DRP	-	DCO Requirement 17(11)	Sets out the indicative methods and controls that will apply to decommissioning
OTHER MITIGATION:			
Outline BSMP	-	DCO Requirement 3	Sets out measures to facilitate safety during the construction, operation and decommissioning of the energy storage including the transportation of new, used and replacement battery cells both to and from the Development
Written scheme setting out the phases of construction	-	DCO Requirement 4	Sets out the phases of construction
European Protected Species	-	DCO Requirement 14	Requires pre-construction survey to identify if EPS are present, and appropriate licencing of works as required to comply with relevant legislation in respect of these.
Operational Noise Assessment	-	DCO Requirement 15	Requires an assessment to be submitted and approved prior to commencement detailing how the detailed design has incorporated mitigation to ensure that operational noise limits will be met
Outline SSCEP	-	DCO Requirement 16	Identifies opportunities for individuals and businesses to access employment and supply chain opportunities associated with the construction, operation and maintenance of the Development.

Acronyms:

LBMP:	Landscape and Biodiversity Management Plan
CEMP:	Construction Environment Management Plan
CTMP:	Construction Traffic Management Plan
SPACNMP:	Special Protection Area Construction Noise Management Plan
DRP:	Decommissioning and Restoration Plan
WSI:	Written Scheme of Investigation (archaeological)
MP:	Management Plan
EPS:	European Protected Species
BSMP:	Battery Safety Management Plan
SSCEP:	Outline Skills, Supply Chain, and Employment Plan