



Lime Down

Solar Park

Permitted Preliminary Works Environmental Management Plan (Tracked)

~~August~~October 2026

Revision ~~1~~2

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The Infrastructure Planning (Examination Procedure) Rules 2010



Schedule of Changes

<u>Revision</u>	<u>Section Reference</u>	<u>Description of Changes</u>	<u>Reason for Revision</u>
<u>2</u>	<u>Table 2-1</u>	<u>Inclusion of numbers of HGVs anticipated during the PPW phase to WC and SLD.</u>	<u>In response to Wiltshire Council and Stop Lime Down's comments at Issue Specific Hearing 7.</u>
<u>2</u>	<u>Whole document</u>	<u>Update the document to make it a stone-alone management plan including inclusion of the ecological and arboricultural method statements.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-3</u>	<u>To update plan to include wording which limits use of artificial lighting outside of core working hours.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-3</u>	<u>Updated to provide additional wording to require submission of ecological survey results and consideration of proposed mitigation to be agreed with Wiltshire Council prior to potential tree removal or site clearance.</u>	<u>Updated to reflect engagement undertaken with Wiltshire Council.</u>
	<u>Table 3-3</u>	<u>Updated to include additional commitments around tree removal during preliminary works.</u>	<u>In response to engagement undertaken with Wiltshire Council.</u>
	<u>Table 3-5</u>	<u>Updates to surface water and drainage commitments</u>	<u>In response to Environment Agency comments at ISH7 and subsequent email and TEAMS call.</u>
	<u>Table 3-6</u>	<u>Updated wording to minimise impact on the setting of heritage assets from storage of materials on site, or other works in proximity to or within the setting of heritage assets.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-7</u>	<u>Updated to make it clearer that the implementation of the measures listed not only apply when a vehicle track crosses a Public Right of Way (PRoW), but also when a vehicle track is shared with a PRoW.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-7</u>	<u>To provide further information on the existing access points that will be used for PPW works and confirmation that no highway improvement works are required</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>

<u>Revision</u>	<u>Section Reference</u>	<u>Description of Changes</u>	<u>Reason for Revision</u>
		<u>to facilitate use of those accesses.</u>	
	<u>Table 3-7</u>	<u>To correct reference at 2.8.1</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-7</u>	<u>Pre-Condition road survey locations updated.</u>	<u>In response to Wiltshire Council comments at ISH7 and subsequent emails.</u>
	<u>Section 2.13</u>	<u>Updated to include a complaints procedure, including a process timeline for logging, investigating and responding to complaints.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Document-wide</u>	<u>Amended so that no reference is made to outline documents</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Appendix A and B</u>	<u>Additional material such as ecological and arboricultural method statements have been added as Appendices</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-4</u>	<u>Updated to include additional mitigation measures</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-5</u>	<u>Addition of commitment to store plant outside of flood zones.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Document-wide</u>	<u>Updates made to cross references.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Appendix C</u>	<u>Addition of a Discovery and inspection strategy commitment.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-11</u>	<u>Updates to text to align with Section 2.1</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Table 3-5</u>	<u>Update wording to prevent storage of plant machinery and materials in Flood Zone 3b.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>
	<u>Paragraph 2.9.1</u>	<u>Updated to clarify the surface material of the temporary compounds.</u>	<u>In response to ExA comments at Issue Specific Hearing 7.</u>

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1 Introduction

1.1 Overview and Purpose of the document

- 1.1.1 Lime Down Solar Park Limited ('The Applicant') has prepared this Permitted Preliminary Works (PPW) Environmental Management Plan (EMP) in relation to an Application for a Development Consent Order (DCO) for the construction, operation (and maintenance) and decommissioning of Lime Down Solar Park ('The Scheme').
- 1.1.2 The Scheme is being led by the Applicant, Lime Down Solar Park Limited, which is a subsidiary of Island Green Power (IGP) UK Limited, IGP is a leading international developer of renewable energy projects, established in 2013.
- 1.1.3 The aim of this PPW Environmental Management Plan is to set out the controls that will apply to the activities that would be undertaken prior to the commencement of the main construction works for Scheme, defined in the draft DCO as the 'permitted preliminary works'. This document sets out the specific, required mitigation measures and environmental commitments, for these permitted preliminary works (PPW), to avoid likely significant effects.
- 1.1.4 This document does not address the construction, operational (and maintenance), or decommissioning activities, which are subject to separate environmental management plans and procedures. An Outline Construction Environmental Management Plan, Outline Construction Traffic Management Plan, Outline Operational Environmental Management Plan and Outline Decommissioning Strategy have been prepared to accompany the DCO Application and will be secured through Requirements of the DCO.
- 1.1.5 It should be noted that, unlike the Outline plans noted above, this PPW Environmental Management Plan (EMP) is a detailed plan and a certified document under Schedule 13 of Article 42 of the draft DCO. As this is a detailed plan, no approval mechanism is necessary under the Requirements.
- 1.1.6 An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and an Environmental Statement (ES) **[APP-052 to APP-291]** has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations). In accordance with the requirements of the EIA Regulations, the ES **[APP-052 to APP-291]** contains the assessment of the likely significant effects on the environment that may be caused during the PPW, construction, operation and maintenance, and decommissioning of the Scheme and describes a range of 'industry standard' or good practice mitigation and management measures.
- 1.1.7 This PPW EMP is structured as follows:
- 'Introduction' – this section.

- 'Permitted Preliminary Works' – sets out the PPW and provides information regarding the roles and responsibilities for PPW and the PPW working hours.
- 'General Mitigation Measures' – sets out the general mitigation measures that will apply to all PPW.
- 'Checking and Corrective Action' – sets out the monitoring, recording and review processes to be implemented.

1.1.8 Contractor(s) will be responsible for working in accordance with the environmental controls documented in this PPW EMP, pursuant to the DCO.

1.1.9 This PPW EMP has been designed with the objective of compliance with the relevant environmental legislation and the mitigation measures set out within the ES **[APP-052 to APP-291]**.

