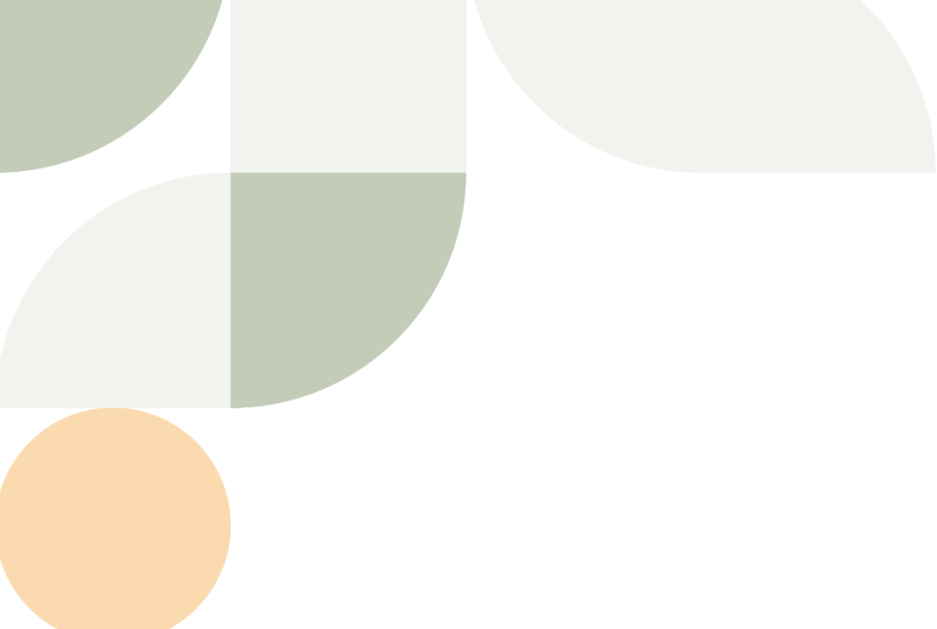




Lime Down

Solar Park

Outline Operational Environmental Management Plan (Clean)

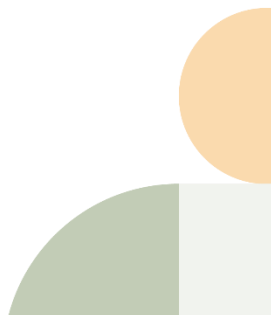
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Schedule of Changes

Revision	Section Reference	Description of Changes	Reason for Revision
2	Table 5	Update in relation to the Water Management Plan.	Updates in response to EA Relevant Representation for Deadline 1 of Examination.
	Table 5	Update in relation to drainage and surface water management.	Updates in response to EA Relevant Representation for Deadline 1 of Examination.
	Table 6	Update in relation to proposed planting mitigation measures	Updates in response to Wiltshire Council and Historic England's Relevant Representation for Deadline 1 of Examination.
	Table 8	Update in relation to annual monitoring and maintenance of equipment for noise and vibration.	Updates in response to Wiltshire Council's Relevant Representation for Deadline 1 of Examination.
	Table 8	Update in relation to the timeframes, and procedure for submitting noise monitoring survey results.	Updates in response to Wiltshire Council's Relevant Representation for Deadline 1 of Examination.
	Table 8	Update in relation to remodelling operational noise from the Scheme.	Updates in response to Wiltshire Council's Relevant Representation for Deadline 1 of Examination.
	Table 12	Update in relation to Community Liaison Manager's role during the planned replacement of all Solar PV Panels.	To address concerns raised by Wiltshire Council.
3	Table 13	Update to insert reference to Discovery and Inspection Strategy.	Updates in response to EA Statement of Common Ground Comments for Deadline 2 of Examination.
4	Table 4	Updates to the track construction methodology near Bincombe Wood.	Updates for Deadline 3 in response to Wiltshire Council Written Questions provided at Deadline 2 of Examination.
	Table 5	Update in relation post-flood inspections.	Updates for Deadline 3 in response to EA Relevant Representation provided at Deadline 2 of Examination.
	Table 5	Update in relation to permeable fencing design within areas of flood interaction.	Updates for Deadline 3 in response to EA Relevant Representation provided at Deadline 2 of Examination.
	Table 5	Updates in relation to rainwater harvesting.	Updates for Deadline 3 in response to EA Relevant

Revision	Section Reference	Description of Changes	Reason for Revision
			Representation provided at Deadline 2 of Examination.
	Table 13	Updates in relation to the post-incident management principles.	Updates for Deadline 3 in response to EA Relevant Representation provided at Deadline 2 of Examination.
	Table 15	Updates in relation to waste compaction	Updates in response to Stop Lime Down's Deadline 1 and 1A responses for Examination.
5	Paragraph 2.12.1	Updated replacement strategy text for non-panel Scheme components.	Updated at Deadline 4 of Examination in response to Action 2 raised at Issue Specific Hearing 4.
	Table 3	Updates in relation to adaptive skylark mitigation.	Updated at Deadline 4 of Examination in response to Action 28 raised at Issue Specific Hearing 3.
	Table 4	Refinement to construction track methodology text near Bincombe Wood.	Updated at Deadline 4 of Examination in response to Action 23 raised at Issue Specific Hearing 4.
	Table 5	Addition of spillage risk text to ensure compliance during replacement period.	Updated at Deadline 4 of Examination in response to discussions around replacement at Issue Specific Hearing 4.
	Table 11	Clarification to ensure reference to replacement period.	Updated at Deadline 4 of Examination in response to discussions around replacement at Issue Specific Hearing 4.
	Table 13	Confirmation of use of PFAS free panels during replacement period.	Updated at Deadline 4 of Examination in response to discussions around replacement at Issue Specific Hearing 4.
	Table 15	Updates to waste monitoring requirements.	Updated at Deadline 4 of Examination in response to discussions around replacement at Issue Specific Hearing 4.
6	Section 2.11	Insertion of clear linkage to ES Volume 3, Appendices 11-1 to 11-9: Flood Risk Assessments and Outline Drainage Strategies.	Updates made at Deadline 5 of Examination in relation to comments made by Wiltshire Council their Deadline 4 submissions.

Revision	Section Reference	Description of Changes	Reason for Revision
	Section 2.13	Clarification on panel replacement as a result of ExA Second Written Questions.	Updates made at Deadline 5 of Examination in relation to comments made by the Examining Authority in ExQ2 (GCT2.6).
	Table 4	Updates to Table 4 in relation to tree felling.	Updates made at Deadline 5 of Examination in relation to the SoCG request made by Wiltshire Council.
	Table 5	Addition of text on channelisation and ground cover monitoring.	Updates made at Deadline 5 of Examination in relation to comments made by Wiltshire Council their Deadline 4 submissions.
	Table 5	Addition of text to confirm process to be followed should a suspected agricultural drainage defect attributable be identified during operation.	Updates made at Deadline 5 of Examination in relation to comments made by the Examining Authority in ExQ2 (CA2.8).
	Table 7	Updates to vehicle movements during operation in relation to engagement with National Highways.	Updates made at Deadline 5 of Examination in relation to comments made by National Highways.
	Table 8	Updates to noise monitoring requirements.	Updates made at Deadline 5 of Examination in relation to comments made by the Examining Authority in ExQ2 (NE2.4).
	Table 20	Addition of equine mitigation table	Updates made at Deadline 5 of Examination in relation to Equine Business Report requested within ExA First Written Questions.
7	Paragraph 2.2.7	Updates in relation to the Innovation Forum.	Updates made at Deadline 6 of Examination in relation to comments made by Wiltshire Council in their Deadline 5 submissions.
	Table 1	Updates in relation to sustainable procurement processes.	Updates made at Deadline 5 of Examination in relation to comments made by Wiltshire Council in a meeting held 08/07/2026.
	Table 2	Updates to include the Cotswolds National Landscape Board as a consultee.	Updates made at Deadline 6 of Examination in relation to comments made by CNL in their Deadline 5 submissions.

Revision	Section Reference	Description of Changes	Reason for Revision
	Table 6	Updates in relation to including a Toolbox Talk detailing the presence of sensitive archaeological features.	Updates made at Deadline 6 of Examination in relation to comments made by Wiltshire Council in their Deadline 5 submissions.
	Table 6	Updated to reflect removal of solar panels from field A1.	Updates made at Deadline 6 of Examination in relation to design change.
8	Throughout	Updated document references throughout to the most recent version.	Applicant due diligence.
	Table 1	Additional measures added for management of any SF6 containing equipment.	Updates made at Deadline 7 of Examination in relation to a request from the ExA at ISH7 (Action 21).
	Table 1	Updates in relation to governance procedures throughout scheme lifetime, particularly concerning carbon emissions.	Updates made at Deadline 7 of Examination in relation to a request from Wiltshire Council provided post-ISH7.
	Table 3	Additional wording to clarify the mitigation hierarchy for badgers.	Updates made at Deadline 7 of Examination in relation to a request from the ExA at ISH7 (Action 25).
	Table 3	Updates in relation to adaptive skylark mitigation monitoring.	Updates made at Deadline 7 of Examination in relation to a request from the ExA at ISH7 (Action 26).
	Table 4	Updates in relation to ACoW, Bincombe Wood works, representation period for Wiltshire Council, notification and appropriate replacement of trees.	Updates made at Deadline 7 of Examination in relation to a request from Wiltshire Council provided post-ISH7.
	Table 5	Updates in relation to mitigation measures provided to ensure ground cover establishment and maintenance to prevent surface water runoff.	Updates made at Deadline 7 of Examination in relation to a request from the ExA at ISH5 (Action 15).
	Table 9 and 13	Updates to post-incident response plan.	Updates made at Deadline 7 of Examination in relation to a request from the ExA at ISH8 (Action 10).
	Table 8	Updated to highlight the commitments made around operational noise levels.	Updates made at Deadline 7 of Examination in relation to a request from the ExA at ISH7 (Action 23).
	Annex A	Outline Discovery and Inspection Strategy provided.	Updates made at Deadline 7 of Examination in relation to a

Revision	Section Reference	Description of Changes	Reason for Revision
			request from the ExA at ISH7 (Action 13).

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1 Introduction

1.1 Background

- 1.1.1 This document provides the outline for the Operational Environmental Management Plan (OEMP) for Lime Down Solar Park (hereafter referred to as 'the Scheme').
- 1.1.2 A Development Consent Order (DCO) would provide the necessary authorisations and consents for the Scheme which comprises the construction, operation and maintenance, and decommissioning of a solar photovoltaic (PV) electricity generating facility with a proposed total capacity exceeding 100 megawatts (MW), and associated infrastructure including a Battery Energy Storage System Area (BESS Area) and an export and import connection to the National Grid at the Existing National Grid Melksham Substation.
- 1.1.3 Due to its total capacity exceeding 100 MW the Scheme is classified as a Nationally Significant Infrastructure Project (NSIP) under Sections 14(1)(a) and 15(2) of the Planning Act 2008 (Ref 1) and therefore requires consent via a DCO. The decision whether to grant a DCO will be made by the Secretary of State for Energy Security and Net Zero (hereafter referred to as 'the Secretary of State') following the Examination and Recommendation by the Planning Inspectorate.
- 1.1.4 An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and an **Environmental Statement (ES) [EN010168/APP/6.1 to 6.4]** has been prepared in accordance with the Infrastructure Planning (EIA) Regulations 2017 (EIA Regulations) (Ref 2). In accordance with the requirements of the EIA Regulations, the ES contains the assessment of the likely significant effects on the environment that may be caused during the operation of the Scheme and describes proposed mitigation measures.
- 1.1.5 This Outline OEMP is designed with the objective of ensuring compliance with the relevant environmental mitigation measures set out within the ES. This document provides the likely structure of, and some outline information relevant to, the detailed OEMP. The detailed OEMP will be produced substantially in accordance with this Outline OEMP following the grant of the DCO before the Scheme becomes operational. It will then be submitted to the relevant Local Planning Authority (LPA) for approval, in accordance with Requirement 14 of the **Draft DCO [REP6-005]**.
- 1.1.6 The key elements of this Outline OEMP include:
- An overview of the Scheme and associated operational programme;
 - Prior assessment of environmental impacts (through the EIA process);
 - Proposed design and other mitigation measures to prevent or reduce potential adverse environment effects;

- Monitoring and reporting of effectiveness of mitigation measures; and
- Links to other complementary plans and procedures.

- 1.1.7 In summary, the Outline OEMP will identify how commitments made in the EIA will be translated into actions during operation and includes a process for implementing the actions through allocation of key roles and responsibilities. Any additional licences, permits or approvals that are required will be listed in the detailed OEMP, including any environmental information submitted in respect of them. The detailed OEMP will be a live document updated throughout the operational phase as required, for example to reflect changes in legislation or contact details. This Outline OEMP has been designed with the objective of compliance with the relevant environmental legislation and mitigation measures set out within the ES.
- 1.1.8 It is noted that multiple detailed OEMPs may be prepared, approved, and implemented, for example separate OEMPs may be prepared for the Solar PV Sites. Within this document 'detailed OEMP' is defined to collectively refer to all detailed OEMPs which may be prepared.
- 1.1.9 In accordance with Requirement 14 of the **Draft DCO [REP6-005]**, the ultimate Operator of the Scheme will be responsible for working in accordance with the environmental controls documented in the Outline OEMP and for the preparation and implementation of the detailed OEMP.

