

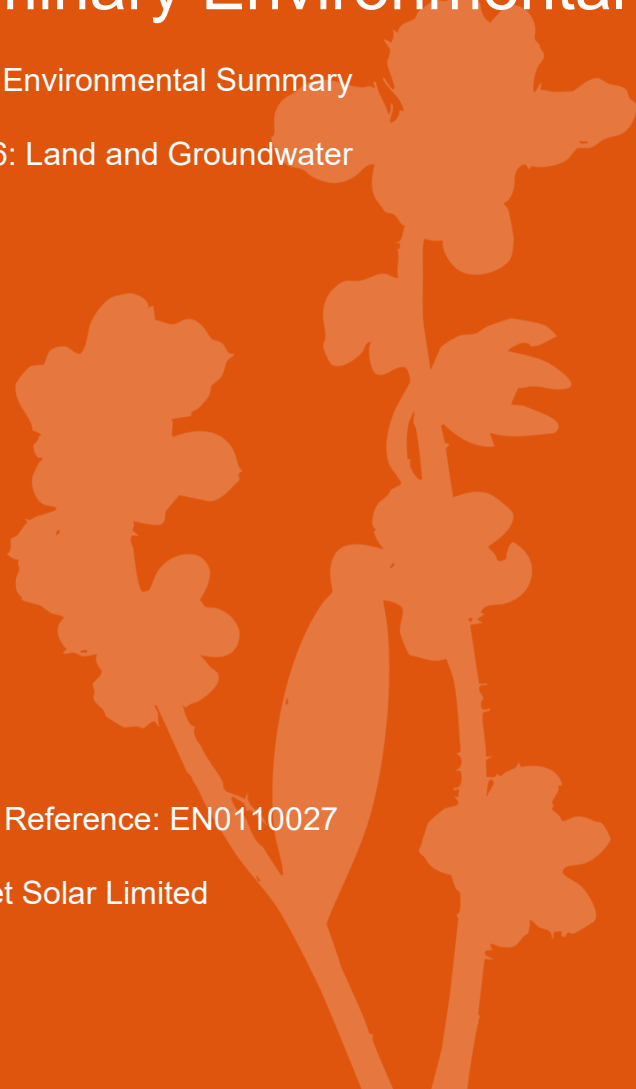
# South Brooks Solar Farm

## Preliminary Environmental Information

Volume 2: Environmental Summary

Chapter 16: Land and Groundwater

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## 16 Land and Groundwater

### 16.1 What is ‘land and groundwater’

- 16.1.1 This element of the preliminary assessment considers the potential for land and groundwater receptors to be affected by the Project during construction, operation and decommissioning. The term ‘Land and Groundwater’ is used to encompass receptors that are connected with the ground beneath the Project, and the water that is present within the ground. The preliminary assessment of receptors relating to Land and Groundwater considers the interactions of contamination effects with the identified receptors, as well as changes to the groundwater system resulting from the Project. **PEI Volume 2 Chapter 6: Hydrology** covers issues relating to surface water (including flooding and drainage), whereas this chapter considers water that is below the ground surface. The methodology for the Land and Groundwater assessment is presented in **Appendix 16.1: Assessment Methodology and Criteria**.
- 16.1.2 Key receptors relating to Land and Groundwater in relation to the Project are the geological units that are present beneath the ground (in places forming part of a geologically designated SSSI) and the groundwater receptors, including groundwater dependent terrestrial ecosystems. Without appropriate mitigation measures, the geological units could be affected by physical changes due to any excavation works within the SSSI area, and the groundwater receptors could be affected by numerous factors, including disturbing any existing contamination (if present), introducing new sources of contamination or affecting existing groundwater flow movements or levels.
- 16.1.3 In addition to the key receptors, this preliminary assessment also considers natural geological hazards. Issues relating to mineral resources have been addressed separately within a Mineral Safeguarding Assessment, which will be submitted in support of the DCO application.