2 Permitted Preliminary Works

2.1 Overview

- 2.1.1 PPW are those that would be undertaken after the DCO coming into effect and before commencement of construction. Commencement is defined as beginning to carry out any material operation forming part of the authorised development other than PPW.
- 2.1.2 The list of PPW is defined within Article 2 of the draft DCO and comprise:
- Environmental surveys;
 - Geotechnical surveys and other investigations for the purpose of assessing ground conditions;
 - Intrusive archaeological surveys;
 - Removal of existing plant and machinery;
 - Above ground site preparation for temporary facilities for the use of Contractor(s);
 - Remedial work in respect of any contamination or other adverse ground conditions;
 - Diversion and laying of apparatus;
 - Provision of temporary means of enclosure and site security for construction;
 - Temporary display of site notices or advertisements;
 - Site clearance (including vegetation removal, demolition of existing buildings and structures (and any associated infrastructure) and removal of existing plant and machinery.
- 2.1.3 Works captured as PPW can be undertaken prior to commencement and therefore the discharge of certain requirements contained in Schedule 2 of the draft DCO. PPW do not include implementation of the Highway Improvement Areas (HIAs), installation of haul roads that cross watercourses or the establishment of new access points off the public highway. Access will be taken from existing access locations only. Topsoil stripping would be limited to those areas where temporary removal of soil is required for example for archaeological trenching or geotechnical investigation. There would be no long-term storage and management of topsoil or subsoil. Vegetation clearance will be selective and limited to the areas reasonably required for relevant discrete activities as listed above.
- 2.1.4 The PPWs that can be undertaken are listed in **Table 2-1**.

- 2.1.5 The PPW must be undertaken in accordance with relevant commitments within this PPW EMP.
- 2.1.6 The Contractor is responsible for identifying and securing all relevant and necessary consents for the PPW prior to the works beginning. To the extent any PPW require protected species licences, these would be obtained by the Contractor, thereby adding an additional layer of control.

Table 2-1: Preliminary works and locations

Preliminary work	Location	Type of Vehicles Required	Indicative Weekly HGV Visits (During Active Works)	Summary of Work
Environmental surveys	Site-wide	<u>Cars and light vans; occasional 4x4 vehicles</u>	<u>Negligible</u>	Environmental surveys will include: - Ecology pre-commencement surveys; <u>and</u> Transport pre-condition road surveys <u>and</u>; <u>Hydrology baseline water quality monitoring.</u>
Geotechnical surveys and other investigations for the purpose of assessing ground conditions	Site-wide	<u>Cars, light vans and 4x4s; drilling rig, window-sampling rig, excavator and support vehicles; occasional low loader or rigid HGV</u>	<u>10 HGVs</u>	Geotechnical surveys and ground investigations may include trial pits, window sampling, boreholes, cable-percussion or rotary drilling, cone-penetration testing, infiltration and permeability testing, groundwater or ground-gas monitoring, soil sampling, and other investigations to establish ground conditions and inform detailed design. Access will normally be taken from existing field entrances and farm tracks. Temporary trackway or ground protection may be used where required. Any vehicles used to undertake the PPW will be parked within the investigation area, an established compound or another suitable designated location within the Order Limits and avoid the use of public highway or laybys. Investigation locations will be reinstated following completion unless the relevant installation, such as a monitoring well, is required to remain for continued monitoring.

Preliminary work	Location	Type of Vehicles Required	Indicative Weekly HGV Visits (During Active Works)	Summary of Work
Intrusive archaeological surveys	Site-wide	<u>Cars, light vans and 4x4s; excavator; occasional low loader or rigid HGV</u>	<u>10 HGV visits</u>	As described in the Outline AMS [APP-230].
Removal of existing plant and machinery	Site-wide	<u>Light vans, rigid HGVs and, where required, low loaders or mobile crane</u>	<u>Negligible</u>	If identified within the PPW areas.
Above ground site preparation for temporary facilities for the use of Contractor(s)	Site-wide	<u>Cars, light vans, 4x4s, excavator, telehandler, flatbed or rigid HGV and tipper</u>	<u>10 HGV visits</u>	Establishment of temporary facilities for the purposes of PPW only. In relation to the construction compound areas shown within ES Figure 3.2 [APP-082], with the exception of fencing, these areas will not be established until after PPW.
Remedial work in respect of any contamination or other adverse ground conditions	Site-wide	<u>Cars, light vans and 4x4s; excavator, tipper, tanker and rigid or articulated HGV</u>	<u>10-20 HGV visits, subject to the remediation required</u>	Although no specific need for remediation has been identified at this time, mitigation needs will be outlined in the CEMP, including potential remediation of contaminated land, natural geohazards and historical mining hazards.
Diversion and laying of apparatus	Site-wide	<u>Cars, light vans and 4x4s; excavator, cable drum carrier, flatbed or rigid HGV and tanker</u>	<u>10-20 HGV visits</u>	Any existing apparatus along the route may require the need to be diverted due to clashes along the route subject to an approved electrical design.
Provision of temporary means of enclosure and site security for construction	Site-wide	<u>Cars, light vans and 4x4s; post driver; flatbed or rigid HGV</u>	<u>5-15 HGV visits</u>	Temporary fencing would be installed where required, to secure work areas not naturally contained by existing hedgerows or fencing. Site security fencing for construction areas would also be installed to allow works to progress.
Temporary display of site notices and advertisements	Site-wide	<u>Car or light van</u>	<u>Negligible</u>	Erection of temporary site notices and advertisements where needed.
Site clearance (including vegetation)	Site-wide	<u>Cars, light vans and 4x4s; excavator,</u>	<u>15-30 HGV visits</u>	Site clearance would include the selective removal, cutting back or management of vegetation required

Preliminary work	Location	Type of Vehicles Required	Indicative Weekly HGV Visits (During Active Works)	Summary of Work
removal, demolition of existing buildings and structures (and any associated infrastructure) and removal of existing plant and machinery)		<u>telehandler, chipper, tipper, rigid or articulated HGV and occasional low loader</u>		to establish, temporary compound areas, survey and investigation locations, temporary fencing and working areas and associated environmental mitigation. Site clearance would be undertaken in discrete work areas, over limited periods and limited to the activities required. Activities may take place concurrently at more than one location where suitable. Clearance will be limited to the areas reasonably required for the relevant activity and will be phased where practicable so that land is not disturbed materially earlier or more extensively than necessary.

2.2 Roles and Responsibilities

2.2.1 The key roles and responsibilities during the PPW in managing environmental impacts will likely include, but are not limited to:

- **Site Manager** – Overall responsibility for activity on-site.
- **Construction Project Manager** – Overall responsibility for ensuring all elements in this PPW EMP and all environmental legal and other requirements are implemented, and appropriately resourced, managed, reviewed and reported.
- **Environmental Manager** – Responsible for the overall management of environmental aspects on site, ensuring environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Environmental Manager will oversee environmental monitoring on-site and carry out regular environmental site inspections and will liaise with relevant environmental bodies and other third parties as appropriate.
- **Archaeological Project Manager** – Responsible for monitoring the completion of all archaeological works in accordance with the programme, reporting and responding to any incidents or non-compliance as set out in the Written Scheme of Investigation (WSI) within the Interim Evaluation Trial Trenching Reports [APP-255 to APP-229].