1.2 The Applicant

- 1.2.1 The Scheme is being developed by Lime Down Solar Park Limited ('the Applicant'). Lime Down Solar Park is a 100% subsidiary of Island Green Power UK Projects Limited, which is in turn a 100% subsidiary of Island Green Power's UK group holding company, Island Green Power Group Limited (IGP). The Applicant is part of IGP, who are a leading international developer of renewable energy projects, established in 2013.

1.3 The Scheme

- 1.3.1 The Scheme comprises a solar PV electricity generating station of over 50 MW and 'associated development' comprising an approximately 500 MW capacity BESS, grid connection infrastructure and other infrastructure integral to the construction, operation and maintenance, and decommissioning phases.
- 1.3.2 The PV electricity generating station and BESS would be contained within five land parcels referred to as Lime Down A, B, C, D and E (hereafter collectively referred to as the 'Solar PV Sites').
- 1.3.3 The Cable Route Corridor is the area within which the export connection cables (hereafter referred to as the 'Grid Connection Cables') would be located to connect the Solar PV Sites to the National Grid at the existing Melksham

Substation (hereafter referred to as the 'Existing National Grid Melksham Substation') and the area within which cables connecting the Solar PV Sites would be located (hereafter referred to as 'Interconnecting Cables') (refer to **ES Volume 2, Figure 3-1: Indicative Site Layout Plan [REP3-035]** and **Figure 3-4: Landscape and Ecology Mitigation Plan [REP6-009]**).

- 1.3.4 Further details of the Scheme are presented in **ES Volume 1, Chapter 3: The Scheme [APP-055]**. The **Design Principles and Parameters [REP4-043]** set out the maximum parameters which will be met by the Contractor and Applicant.

1.4 The Order Limits

- 1.4.1 The Scheme would be contained within the Order Limits (also referred to as 'the Site') which contains all elements of the Scheme (shown in **ES Volume 2, Figure 1-2 [APP-076]**).

2 Operational Environmental Management

2.1 Introduction

2.1.1 This section sets out the general site arrangements for the operation and maintenance phase of the Scheme.

2.2 Operational Activities

- 2.2.1 Subject to being granted development consent and following a final investment decision, the earliest construction could start is in 2027. The operation and maintenance phase is anticipated to commence in 2029. The operational life of the Scheme will be no more than 60 years and decommissioning is estimated to be no earlier than 2089.
- 2.2.2 During operation, activity on the Solar PV Sites would be restricted principally to vegetation management, equipment maintenance and servicing, ad hoc replacement of any components that fail or reach the end of their lifespan, periodic fence inspection, and monitoring to ensure the continued effective operation of the Scheme. Operation replacement of Solar PV Panels and BESS is discussed in Section 2.13.
- 2.2.3 Along the Cable Route Corridor, operational activity will consist of routine inspections (schedule to be determined) and any reactive maintenance such as where a cable has been damaged.
- 2.2.4 The Existing National Grid Melksham Power Station will be managed and maintained by National Grid. The substations on the Solar PV Sites will be managed and maintained by the Applicant / operator of the site.
- 2.2.5 As stated in **ES Volume 1, Chapter 13: Transport and Access [REP4-014]**, during the Scheme's operational phase, there are anticipated to be around five visits to each Site per month for maintenance purposes. These would typically be made by light van or 4 x 4 type vehicles. The installed grid connection cables (within the Cable Route Corridor) will be located underground. Access may be required for maintenance, but this is only likely once or twice a year.
- 2.2.6 Welfare facilities will be required at the substations within each location. Any wastewater will be removed via tanker to local licensed wastewater treatment works.
- 2.2.7 An Innovation Forum would be adopted during the Operational phase of the Scheme, to focus on adopting the emerging best practices and technological advances during the Scheme life. The structure and frequency of meeting would be provided in the detailed OEMP.

2.3 Operation Programme

- 2.3.1 Operation of the Scheme is expected to start following construction, no earlier than 2029. The Scheme will operate for no more than 60 years, with decommissioning assumed for the purposes of the environmental impact assessment to be not earlier than 2089.

2.4 Operational Staff

- 2.4.1 No on-site staff will be required to operate the Scheme but there will be limited staff facilities located in the control rooms associated with the 400 and 132 kV substations. Some permanent equipment for monitoring the Solar PV Sites will be located in the Relay and Control Room. Whilst this would typically be accessed remotely, it would be available for occasional physical access during routine visits. A further 15 staff jobs would be created, which would not be based on site.

2.5 Working Hours

- 2.5.1 The Solar PV Sites will generally be unmanned during normal operation. Routine maintenance would be carried out as required Monday to Friday 07.00 – 18.00. Emergency maintenance would be carried out as and when needed.

2.6 Parking Provisions

- 2.6.1 During operation, parking permeable gravel hardstanding will be provided within the operational compounds.

2.7 Control of Light

- 2.7.1 Lighting is generally not required within the Solar PV Sites during the operation phase of the Scheme. During the cleaning of the panels (as described in section 2.9), panels would be cleaned at night and would likely require lighting. This level of lighting similar to lighting required for night-time agricultural activities carried out in the area.
- 2.7.2 All routine maintenance activities, except panel cleaning, would be scheduled for daylight hours as far as is practicable, and therefore it is anticipated that focussed task specific lighting should only be required in the event of emergency works/equipment failure requiring night-time working or panel cleaning operations.
- 2.7.3 Motion sensing security lighting would be provided within substations and within the BESS Area to be used to maintain safe working conditions in winter months, security purposes, and maintenance activities. Light spill from internal lighting is anticipated to be minimal.

2.8 Operational Traffic and Access

- 2.8.1 During operation, other than during the operational replacement of Solar PV Panels (refer to Section 2.13), there will be a small number of daily vehicle trips, with additional staff attending when required for maintenance and cleaning activities.
- 2.8.2 Existing field accesses are proposed for the operational access where this is practicable and would reuse construction accesses. This excludes the access taken from the Fosse Way to Lime Down B which would be returned to its previous condition. **ES Volume 2, Figure 3-1: Indicative Site Layout Plan [REP3-035]** illustrates the accesses.

2.9 Panel Cleaning

- 2.9.1 Due to the wet UK climate, Solar PV Panels are largely self-cleaning and deterioration in PV system output due to dust or dirt is generally low. The requirement for, and the frequency of, cleaning of the Solar PV Panels due to the build-up of dust and dirt varies depending upon site specific conditions. For example, the presence of fine dust emitters such as quarries, agricultural operations (harvesting), and the volume and proximity of nearby woodland can all impact the level of dust deposition. However, the main factor influencing cleaning requirements in the UK is lichen growth which again is influenced by site specific and climatic factors.
- 2.9.2 As stated above, the deterioration in output due to dust or dirt is generally low and, therefore, the requirement for cleaning due to loss of output is balanced against cost of the cleaning operation. Some sites can operate without the need to be cleaned, whereas some sites require cleaning annually. The cleaning requirements for the Scheme can only be accurately determined once operational and, therefore, to present a worst case for the assessments presented in this ES, an annual cycle is assumed.
- 2.9.3 The Solar PV Panels would be cleaned using water only. Up to 495 m³ would be required to clean the panels once every year. Deionised water would be used as preference. No chemical cleaning products would be used, with stubborn dirt brushed or wiped off the panels.

2.10 Management of Vegetation Planting

- 2.10.1 An **Outline LLEMP [REP6-037]** has been prepared and submitted as part of the Application.
- 2.10.2 The Outline LEMP provides a framework for delivering the landscape strategy and the successful establishment and future management of proposed landscape works associated with the Scheme. It sets out the short and long-term measures and practices that will be implemented to establish, monitor and

manage landscape, and ecology mitigation and enhancement (biodiversity net gain) measures embedded in the design.

2.10.3 The Outline LEMP sets out the measures proposed:

- To mitigate the effects of the Scheme on landscape and biodiversity features;
- To enhance the biodiversity, landscape, and green infrastructure value of the Order limits; and
- To secure compliance with relevant national and local planning policies.

2.10.4 A detailed LEMP will be prepared in accordance with the Outline LEMP and will be submitted to and approved by the relevant local planning authority or authorities prior to construction. This will include provisions in respect of on-going maintenance and management of the landscape and ecology.

2.11 Control of Flooding

2.11.1 **ES Volume 3, Appendices 11-1 to 11-9: Flood Risk Assessments and Outline Drainage Strategies [REP4-022 to REP4-036 and REP3-063]** updated at Deadline 5 of Examination set out the site-specific flood risk and drainage measures relevant to operation of the Scheme. These measures form the basis of the mitigation required to avoid, reduce and manage the potential hydrology, flood risk and drainage effects identified in **ES Volume 1, Chapter 11: Hydrology, Flood Risk and Drainage [REP4-012]**. The relevant measures must therefore be incorporated into the detailed OEMP and associated Water Management Plan and implemented as applicable to the location, nature and stage of the construction works. The FRA and Outline Drainage Strategy suite should be read alongside Table 5 of this Outline OEMP.

2.12 Recovery, Recycling and Disposing of Waste

2.12.1 Solid waste materials generated during Scheme operation and maintenance would primarily be general (household type) waste from the staff visiting site. However, there would also be a limited volume of packaging waste associated with the delivery of spare components. In accordance with legislation and guidance applicable at the time, all general and packaging type waste would be segregated prior to transport to an approved, licensed third party landfill and recycling facilities.

2.12.2 Additionally, any waste components (e.g. faulty or damaged Solar PV Panels, batteries, cables, connectors and mounting structures) would also be removed and recycled as far as practical and in accordance with legislation and guidance applicable at the time (refer to Section 2.13).

2.12.3 Section 2.13 summarises the anticipated design life and replacement frequency for the main elements of the Scheme (Solar PV Panels, BESS etc.), based on other similar solar Nationally Significant Infrastructure Project (NSIP) schemes.

2.12.4 Waste is discussed further in **ES Volume 1, Chapter 20: Other Environmental Matters [REP5-028]**.

2.13 Replacement Programme

2.13.1 The replacement programme for the Scheme is expected to be as follows:

- It is expected that the operational life of Solar PV Panels is 40 years. The operational replacement of panels is anticipated to comprise:
 - Replacement of individual defective and broken Solar PV Panels on an ad hoc basis; and
 - Planned replacement of all Solar PV Panels once during the operational phase. The Solar PV Panels are anticipated to be replaced over a 12 to 24 month period.
- It is expected that the BESS could be replaced up to five times during the operational phase. The operational replacement of BESS have been assessed in the ES; however the effects are not anticipated to be greater than those associated with Solar PV Panel replacement; and
- Components such as Solar PV Mounting Structures, cabling and the Substation and BESS Area buildings are not anticipated to be replaced during the operation and maintenance phase, except in the event of unforeseen damage, failure, or deterioration.

2.13.2 The assessment in the ES has considered a reasonable worst case scenario for operational replacement with regard to frequency and duration of replacement activities. Where a shorter or longer operational replacement programme is anticipated to result in a greater level of likely significant effects in respect of a particular EIA topic, the worst case programme has been assumed for the purposes of the assessment of that topic.

2.13.3 Elements of the activities during the replacement programme would be similar to those carried out during construction. Where mitigation has been identified in the ES to mitigate construction effects is applicable to the replacement programme, these have been repeated in Section 3 of this Outline OEMP.

2.13.4 While panels are not anticipated to be replaced in a way that would not fall under either routine replacement or under the assessed wholesale replacement, including in a phased manner, the Applicant will notify the local authority of any replacement of 10% or more of either the BESS units or Solar PV panels.

2.14 Water Supply

- 2.14.1 During operation and maintenance, self-contained portable welfare units which store foul/wastewater for collection/emptying by specialist licenced contractors would be deployed on an ad hoc basis (e.g. if required by maintenance crews).
- 2.14.2 The water supply for operational staff facilities would either be transported to the Solar PV Sites by road from an existing nearby licenced water abstraction source and stored on site; or where mains water is available this will also be utilised. Welfare facilities will be required at the substations. Any wastewater will be removed via tanker to local licenced wastewater treatment works.
- 2.14.3 The volume of stored fire water will be maintained to ensure there is sufficient water for firefighting purposes. More details on fire water supply and storage is provided within the **Outline Battery Safety Management Plan [REP3-106]**.