### 16.2 Key Terms

**Table 16-1: Key Terms**

Term	Definition
Groundwater	Water that is present within shallow soil, superficial geological deposits or bedrock deposits. Groundwater flows through the ground, will be present at varying depths beneath the surface, and is influenced to some degree by the surface water bodies within the area. In the South Brooks area, there would be expected to be a tidal effect on groundwater, and there may be saline intrusion (meaning

Term	Definition
	that some groundwater may be composed of salt water, due to the proximity to the sea).
Aquifer	A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater.
Source Protection Zones	Zones which show the level of risk to a source of water from contamination. An Inner zone (SPZ 1) is defined as a zone with a 50 day travel time of pollutant to source (50 metres default minimum radius). An Outer zone (SPZ 2) is defined as a zone with a 400 day travel time of pollutant to source (250m or 500m minimum radius around the source depending on the amount of water taken). A Total catchment (SPZ 3) is the area around a supply source within which all the groundwater ends up at the abstraction point.
Groundwater dependent terrestrial ecosystem	A wetland that is critically dependent on groundwater flows and/or chemistries.
Contamination	The unwanted presence of a substance at a level that is hazardous, or that is significantly above the 'background' level is considered to be contamination.
Preliminary Risk Assessment	This is a report which provides the first stage of a land contamination assessment. It assesses available desk-based information to develop a 'conceptual site model' for the Site. This enables potentially unacceptable risks from contamination to be identified, and recommendations to be proposed for any further work to refine the conceptual site model.
Conceptual site model	This is a site-specific representation of the relationships between contamination sources, migration pathways and potential receptors. It identifies pollutant linkages (source-pathway-receptor) to assess environmental risks and guides investigation and remediation efforts. It can be in the form of text or a diagram.
Natural geological hazards	The geology of an area can pose hazards when land is developed, for example issues relating to shrink-swell clay, natural cavities, landslides, the presence of soluble rocks, compressible ground, collapsible deposits, and running sand.

Term	Definition
Geomorphology	The scientific study of landforms, including their origin, development, form, and sediments at the surface of the Earth.
Minerals Safeguarding Assessment	A technical report that evaluates whether a proposed non-mineral development will sterilise underlying mineral resources.
Receptor	Elements of the land or groundwater environment that could be affected by changes as a result of the Project.
Saline intrusion	Migration of salt water into freshwater coastal aquifers.

### 16.3 Summary of Points Raised in EIA Scoping Opinion and Project Response

16.3.1 Responses provided by the Planning Inspectorate (PINS) in the Scoping Opinion relating to receptors/matters to be considered in the Land and Groundwater assessment to be presented in the ES are summarised in Table 16-2 below.

**Table 16-2: PINS Scoping Opinion on Land and Groundwater**

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
Dungeness, Romney Marsh and Rye Bay Site of Special Scientific Interest (SSSI) (designated for geological features) should be scoped into the assessment.	The geological SSSI will be included in the assessment for all phases of the Project.	Potential impacts to the geological SSSI, along with the relevant mitigation required to reduce any likely significant effects, will be assessed within the Land and Groundwater chapter of the ES, which will be submitted in support of the DCO application. Engagement with relevant statutory consultees will be undertaken.
Groundwater should be scoped into the assessment.	Groundwater receptors will be included in the assessment for all phases.	Potential impacts to groundwater receptors, along with the relevant mitigation required to reduce any likely significant effects, will be