- **Ecological Clerk of Works (EcoCoW)** – Management of the risks to biodiversity on construction sites, advising protecting sensitive biodiversity features, supervising construction activities as required (e.g. within ecologically sensitive areas or during specific times of year), and providing on-going practical advice throughout the PPW.
- **Arboricultural Clerk of Works (ACoW)** – Management of the risks to trees on construction sites, advising protecting sensitive trees (e.g. veteran trees), and providing on-going practical advice throughout the PPW.
- **Health and Safety Manager** – Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site.
- **Community Liaison Officer** – A Community Liaison Officer 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.

2.3 Working Hours

2.3.1 Core PPW working hours on-site will be as follows:

- Monday to Friday from 07:00 to 18:00 (daylight hours permitting);
- Saturday from 08:00 to 13:30 (daylight hours permitting); and
- No Sunday or Bank Holiday working, unless in an emergency.

2.3.2 Where practicable, deliveries would be coordinated to avoid HGV movements during the traditional network peak morning (08:00 to 09:00) and peak afternoon (17:00 to 18:00) hours. In addition, worker shift patterns will be coordinated to avoid travel during the network peak hours of 08:00-09:00 and 17:00-18:00.

2.3.3 A period of up to one hour before and after the core working hours may be used for mobilisation and close down activities which do not involve materially noise inducing operations.

2.3.4 Works may be undertaken outside core hours where reasonably necessary to respond to an emergency, prevent harm to persons or the environment and protect exposed works or utilities. Where such works occur Wiltshire Council must be notified as soon as practicable.

2.4 Ecology

Pre-Commencement Surveys

2.4.1 ~~Prior to commencement of PPW, a number of pre-commencement ecological surveys will be undertaken, including for species including badger, water vole, and otter. These surveys will be undertaken in line with relevant survey guidelines, including optimal timing of surveys to ensure results are sufficiently~~

~~robust to inform detailed design and construction. The~~ Method statements relevant to the ~~environmental surveys and listed in the Outline EPMS [EN010168/APP/7.19 (Rev 5)]~~ are MS4, MS5, MS6, MS8, MS9, MS10, MS11, MS12, MS13 and MS14. Permitted Preliminary Works are provided at Appendix A These cover all pre-commencement surveys and seasonal constraints relating to habitat removal (which may be undertaken in small quantities during PPW), ~~as well as lighting restrictions.~~

Lighting

- 2.4.2 The use of artificial lighting at night will be minimised as far as practicable from March to October inclusive, with any unavoidable lighting required during this time to be permitted only following consultation with the Ecological Clerk of Works (EcoCoW). Lighting for PPWs located within the Cable Route Corridor within any Wiltshire Impact Zone for Bats associated with the Bath and Bradford on Avon Bats Special Area of Conservation (SAC) would not be permitted. Lighting utilised from November to February inclusive will be designed to minimise light spill on ecologically sensitive features. These seasonal measures are designed to avoid and minimise potential impacts on protected and notable species, particularly light-sensitive species such as horseshoe bats including those associated with the Bath and Bradford on Avon Bats SAC.

2.5 Hydrology, Flood Risk and Drainage

- ~~2.5.1 The pre construction activity for hydrology, flood risk and drainage is the baseline water quality monitoring referred to in the Outline CEMP [EN010168/APP/7.12 (Rev 6)]. This involves visits to agreed monitoring locations on relevant watercourses before construction, completion of visual condition inspections, risk based on site measurements and, where appropriate, collection of water samples for laboratory analysis. Where sampling is undertaken, MCERTS methods would be used where applicable and analysis completed by a UKAS accredited laboratory. The results would be recorded to establish the baseline against which monitoring during construction and for an appropriate period following construction can be compared.~~
- ~~2.5.2 The detailed Water Management Plan will define the monitoring locations, parameters, frequency, methods and any trigger levels, proportionate to the sensitivity of the receiving environment. It will also take account of relevant information from the Environment Agency's automatic water quality monitoring network.~~
- ~~2.5.3~~ 2.5.1 As the ~~anticipated work is~~ PPW are limited ~~to inspections, measurements and sampling in scale and extent~~, the relevant controls would principally relate to safe access, protection of watercourse banks and buffers, avoidance of unnecessary disturbance, and pollution prevention and incident response, as listed in **Table 3-5**. No separate hydrology management plan, monitoring or

wider pre-construction drainage or topographical survey is required ~~for this activity~~.

2.6 Control of Noise

2.6.1 PPW will be undertaken in accordance with the best practicable means (as defined in Section 72 of the Control of Pollution Act 1974 (Ref 3)), to minimise noise and vibration effects. Noise control measures will be consistent with the recommendations of the current version of BS 5228 'Code of Practice for Noise and Vibration Control on Construction and Open Sites' – 'Part 1: Noise' and 'Part 2: Vibration' (BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014) (Ref 5).

2.7 Control of Light

2.7.1 Lighting may be required during PPW for safety reasons but will be temporary in nature and predominantly limited to the core PPW working hours. A period of up to one hour before and after the core working hours may be used for mobilisation and close down activities which do not require substantial artificial lighting.

2.7.2 Between the months of November and February inclusive, where lighting is considered essential, PPW temporary site lighting in the form of mobile lighting towers will be positioned to ensure that light is directed onto the area of works only with as minimal light spillage onto the hedgerows/woodland as possible. The use of LED lighting and cowls, hoods and other similar screens will be adopted. Any working-area lighting requirements will be discussed and reviewed with the EcoCoW.

2.7.3 The following principles for lighting will be adhered to:

- Use of focused directional fittings to minimise outward light spill and glare (e.g. hoods/cowls which direct light below downwards) outside of the Site; and
- Lighting to be directed towards the middle of the Site rather than towards the boundaries.

2.7.4 Any unavoidable artificial lighting during the hours of darkness required within the period March to October inclusive will only be permitted following consultation with the EcoCoW in order to determine the severity of potential impacts and appropriate mitigation steps, including agreed hours of operation and numbers/specification of luminaires.

2.7.5 Security lighting may be installed on temporary site compounds and permanent structures following consultation with the EcoCoW to establish appropriate locations. Security lighting will be limited to the minimum number of luminaires required, which will be defined through consultation with the EcoCoW and

based on the sensitivity of the habitats potentially affected and baseline lux levels. Security luminaires will be motion-sensitive and set on a short (less than 2 minute) timer and oriented to reduce upward light spill as far as possible (i.e. horizontally oriented) in order to reduce the potential impact on light sensitive species such as bats.