2.15 Surface Water Drainage

- 2.15.1 The detailed operational drainage design would be carried out preconstruction with the objective of ensuring that drainage of the land to the present level is maintained. It would follow either the design of a new drainage system taking into account the proposed new infrastructure (access tracks, cable trenches and structure foundations) to be constructed or, if during the construction of any of the infrastructure there is any interruption to existing schemes of land drainage, new sections of drainage would be constructed.
- 2.15.2 The design of new drainage systems would be based on the **ES Volume 1, Chapter 11: Hydrology, Flood Risk and Drainage [REP4-012]** and **ES Volume 3, Appendix 11-1 to Appendix 11-9: Flood Risk Assessment and Drainage Strategy [REP4-022 to REP4-036 and REP3-063]**. Infiltration drainage design would be in accordance with Building Research Establishment (BRE) Digest 365: Soakaway Design and Sewers for Adoption and infrastructure would be placed at least 10 m away from watercourses, as shown on **ES Volume 2, Figure 3-1: Indicative Site Layout Plan [REP3-035]**.
- 2.15.3 Management of fire water is further described in **ES Volume 1, Chapter 11: Hydrology, Flood Risk and Drainage [REP4-012]**.

2.16 Grazing

- 2.16.1 For the purposes of assessment and reporting of effects, as a reasonable worst case it is assumed that vegetation will be managed with machinery and there will be no grazing at the Solar PV Sites during the operation and maintenance phase.
- 2.16.2 However, should consent be granted, grazing by sheep will be explored, noting that there are no known landowner restrictive covenants or other reasons that would prevent such use.

2.17 Security

- 2.17.1 The Solar PV Sites will receive several security risk management threat assessments during the development, construction, operation, and ultimately decommissioning phases. These security risk management threat assessments are conducted by suitable qualified and experienced persons (SQEP) and will determine security risks.
- 2.17.2 The Applicant recognises, and embraces, the symbiotic relationship between safety and security. The security arrangements to be present at the Solar PV Sites will therefore contribute to the overall safety of all who will, or may, enter the Site. The security arrangements will be SQEP reviewed at identified epochs commensurate to the Security Risk rating and will further assess any changes in the Security Risk Management Threat Assessment.
- 2.17.3 The boundary of the Solar PV Sites will be secured both by fencing and by the provision of Closed-Circuit Television (CCTV) equipment. Cameras would be placed on galvanised steel painted green poles with a maximum height of 3 m. Perimeter fencing will be deer wire mesh and wooden post fencing with a maximum height of 2.5 m. Fencing will be maintained in good condition throughout the operation and maintenance phase of the Scheme. All new access tracks will be secured by gates, which will be set back from the public highway. Where existing access tracks are used that also provide access to residential properties, appropriate security measures will be put in place in consultation with the relevant property owner(s).
- 2.17.4 There will be palisade fencing around the substations and BESS Area which will have a maximum height of 3 m.
- 2.17.5 Other potential security measures to be included comprise:
- Detection systems such as beam break, image detection etc. to raise alarm when fence breached;
 - Audio announcement when intruder detected to warn alarm triggered and police on way;
 - Barriers/locked gates at main entrances to the Solar PV Sites;
 - Steel doors on substation buildings;
 - Buried cables as much as practicable;
 - Remote monitoring; and
 - Alarm response contract with keyholder/security company.

3 Mitigation and Monitoring

3.1 Purpose

- 3.1.1 This section of the Outline OEMP sets out the mitigation and management measures to be included as a minimum in the detailed OEMP. It also identifies where monitoring is proposed to assess the effectiveness of the mitigation measures.

3.2 Climate Change

Table 1: Climate Change

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Greenhouse gas emissions from the operational maintenance activities required during operation of Scheme Stronger winds, heatwaves, heavy precipitation and increased risk of fires/wildfires.	The procurement of SF₆-free equipment will be prioritised where practicable SF₆-free equipment will be prioritised during detailed design and procurement. The selection of Automatic Identification System (AIS) equipment in the electrical design reduces the need to use SF₆ compared to alternative configurations. The BESS units, inverters, transformers and control panels will not contain SF₆, and SF₆-containing equipment will be avoided for equipment operating below 33 kV. Where SF₆-containing equipment is required for high-voltage electrical infrastructure, the final OEMP will include appropriate measures for the monitoring and control of fugitive SF₆ emissions in accordance with the applicable F-gas legislation and any successor requirements. Measures will include, where applicable to the equipment ultimately procured, maintaining an inventory of SF₆-containing equipment and associated SF₆ quantities; appropriate inspection, maintenance and leak detection arrangements; recording and investigation of identified leakage; prompt repair where leakage is identified; and appropriate recovery and handling of SF₆ during maintenance and at end of life. Regular planned maintenance of the Scheme will be conducted to optimise efficiency of the Scheme infrastructure. Increasing recyclability by segregating waste to be re-used and recycled where reasonably practicable.	The overall responsibility will be with the Applicant. Specific responsibilities will be confirmed in the OEMP(s). Monitoring weather forecasts and the news for Environment Agency flood warnings, relevant weather warnings, and water levels of the local waterways Refer to the Outline BSMP and Outline Water Resources Strategy.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Off-site reuse, recycling and recovery of materials and waste where reuse on site is not practicable. Operating the Scheme in such a way as to minimise the creation of waste and maximise the use of alternative materials with lower embodied carbon such as locally sourced products and materials with a higher recycled content. The Operator shall maintain appropriate corporate governance, procurement and supplier management procedures throughout the operational lifetime of the Scheme. Where practicable, suppliers and contractors engaged in the operation and maintenance of the Scheme shall be required to comply with the Operator's relevant policies and procedures relating to carbon emissions, environmental, social and ethical business practices. Where reasonably practicable, using lower carbon modes of transport, including Low Emissions Vehicles, by identifying and communicating local bus connections and pedestrian and cycle access routes to/from the Scheme to all staff. Off-site prefabrication will be undertaken where practicable, including use of prefabricated elements. Switching off vehicles and plant when not in use and ensuring vehicles conform to current UK emissions standards. Using equipment's cooling systems where necessary, i.e. for the BESS and for the standalone conversion units, and adapting working practices and equipment used based on current weather conditions. Protecting workers and resources from extreme weather conditions through appropriate PPE and working; and	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	BESS to include Heating, Ventilation and Cooling (HVAC) systems which would be contained within the individual equipment containers as well as other measures outlined in the Outline BSMP [REP3-106]. In terms of high precipitation and increase in storm intensity, The Outline WRS[APP-290] describes water management measures to control surface water run-off and drain hardstanding and other structures. The Scheme will adhere to good practice and guidance. Gas-insulated switchgear equipment is now supplied to minimise leakages. Additionally, through regular checks of the equipment for gas leaks, it can be expected that leaks to be de minimis.	

3.3 Landscape and Visual Landscape and Visual

Table 2: Landscape and Visual

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Loss of existing landscape features (e.g., vegetation). Visibility of operational activities.	The Outline LEMP [REP6-037] sets out the measures proposed to mitigate the potential impacts and effects on landscape (and biodiversity) features, and to enhance the landscape and biodiversity value of the Order limits. A detailed LEMP will be prepared in accordance with the principles of the OLEMP and will be submitted to and approved by the relevant planning authority or authorities. This will include measures to ensure landscape mitigation and enhancements are established and maintained into and throughout the operational phase. Avoidance Measures Avoidance measures are incorporated into the design of the scheme in order to reduce development impacts and control any negative effects on the landscape, especially on sensitive receptors such as the Cotswolds National Landscape. These measures include: • Avoiding development adjacent to the National Landscape where it would affect its setting; • Avoiding development where it would be visually intrusive and affect the character and visual experience of the landscape; and • Panels have been removed within the setting of the Cotswolds National Landscape in Sites A, B and C Avoidance areas have been included in the following locations: - A1 (northern and southern part), A11, A12 - B2, B3, B4, B5, B12	Refer to the OLEMP

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- C1, C2, C3, C4, C6, C8, C9 (part of), C20, C24, C25, C27, C28 - D9, D10 - E8, E9, E10 General Offsets/ Buffers Buffers outlined in Table 8.9 of Chapter 8: Landscape and Visual Impact Assessment [EN010168/APP/6.1] have been embedded into the design of the Scheme to protect the landscape fabric of the Sites. As well as standard offsets / buffers identified within Table 8.9 that have been applied across the Scheme, Table 8.10 of Chapter 8: Landscape and Visual Impact Assessment [EN010168/APP/6.1] identifies those areas which were avoided to reduce Landscape and Visual Impacts. Landscape Design Parameters Embedded mitigation measures: Landscape Design Parameters are set out in Table 8.8 of Chapter 8: Landscape and Visual Impact Assessment [REP3-025]. In preparing the detailed OEMP, the Cotswolds National Landscape Board will be consulted in respect of those measures relevant to the Cotswolds National Landscape and will have regard to any representations received in finalising those measures. PV Panels Tracking solar PV modules would be aligned in north-south rows, and fixed solar panels would be aligned in east-west rows. The maximum height of the highest part of the tracking solar PV modules and its greatest inclination would be 4.5 m. The maximum height of the solar PV modules	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	when horizontal would be 2.5 m. The maximum height of the highest part of the fixed solar PV modules will be 3.5 m BESS The installation of the energy storage has been selected based on locations where a combination of existing screening and capacity for planting mitigation can reduce visual impacts. Lighting • Security lighting within the substations and BESS would be motion sensors. • Good practice measures would be employed to minimise light spill. • There will not be any permanently fixed lighting structures within the Solar PV areas. Proposed Planting The following planting typologies have been proposed across the scheme to provide visual mitigation and introduce landscape features which are characteristic of the landscape setting that link existing habitat. Proposed planting typologies are illustrated within ES Volume 2, Figure 3-4 Landscape and Ecology Mitigation Plan [REP6-009] and within the Outline LEMP [REP6-037] and include: • Green corridor & Woodland Planting; • Enhanced Riparian Native planting; • Hedgerow Reinforcement & Reinforced roadside planting; • Proposed Hedgerows; and • Proposed Ponds and Wader Scrapes.	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Each of the above Planting Typologies has been sub divided to provide specific Planting Reference Types as set out within the Outline LEMP [REP6-037]. Arboricultural Protection The Scheme has been designed, as far as practicable, to avoid and reduce impacts and effects on Arboriculture by embedding mitigation measures into the design process. Particular protection measures include (outlined in Table 4 below): • Cable Route Corridor design work has been undertaken in order to retain, avoid and fully protect identified veteran trees to provide sufficient space to allow for open cut trenching around veteran tree buffer zones ensuring impacts to veteran trees are avoided – secured in the Works Plan [REP6-004]	

3.4 Ecology and Biodiversity

Table 3: Ecology and Biodiversity

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Impacts on biodiversity features during the operation of the Scheme	The Outline LEMP [REP6-037] contains habitat management measures to take place within the Solar PV Sites which will provide net gains for biodiversity. Prescriptions include substantial new hedgerow and tree planting, reinforcement planting at existing hedgerows and field boundaries, extensive grassland habitat creation and sympathetic management both within buffers and within the arrays, as well as discrete, valuable habitat creation (e.g. ponds and meadows) in appropriate locations. With the exception of land that has been excluded from development, the perimeter of the Solar PV Sites will be fenced for security purposes. A standoff of at least 3 m between the perimeter security fencing and the array structures will be implemented in order to facilitate movement for maintenance vehicles within the arrays. Permanent lighting is not required within the Solar PV Arrays for the operational phase. Motion sensing security lighting will be provided within substations and within the BESS Area, to be used only for maintenance and security purposes. A sensitive lighting strategy as part of the detailed OEMP will specify how this artificial lighting will be installed and used, which will serve to mitigate adverse impacts on ecological receptors which are adversely impacted by lighting, such as bats. Cables will be installed via HDD (or other non-open-cut methods) to cross those watercourses deemed suitable to regularly support eels and sea trout, including Gauze Brook, Gabriel's Well Brook, Pudding Brook, Pudding Brook Tributary, and Byde Mill Brook. In all such cases cables will be buried to a minimum depth of 5 m below the channel bed, in order to maximise attenuation of electromagnetic fields and minimise the risk of	Refer to the OLEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	any adverse impacts during operation. This is prescribed within the Outline EPMS [REP6-039]. Any newly created badger setts identified will be retained wherever possible and suitable mitigation measures, such as protective buffers, implemented to avoid potential adverse impacts such as damage to setts or disturbance of badgers therein. However, should new badger setts be excavated in areas where they come into conflict with ongoing management activities and retention and adequate protection of the setts is not possible, then these setts would likely be excluded under a mitigation licence from Natural England as a last resort measure. The mitigation licence would secure any compensation measures (such as the creation of artificial setts) required, the exclusion of the setts, and would ensure any impacts to setts are compliant with current legislation. During operation, habitat management and maintenance works will be timed, where appropriate, to avoid ecologically sensitive periods, for example hedgerow maintenance will avoid nesting bird season. Details of this are prescribed within the Outline LEMP [REP6-037].	
Potential pollution from battery fire or replacement at the BESS;	The risk of a fire and measures to mitigate impacts in the event of a fire are detailed within the Outline BSMP [REP3-106] .	Refer to the OBSMP.
Adaptive skylark mitigation	The Outline LEMP [REP6-047] sets out the provision of areas specifically designed to provide suitable habitat for ground-nesting birds, in particular skylark, and establishes the long-term management requirements for these areas. Section 1.4 of the Outline LEMP [REP6-037] also sets out an ecological monitoring strategy, which includes monitoring of ground-nesting bird mitigation. Monitoring of ground-nesting bird mitigation habitat will focus on ensuring optimal habitat conditions are achieved within mitigation areas. Given the numerous environmental variables that may influence skylark numbers and nesting between years, monitoring of breeding pairs as a measure of mitigation success is not proposed.	Refer to the OLEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	The findings of this monitoring will be used to assess the effectiveness of the ground-nesting bird mitigation areas and to identify whether any remedial or adaptive measures, such as changes to the management regime, are required. Further details relating to the target habitat condition and potential triggers for remedial action should target condition or suitability be not achieved will be provided within the detailed LEMP. General monitoring of bird populations at the Solar PV Sites, including within ground-nesting bird mitigation areas, is also proposed within the monitoring strategy.	