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
<p>Groundwater dependent terrestrial ecosystems should be scoped into the assessment.</p>	<p>Groundwater dependent terrestrial ecosystems will be included as a receptor.</p>	<p>assessed within the Land and Groundwater chapter of the ES, which will be submitted in support of the DCO application.</p> <p>Potential impacts to groundwater dependent terrestrial ecosystems, along with the relevant mitigation required to reduce any likely significant effects, will be assessed within the Land and Groundwater chapter of the ES, which will be submitted in support of the DCO application.</p>
<p>The proposed study area should be better defined and justified, considering the extent of hydrological connectivity in the ES. The study area should be illustrated on a figure.</p>	<p>An increased size of study area will be assessed, up to 1km (from 250m).</p>	<p>The Preliminary Risk Assessment considers the baseline environment up to 1km from the Site boundary, and this approach will also be adopted within the Land and Groundwater chapter of the ES, to ensure that any possible effects are captured, based on the potential extent of hydrological connectivity (this is in line with the approach taken within PEI Volume 2 Chapter 6: Hydrology). A figure showing the study area will also be provided in the ES.</p>
<p>Appropriate methodology for the land and groundwater assessment should be set out in the</p>	<p>The methodology for the Land and Groundwater assessment is provided in this document and will</p>	<p>The proposed methodology for the Land and Groundwater assessment is provided</p>

Summary of PINS Scoping Opinion	Discipline Feedback	Next Steps
<p>ES in line with relevant guidance. The Applicant should seek agreement on the approach with relevant consultation bodies.</p>	<p>be adopted for the assessment within the ES.</p>	<p>in this chapter and will define the approach to the assessment that will be followed within the ES, and this will be agreed in consultation with Kent County Council, East Sussex County Council and the Environment Agency.</p>
<p>Provision of a drawing showing the superficial geology.</p>	<p>The EIA Scoping Report provided a drawing showing the bedrock geology, but not the superficial geological units. Both types of geology will be shown on a drawing within the ES.</p>	<p>The requested drawing will be prepared and incorporated in the ES, which will be submitted in support of the DCO application.</p>
<p>The ES should confirm the approach to addressing geotechnical risks or signpost to where it is addressed.</p>	<p>Potential effects on the Project from natural geological hazards will be addressed.</p>	<p>Potential effects on the Project from natural geological hazards will be assessed within the Land and Groundwater chapter of the ES, which will be submitted in support of the DCO application.</p>
<p>Consultation relating to documents such as the Preliminary Risk Assessment (PRA) and subsequent assessments such as a Foundation Works Risk Assessment and Minerals Resources Assessment should involve parties such as all relevant local authorities and the Environment Agency.</p>	<p>Wider consultation will be undertaken, as appropriate to the specific documents.</p>	<p>Consultation with Kent County Council, East Sussex County Council and the Environment Agency will ensure that these bodies are aware of relevant documents and are involved as appropriate with the development of these documents.</p>

16.3.2 In addition to the PINS Scoping Opinion, engagement has been and continues to be undertaken with relevant stakeholders. A summary of ongoing consultation with consultees in relation to Land and Groundwater is provided in Table 16-3.

**Table 16-3: Summary of Ongoing Comments and Feedback With Consultees**

Summary of Relevant Stakeholder Comments	Consultee	Discipline Feedback	Next Steps
<p>Comments relating to the potential effects on shallow groundwater receptors requiring full consideration, to include an assessment of effects on groundwater quality and quantity (including any effects from saline intrusion). The assessment should include all elements of the Project including the cable routes.</p>	<p>Environment Agency</p>	<p>This issue will be considered as part of the Land and Groundwater assessment within the ES.</p>	<p>Potential impacts to shallow groundwater receptors, along with the relevant mitigation required to reduce any likely significant effects, will be assessed within the Land and Groundwater chapter of the ES, which will be submitted in support of the DCO application.</p>
<p>Provision of methodology for undertaking the land and groundwater assessment.</p>	<p>Kent County Council, East Sussex County Council and the Environment Agency</p>	<p>The methodology for undertaking the Land and Groundwater assessment was issued to Kent County Council and East Sussex County Council on 26 March 2026 and to the Environment Agency on 2 April 2026 for feedback prior to</p>	<p>Any responses relating to the methodology will be integrated into the assessment approach that will be adopted as part of the Land and Groundwater assessment within the ES Chapter, which will be submitted in support of the DCO application.</p>

Summary of Relevant Stakeholder Comments	Consultee	Discipline Feedback	Next Steps
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being used within the Land and Groundwater chapter of the ES.