2.8 Traffic Management

2.8.1 During PPW, the appointed contractor(s) will ensure that the impacts from works-related traffic on the local community (including local residents and businesses and users of the surrounding transport network) are minimised, where reasonably practicable, by implementing the measures set out in **Table 3-7** below.

~~2.8.2 Prior to the commencement of PPW, a pre construction road condition survey will need to be undertaken as set out in Section 6.12 of the Outline CTMP [EN010168/APP/7.22 (Rev 5)]. Any works on site requiring vehicle movements will be minimal and would need to take note of the measures set out in Chapter 6 of the Outline CTMP [EN010168/APP/7.22 (Rev 5)].~~

2.9 Parking Provisions

2.9.1 The temporary compounds for the PPW will include parking areas. TheseFor the purposes of PPW, temporary compounds will be limited in scale. To minimise HGV deliveries, parking areas will use track matting to protect the ground surface and not be aggregate, and. Vegetation will be cleared and security fencing will be established for these compounds.

2.9.2 Wheel cleaning facilities will be used by vehicles prior to exiting the Order Limits onto the public highway if there is mud or debris from the construction site on the vehicles.

2.10 Recovery, Recycling and Disposing of Waste

2.10.1 In order to control the waste generated during PPW, the contractor(s) will separate the main waste streams on-site, prior to transport to an approved, licensed third party waste facility for recycling or disposal.

2.11 Security

2.11.1 Risk-based site security during PPW will be managed by the contractor(s). Active PPW areas, compounds, plant and stored materials shall be secured using measures proportionate to the location, activity, duration and assessed security risk. Measures may include temporary fencing, gates, locks, surveillance or security attendance where reasonably necessary. Any storage of materials will be kept secure to prevent theft or vandalism. A safe system for

accessing the materials storage areas would be implemented by the contractor(s).

2.12 Responding to Environmental Incidents and Emergencies

- 2.12.1 An emergency response plan will be shared with the relevant local authority emergency planning officer, emergency services including the local fire service, as well as the Environment Agency in relation to responding to flood warnings and events. The plan will detail the procedures for responding to incidents and emergencies on site, and any reporting.

2.13 Complaints Procedure

2.13.1 The Applicant will take all reasonable steps to avoid any breach of the Permitted Preliminary Works (PPW) Management Plan through the implementation of the management and control measures. Should any breaches occur, then enforcement procedures will be followed:

- The Site Manager will notify the Applicant of any breaches of the PPW Management Plan arrangements as and when they occur;
- The Applicant will issue a warning letter to the relevant contractor outlining what action would be taken in the event of any further noncompliance (in general terms).
- The Applicant will report the details of the response to the Site Manager as part of the monitoring report. The monitoring report will be made available to the relevant local planning authorities at their request to ensure compliance and to demonstrate that action is being taken where necessary.

2.13.2 If complaints are received, the Site Manager will record the incident using a database logging system. A receipt of the complaint will be emailed to the person making the complaint. The receipt will include details of the formal response and how the complaint can be escalated, if required.

2.13.3 The Site Manager will then investigate the incident and will discuss what actions need to occur with the Applicant.

2.13.4 To ensure public faith in the reporting system, the target response times will be:

- Receipt of original complaint: within 2 working days of the complaint being received;
- Investigation time: within 4 working days of receipt of the complaint (assuming no requirement to involve / consult with third parties);
- Corrective Action Decision: within 3 working days of the completion of the investigation (assuming no requirement to involve third parties); and
- Response: to be issued to the complainant within 3 working days of the Corrective Action Decision.

2.13.5 It is of the utmost importance that the public know that their complaint will be investigated, actioned and that they are informed of what actions are being taken.

2.13.2.14 Good Practice

2.13.12.14.1 The Considerate Constructors Scheme (CCS) will be adopted to assist in reducing pollution and nuisance from the PPW, by employing good practice measures, which go beyond statutory compliance.

2.13.22.14.2 The CCS is a national scheme that promotes good practice on construction sites through its codes of considerate practice; these commit registered sites to be considerate and good neighbours, as well as being respectful, environmentally conscious, responsible and accountable.

2.14.2.15 Public Consultation and Liaison

2.14.12.15.1 A Community Liaison Officer would be in place from the commencement of PPW to lead discussions with local communities during the PPW.

2.14.22.15.2 Where access is required to land for temporary work, landowners will be notified a minimum of 14 days in advance unless otherwise agreed. Communication with landowners will be ongoing and maintained by the Community Liaison Officer.

3 Mitigation and Monitoring

- 3.1.1 This section of the PPW EMP sets out the mitigation and management measures to be implemented as part of the PPW, as relevant to the nature of the PPW. It also sets out monitoring requirements for each mitigation measure or monitoring requirement where relevant.

3.2 Climate Change

Table 3-1: Climate Change

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Greenhouse Gas (GHG) impact on waste	Reducing waste: • Segregation of waste at source, where practicable, to facilitate a high proportion and high-quality recycling; and • Off-site reuse, recycling and recovery of materials and waste where reuse on-site is not practical, e.g. through use of an off-site waste segregation or treatment facility or for direct reuse or reprocessing off-site.	Regular (weekly) visual checks and site inspections, with monthly auditing by the Environment during PPW.
GHG emissions from PPW traffic and equipment.	Appropriate standard and good practice control measures, including: • Designing and implementing the PPW 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 where feasible; • 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 PPW staff, and providing appropriate facilities for the safe storage of cycles; • Switching vehicles and plant off when not in use and ensuring construction vehicles conform to current UK emissions standards; • Conducting regular planned maintenance of the construction plant and machinery to optimise efficiency; • Protecting workers and resources from extreme weather conditions through appropriate PPE and working practices; • Using equipment's cooling systems where necessary/adapting working practices and equipment used based on current weather conditions; and	Regular (weekly) visual checks and site inspections, with monthly auditing by the Environment during PPW.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Monitoring weather forecasts and the news for Environment Agency flood warnings, relevant weather warnings, and water levels of the local waterways	
Stronger winds, heatwaves, heavy precipitation and increased risk of fires/wildfires.	Contractor will monitor weather forecasts and plan works accordingly, protecting workers and resources from any extreme weather conditions. The contractors will monitor weather forecasts and receive Environment Agency's flood alerts and plan works accordingly, protecting workers and resources from any extreme weather conditions such as storms, flooding. Fire suppression system on site to rapidly action in case of fire.	Regular (weekly) visual checks and site inspections, with monthly auditing by the Environment during PPW.