3.5 Arboriculture

Table 4: Arboriculture

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Soil compaction or damage to stem/branches during replacement activities.	Perimeter fencing (wooden post fencing with deer wire mesh to a height of 2.5 m) will be installed and remain in situ during operation of the Solar PV Sites. This will suitably protect trees on the field boundaries of the Sites from operational impacts such as maintenance and replacement activities. New tree and woodland planting is not proposed within the open cut sections of Cable Route Corridor, ensuring that future tree removal will not be required to remedy possible tree root interference with the cables. No new tree planting is proposed within the veteran tree buffer zones of identified veteran trees to ensure no future shading and resulting decline in the health and longevity of veteran trees. Any repairs to the existing section of access track adjacent to North Bincombe Wood shall be limited to the infilling of potholes using no-fines gravel and topsoil only. Use of the access track shall be limited to access by existing landowners for the purposes of accessing and managing their land and access required by the undertaker for hedgerow and other vegetation management. All maintenance and replacement activities near veteran trees will be supervised by an Arboricultural Clerk of Works (ACoW) to ensure no machinery or materials enter the Veteran tree buffer zone. This may be achieved through implementation of ground protection and/or tree protection fencing around the veteran tree buffer zones during maintenance and replacement activities.	To be confirmed in the detailed OEMP(s) Refer to OLEMP. Ongoing Arboricultural Clerk of Works during the replacement period and for any maintenance activities which pertain to the management of trees.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Where, during operation of the authorised development, a retained BS 5837:2012 Category A or Category B tree, or any veteran or ancient tree, is felled or removed for reasons including safety, disease, structural failure or other operational necessity, the undertaker shall provide Wiltshire Council with not less than five working days written notice prior to the undertaking of such works. Wiltshire Council may make representations to the undertaker during that five-working-day period. The undertaker shall have regard to any representations received before undertaking the works. Any relevant arboricultural survey information held by the undertaker in relation to the tree will be provided to Wiltshire Council upon request. Where works are urgently necessary because a tree presents an immediate risk of serious harm to persons or property, the requirement to provide prior notification shall not apply. In such circumstances, Wiltshire Council shall be notified in writing as soon as reasonably practicable following completion of the works The notification shall include: • the location and reference number of the tree; • the reason for the felling or removal; and • the date on which the works were undertaken Where replacement planting is undertaken to mitigate the operational loss of a retained BS 5837:2012 Category A or Category B tree, Wiltshire Council will be notified of the proposed species, size, specification and location of the replacement planting before the planting is undertaken.	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Replacement activities will be facilitated through use of access tracks installed during the construction of the Scheme, ensuring no additional root or canopy impacts to retained trees during replacement activities; Permanent access points and visibility splays for the Solar PV Site will be the same as those used for construction, ensuring no additional tree removal or pruning during operation of the Sites. Prior to any planned replacement of all or a substantial proportion of the Solar PV Panels: • A tree survey would be undertaken in accordance with BS 5837:2012 (or in line with most recent adopted standard and industry guidelines); and • An Arboricultural Impact Assessment would be produced alongside an Arboricultural Method Statement.	
Arboricultural Clerk of Works	The Arboricultural Clerk of Works (ACoW) shall be a suitably qualified and experienced arboriculturist with a minimum of five years' relevant professional experience. The ACoW shall have appropriate knowledge and practical experience of arboricultural matters relating to operation and maintenance (including replacement) works, including the application of BS 5837:2012 (or any relevant successor standard), tree protection measures and the supervision of works within or adjacent to Root Protection Areas. The ACoW shall have sufficient experience and competence to undertake the duties identified within this AMS and to provide appropriate arboricultural advice to the operation team throughout any required works.	N/A

3.6 Hydrology, Flood Risk and Drainage

Table 5: Hydrology, Flood Risk and Drainage

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
The following impacts may occur without adequate mitigation: - Impacts on water quality in waterbodies that may receive surface water runoff or be at risk of chemical spillages from supporting infrastructure for the Scheme (e.g., substations, battery stores, solar stations, local site offices and car parking etc.) and maintenance activities. - Potential for reduced chemical loading of watercourses associated with cessation of nitrate, pesticide, herbicide and insecticide applications on arable fields, or reduction in fine sediment/soil erosion, which would be beneficial. - Hydro morphological impacts to waterbodies including changes to physical form (for example where outfalls or watercourse crossings are required) which underpin habitats. - Impacts on flood risk from increased runoff from new impervious areas across the Sites.	Mitigation that has been embedded into the Scheme by design includes: Flood Risk and Resilience • Associated electrical infrastructure, including substations and Conversion Units are sequentially located to areas with a 'Low' probability of flooding (less than 1 in 1,000 annual probability of river or sea flooding (<0.1%)), where practicable, based on site-specific flood modelling and topographic data; • Post flood inspections will be carried out, as will removing debris from fencing, where safe and practicable; • Where perimeter fencing is required within the mapped Flood Zone 2 or Flood Zone 3 extents, it will comprise post and wire mesh fencing specified with the widest mesh aperture available within the selected fencing system, so as to maximise the passage of floodwater and debris and avoid obstruction of flood flows. Fencing in these locations will not be solid, close-boarded or fine-mesh. The detailed fencing specification will be confirmed at the detailed design stage in accordance with this principle; • Smaller fixed infrastructure such as Conversion Units are required to be positioned at specific operational locations within the panelled areas and therefore offer limited flexibility in siting. These components are typically located outside the 1 in 100 plus climate change extent (1% annual probability +CC), but where they fall within areas of modelled risk, they will be protected through localised flood resilience measures; and • Less-flood sensitive infrastructure forming the wider Scheme (Solar PV Panels and cabling) have been sequentially located outside the 1 in 100 plus climate change annual probability extent (1% +CC) or where this is	Regular recording of compliance in a logbook. The OEMP will detail the frequency. A Water Management Plan (which will form part of a detailed CEMP) will include details of pre-construction, construction, and post-construction (operational) water quality monitoring. This will include visual inspections and risk-based on-site measurements and sampling where appropriate. Monitoring is anticipated to be undertaken on a regular basis with increased frequency during periods of higher risk such as earthworks or concrete works, and continuing through construction and an appropriate period post-construction. Where sampling is undertaken, MCERTS methods will be used where applicable, with analysis undertaken by UKAS accredited laboratories. Details of monitoring frequency,

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
- Potential impacts on hydrology as a result of the Scheme by changing the way water infiltrates into the ground. - Potential beneficial impacts on local waterbodies where local abstractions are made for spray irrigation and therefore need will reduce.	not practicable restricted to areas which experience less than 1 m depth of flooding during the same event. Solar PV Panels • Flexibility for tracker or fixed Solar PV Panels has been built into the design with foundations likely to be galvanised steel poles driven into the ground. These will either be piles rammed directly into the ground or rammed into a pre-drilled hole, or a pillar attaching to a steel ground screw depending on ground conditions (subject to an appropriate piling risk assessment); • For both fixed and tracker panels, all sensitive and electrical equipment mounted on the Solar PV Panels will be elevated by the supporting legs or frame so that it is no less than 0.6 metres above the surrounding peak flood level, in accordance with the site-specific hydraulic modelling and flood resilience principles; and • Tracker panel units will be mounted on rotating frames which, when at maximum tilt, result in a minimum clearance of approximately 0.4 metres between the lower edge of the panel and surrounding ground levels. However, the electrical and sensitive components will remain positioned at a height that ensures compliance with the 0.6 metre clearance above the peak flood level. During flood events, the tracking system is designed to stow panels into a horizontal position, resulting in a post height of at least 2.5 metres above ground level. The panel structures themselves are flood resilient and not considered vulnerable to short-term water contact. Drainage and Surface Water Management • Eight metre buffers from infrastructure will be established around watercourses, including Main Rivers and Ordinary Watercourses. This is an improvement over the baseline scenario, where arable farming typically involves ploughing closer to ditches than the proposed separations, resulting in better drainage outcomes;	locations, parameters, trigger levels and methods will be defined within the detailed Water Management Plan, proportionate to the sensitivity of the receiving environment. This will be based on a combination of visual observations and reviews of the Environment Agency's automatic water quality monitoring network. Operational phase water management will be secured through the OEMP, with any monitoring requirements defined on a proportionate, risk-based basis where necessary.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	• Linear infiltration trenches will be incorporated around isolated infrastructure (e.g. string inverters or cable jointing pillars) within panelled areas to manage surface water at source, mimic the undeveloped state, and prevent lateral surface water migration; • Where practicable, runoff from equipment and access tracks will be directed to permeable SuDS features such as gravel-filled trenches or French drains, or similar passive drainage features appropriate to local conditions; • SuDS features will be inspected and maintained on a regular basis. Detail on frequency of maintenance scheduled will be provided in the detailed OEMP; • The detailed OEMP will consider opportunities for rainwater harvesting for appropriate non-potable operational uses, including occasional panel cleaning, where feasible. Subject to detailed drainage design, SuDS strategy, water quality controls and operational requirements; must not compromise sealed/isolatable drainage principles for BESS/substation infrastructure; • The construction of the cable route will include several watercourse crossings which are described and mapped within ES Volume 3, Appendix 11-9: FRA and Drainage Strategy - Lime Down Cable Route Corridor [REP3-063]. While works would ordinarily require Flood Risk Activity Permits from the Environment Agency and Land Drainage Consents from the Lead Local Flood Authority, it is intended that these requirements be disapplied through the Development Consent Order; • Access to the Scheme during construction, operation and maintenance, and decommissioning phases will be taken from new permeable or existing farm tracks accessed from the local highway network. This limits the potential for increased surface water runoff rates and sedimentation effects during construction / decommissioning; and	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- Where practicable, existing access tracks would be retained to limit the requirement to develop new access which can disturb soils and lead to compaction. Where new access tracks are required, they would be designed to avoid crossing drainage ditches, where practicable. Appropriate soil handling and storage protocols are set out in the Outline SRMP[REP6-035]. Spillage Risk - Measures relating to vehicle refuelling stated in the 'Spillage Risk' section of Table 5 of the Outline CEMP [REP6-029] such as correct storage of fuels, buffers from receptors and use of drip trays should be abided to during the replacement phase. Monitoring of Channelisation - During operation, the Solar PV Sites will be inspected for evidence of concentrated or channelised surface water runoff, including erosion, scour, rutting and sediment movement. Inspections will be undertaken periodically and following significant rainfall events. Where channelisation or associated erosion is identified, proportionate remedial measures will be implemented to restore diffuse drainage and prevent further erosion or sediment transport. Ground Cover Monitoring - Vegetation establishment provides a vital function in ensuring favourable soil structure particularly with regards to preventing surface water runoff. Vegetation will be managed in line with the principles set out in the Outline LEMP [REP6-037]. - Ground cover beneath and between the Solar PV Panels will be monitored to identify persistent areas of bare ground, poor vegetation establishment, rilling, erosion and drip line scour. - Where required, remedial measures will be implemented, which may include reseeding, soil loosening or localised erosion control, to maintain effective ground cover and minimise surface water runoff and soil loss. Success of remedial actions will be monitored until	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	establishment has been confirmed. Vegetation establishment and monitoring measures are also outlined within the Outline LEMP[REP6-037]. • Where remediation efforts have failed or cannot be established within a reasonable timeframe to ensure flood risk is managed temporary SuDs will be implemented to prevent any increases in runoff offsite. • As per the measures outlined in the Outline SRMP[REP6-035] prior to any significant reseeded a suitably qualified soil practitioner should perform checks by means of small hand-dug pits to determine if compaction or other soil related issues are contributing to the vegetation failure. Should structural soil issues be determined as the root cause of vegetation failure appropriate mitigation should be implemented prior to any subsequent sowing. Temporary Drainage • Where evidence of a suspected agricultural drainage defect attributable to the construction of the Scheme is identified following reinstatement, the affected drainage will be inspected by a suitably qualified and experienced agricultural drainage specialist. Where the defect is confirmed to result from the construction works for the Scheme, proportionate remedial works will be undertaken to restore the affected drainage function.	