16.3.3 **Appendix 1-2: Key Policy and Legislation** provides details on the legislation, policy and guidance that has informed the approach to the Land and Groundwater assessment.

## 16.4 Ongoing Land and Groundwater Work

### Study Area

16.4.1 The Site boundary plus a 250m buffer was initially proposed for the study area in the EIA Scoping Report, as an appropriate area to ensure consideration of all potential contaminant sources, or any sensitive receptors. However, the study area has been extended to 1km from the Site boundary. This brings the assessment of the groundwater regime in line with the study area used for assessing surface water receptors and will ensure that any features that are potentially in hydrological continuity with the groundwater beneath the Site will be considered. The updated 1km study area is used within the Preliminary Risk Assessment.

### Collection of Land and Groundwater Data

16.4.2 A Preliminary Risk Assessment has been drafted for the Project at this stage for consideration of the local authorities and the Environment Agency. This is a report which provides the first stage of the land contamination assessment for the Project. It assesses available desk-based information to develop a ‘conceptual site model’ for the Site. Desk-based information has been obtained from a commercially available environmental database search, along with other publicly available datasets, and responses provided by specific consultees. This document allows potentially unacceptable risks from contamination to be identified, and recommendations are proposed for any further work to refine the conceptual site model. The study area for the Preliminary Risk Assessment includes the Site boundary and up to 1km from the Site boundary.

### Current Land and Groundwater Results

16.4.3 A summary of the findings of the Preliminary Risk Assessment is provided below:

- 16.4.4 Potential sources of contamination from historical site usage include potential contamination from ongoing agricultural site use, potential contamination in made ground (including possible areas of reclaimed land or 'artificial ground') and potential contamination along routes of historical railways or tramways. Potentially contaminative land uses outside the Site boundary but within 1km of the Site boundary include mineral extraction sites, a sewage works, London Ashford Airport, Dungeness A and B Nuclear Power Stations, Dungeness Substation, railway lines and farm buildings.
- 16.4.5 Based on the preliminary assessment of potentially complete contaminant linkages, a number have been identified as requiring further consideration, through either an appropriate scope of site investigation, or through mitigation incorporated into the Project as may be appropriate:
- Potential risks to groundwater source protection zones and off-site groundwater abstractions from contamination caused by agricultural land use;
  - Potential risks to groundwater source protection zones and off-site groundwater abstractions from contamination associated with made ground;
  - Potential risks to groundwater source protection zones and off-site groundwater abstractions from contamination associated with off-site sources.
- 16.4.6 There are a number of locations where 'licensed waste management facilities' are present within the study area, the closest of which is approximately 55m from the Site boundary. These include one landfill site (approximately 585m from the Site boundary), and four treatment, management or transfer facilities (a metal recycling facility approximately 55m from the Site boundary, a waste water treatment facilities approximately 185m from the Site boundary, a recycling facility approximately 297m from the Site boundary and a waste management site approximately 740m from the Site boundary).
- 16.4.7 In relation to 'registered landfill sites', there are none within the Site boundary, with four within the 1km study area (only one of which is operational). These are located approximately 91m (two registrations at the same location), 158m and 596m from the Site boundary respectively.
- 16.4.8 In terms of the geological setting, the bedrock is composed of the Hastings Beds (part of the Wealdon Group), incorporating sandstones, siltstones and mudstones. The superficial geological units across the Site and in the surrounding 1km area include alluvium, blown sand, storm gravel beach deposits, marine beach deposits and tidal flat deposits.
- 16.4.9 A designated geological site is present within some parts of the Site, known as Dungeness, Romney Marsh and Rye Bay SSSI (which is designated for both