3.3 Landscape and Visual

Table 3-2: Landscape and Visual

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Loss of existing landscape features, e.g., vegetation Visibility of PPW activities	Other than reinstatement of removed vegetation where required and appropriate, no planting or habitat creation will be undertaken as part of PPW. PPW are limited in scale therefore no mitigation in the form of screening, planting or bunds for example is proposed.	n/a

3.4 Ecology and Biodiversity

Table 3-3: Ecology and Biodiversity

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Potential for obtrusive light spill to impact on ecology. Potential for spillages to enter watercourses and impact ecology. Clearance or damage of habitat to facilitate works – resulting in temporary or permanent reduction in habitat extent and potential direct and indirect effects on associated species. Dust deposition on sensitive ecological receptors.	The following mitigation measures will be adopted: • An EcoCoW will be designated at the onset of the PPW, which will provide ecological supervision during the completion of any works which have the potential to impact protected and notable species, as appropriate; • Criteria under which the EcoCoW would be required in order to oversee certain activities that have the potential to impact on protected species, such as localised habitat clearance. These criteria would trigger the need for EcoCoW attendance and, potentially, pre-commencement surveys or preparation by an ecologist, as well as follow up monitoring or reporting; • Criteria under which certain potentially impactful activities would need to be restricted to particular months or seasons in order to lessen likely adverse ecological effects (for example, hibernation or nesting season for particular species); • Restrictions on the use of fuels and other contaminants in proximity to boundary features and other sensitive habitats; • Measures to limit the dust generating activities, such as when working in dry conditions; • Measures to limit the mobilisation of sediments and run-off, such as when working in very wet conditions; • Where identified as required by the EcoCoW, construction personnel will receive a Toolbox Talk detailing the presence of sensitive ecological features at or close to permitted preliminary work areas. • Temporary site lighting during PPW will be required to enable safe working during construction during hours of darkness (likely	A site walkover will be undertaken in advance of the areas where PPW will be undertaken to identify any new ecological risks, such as newly constructed badger setts. Further surveys for protected species may be conducted as required, for example where tree modification or removal is proposed where trees have potential to support roosting bats. Further surveys, including for species such as bats, otter, water vole and badger would be completed as appropriate to reconfirm the status of protected species identified, to inform mitigation requirements and support protected species licence applications, if required, and the requirement for any EcoCoW supervision during the PPW. Ecological survey results will be made available to Wiltshire Council.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	over the winter months only) and will be designed as far as reasonably practicable to minimise potential for light spillage, particularly towards valuable ecological habitats. <u>Site lighting will be limited to use during the core working hours only (refer Section 2.3) and will adhere to the control measures identified within Section 2.7 of this PPW MP. A period of up to one hour before and after the core working hours may be used for mobilisation and close down activities which do not require substantial artificial lighting.</u> Standard good practice measures would be employed to minimise light spill, including glare, during PPW.	Such surveys would be undertaken sufficiently far in advance of PPW to account for seasonality constraints and to allow time for the implementation of any necessary mitigation, prior to PPW commencing. <u>In the event of tree removal and vegetation clearance identified by the EcoCoW as being located in sensitive areas, Wiltshire Council will be consulted on the proposed mitigation.</u> Additional surveys may be required during the PPW, as advised by the Applicant's ecologist, based on the findings of the updated walkover and protected species surveys, or otherwise as identified as appropriate by the Applicant or their appointed contractor.

3.5 Arboriculture

Table 3-4: Arboriculture

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Tree Removal	It is unlikely that tree removal will be required as part of PPW. However, should tree removal be required, trees of lower quality and life expectancy will be preferably removed over those of higher quality and life expectancy. Trees with a BS5837:2012 Quality Category of U shall be preferentially removed followed by Category C, B and A trees in that order of priority. Veteran trees will not be removed under any circumstances. If required, tree removals will be marked on-site by the Arboricultural Clerk of Works (ACoW), with final decisions made during detailed site design and cable trench micro-siting. Only qualified arboricultural contractors, in accordance with British Standard 3998:2010, will perform tree work. PPW workers will not perform tree removals unless qualified and specifically instructed. Prior to removal, legal restrictions, such as those protecting nesting birds and roosting bats, will be observed. Where trees are protected by a Tree Preservation Order (TPO), removal will only occur if deemed necessary to prevent obstruction or interference with the Scheme. The ACoW will be consulted to ensure compliance and explore alternatives before proceeding with works on TPO trees. The above measures are included within ES Volume 3, Appendix 10-1 Arboricultural Impact Assessment and Outline Arboricultural Method Statement [APP-206]. The Contractor is to comply with the measures set out in this document. All work in proximity to trees, tree groups and woodlands will be undertaken in accordance with the Outline Arboricultural Method Statement (OAMS) contained at Appendix B of this PPW Management Plan. The OAMS provides practical guidance, that if followed correctly will ensure existing arboricultural features for retention	Ongoing Arboricultural Clerk of Works. <u>In the event of tree removal and vegetation clearance identified by the Arboricultural CoW as being located in sensitive areas, Wiltshire Council will be consulted on the proposed mitigation.</u>

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	<u>are suitably safeguarded during construction, in particular those of high value such as veteran trees and Category A trees of high quality</u>	
Tree Pruning	Prior to any necessary tree pruning, the ACoW will liaise with the construction contractor on the requirements for pruning and the ACoW will provide a specification for the pruning works required which will then be implemented by a suitably qualified, insured and experienced arboricultural contractor working in accordance with British Standard 3998: 2010 'Tree Work – Recommendations' Pruning works to veteran trees will be avoided and pruning will aim to prioritise trees of low quality (BS5837:2012 Category U and C trees) over trees of moderate or high quality (BS5837:2012 Category A and B trees). No tree works will be undertaken by construction workers unless qualified and instructed to do so. All tree pruning works will have due consideration for ecological mitigation. Temporary compounds will be sited outside of the canopy spreads of adjacent trees and woodlands. The above measures are included within ES Volume 3, Appendix 10-1 Arboricultural Impact Assessment and Outline Arboricultural Method Statement [APP-206], the Contractor is to comply with the measures set out in this document. (OAMS).	Ongoing Arboricultural Clerk of Works
Root loss/damage from excavation or soil compaction within RPAs	Tree protection fencing and/or Perimeter Fencing will be installed prior to PPW to establish a Construction Exclusion Zone (CEZ) around RPAs. The fencing will consist of wire mesh and wooden posts or other protective fencing as specified by the Outline Arboricultural Method Statement and will prevent entry of machinery, materials, or spoil into the protected areas and be checked by the ACoW prior to construction near trees commencing.	Ongoing Arboricultural Clerk of Works