3.7 Cultural Heritage

Table 6: Cultural Heritage

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Operation phase impacts upon Heritage / Archaeology assets	Mitigation that has been embedded into the Scheme by design includes the avoidance of archaeologically sensitive areas and areas considered to cause an indirect impact to the significance of heritage assets through their setting. Proposed Solar PV Panels have been removed entirely from various fields within the Solar PV Sites as a result of heritage or archaeological sensitivities. This includes Fields A8, A11, A12, B1, B12, C1, C2, C3, C4, C6, C8, C13, C16, C20, C24, C25, C26, C27, C28, C35, D9, D10, E5, E7, E8, E9, E10, E16, E22 and E30. Solar PV Panels have been partially removed from Fields A4, B6, B11, C10, C15, C21, C23, C31, D4, D6, D11 and E1. Solar PV Panels have been entirely removed from Fields A1 and C9, in part due to heritage impacts but these have not been the reason all panels have been removed. In locations with heritage assets that could be impacted by the Scheme through their settings, enhanced visual screening through vegetation and distance offsets are proposed. The Applicant and its Consultants will look for opportunities to better reveal or enhance the significance of the heritage assets affected. Offsets in Fields A4, C9, C10, C15, E29 and E32 of the Solar PV Sites provide embedded mitigation to the setting for identified heritage-based sensitivities. Landscape mitigation to mitigate potential adverse effects upon heritage assets will include planting of shelter belts and scattered trees, planting of	No monitoring required.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	new hedgerows, and existing hedgerow reinforcement. Monitoring of the effectiveness of proposed planting will be undertaken in line with Annex A of the Outline Landscape and Ecological Management Plan (LEMP) [EN0101068/APP/7.18] and replacement planting will be undertaken in line with Sections 1.3.15 to 1.3.18 of the LEMP. Any maintenance works to the track to the south-west of Rodbourne Road (Works Number 8b) should be undertaken in line with the design agreed in consultation with the Wiltshire Council Conservation Officer (see Section 2.3 of the CTMP).	
Operation phase impacts upon buried archaeological assets.	Where preservation in situ has been identified as embedded mitigation for buried archaeological remains during the construction phase, this will be maintained during the operation and maintenance phase. It is not envisaged that any ground disturbance is required beyond that experienced during the construction phase. If ground disturbance is required beyond that caused during the construction phase than an appropriate archaeological mitigation strategy will be identified and agreed with the archaeological advisor(s) to the LPA(s) in advance of any required works (i.e. a written scheme of investigation (WSI)). If required, archaeological works will be undertaken by suitably qualified and experienced professional archaeological specialists. All archaeological works will be undertaken in line with national guidance (i.e. Historic England and ClfA guidance). If required, works will be monitored by The Archaeological Clerk of Works and/or the Archaeological Advisors to the LPAs will monitor the completion of works in accordance with an appropriate WSI.	Monitoring as required

3.8 Transport and Access

Table 7: Transport and Access

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Vehicle movements during operation.	• Providing suitable points of access for operation and maintenance phase vehicles with turning areas; • The planting of landscaping and screening to conceal reflections from the Solar PV Panels as far as practicable, which could affect drivers on the local highway network; and • Implementation of measures from the Outline CTMP [EN010168/APP/7.22] (where appropriate) during the programme of replacement for the Solar PV Panels, transformers and BESS Batteries. • The Applicant will engage with National Highways where any of the operational activities are proposed within close proximity or adjacent to the Strategic Road Network (SRN) or that could have an impact on the SRN including (without limitation) replacement activities. The Applicant will also consult National Highways if there are any changes or amendments to the operational environmental management plan that relate to operational activities within close proximity or adjacent to the Strategic Road Network (SRN) or that could have an impact on the SRN.	The overall responsibility will be with the Applicant. Specific responsibilities will be confirmed in the OEMP(s).
Management of permissive path.	The permissive path will be managed through: • The provision of new non-vehicular permissive paths on each of the Solar PV Sites. These routes will provide pedestrians and horse riders improved accessibility to the countryside and improved connectivity to the wider PRoW network. These permissive paths are to remain open up to 364 days per year throughout the proposed 60-year operational lifetime of the Scheme. These permissive paths will provide a beneficial impact on PRoW use for local users and visitors through mitigating adverse impacts on other PRpWs and providing alternative access	The overall responsibility will be with the Applicant. Specific responsibilities will be confirmed in the OEMP(s).

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	routes to the use of the local highway network. These measures, when implemented, will enhance connectivity in the local area; • The Outline PRow and Permissive Paths Management Plan [EN010168/APP/7.17] will also apply to the operation and maintenance phase;	

3.9 Noise and Vibration

Table 8: Noise and Vibration

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Impact of noise and vibration associated with operational equipment on nearby sensitive receptors.	The specification of plant machinery with low noise emission and properly attenuated supply and extract terminations will help to minimise noise emissions during the operational phase. The use of enclosures, local screening, mufflers, and silencers will also be used as appropriate. Plant such as the substation and batteries will be designed to have minimal tonal, impulsive or intermittent features; and Where practicable, the Scheme layout has been developed to minimise noise and vibration effects at sensitive receptor locations. The BESS Area and 132 kV and 400 kV Substations have been located a minimum of 450 m and 400 m from receptor locations respectively. Noise source data for plant in Chapter 14: Noise and Vibration of the ES [EN010168/APP/6.1] has been selected based on experience of previous solar farms. There is a requirement for flexibility in design so noise source data may not be representative of plant in the final design. Although there can be variations in noise emissions, noise emitting plant will be selected with consideration of noise emissions where practicable. In addition, the following measures will apply: • Noise emissions are one of the criteria evaluated when procuring appropriate equipment for use on the Site; • A 2 m bund with additional 3 m barrier around the eastern and southern boundary of the BESS Area will be incorporated within the design of the Scheme to attenuate noise and to reduce visual impacts; • Where required, manufacturer-supplied noise mitigation will be installed; and • Where required, noise generating equipment will be enclosed / containerised.	Site staff will carry out annual monitoring and maintenance of equipment as close as practicable to the BESS Containers, inverters, conversion units and transformers. The monitoring, which will take place following commissioning as well as during each summer when cooling fans are likely to be at their loudest, will include identifying any changes in sound pitches or volume early and carrying out the relevant maintenance. This ensures that plant noise at sensitive receptors throughout the operational lifetime of the Scheme is not materially worse than the levels presented in the ES. The results of such monitoring will be submitted to the relevant planning authority for review within 4 weeks of the survey. Where this review indicates plant noise levels generated by the Scheme have materially

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Although the indicative Scheme layout and plant selection has been optimised to minimise noise levels at sensitive receptors, there is a requirement to retain some flexibility with respect to the final specifications of the operating plant. Consequently, the Applicant commits that noise at sensitive receptors will be no higher than the levels presented in Section 14.10 of Chapter 14: Noise and Vibration of the ES [EN010168/APP/6.1] and these levels will be set out in the detailed OEMP. This includes a commitment to noise levels being below the LOAEL at R12, R22, R25, R31 and R34 and levels derived from modelling that includes silencers on 17 of the conversion units including those units that would impact R24, R41, R42 and R43. The Applicant will remodel operational noise from the Scheme with respect to the final design, including required plant mitigation, to demonstrate that there would be no significant operational noise effects arising from the Scheme as built. The results of this remodelling, including details of the final plant mitigation measures, will be submitted to the relevant local authority.	increased, the report to the local authority will include an action plan and appropriate timescales for resolving the issue. The undertaker and relevant planning authority will then liaise in respect of any further maintenance or mitigation required to reduce levels at receptors back to those presented in the ES. In the case of third-party complaints about noise correction actions will be taken by the Environment Manager and recorded as outlined in Section 6.2. Further details are to be confirmed in the detailed OEMP(s).

3.10 Air Quality

Table 9: Air Quality

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
BESS fire emissions.	Measures included in the Outline BSMP [EN010168/APP/7.21]: • Notification of potentially affected residents including advice on the health effects of smoke and ways to reduce exposure (e.g. close windows and stay indoors); • Notification of potentially affected members of the public to move to a cleaner air location; • Cancellation of outdoor events and potentially moving affected residents to a cleaner air location; • Should there be a BESS fire in close proximity to the road, the site operator to determine wind direction and seek to close the road if deemed necessary; and • Should there be a BESS fire in close proximity to the rail line, the site operator to determine the wind direction and notify Network Rail if deemed necessary.	Refer to the Outline BSMP. A post-incident recovery plan (refer to Section 4.1.34 of the Outline BSMP [EN01068/APP/7.71] (Rev 4) will be shared with the relevant regulatory bodies to allow consideration of any ongoing actions including monitoring.
Back-up generator emissions.	• Ensure the back-up generators adhere to Stage V emissions standards and seek alternatives where practicable, such as batteries or alternative fuel; and • Should a diesel generator be used at the 132 kV Substation located at Lime Down E, ensure it is placed as far from North Bincombe Wood Ancient Woodland and Rodbourne Plantation Local Wildlife Site as practicable and that testing is kept to a minimum.	The overall responsibility will be with the Applicant.
Vehicle emissions from the operational maintenance activities required during operation of Scheme	• Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use	The overall responsibility will be with the Applicant. Specific responsibilities will be confirmed in the OEMP(s).

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	and when it is safe to do so. In addition, plant and vehicles will conform to relevant applicable standards for the vehicle type as follows: - Euro 4 (Oxides of Nitrogen (NOx)) for petrol cars, vans and minibuses; - Euro 6 (NOx and PM) for diesel cars, vans and minibuses; and - Euro VI (NOx and PM) for lorries, buses, coaches and Heavy Goods Vehicles (excluding specialist abnormal indivisible loads).	
Fugitive dust emissions during replacement activities.	Good practice measures set out for construction will be reintroduced and implemented for replacement activities. Appropriate mitigation and control measures will be included in the detailed OEMP(s), which would include: Communications • Develop and implement a Stakeholder Communications Plan that includes community engagement before work commences on-site; • Display the name and contact details of person(s) accountable for air quality and dust issues on the Site. This may be the Environmental Manager; and • Display the Contractor's head or regional office contact information. Dust Management • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the relevant local authorities. Site Management • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; • Make the complaints log available to the local authority when asked; • Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook; and	The overall responsibility will be with the Applicant. Specific responsibilities will be confirmed in the OEMP(s). The following monitoring will be undertaken: • Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authorities when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary; • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	• Hold regular liaison meetings with other high risk construction sites within 500 m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes. Preparing and maintaining the site • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible; • Erect solid screens or barriers around dusty activities or the site boundary so that are at least as high as any stockpiles on site; • Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period; • Avoid site runoff of water or mud; • Keep site fencing, barriers and scaffolding clean using wet methods. • Remove materials that have a potential to produce dust from site as soon as practicable, unless being re-used on site. If they are being re-used on-site, cover as described below; and • Cover, seed or fence stockpiles to prevent wind whipping. Operating vehicle/machinery and sustainable travel • Ensure all off-road vehicles comply with the requirements of the Non-Road Mobile Machinery (NRMM) standards, where applicable. Use stage 4 NRMM as a minimum and stage 5 where practicable; • Ensure all vehicles/machinery are switched off when stationary/not in use; • Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable; • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required, these speeds may be increased with suitable	available to the local authorities when asked; • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions; and • Agree dust deposition, dust flux, or real-time PM₁₀ continuous monitoring locations with the local authority. Where practicable, commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Any unforeseen issues that arise in relation to vehicle movements will be logged by the Site Manager. If necessary, the issues will be discussed with the local highway authority so that they can be resolved as appropriate.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authorities, where appropriate); • Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing); and • Signs to direct construction vehicles associated with the Scheme will be installed along the construction traffic route. Operations • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where practicable and appropriate; • Use enclosed chutes and conveyors and covered skips; • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. Waste Management • No bonfires or burning of waste materials. Earthworks • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable; • Use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- Only remove the cover in small areas during work and not all at once. Construction - Avoid scabbling (roughening of concrete surfaces) if possible; - Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place; - Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and - For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust. Trackout - Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site; - Avoid dry sweeping of large areas. In dry conditions, areas near to the Site access will be sprayed with water supplied to prevent the spread of dust; - Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; - Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; - Record all inspections of haul routes and any subsequent action in a site logbook; - Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned;	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	• Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). A wheel washing facility will be provided at each access. This will be located at the end of each access road, ahead of the egress onto the local highway network; • A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway; • If required, a road sweeper will be provided for the area surrounding access to alleviate any residual debris generated during the construction phase, as required; • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and • Entrance gates to be located at least 10 m from receptors where practicable.	