geological and ecological reasons). Regarding geology, the SSSI is designated due to three elements of importance relating to the presence of important features relating to coastal geomorphology<sup>140</sup>. These are defined as 'finite buried interest', 'integrity: active process geomorphological' and 'integrity: static (fossil) geomorphological'. The majority of South Brooks A is not within the SSSI boundary, the exception being the field closest to Horses Bones Farm (in the north eastern corner). South Brooks B is not within the SSSI boundary. A small part of South Brooks C is within the SSSI boundary, at the southern extent. South Brooks D and E are not within the SSSI, although the boundary of the SSSI is adjacent to the Site in some locations. Sections of the internal cable corridor option land are within the SSSI boundary, and the majority of the cable corridor routes to Dungeness Substation are within the SSSI boundary.

- 16.4.10 The Dungeness, Romney Marsh and Rye Bay SSSI is also classified as being a groundwater dependent terrestrial ecosystem, which means that it is a wetland that is critically dependent on groundwater flows and/or groundwater chemistry.
- 16.4.11 In terms of mineral extraction sites and mineral safeguarding areas, there are no operational mineral extraction sites within the Site, and there are two active sites within 1km of the Site boundary. There are four dormant mineral extraction sites within the 1km study area (none of which are within the Site). Mineral safeguarding areas are present within the Site and the 1km study area, relating to Storm Beach gravel.
- 16.4.12 In terms of groundwater, the bedrock deposits underlying the Site are classified as a secondary A aquifer, with superficial geological units defined as mainly secondary A aquifers, with some secondary aquifers (undifferentiated). The bedrock aquifers are defined as being of low vulnerability, with the superficial units having either high or moderate vulnerability. Depth to groundwater is unconfirmed, but it would be expected that saline intrusion of groundwater is likely, due to the proximity to the coast. A series of groundwater Source Protection Zones (SPZs) are present to the east of Lydd, through which some sections of the proposed cable routes pass. This predominantly relates to SPZ 3 (total catchment zone), but some short sections of cable route pass through SPZ 1 (inner protection zone) and SPZ 2 (outer protection zone). There are no SPZs within and of the solar PV land parcels.
- 16.4.13 There are no recorded private groundwater abstractions within the Folkestone and Hythe District Council area that are within the Site or the 1km study area. There are no recorded private groundwater abstractions within the Rother District Council area that are within the Site or the 1km study area. With respect to records held by the Environment Agency, there are no groundwater abstraction licences within the

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<sup>140</sup> Natural England Designated Sites View for Dungeness, Romney Marsh and Rye Bay SSSI, with categories defined in Natural England General Publication 802 (Part 1)

Site, with four located within the 1km study area, the closest being approximately 123m from the Site boundary.

16.4.14 With respect to potential natural geological hazards, the following have been identified within the Site boundary and/or the 1km study area:

- Running sand hazards: some areas of high hazard, some of moderate hazard, and zones of no hazard;
- Silt-rich soils susceptible to rapid loss of strength in wet conditions may be present within superficial deposits;
- Compressible ground hazards: mostly no hazard is likely, but in a small area hazards are possible;
- Filled or made ground may be present in limited locations; and
- A high groundwater table is expected.

16.4.15 The following provides a summary of the baseline information in respect of the key receptors or matters that have been scoped into further assessment:

- Designated geological sites: parts of the Site are within Dungeness, Romney Marsh and Rye Bay SSSI.
- Groundwater: secondary A aquifer and secondary aquifers (undifferentiated), including groundwater SPZs and Environment Agency recorded groundwater abstractions.
- Groundwater dependent terrestrial ecosystems within the Dungeness, Romney Marsh and Rye Bay SSSI.
- Natural geological hazards: according to the environmental database information, there is the potential for risks from geological hazards within some sections of the Site.

### **Future land and groundwater**

16.4.16 If the Project is not progressed, the future baseline with respect to land and groundwater is not expected to change significantly from current conditions.