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	Retained trees along the Cable Route Corridor will also be protected with tree protection fencing for the duration of works as appropriate in sections of the Cable Route Corridor. Temporary compounds will be sited outside of the RPAs of adjacent trees and woodlands. In cases where construction activities must occur within RPAs, suitable ground protection will be installed to prevent soil compaction. The type of ground protection will vary based on the weight of traffic and will comply with BS5837:2012 recommendations, ranging from scaffold boards for pedestrian use to reinforced systems for heavy machinery. Micro-siting techniques will be used to minimize root disturbance, with cable routing designed to avoid RPAs of retained trees. If work within RPAs is unavoidable, the ACoW will supervise and guide precautionary measures such as hand digging and root pruning. Throughout PPW, movement of machinery and storage of materials will be managed to prevent encroachment into RPAs. In the event that access is required, temporary ground protection will be employed to safeguard the tree roots. The above measures are included within ES Volume 3, Appendix 10-4 Arboricultural Impact Assessment and B; Outline Arboricultural Method Statement [APP-206]. The Contractor is to comply with the measures set out in this document (OAMS)	
Dust/sediment impacts to adjacent woodlands (including ancient woodlands)	Measures to limit the dust generating activities, such as when working in dry conditions, will be implemmentedimplemented. To mitigate the risk of airborne contamination, a dust suppression and management system will be implemented. Other sediment mitigation includes:	No monitoring required

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	• Cut-off ditches or geotextile silt-fences, installed around excavations, exposed ground and stockpiles to prevent uncontrolled release of sediment; • All potentially contaminated waters (for example washdown areas, stockpiles and other areas of risk for water contamination) to have separate drainage. Any contaminated waters would be taken away by tanker; and • Vehicles carrying material off-Site will be sheeted to prevent the spread of dust.	
Damage to canopies/stems from machinery movements	To mitigate damage to tree canopies and stems from machinery, tree pruning will be carefully managed and conducted by qualified arboricultural contractors under the guidance of the ACoW Pruning will prioritise low-quality trees (Category U and C) over higher-quality trees (Category A and B), with veteran trees being preserved wherever practicable. All pruning will comply with British Standard 3998:2010 and take ecological protection into account. Micro-siting will be employed to avoid the removal or occurrence of root or canopy impacts to veteran trees within the Cable Route Corridor. If micro-siting cannot be achieved around such arboricultural features. Tree protection fencing will be installed around RPAs before PPW activities begin, creating an exclusion zone to prevent machinery from entering protected areas. The fencing will remain in place throughout construction and only be altered under ACoW supervision. If PPW activities must take place within RPAs, ground protection will be used to minimize soil compaction, and precautionary working methods such as hand digging will be employed. When tall machinery is working near tree canopies the machine operator will be accompanied by a banksman who will work from ground level and	Ongoing Arboricultural Clerk of Works.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	ensure that moving machinery parts avoid the stems and branches of retained trees. The above measures are included within ES Volume 3, Appendix 10-4 Arboricultural Impact Assessment and B Outline Arboricultural Method Statement [APP-206]. The Contractor is to comply with the measures set out in this document. (OAMS).	