3.11 Socio Economic Tourism Recreation

Table 10: Socio Economic Tourism Recreation

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Peak impacts on the socio-demographic and tourism environment	Peaks in operational and maintenance activity are anticipated to take place in association with replacement of Solar PV Panels and BESS Batteries. In these instances, embedded mitigation and good practice measures set out for construction will be reintroduced and implemented for these periods of peak activity on the Scheme.	To be confirmed in the detailed OEMP(s).
Disruption to local residents, businesses and community facilities	Primary mitigation measures are embedded within the Scheme, as set out in the respective chapters, to reduce operational effects (such as noise, air quality, transport, and landscape and visual) which in turn will mitigate the effects on the local community and existing facilities from a socio-economic and land use perspective. Measures to mitigate the effects of operational noise and vibration are outlined in Table 8. Repair, upgrade and replacement of existing PRow furniture and re-establishment of hedgerow gaps. New non-vehicular permissive paths will also be installed, which would be open up to 364 days per year throughout the proposed 60-year operational lifetime of the Scheme. The potential to locate temporary workers, during periods of scheduled replacement activities, in either private rental accommodation or in temporary serviced accommodation to moderate the level of demand for temporary accommodation will be considered to mitigate impacts on accommodation demand for both residents, and visitors and tourists. Measures to mitigate the effects of landscape and visual amenity impacts from operation are outlined in Table 2. Measures to mitigate the effects of operational traffic are outlined in Table 7.	To be confirmed in the detailed OEMP(s).
Visual impact on tourism and recreation facilities	The embedded visual mitigation includes designing the preliminary layout of the Sites to provide suitable buffers from roads, PRow, and	Refer to the OLEMP.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	neighbouring tourism destinations. These buffers, along with minimal on-site activity during general operation and maintenance, help to mitigate impacts on the durability of tourism receptors, and on formal recreational sport and youth play facilities near to or within view of the Scheme during its operational lifetime. Furthermore, proposed landscaping planting is likely to mature over the lifetime of the Scheme, which will mitigate effects of the Scheme on the surrounding landscape and amenity for residents and tourists. Measures to mitigate visual impacts are set out in the Outline LEMP [EN010168/APP/7.18]. These mitigation measures, such as noise attenuation, glint and glare mitigation, and additional landscape screening to residential and other sensitive receptors will help to reduce overall impacts on tourism and recreational receptors such as tourist attractions, recreation centres, and recreational routes in the proximity of the Scheme. General operational and maintenance traffic will be directed to using access and travel routes most appropriate for the vehicle type required.	
Disruption to users of PRoW during operation Disruption to users of PRoW during peak operational and maintenance periods	The routing of PRoW is retained by the Scheme design to ensure the use and connectivity of PRoW is maintained throughout the operational lifetime of the Scheme. Any diversions to PRoW and other recreational routes, if required during infrastructure replacement activities events, will be temporary with original routing restored as soon as practicable, appropriately signed, and the duration and length of diversions will be optimised to minimise impacts on accessibility and use. An Outline PRoW and Permissive Paths Management Plan [EN010168/APP/7.17] outlines these measures. Other potential mitigation measures may include the reintroduction of traffic management including banksmen at sensitive points on the highway network or at PRoW and recreational route crossing points. These will help to reduce peak effects on recreational receptors sensitive to traffic movements and mitigate against likely significant effects to long-distance recreational routes. The diversion of footpath bridleway	To be confirmed in the detailed OEMP(s).

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	WT MALW 54, where HGV access to Lime Down E is taken, will be reintroduced as required for peak Solar PV Panel replacement activities as set out for construction.	
Landowner Income	The Scheme allows for continued income for eligible landowners by way of ground rent in place of the loss of income from agricultural use of the Solar PV Sites.	No monitoring required

3.12 Soils and Agriculture

Table 11: Soils and Agriculture

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for surface soil compaction and disturbance in some areas due to maintenance work. For example, grassed access alleys traversed by light vehicles for Site maintenance could cause surface compaction in damp or wet soil conditions.	A Soil Resources Management Plan (SRMP) will detail how the risk of causing surface compaction can be minimised and how to remove compaction if it has occurred. Examples include specification of vehicles used for any trafficking off access tracks, placement and movement of any livestock troughs and site inspection by a suitably experienced soil scientist to monitor for the emergence of any soil compaction issues. Maintenance work on solar arrays and equipment (including replacement) in relation to soil and land disturbance will be carried out in accordance with the SRMP. Vegetation would be managed with machinery. There may be the opportunity for land beneath the Solar PV Panels to be grazed by sheep.	Soil assessments and monitoring will be undertaken as detailed in the SRMP.

3.13 Human Health

Table 12: Human Health

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Disruption to the local community	A Community Liaison Manager will be appointed as a temporary facilitator of communications between communities and the Scheme's operators during the peak replacement scenario. During long-term general operation and maintenance activities, a full-time member of the Scheme's operation and maintenance team should also be in dedicated 'community contact' position whereby they are responsible for monitoring community interaction to ensure community concerns are heard, responded to and suitably addressed throughout the duration of the Scheme's operation and maintenance phase. Details of the Community Liaison Manager within the operation and maintenance team should be made available to members of the public through elected representatives or online, and kept up-to-date at all times. This will therefore reduce the likely significance of effect on human health in the communities most affected by the Scheme. During the planned replacement of all Solar PV Panels, the Community Liaison Group established during construction will be resumed as a formal forum for local issues to be raised. A Community Liaison Manager will be appointed to lead discussions with local communities, and also act as the primary point of contact should there be any queries or complaints. The terms of reference for the Community Liaison Group will be developed in consultation with Wiltshire Council. The Scheme will include enhancements to existing PRowS and provide new non-vehicular permissive paths.	To be confirmed in the detailed OEMP(s).

3.14 Ground Conditions

Table 13: Ground Conditions

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for pollutants to enter the ground.	The design of the Scheme has included measures to avoid and minimise the risk of pollution to the ground and water during its operation. These include: • Regular inspections and maintenance of all equipment will be undertaken in order to identify any leaks or damage early. Any panels which require maintenance / replacement will be removed before there is any leakage of chemicals from the sealed units. Any leaks will be dealt with in a way that is compliant with the prevailing environmental legislation. The detailed OEMP(s) will include a regular schedule for visual inspection of the panels and all other infrastructure; • Bulk fuels and any chemicals used on the Sites will be stored appropriately, within an impervious bund to reduce the potential for any contamination source in the event of a container failure / leak of battery fire and associated fire waters; • Where the use of pesticides or herbicides is necessary for the maintenance of the operational site, all substances used will be used in accordance with guidelines on application rate and safe use and in full consideration of the hazards outlined on the Material Safety Data Sheet (MSDS) issued by the manufacturer; • Where foundations are required, appropriate drainage will be designed into the building, using sustainable drainage principles where appropriate; • Excavation of soils is not anticipated to be required during the operational phase, but on occasions where it cannot be avoided or where accidental releases of chemicals are known or suspected to have occurred as a result of the Scheme a discovery and inspection strategy will be deployed to outline the process that should be adopted for	The Environmental Manager will regularly record compliance in a logbook. The OEMP will detail the frequency.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	identifying and addressing contaminant impacts to soils and groundwater (an Outline Discovery and Inspection Strategy is provided in Annex A). Records of any unexpected contamination identified and remediated or removed will be retained to inform decommissioning activity; - Where such contamination is identified, consideration will be given to the proximity of potable abstractions and Ground Water Dependent Terrestrial Ecosystems (GWDTE) in any action taken. Where excavation is required within a radius of an abstraction equivalent to SPZ1, i.e. within 50m, this should be considered in the remedial action taken; - There is no intention for fluid-filled cables to be utilised so there is no risk of the uncontrolled release of insulating fluids; - Implementation of management measures for waste during the construction, operation and decommissioning process; - All photovoltaic arrays / panels used, including replacements, will be certified as PFAS free, meaning there is no risk of mobilisation of PFAS coatings on the panels being leached or otherwise mobilised and entering ground or surface water. The detailed OEMP will also specify the management of any chemical substances, i.e. herbicides, pesticides, lubricants, used on site and the precautions in place to avoid uncontrolled discharge.	
Battery Storage	Additional to this, the design of the has included measures to avoid and minimise the risk of battery storage contamination. These include: A Battery Safety Management Plan (BSMP) will be implemented throughout the scheme to ensure the safe design, production, use, transportation, storage, and disposal of batteries. This approach will minimise risks associated with batteries while complying with relevant standards; and	The Environmental Manager will regularly record compliance in a logbook. The OEMP will detail the frequency.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	The underground cables will employ high-quality, durable sheathing and insulation materials to protect the cables from physical damage, moisture, and corrosion, ensuring they can withstand harsh underground conditions.	
BESS Fires	Mitigation measures to manage potential risks associated with BESS fires: - A Battery Safety Management Plan (BSMP) will be implemented throughout the scheme to ensure the safe design, and disposal of batteries. This approach will minimise risks associated with batteries while complying with relevant standards; - For BESS Area and substation sites featuring potential fire risk, installations will be bundled to retain firefighting substances used to control fire. All such designs will as a minimum be in line with current good practice on the construction of the BESS Area. Fire suppression systems will prioritise the use of environmentally safer foams or fire waters, with containment measures in place to manage runoff; and - Containment of hazardous substances. Battery storage units will be housed in fully contained systems, ensuring that release of chemicals or contaminated fire water is captured and prevented from leaching into the environment.	Post-incident environmental monitoring will be conducted to ensure soil and water quality is not compromised. A post-incident recovery plan (refer to Section 4.1.34 of the Outline BSMP [EN01068/APP/7.21] (Rev 4)) will be shared with the relevant regulatory bodies to allow consideration of any ongoing actions including monitoring. An outline post-incident management procedure for retained firewater should be prepared prior to operation. This will be secured through the detailed Operational Environmental Management Plan, approved under Requirement 14 of the Draft DCO.

3.15 Minerals

Table 14: Minerals

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
As a result of the nature of the Scheme, no mitigation measures have been identified during the operation and maintenance phase of the Scheme for Minerals.		

3.16 Materials and Waste

Table 15: Materials and Waste

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Impacts of waste to the surrounding environment. Potential to impact on sensitive receptors (humans, wildlife, and controlled waters) if not stored and managed appropriately. Impacts on waste recycling and handling facility capacity.	The Scheme will prioritise waste prevention, followed by allowing for reuse, recycling, and recovery of equipment when it comes to replacement as part of the with landfill disposal as the last resort, in line with the waste hierarchy. A Waste Management Strategy will be developed as part of the OEMP to ensure operational waste is managed suitably, and that waste arisings are sent for handling at facilities within the waste local authorities that have capacity to do so without adversely impacting upon their capacity to handle waste arisings for all other waste streams in the authority area. All waste management will comply with relevant regulations, and waste will be transported by licensed hauliers to authorised waste management sites with the necessary permits for the consigned wastes. During the replacement of components, waste compactors will be located within each Solar PV Site to reduce trips associated with waste removed from the Site. Excavated material reuse would be determined via a Materials Management Plan (MMP) in accordance with the CL:AIRE DoW CoP, exemption or environmental permit. Materials requiring removal from the Order limits during operation would be transported using licensed carriers and records kept, detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations. Infrastructure such as PV panels and battery storage units that need to be replaced during the operational phase, will be removed and recycled as far as practical and in accordance with legislation and guidance applicable	Refer to the detailed OEMP. The types, quantities and final destination of waste generated during the construction phase would be identified, measured and recorded through the MMP. A register of all waste loads leaving the Order limits during the replacement period would be maintained to provide a suitable audit trail for compliance purposes and to facilitate monitoring and reporting of waste types, quantities and management methods.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	at the time, or if more suitable at the time, sold for refurbishment and reuse. The Scheme is expected to generate waste from electrical and electronic equipment (WEEE) during both the operation and maintenance phases. These items will be recovered and recycled by an authorised reprocessor in compliance with the WEEE Regulations 2013 (Ref 7). To ensure this is done according to “Best Available Treatment Recovery and Recycling Techniques,” a list of up-to-date authorised reproducers should be established prior to the operational phase of the Scheme and kept up-to-date throughout the operation phase. This will be secured through measures set out within the OEMP.	

3.17 Telecommunications, Television Reception and Utilities

Table 16: Telecommunications, Television Reception and Utilities

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Utilities, Telecommunications and Television Receptors	During the operational and maintenance phase, there will be safe working beneath any overhead lines in line with National Grid's technical guidance note 287 (Ref 3), including, for example, ensuring adequate clearances are in place when plant and equipment are being moved beneath overhead lines, and limiting any planting beneath overhead lines to low growing species. Measures in relation to safe working near buried utilities, particularly gas pipelines, will be in place at all phases of the Scheme. For example safety measures set out in National Grid and Northern Gas Networks guidance documents for third parties working in the vicinity of high pressure gas pipelines and associated installations (Ref 5; Ref 6).	No monitoring required.

3.18 Glint and Glare

Table 17: Glint and Glare

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Glint and Glare effects	The following embedded mitigation measures have been incorporated into the Scheme design: • The Scheme design has incorporated setbacks from dwelling receptors where practicable; • Committing to use of single axis tracking Solar PV Panels where required (field C14); • Committed not to implement fixed south facing panels in the affected area (as show in ES Volume 3, Appendix 20-4: Glint and Glare Study [EN010168/APP/6.3]) or implement a resting angle of 5 degrees to the single axis tracking panels (field C14); and • Committing to use of 2.5 m 1P fixed south-facing panels where required (field B11). Additionally, existing vegetation along the boundary of the Order limits will be retained and managed where practicable to ensure its continued presence and to aid the screening of low-level views into the Order limits.	Refer to the OLEMP.