## **16.5 Important Receptors Identified**

16.5.1 The following important receptors for land and groundwater have been identified at this stage:

- Geological units within the SSSI;

- Groundwater receptors (secondary A and secondary undifferentiated aquifers), including areas of groundwater SPZs; and
- Groundwater dependent terrestrial ecosystems (within the SSSI).

### **Considering Land and Groundwater in Design**

16.5.2 The baseline assessment relating to land and groundwater has identified the sensitive receptors relating to the Project.

16.5.3 With respect to issues associated with the geological SSSI, a bespoke construction approach will be developed in response to the geological importance associated with the SSSI, which will be set out in further detail at ES stage.

16.5.4 With respect to important groundwater receptors, the baseline assessment has identified the locations of these, and this has been taken into consideration as part of the design stage of the Project, although due to other constraints (including the position of the Project substation potentially requiring grid cables to pass through the areas of higher importance), it may not be possible to entirely avoid the higher importance groundwater receptors, depending on which grid connection options are taken forward.

16.5.5 In order to manage and minimise effects from the Project, measures will be secured by the outline Battery Safety Management Plan (oBSMP), outline Construction Environmental Management Plan (oCEMP), outline Operational Environmental Management Plan (oOEMP), and the outline Decommissioning Environmental Management Plan (oDEMP) to protect the land and groundwater receptors from:

- Risks relating to contamination (including the potential for introduction of new contamination, or the disturbance of existing contamination);
- Changes to the groundwater regime (which could affect the groundwater or groundwater dependent terrestrial ecosystems);
- Effects on the geological units within the SSSI; and
- Potential hazards associated with natural geological features.

16.5.6 Measures within the management plans will include, but not be limited to, the following:

- For the construction and decommissioning phases:
  - Undertaking ground investigation works prior to construction commencing to identify any requirements for additional investigation, remediation or mitigation measures;

- Procedures for responding to environmental incidents and emergencies;
- Adopting good practice measures to reduce pollution (such as providing spill kits on-site);
- Use of containment measures for fuels/chemicals;
- A procedure for encountering unexpected ground or groundwater contamination, including training personnel on the potential presence of unexpected contamination;
- Measures for dust suppression;
- Ensuring suitability of use for all material, to avoid accidental contamination; and
- Appropriate management of stockpiled material.
- For the operation phase:
  - Use of containment measures for fuels/chemicals;
  - An emergency spillage action plan;
  - A procedure for encountering unexpected ground or groundwater contamination, including training personnel on the potential presence of unexpected contamination;
  - Procedures to manage emergency events relating to the BESS infrastructure, including segregating, testing and safe disposal of firewater; and
  - Procedures for cleaning of solar PV panels, which should be done using only water (no chemicals).

## 16.6 Preliminary Assessment of Likely Significant Effects

### Approach

- 16.6.1 The table below indicates potential effects on land and groundwater receptors as a result of the Project. The receptors have been considered in terms of potential effects during the construction, operation and decommissioning phases of the Project, based on the methodology set out in **Appendix 16.1: Assessment Methodology and Criteria**.
- 16.6.2 In summary, the methodology stipulates that each of the identified receptors is assigned a sensitivity or importance (based on criteria provided by the Design

Manual for Roads and Bridges (DMRB)<sup>141</sup>. It is acknowledged that the main use of DMRB is for projects that relate to projects promoted by National Highways. However, in the absence of specific guidance relating to the assessment of geology, contamination and groundwater with respect to solar projects, the use of DMRB is considered to result in a robust and appropriate assessment. The potential impacts are assigned a magnitude of impact (change), and the sensitivity/importance and magnitude of impact are used to determine the significance of effect criteria for each of the Project phases. The methodology provided incorporates criteria definitions and typical examples to ensure that a consistent approach is taken to the assessment. Where the significance of effect is assessed to be moderate or above, this is defined as being a significant effect.