3.6 Hydrology, Flood Risk and Drainage

Table 3-5: Hydrology, Flood Risk and Drainage

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Leakage or accidental spillage of PPW materials and potential pollutants used on-site, migrating to nearby surface watercourses or infiltrating to groundwater. Any flooding during PPW could flood construction equipment and/materials, causing release of pollutants nearby surface watercourses or infiltrating to groundwater.	Staff Awareness and Training - The contractor(s) will ensure that staff are fully aware of the potential impact to water resources associated with the PPW and procedures to be followed in the event of an accidental pollution event occurring. This would be included in the site induction and training, with an emphasis on procedures and guidance to reduce the risk of water pollution. - Any necessary equipment to manage accidental pollution (e.g., spillage kits) would be held on-site and all site personnel would be trained in their use. The Environment Agency would be informed immediately in the unlikely event of a suspected pollution incident.	Temporary drainage will be monitored throughout any PPW. Materials would be stored outside of Flood Zone 2 and the construction laydown area site office and supervisor would be notified of any potential flood occurring by use of the Floodline service.
	Storage of Materials Measures as set out in relevant Construction Industry Research and Information Association (CIRIA) Guidance will be implemented, including:	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- Placing arisings and temporary stockpiles outside of the Flood Zone 3 flood extent and away from drainage systems. If areas located within Flood Zone 2 are to be utilised for the storage of PPW materials, then a standard rules permit will be sought from the Environment Agency; - Compounds, material storage and stockpiles will not be located within Flood Zone 3b and, where practicable, will be located outside the 1 in 100 year flood extent; - Containment measures will be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils. Where appropriate, containers will be covered, bunded to 110% of stored volume; <u>Compounds and stockpiles would be located as far from receptors as possible;</u> <u>Depending on the size and duration of the PPW compound areas, if required, a drainage system will be developed to prevent silt-laden runoff from entering surface water drains, watercourses and ponds without treatment (e.g. earth bunds, silt fences, straw bales, or proprietary treatment);</u> - All chemicals will be stored in accordance with their Control of Substances Hazardous to Health (COSHH) guidelines, whilst spill kits will be provided in areas of fuel/oil/minor chemicals storage; - The mixing and handling of materials would be undertaken in designated areas and away from surface water drains; - Plant and machinery will be kept away from surface waterbodies wherever practicable and would have drip trays installed beneath oil tanks/engines/gearboxes and hydraulics, which would be checked and emptied regularly. Refuelling and delivery areas would be located away from surface water drains; and - Exposed ground and stockpiles would be protected as appropriate and practicable to prevent windblown migration of	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	potential contaminants. Water suppression would be used if there is a risk of fugitive dust emissions. Discharge/Disposal of Site Runoff - Site drainage, including surface runoff and dewatering effluents, will be discharged to sewers where practicable and relevant permissions will be obtained from the sewerage or statutory undertaker. Discharge to watercourses will only be permitted where discharge consent or other relevant approval has been obtained (where necessary); - Existing access tracks, where practicable, will be retained, limiting the requirement to develop new access which can disturb soils and lead to compaction; - Access to the Scheme during PPW will be taken <u>from</u> existing farm tracks accessed from the local highway network. <u>No highway improvements are required for the purposes of PPW;</u> - During the PPW, buffers of 10m (where practicable) would be preserved adjacent to all water environment receptors to ensure that there is a sufficient buffer from the sensitive receptor to the PPW activities; <u>Should there be concrete pouring, concrete washout and similar cementitious activities, they will be planned and managed to avoid works in conditions where heavy rainfall or surface runoff could result in alkaline or sediment-laden discharge to watercourses or surface water drains. Concrete washout will take place in designated contained areas only;</u> - The relevant sections of BS 6031:2009 Code of Practice for Earthworks (Ref 10) will be followed for the general control of site drainage; With the exception of stripping for the purposes of archaeological mitigation, there will be no topsoil stripping as part of PPW;	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- To protect watercourses from fine sediment runoff, topsoil/subsoil stripped as part of the archaeological mitigation work will be stored a minimum of 30m from watercourses on flat lying land; - There will be no long-term storage of topsoil or subsoil as part of the PPW; - Equipment and plant are to be washed out and cleaned in designated areas at least 10 m from the bank of a watercourse within the Sites' compound where runoff can be contained, isolated and treated before disposal. Vehicle washdown and refuelling will be carried out only in designated areas that are located, designed and managed so that there is no risk of pollution to surface water or groundwater receptors. Washdown runoff will be contained and either removed off-site to a licensed facility or managed under relevant permits, with no uncontrolled discharge; - Mud deposits will be controlled at entry and exit points to the Sites using wheel washing facilities and/or road sweepers operating during earthworks activities or other times as required. Where wheel washing is required, it will be undertaken in designated impermeable or lined areas, with wash water contained and either recycled or removed off-site by a licensed contractor, with no uncontrolled discharge to ground or surface water; - Sediment capture methods, such as silt fencing, cut-off drains, check dams, settlement features or equivalent controls, will be deployed on temporary tracks, compounds and other disturbed areas where there is a risk of sediment-laden surface runoff reaching watercourses or surface water drains; - Opportunities for rainwater harvesting for appropriate non-potable construction uses, including vehicle washdown, will be considered, where practicable;	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	• Appropriate SuDS and sediment control measures will be implemented where required to manage runoff and prevent sediment mobilisation, with inspection and maintenance commitments; • Debris and other material will be prevented from entering surface water drainage, through maintenance of a clean and tidy site, provision of clearly labelled waste receptacles, grid covers and the presence of site security fencing; • Foul water from any site compound (including temporary toilets) will be managed in accordance with a construction foul water strategy. Foul water will be collected, contained and taken away by tanker to an appropriate licensed disposal facility. No foul water will be discharged to surface water drains or watercourses; • No discharges from any self-contained wheel wash and localised wheel wash will be permitted to discharge directly into any surface water system; and • PPW groundworks will be kept as far from the from watercourses/drainage ditches as reasonably practicable.	
	Temporary Drainage • All reasonably practicable measures will be taken to prevent the deposition of fine sediment or other material in, and the pollution by sediment of, any existing watercourse, arising from PPW activities. The measures will accord with the principles set out in industry guidelines. Measures may include use and maintenance of temporary lagoons, tanks, bunds and fabric silt fences or silt screens as well as consideration of the type of plant used; • Site access points would be regularly cleaned to prevent build-up of dust and mud; • All potentially contaminated waters (for example washdown areas, stockpiles and other areas of risk for water contamination) to have separate drainage. Any contaminated waters would be	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	taken away by tanker from the Sites; and in addition, if monitoring demonstrates unsatisfactory levels of solids or other pollutants, measures would be implemented (e.g. changes to site drainage and settlement facilities and/or use of flocculants) to control suspended solids or other contaminated discharge to watercourses. Spillage Risk - Fuel will be stored and used in accordance with the Control of Substances Hazardous to Health Regulations 2002 (Ref 11), and the Control of Pollution (Oil Storage) (England) Regulations 2001 (Ref 12). Particular care will be taken with the delivery and use of concrete and cement as it is highly corrosive and alkaline; - Fuel and other potentially polluting chemicals will either be in self-bunded leak proof containers or stored in a secure impermeable and bunded area (minimum capacity of 110% of the capacity of the containers), with rainwater management and oil separation included where required; - Refuelling of plant to take place off the Site if practicable, or only in a designated area at the Site compound ideally at least 20 m from receptors; <u>When not in operation, plant, machinery and vehicles will not be stored within Flood Zone 3b.</u> - Any plant, machinery or vehicles will be regularly inspected and maintained to ensure they are in good working order and clean for use in a sensitive environment. This maintenance is to take place off site if practicable or only at designated areas within the Sites' compound. Only construction equipment and vehicles free of all oil/fuel leaks will be permitted on site. Drip trays will be placed below static mechanical plant; - All refuelling, oiling and greasing will take place above drip-trays or on an impermeable surface which provides protection to underground strata and watercourses, and away from drains as	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	far as reasonably practicable. Vehicles will not be left unattended during refuelling; • As far as reasonably practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses; • All fixed plant used on the Site will be self-bunded; Mobile plant is to be in good working order, kept clean and fitted with plant 'nappies' at all times; • <u>Contractors will have an Emergency Spill Response Plan;</u> • Spill kits and oil absorbent material will be carried by mobile plant and located at high risk locations across the Sites and regularly topped-up. All construction workers will receive spill response training and tool box talks; • The PPW worksites are to be kept secure to prevent vandalism that could lead to a pollution incident; • Construction waste/debris are to be prevented from entering any surface water drainage or water body; • All washing down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses; • Surface water drains on public roads trafficked by plant or within the construction compound will be identified and, where there is a risk that fine particulates or spillages could enter them, the drains will be protected (e.g. using covers or sand bags) or the road regularly cleaned by road sweeper.	
	Flood Risk • PPW specifically in areas located within Flood Zone 3, would not be undertaken when an Environment Agency Flood Warning is in place.	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	The contractor will be required to produce a Flood Risk Management Action Plan/Method Statement which will provide details of the response to an impending flood and include the following: • 24-hour availability and ability to mobilise staff in the event of a flood warning; • Details of the evacuation and site closedown procedures; • Arrangements for removing any potentially hazardous material and anything capable of becoming entrained in floodwaters, from the temporary works areas; • The Contractor will sign up to the Floodline service and describe in the Emergency Response Plan the actions it will take in the event of a flood event occurring. These actions will be hierarchal meaning that as the risk increases the Contractor will implement more stringent protection measures; • If water is encountered during below ground construction, suitable dewatering methods will be used; • Any groundwater dewatering required in excess of the exemption thresholds will be undertaken in line with the requirements of the Environment Agency (under the Water Resources Act 1991 as amended (Ref 13) and the Environmental Permitting Regulations (England and Wales) 2016 (Ref 14)); and • Safe egress and exits are to be maintained at all times when working in excavations. When working in excavations a banksman is to be present at all times.	
	Silt Management • Works that are likely to generate silt-laden runoff (e.g. earthworks and excavations) will be done preferentially during the drier months of the year; • Where practicable, during the construction/decommissioning phases, buffers of 10m would be preserved adjacent to sensitive receptors to reduce impacts;	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- Mud will be controlled at entry and exits points using wheel washes and/or road sweepers. Where wheel washing is required, it will be undertaken in designated impermeable or lined areas, with wash water contained and either recycled or removed off-site by a licensed contractor, with no uncontrolled discharge to ground or surface water; and - Debris and other material such as dust will be prevented from entering nearby receptors through the use of standard pollution control measures, such as silt fences, straw bales, bunding, wheel washing and dust suppression.	