3.19 Electromagnetic Fields

Table 18: Electromagnetic Fields

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for risks to human health associated with electromagnetic fields.	The following embedded mitigation measures have been incorporated into the Scheme design: • The Scheme will be designed so that the maximum levels of electromagnetic radiation received at existing residential properties, places of work, and PRowS, from the 400 kV cables during operation will be below ICNIRP reference levels (Ref 4); • There are no overhead cables planned as part of the Scheme. This is material as underground cables significantly reduce the risk of significant EMF impacts upon human health. There are no electric fields above ground associated with underground cables. Electrical fields from the underground power cables will be shielded by the surrounding jacket and the conducting soil; • A minimum 10 m setback will be imposed between receptors (residential dwellings) and 400 kV cables. The Grid Connection Cables will be installed in trenches up to 2 m deep; and • All proposed cables and associated electrical infrastructure will be 'UKCA' and/or 'CE' marked.	The Environmental Manager will regularly record compliance in a logbook. The OEMP will detail the frequency.

3.20 Major Accidents and Disasters

Table 19: Major Accidents and Disasters

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Major Accident or Disasters	The following embedded mitigation measures have been incorporated into the Scheme design: • The Scheme has been designed to incorporate adequate separation between battery containers; • The Scheme layout seeks to avoid greatest areas of flood risk and avoids existing utilities to reduce risk of damage or severance; • The Scheme has been designed to ensure battery containers are located at least 350 m from the nearest PRoW and 600 m from residential receptors; • BESS containers would have built in safety features, including cooling systems, fire resistant construction, fire detection, suppression systems, emergency stop functions, and isolation monitoring; and • The Scheme has been designed to ensure adequate provision of land for water storage, and battery containers away from trees and hedgerows. All works will be undertaken in accordance with relevant Health and Safety legislation and guidance. Details of fire, police, emergency services and hospitals will be publicised and included in the site induction. An Outline BSMP [EN010168/APP/7.21] has been produced for the Scheme and will be referred to during operation to safely reduce and manage the risk of fire during operation. This will be updated and maintained as a 'live document' throughout the operational phase of the Scheme. An Emergency Response Plan will be prepared to minimise risks from smoke that may accompany a toxic gas release. An appropriate risk assessment will be produced prior to construction to minimise the risk	No monitoring required.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	of major accidents during operation. An Emergency Response Plan would be followed in the event of fire. Further risks of major accidents and disasters are covered in the other tables in this document relating to Hydrology, Flood Risk and Drainage; Transport and Access; Ground Conditions, Human Health and Other Environmental Matters (Utilities and Glint and Glare).	

3.21 Equine Mitigation

Table 20: Equine Mitigation

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for Major Incidents affecting horses.	Previously Committed Measures Mitigation measures to control thermal runaway events occurring, or to dictate the emergency response to fire at the BESS are secured through the Outline Battery Safety Management Plan [REP3-106].	Outline Battery Safety Management Plan [REP3-106] Requirement 6
Potential for Solar PV Panels to cause horses to startle.	Previously Committed Measures - Landscape buffers and the implementation of screening are embedded into the Scheme through the Design Principles and Parameters [REP4-043] and Outline Landscape and Ecological Management Plan [REP3-100]; - For equestrian users of highways and PRow, onsite Solar PV Arrays are offset from users by the embedded Design Principles and Parameters [REP4-043]. As a result, Solar PV infrastructure is no less than 15 m from the highway or centreline of a PRow; and Additional Committed Measures - Provision of information boards at the start of permissive path routes with solar infrastructure within 15m of path.	Design Principles and Parameters [REP4-043] Requirement 5 Outline Landscape and Ecological Management Plan [REP3-100] Requirement 7 Outline Public Right of Way and Permissive Paths Management Plan [REP1-104] Requirement 16

4 Complementary Plans and Procedures

4.1.1 A suite of complementary environmental plans and procedures for the operation and maintenance phase will be developed alongside the detailed OEMP/have been included within the DCO application and set out proposed mitigation for the operation and maintenance phase, and further detailed plans will be prepared for further approval.

- **ES Volume 3, Appendix 11-1 to 11-9: Flood Risk Assessment and Drainage Strategy [EN010168/APP/6.3];**
- **Outline Soil Resources Management Plan [EN010168/APP/7.15];**
- **Outline Site Waste Management Plan [EN010168/APP/7.16];**
- **Outline Public Right of Way (PRoW) and Permissive Paths Management Plan [EN010168/APP/7.17];**
- **Outline Landscape and Ecology Management Plan (LEMP) [EN010168/APP/7.18];**
- **Outline Skills, Supply Chain and Employment Plan [EN010168/APP/7.20];**
- **Outline Battery Safety Management Plan [EN010168/APP/7.21]; and**
- **Outline Construction Traffic Management Plan (CTMP) [EN010168/APP/7.22].**

5 Implementation and Operation

5.1.1 Each detailed OEMP will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this Outline OEMP, including:

- An organogram showing team roles, names, and responsibilities;
- Training requirements for relevant personnel on environmental topics;
- Information via on-site briefings and toolbox talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
- Measures to advise employees of changing circumstances;
- Communication methods;
- Document control;
- Monitoring, inspections, and audits of site operations; and
- Environmental emergency procedures.

6 Monitoring and Reporting

6.1 Monitoring

- 6.1.1 Monitoring and reporting will be undertaken for the duration of the operation and maintenance phase to demonstrate the effectiveness of the measures set out in the detailed OEMP and related construction controls and allow for corrective action to be taken where necessary.
- 6.1.2 As part of the monitoring process a designated Environmental Manager will observe site activities and report any deviations from the detailed OEMP in a logbook, along with the action taken and general conditions at the time. In addition, the Environmental Manager will conduct regular walkover surveys which will be documented and arrange regular formal inspections to ensure the requirements of the detailed OEMP are being met.
- 6.1.3 The Environmental Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies, such as the Environment Agency.

6.2 Records

- 6.2.1 The Environmental Manager will retain records of environmental monitoring and implementation of the detailed OEMP. This will allow provision of evidence that the detailed OEMP are being implemented effectively. These records will include:
- Results of routine site inspections by Environmental Manager/ Project Manager;
 - Environmental surveys and investigations;
 - Environmental Action Schedule;
 - Environmental equipment test records;
 - Licences and approvals; and
 - Corrective actions taken in response to incidents, breaches of the approved detailed OEMP or complaints received from a third party.
- 6.2.2 The detailed OEMP will be updated if it is necessary to add additional control measures, with a full review as required. Existing control measures and mitigation will not be amended without prior agreement with the local authorities.

7 References

- Ref 1 The Planning Act 2008 (as amended). Available at:
https://www.legislation.gov.uk/ukpga/2008/29/pdfs/ukpga_20080029_en.pdf (Accessed July 2025).
- Ref 2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended). Available at:
<https://www.legislation.gov.uk/uksi/2017/572> (Accessed July 2025).
- Ref 3 National Grid (2016). Technical Guidance Note 287: Third-party guidance for working near National Grid Electricity Transmission equipment. Available at: [REDACTED]
[REDACTED] (Accessed May 2026)
- Ref 4 1998 International Commission on the Non-Ionizing Radiation Protection (ICNIRP) guidelines. Available at
<https://www.icnirp.org/cms/upload/publications/ICNIRPemfgdl.pdf> (Accessed July 2025).
- Ref 5 National Grid (2007). Specifications for Safe Working in the Vicinity of National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties. Available at:
[REDACTED]
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- Ref 6 Northern Gas Networks (2017). Working safely near high pressure gas pipelines and associated installations: Third party requirements. Available at: [REDACTED]
[REDACTED]
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- Ref 7 HM Government (2013). The Waste Electrical and Electronic Equipment (WEEE) Regulations 2013. Available at:
<https://www.gov.uk/guidance/regulations-waste-electrical-and-electronic-equipment> (Accessed July 2025).

8 Glossary

Term	Acronym	Definition
Arboricultural Clerk of Works	ACoW	Responsible for undertaking site visits and providing advice operation on how tree impacts will be avoided and minimised, including ensuring that the precautionary working methods described in this Outline Arboricultural Method Statement are adhered to.
Battery Energy Storage System	BESS	Battery storage and Associated Development to allow for the storage, importation and exportation of energy to the National Grid.
Battery Energy Storage System Area	BESS Area	The area within which the BESS would be located for the storage, import, and export of energy to the National Grid. The Scheme would include a single BESS Area located within Lime Down D
Battery Safety Management Plan	BSMP	The BSMP outlines the key fire safety provisions for the BESS proposed to be installed at Lime Down Solar Park (Lime Down D BESS) including measures to reduce BESS failure risks and mitigate credible failure incident scenarios. It provides a provides a summary of the safety related information requirements which will be provided in advance of construction of the BESS.
Considerate Constructors Scheme	CCS	N/A
Closed-Circuit Television	CCTV	N/A
Construction Environmental Management Plan	CEMP	The CEMP is to be produced in accordance with the Outline CEMP, as a DCO Requirement, following the appointment of a contractor, prior to the start of construction. The CEMP and the requirement to comply with it will ensure that appropriate environmental management practices are followed during construction.
Construction Traffic Management Plan	CTMP	A framework document for the management of construction vehicle movements to and from the Scheme, to ensure that the effects of the temporary construction phase on the local highway network are minimised. The Outline CTMP sets out construction access arrangements, construction vehicle routing, construction vehicle trip generation, and the management/mitigation measures. It also summarises the requirements for vehicles transporting abnormal loads (for elements such as transformers).
Development Consent Order	DCO	A development consent order is the order which grants development consent when a successful application is made to the Secretary of State. The Inspectorate is responsible for administering the examination of the DCO Application and supporting the Examining Authority that will be

Term	Acronym	Definition
		appointed to make a recommendation to the Secretary of State for DESNZ pursuant to the Planning Act 2008. The Secretary of State for DESNZ has responsibility for subsequently determining whether to grant development consent for the Proposed Development.
Environmental Impact Assessment	EIA	A process by which information about environmental effects of a proposed development is collected, assessed and used to inform decision making
Environmental Statement	ES	A document produced in accordance with the EIA Regulations to report the results of an EIA. The Environmental Statement contains a description of the likely significant effects of the development on the environment.
Heavy Goods Vehicle	HGV	An HGV is any truck over 3.5 Tonnes gross combination mass (GCM).
Horizontal Direction Drilling	HDD	Horizontal Directional Drilling is a method for installing cables without digging a trench. It involves drilling a pilot hole the progressively enlarging it to the required diameter.
Heating, Ventilation and Cooling	HVAC	N/A
Island Green Power Group Limited	IGP	N/A
Landscape and Ecological Management Plan	LEMP	The LEMP is to be produced in accordance with the Outline LEMP, as a DCO Requirement, following the appointment of a contractor, prior to the start of construction. The LEMP and the requirement to comply with it will ensure that appropriate landscape and ecological management practices are followed during construction.
Light Goods Vehicle	LGV	An LGV is a commercial vehicle with a gross weight of 3,500 kg or less.
Local Planning Authority	LPA	The public authority whose duty it is to carry out specific planning functions for a particular area.
Material Safety Data Sheet	MSDS	N/A
Megawatts	MW	N/A
Nationally Significant Infrastructure Projects	NSIP	NSIPs are large scale developments such as certain new harbours, power generating stations (including solar and wind farms), highways developments, and electricity transmission lines, which require a certain type of consent known as 'development consent' under the Planning Act 2008.

Term	Acronym	Definition
Operational Environmental Management Plan	OEMP	The OEMP is to be produced in accordance with the Outline OEMP, as a DCO Requirement, following the appointment of a contractor, prior to the start of construction. The OEMP and the requirement to comply with it will ensure that appropriate environmental management practices are followed during operation.
Photovoltaic	PV	N/A
Public Right of Way	PRoW	A public right of way (PRoW) in the UK is a path or track that is open to the public to use at any time. They are protected by law and can be found in towns, villages, and the countryside.
Risk Assessment Method Statements	RAMS	N/A
Suitable Qualified and Experienced Persons	SQEP	N/A
Soil Resources Management Plan	SRMP	The SRMP is to be produced in accordance with the Outline SRMP, as a DCO Requirement, following the appointment of a contractor, prior to the start of construction. The SRMP and the requirement to comply with it will ensure that appropriate soil management practices are followed during construction.
Site Waste Management Plan	SWMP	The SWMP is to be produced in accordance with the Outline SWMP, as a DCO Requirement, following the appointment of a contractor, prior to the start of construction. The SWMP and the requirement to comply with it will ensure that appropriate waste management practices are followed during construction.
Waste from electrical and electronic equipment	WEEE	N/A

Annex A Outline Discovery and Inspection Strategy

1 Outline Discovery & Inspection Strategy

1.1 Purpose

- 1.1.1 This document has been prepared as part of addressing Action 13 from Issue Specific Hearing 7.
- 1.1.2 The purpose of the document is to describe the Discovery & Inspection (D&I) Strategy that will be applied to works involving the disturbance of soils through the Permitted Preliminary Works, Construction, Operation (and Maintenance) and Decommissioning phases of the Scheme. This document will be appended to the Permitted Preliminary Works Environmental Management Plan [EN010168 /EXAM/9.63], the Outline Construction Environmental Management Plan [EN010168/APP.7.12] and the Outline Decommissioning Strategy [EN010168/APP7.14].
- 1.1.3 This represents an outline strategy which will describe the elements required in the D&I Strategy. It is anticipated that the main contractor for the construction phase will produce a D&I Strategy which aligns with the broad requirements of this document.
- 1.1.4 It should be noted that while the D&I Strategy will apply to all phases of the project, it may be periodically updated to align with changes in legislation, guidance or understanding of the soil conditions on site.