- 16.6.3 It should be noted that mineral resources have been scoped out of further assessment for construction, operation and decommissioning, although the Applicant has committed to demonstrate within the ES that the minerals underlying the Site will not be extracted during the lifetime of the Project, and that permanent sterilisation of resources will not occur. A Minerals Safeguarding Assessment has been prepared for the Project and will be submitted in support of the DCO application.
- 16.6.4 Issues relating to contamination have been scoped out of further assessment for construction, operation and decommissioning, which was agreed by PINS as long as the ES provides confirmation that the Preliminary Risk Assessment has demonstrated that the risk of contamination is minimal across the entirety of the Site (including all cable route and interconnecting cable corridors), and that an appropriate Battery Safety Management Plan is secured. In addition to the oBSMP, measures secured by the oCEMP, oOEMP, and oDEMP will protect the land and groundwater receptors from risks relating to contamination.

### **Preliminary Assessment**

- 16.6.5 A summary of the preliminary assessment of likely significant effects on Land and Groundwater associated with the Project is provided in Table 16-4 below. In summary, there is potential for significant effects in relation to groundwater

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<sup>141</sup> Design Manual for Roads and Bridges LA 109: Geology and Soils, revision 0, October 2019, available at: <https://www.standardsforhighways.co.uk/search/adca4c7d-4037-4907-b633-76eae30b9c0e>

Design Manual for Roads and Bridges LA 113: Road Drainage and the Water Environment, revision 1, March 2020, available at: <https://www.standardsforhighways.co.uk/search/d6388f5f-2694-4986-ac46-b17b62c21727>

Design Manual for Roads and Bridges LA 104: Environmental Assessment and Monitoring, revision 1, August 2020, available at: <https://www.standardsforhighways.co.uk/search/0f6e0b6a-d08e-4673-8691-cab564d4a60a>

receptors, to which mitigation will be set out as part of management plans to be submitted as part of the DCO application.

**Table 16-4: Potential Significant Land And Groundwater Effects**

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
Construction, operation and decommissioning	Use or storage of fuels or chemicals, earthworks, piling	Groundwater	Depending on the route selected for the cable corridors, the Site may include areas that are of very high importance in terms of groundwater, which could result in significant effects in terms of the quality or quantity of groundwater. Where groundwater importance is lower, effects are not anticipated to be significant (this means that for all areas of Solar PV, for the western cable options, and for the northern sections of the eastern cable options, significant effects would not be likely).	Receptor importance is Medium to Very High. Magnitude of impact following mitigation is Minor. The significance of effect is Moderate or Large Adverse (Significant).	Possible impacts on this receptor from introduction of new contamination sources (such as fuels or chemicals), or disturbance of existing contamination (during earthworks or piling) together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in full within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oCEMP, oOEMP, oDEMP and oBSMP will provide measures for minimising effects on this receptor.
Construction	Earthworks or piling	Geological SSSI	The geological SSSI is assigned as having a	Receptor sensitivity is Very	Possible impacts on this receptor from construction works, together

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
			<p>receptor sensitivity of very high (see <b>Appendix 16.1: Assessment Methodology and Criteria</b>), with the SSSI being of international importance. The magnitude of impact, following additional mitigation, is negligible (defined as a very minor loss or detrimental alteration to one or more characteristics, features or elements of geological feature/ designation, with the overall integrity of the resource not affected). Therefore, there is likely to be a direct, permanent slight adverse residual effect on the geological SSSI during the construction phase.</p>	<p>High. Magnitude of impact following mitigation is Negligible. The significance of effect is Slight Adverse (Not Significant).</p>	<p>with the mitigation required to ensure that likely significant effects do not occur, will be assessed in full within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oCEMP will provide measures for minimising effects on this receptor.</p>

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
Operation	Earthworks	Geological SSSI	The operation of the Project would not be expected to have any further effect on the superficial geological deposits within the geological SSSI, beyond those that are related to the construction phase.	Receptor sensitivity is Very High. Magnitude of impact following mitigation is No Change. The significance of effect is Neutral (Not Significant).	Possible impacts on this receptor from operational works, together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oOEMP will provide measures for minimising effects on this receptor, if appropriate.
Decommissioning	Earthworks	Geological SSSI	The decommissioning of the Project would not be expected to have any further effect on the geological deposits within the SSSI, beyond those that are related to the construction phase.	Receptor sensitivity is Very High. Magnitude of impact following mitigation is No Change. The significance of effect is Neutral (Not Significant).	Possible impacts on this receptor from decommissioning works, together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oDEMP will provide measures for minimising effects on this receptor, if appropriate.