1.2 Application of the Strategy

- 1.2.1 This Outline D&I Strategy describes a process for managing unexpected contamination, where encountered. It should not be used as a process for managing known contamination, which should be assessed and managed in line with the guidance in the UK Government Guidance resource [Land Contamination: Risk Management](#).
- 1.2.2 Where contamination is identified through pre-construction activities, the material should be appropriately assessed, managed and if necessary, remediated as part of the construction works.

1.3 Description of Activities

- 1.3.1 This Outline D&I Strategy is intended to cover activities throughout the lifecycle of the project where ground works may be necessary. It should be considered in relation to activities referenced in the **Permitted Preliminary Works Environmental Management Plan [REP5-106]**, the **Outline Construction Environmental Management Plan (CEMP) [REP6-029]**, and **Outline Decommissioning Strategy [REP6-033]**. Activities included within these plans which may create disturbance of soils include trenching, levelling of service roads and development platforms, ground investigation, Horizontal Directional

Drilling (HDD), vegetation clearance and placement of solar arrays. Wherever soils are disturbed, the D&I Strategy should be considered.

1.4 Inspection Strategy

- 1.4.1 The Inspection Strategy should be adopted for identifying arisings that appear to exhibit characteristics that are inconsistent with those previously encountered i.e. a potential 'hotspot'. For the purpose of this document the Inspection Strategy pertains to identifying potentially contaminated material, although it can be employed for other purposes, such as to identify material that may have different geotechnical properties.
- 1.4.2 The Inspection Strategy should be used in two ways:
- To ascertain whether arisings can be retained at site; and
 - To ascertain whether material being removed from site requires an alternative treatment method to that being administered to the bulk material.
- 1.4.3 Implementation of the Inspection Strategy should be initially based on visual and or olfactory assessment.
- 1.4.4 The supervising engineer and groundworkers should remain vigilant for unforeseen ground conditions, for example, soil arisings that change appearance as an excavation progresses or are inconsistent with the general soil mass present on the site. This will help to ascertain whether the contaminated material can be retained or requires an alternative management technique.
- 1.4.5 Vigilance shall be maintained for materials suspected of exceeding the hazardous waste thresholds.
- 1.4.6 Upon discovery of suspect ground conditions, the works should be stopped, and a suitably qualified geo-environmental advisor consulted. Work in the affected area should not continue until a strategy and programme have been formulated and approved by the appropriate regulatory authorities.
- 1.4.7 Unexpected materials or other suspicious soils shall include (but is not limited to):
- Asbestos fibres or suspected fibres of any kind;
 - Any visible fragments or deposits of metals, especially droplets of mercury;
 - Discoloured soils, gravels, clays etc;
 - Any materials featuring a noticeable chemical or hydrocarbons-type odour; and
 - Any liquid other than clean groundwaters.

1.5 Discovery Strategy

- 1.5.1 There may be ground conditions at the site that have not been revealed during intrusive ground investigations and therefore have not been previously taken into account. Such materials will be identified by means of the Inspection Strategy and should be subsequently dealt with using this Discovery Strategy.
- 1.5.2 Based on current understanding of the excavated material, no contamination is expected to be encountered during implementation of the construction works and subsequent re-use. However, should any person working on the project witness any visual or olfactory evidence or suspicion of contamination then the following steps should be taken:
- Stop excavation work immediately;
 - Take steps to isolate and restrict access to the area where the suspected contamination was found; and
 - Implement the following sampling regime:
 - Collect minimum three composite samples of the suspect material;
 - Arrange for laboratory testing according to an agreed suite of testing. This should be based on the Conceptual Site Model for the project and agreed with the Environment Agency (EA) and Local Planning Authority (LPA) prior to the commencement of any construction works;
 - Arrange for the results to be assessed by a Contaminated Land Specialist with respect to public and environmental health risks, with comparison to published criteria and site-specific Risk Based Screening Levels (RBSL); and
 - Arrange for the results to be modelled using a waste classification model such as HazWaste Online™ to determine Hazardous/Non-Hazardous/Potentially Hazardous waste classification if off-site disposal is required or the materials are to be reused under a recognised exemption (Ref 1).
- 1.5.3 Additional specialist geo-environmental advice should be sought to assess whether the new findings will materially affect the recommendations previously given and if further measures are needed.
- 1.5.4 Visual and olfactory assessment shall be employed initially to 'chase out' the contamination vertically and laterally. The overall objectives of this exercise shall be to:
- Assess the vertical and lateral extent of the 'hotspot';
 - Obtain validation samples of the sides and base of the excavation;

- Obtain validation samples of the 'hotspot' for characterisation; and
- Assess the laboratory data sets against the remediation criteria.

- 1.5.5 If excavations cannot be extended vertically or laterally due to physical constraints the Contractor shall seek further guidance from the Principal Designer.
- 1.5.6 Excavated materials shall be placed into suitable stockpiles which should be placed on an impermeable surface, away from surface water features and not within close proximity of a groundwater abstraction, i.e. within SPZ1.
- 1.5.7 Environmental management procedures shall be employed to control effluvia, including fugitive dust and run off associated with rainwater, associated with the handling.
- 1.5.8 All necessary precautions shall be taken to prevent mixing of any possibly contaminated material with contaminated material. Procedures shall be adopted that allow for the referencing of possibly contaminated and contaminated materials in relation to the samples taken for chemical testing.
- 1.5.9 All excavated materials should be recorded and photographed. Any material designated as waste should be recorded and managed in accordance with relevant waste regulations of the time, i.e. WM3 (Ref 2). The extent of excavations and locations of samples shall be recorded.

Validation Sampling and Testing

- 1.5.10 In relation to footprints of existing buildings, hardstanding and structures and any 'hotspots' of previously undiscovered, potentially contaminated ground, validation data is required:
- To determine whether material is suitable for retention at site;
 - To help characterise the material should it be unsuitable for retention at site; and
 - For the base and sides of the excavation.
- 1.5.11 The precise requirements for the validation is determined by the conceptual site model for the site. As no remediation is currently anticipated, no criteria for the validation of material for reuse has been agreed.
- 1.5.12 The suitability for material to be retained on site should be agreed with the EA and LPA.
- 1.5.13 Where material cannot be validated for retention on site, suitable testing should be undertaken to characterise the waste for disposal, in line with the requirements of the Department of Environment, Food and Rural Affairs (DEFRA) WM3 guidance document (Ref 2).

General Requirements

- 1.5.14 A shovel, spade, trowel, rock pick or coring device may be used to collect soil samples. A tube may be driven into the base of the excavation. Bailers, buckets, vials or jars may be used to collect samples of groundwater and surface water.
- 1.5.15 The sample collection device and containers should be made of a material that is compatible with the material to be sampled and the planned analyses in order to avoid cross-contamination and loss of contaminant. Stainless steel or PTFE-coated tools are preferred. Preservatives should be included where necessary.
- 1.5.16 All sampling equipment shall be decontaminated at the start and end of the investigation and between sampling locations. This will involve washing sampling equipment between samples with detergent solution followed by rinsing with deionised water. If particularly oily or tarry soils are encountered, more stringent decontamination procedures will be required i.e. use of a stronger detergent solution followed by drying with prepared wipes. The decontamination procedures shall be presented to and agreed with the Engineer prior to the commencement of site works.
- 1.5.17 Samples shall be described to an appropriate level of detail. Soil descriptions shall include colour and smell with reference to specific inclusions.
- 1.5.18 Samples shall be clearly labelled in accordance with BS5930 and BS10175 (Ref 3; Ref 4). Samples suspected of being toxic or hazardous should be clearly labelled as such.
- 1.5.19 All samples should be handled under “chain of custody” conditions, with laboratory requirements regarding holding times, holding temperatures, etc, actively considered in sampling and sample handling protocols.
- 1.5.20 Validation samples taken from stockpiles and excavations shall be tested in accordance with a validation strategy to be agreed with the EA and LPA.
- 1.5.21 The laboratory used for testing shall, in the first instance, hold Monitoring Certification Scheme (MCERTS) and UK Accreditation Service (UKAS) accreditation for all soil and water tests respectively. Where the laboratory is not accredited under MCERTS for any parameter the laboratory shall ensure the works is either subcontracted to a laboratory with the appropriate MCERTS (UKAS for Asbestos) accreditation or provide appropriate in-house Analytical Quality Control (AQC) data allowing an estimate of the likely precision and bias associated with the particular analysis.

1.6 Material Tracking, Transfer and Storage

- 1.6.1 Best practice at the time of material generation should be used to manage and track material on site. At the time of writing of this strategy, that would be the CL:AIRE / EA Definition of Waste: Code of Practice (DoWCoP) (Ref 5). The first

stage of the tracking process is the identification and classification of the various separate works materials.

- 1.6.2 A system will be put in place to identify and track all earthwork material movements including excavated materials, imported materials, material undergoing on-site remediation, and if material is sentenced for off-site disposal. This will include the creation of a site-specific coordinate grid-system or end-use area system to geographically locate the areas of material excavation and use within the development area.
- 1.6.3 The tracking system will include the facility to identify the excavated materials that are to be temporarily stored separately on-site in the designated stockpiling area whilst awaiting the results of testing, waiting to be used on site or if waiting for any off-site disposal. The tracking system will be maintained utilising an electronic database (e.g., excel, access) and key material movements will be tracked by a combination of GPS and database collation, allowing temporary stockpiles to be easily located and referenced to the applicable testing data for the material. The tracking system will be a dynamic system that will be updated daily.
- 1.6.4 Tracking of material should ideally be managed digitally, but in some circumstances tracking may need to be managed in analogue format. Where this is required, a standardised proforma will be developed for use across the whole project.
- 1.6.5 There should be a single point of management for material tracking; either through a shared system which is accessible to a range of staff or through a dedicated individual or team.
- 1.6.6 Where materials that exhibit exceedances of determinants have been segregated and deemed suitable for on-site remedial treatment the tracking system shall record the progress of the material through the specific remedial process including all associated testing required to validate the material as part of that process. Where material cannot be remediated, the tracking system shall record temporary storage of the material before off-site disposal including all associated testing and documentation required.
- 1.6.7 The records of all materials movements on-site and off-site will be kept for a minimum period of 2 years (or whatever period is required in best practice and / or regulation) following completion of the works and production of the Verification Report.

1.7 Verification Strategy

- 1.7.1 Validation applies to both imported and site-won material and it is the contractors responsibility to demonstrate compliance with both geotechnical and geo-environmental acceptance criteria. This applies to material used during the main earthworks and any which is retained for future use.

- 1.7.2 Material used and reused on site should be demonstrated to comply with a geo-environmental and geotechnical specification, which should be agreed with the EA and LPA prior to the start of the construction phase.
- 1.7.3 Verification testing should be undertaken on all material intended for use in backfilling excavations as a result of the application of the strategy, either site-won or imported. Testing frequency should be agreed with the LPA and EA prior to the placement of any material. A minimum testing frequency of 1 sample per 500 m³ (minimum of 3 samples per material source) will be employed. Verification testing should be in line with agreed RBSLs.
- 1.7.4 A Verification Report should be produced for the project, covering all areas of placed imported or reused material. The report should include evidence of material use and validation elements including locations and volumes of material used, verification laboratory and in situ testing data, assessments demonstrating the acceptability of material and details of waste soils removed from site.
- 1.7.5 The Verification Report should be made available to the EA and LPA for review upon completion.

2 References

- Ref 1 HazWasteOnline™: Hazardous Waste Classification. Available at: [REDACTED] (Accessed: 22 September 2026).
- Ref 2 Environment Agency (2021) Waste classification technical guidance. Available at: <https://www.gov.uk/government/publications/waste-classification-technical-guidance> (Accessed: 22 September 2026).
- Ref 3 British Standards Institution (2020) BS 5930:2015+A1:2020 Code of practice for ground investigations. London: BSI.
- Ref 4 British Standards Institution (2026) BS 10175:2026 Investigation of potentially contaminated sites. Code of practice. London: BSI.
- Ref 5 CL:AIRE (2011) The Definition of Waste: Development Industry Code of Practice. London: Contaminated Land: Applications in Real Environments (CL:AIRE). Available at: [REDACTED] (Accessed: 22 September 2026).