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
Construction, operation and decommissioning	Use or storage of fuels or chemicals, changes to the groundwater regime due to earthworks or piling	Groundwater dependent terrestrial ecosystems	The groundwater dependent terrestrial ecosystem in the Dungeness, Romney Marsh and Rye Bay SSSI has the potential to be affected by the Project by the introduction of contamination (for example due to spills of chemicals or fuels, for example during refuelling of plant), or by affecting the groundwater regime by changing existing drainage. Activities such as piling, foundation excavation and earthworks could result in adverse effects on the groundwater receptor, with subsequent effects on the groundwater dependent terrestrial ecosystem.	Receptor importance is High. The magnitude of impact following mitigation is Minor. The significance of effect is Slight Adverse (Not Significant).	Possible impacts on this receptor from construction works, together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in full within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oCEMP will provide measures for minimising effects on this receptor.

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
Operation	Use or storage of fuels or chemicals, changes to the groundwater regime due to earthworks	Groundwater dependent terrestrial ecosystems	The groundwater dependent terrestrial ecosystem in the SSSI has the potential to be affected by the Project by the introduction of contamination during the operational phase (for example due to spills or refuelling activities).	Receptor importance is High. The magnitude of impact following mitigation is Negligible. The significance of effect is Slight Adverse (Not Significant).	Possible impacts on this receptor from operational works, together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in full within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oOEMP and oBSMP will provide measures for minimising effects on this receptor.
Decommissioning	Use or storage of fuels or chemicals, changes to the groundwater regime due to earthworks	Groundwater dependent terrestrial ecosystems	The groundwater dependent terrestrial ecosystem in the SSSI has the potential to be affected by the Project by the introduction of contamination during the decommissioning phase (for example due to spills or refuelling activities, or earthworks).	Receptor importance is High. The magnitude of impact following mitigation is Minor. The significance of effect is Slight Adverse (Not Significant).	Possible impacts on this receptor from decommissioning works, together with the mitigation required to ensure that likely significant effects do not occur, will be assessed in full within the Land and Groundwater chapter of the ES that will be submitted in support of the DCO application. The oDEMP and oBSMP will provide measures for minimising effects on this receptor.

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
Construction	Earthworks or piling	Natural geological hazards	The ES will address potential effects on the Project from natural geological hazards, based on the information that is presented within the Preliminary Risk Assessment report.	If present, geological hazards could cause geotechnical difficulties for the Project, such as collapse of excavations, difficult excavation conditions or the presence of shallow groundwater.	Additional work is recommended to provide site-specific information from an intrusive ground investigation, which should include geotechnical in-situ and laboratory testing to inform infrastructure and foundation design by assessing soil and bedrock types and depths, with additional focus on areas where the ground will be more heavily loaded. The geotechnical investigation will be developed in consultation with the project design team to ensure that all necessary areas are assessed for the intended end-use. The potential geological hazards that have been identified should be considered when this site investigation scope is being finalised.
Operation and decommissioning	Earthworks and removal of	Natural geological hazards	Issues relating to natural geological hazards would typically be resolved	Effects on the Project are expected to be	The information obtained during the intrusive ground investigation works should be considered, in

Phase	Activity	Receptor	Preliminary Assessment	Potential Significant Effect(s)	Next Steps
	infrastructure		during the construction phase and would not be expected to cause significant difficulties during operation or decommissioning.	Not Significant during operation or decommissioning.	case it provides information that would also be useful during operational or decommissioning phases.



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