3.7 Cultural Heritage

Table 3-6: Cultural Heritage

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
PPW activities impacting upon Heritage assets	Where <u>non-heritage based</u> PPW will be undertaken in the relative proximity of designated assets <u>that have the potential to cause temporary change to the setting of designate heritage assets</u> , works, including the <u>temporary</u> storage of materials, will be undertaken as far away from the assets as reasonably practicable <u>and be undertaken for the minimum amount of time necessary to achieve the objectives of the PPW</u> .	Provision for archaeological mitigation and monitoring is detailed in the Outline AMS (see ES Volume 3, Appendix 12-6: Outline Archaeological Mitigation Strategy [APP-230]). The AMS must be adhered to during PPW.
PPW impacts upon buried archaeological assets.	The Outline AMS details the overarching methodology for undertaking a programme of archaeological mitigation within the Order limits. As part of the PPW, Project Designs (Site Specific Written Schemes of Investigation (WSI)) for each identified area will be developed in consultation with Wiltshire Council. The proposed mitigation strategy detailed in the Outline AMS will be implemented as part of the PPW. The Outline AMS provides for a programme of geophysical survey, 'strip, map and sample', and archaeological monitoring, based on the location of identified archaeological remains where there is considered to be potential for such remains to be impacted by the Scheme. It also provides for preservation of archaeological remains in situ where possible through the use of non-intrusive construction methodology (such as surface mounted pre-cast concrete ground anchors), the removal of specific areas of the Scheme from any proposed development work and directional drilling of sections of the cable route beneath buried archaeological remains.	Provision for archaeological mitigation and monitoring is detailed in the Outline AMS (see ES Volume 3, Appendix 12-6: Outline Archaeological Mitigation Strategy [APP-230]). The AMS must be adhered to during the PPW. All 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). The Archaeological Clerk of works and/or the Archaeological Advisors to the LPAs will monitor

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
		the completion of works in accordance with the methodology and programme set out in the AMS and associated SSWSIs.

3.8 Transport and Access

Table 3-7: Transport and Access

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Increased traffic flows, including HGVs on the roads leading to the Sites. Severance and intimidation associated with PPW traffic.	PRoW Where a vehicle track crosses <u>or runs alongside</u> a Public Right of Way, the following measures will be implemented: • A widened access track to ensure vehicles can pass PRoW users safely (including cyclists and equestrians); • The provision of banksmen at either end of the PRoW, to hold vehicles if a PRoW user is present and advise PRoW users of the potential for construction vehicles to be present; • Speeds to be limited to 5mph; • Drivers will stop and give-way to any PRoW user (in particular for equestrians) that they encounter; • Appropriate signage will be installed along the PRoW to make PRoW users aware of the construction activity. This will include information on construction times and contact details for a public liaison officer; • The PRoW will be kept clear of construction vehicles and apparatus outside of permitted construction hours so far as is practicable to do so; and • Any damage to the surface of the footpath/bridleway will be repaired as soon as practicable. The surface will be returned to its original condition following completion of construction. Specific Highway Measures • <u>Only</u> existing accesses will be utilised. No new accesses off the public highway will be established. <u>Use of existing access will not require highway improvements to be made;</u> • The Offsite Highway Improvement Areas will not be implemented as part of the PPW; and	Any unforeseen issues that arise in relation to construction vehicle movement 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
	- There will be no Abnormal Load movements during PPW. Traffic Management - Traffic Management Measures, including signage will be utilised to warn drivers of the presence of PPW related traffic. Traffic marshals or banksmen will be utilised to ensure the safe passage of construction vehicles at access junctions; and - There will be a commitment to stopping construction deliveries during Badminton Horse Trials. Signage - Signs to direct vehicles associated with the PPW will be installed along traffic routes. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to Site to ensure that vehicles follow the identified routes; - All signage on the designated route will be inspected daily by the Site Manager, to ensure they are kept in a well maintained condition and located in safe and appropriate locations; and - Provide additional construction traffic warning signs at oncoming bends in location of fatal accident (Ref: 212105589) recorded on 13/11/2021 on the B4040 construction vehicle route for Lime Down A, B and C. Vehicle Movements - Construction deliveries by HGV will be coordinated to arrive/depart between 09:30-16:30 where practicable to avoid the network peak hours of 08:00-09:00 and 17:00-18:00; and - Banksmen will be provided at the Site accesses to indicate to construction traffic when it is safe for them to enter and exit the Site. Parking Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road. Contractors and visitors will be advised that parking facilities will be	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	provided on-Site in advance of visiting the Site and that they should not park on-street. Wheel Washing Facility Mud will be controlled at entry and exits to the Solar PV Sites using wheel washes and/or road sweepers. Where wheel washing is required, it will be undertaken in designated impermeable or lined areas, with wash water contained and either recycled or removed off-site by a licensed contractor, with no uncontrolled discharge to ground or surface water. 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. Noise Reduction and Air Quality When on Site and when not in use, vehicle engines will be switched off;. Vehicles carrying material off-Site will be sheeted to prevent the spread of dust. In dry conditions, areas near to the Site access will be sprayed with water supplied to prevent the spread of dust. Site Security The PPW works will be secured at all times via a perimeter fence or temporary fencing. 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). Community Engagement The details of the Community Liaison Officer will be provided to the local highway authority in advance of any work being carried out. The Community Liaison Officer's details will also be provided on a Site-board at the Site accesses. If anyone in the local community has any issues during the PPW, the Site Manager will be available to discuss.	
Impacts to the SRN from adjoining works	Communication and consultation with National Highways	Any unforeseen issues that arise in relation to construction vehicle movement will be logged by the

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	The Applicant will engage with National Highways where any works are proposed within close proximity or adjacent to the Strategic Road Network (SRN). This will include National Highways being consulted on: - the location and specification of temporary and permanent protective fencing located on or within 10 metres of the SRN; - the location and specification for temporary and permanent drainage; and - measures associated with limiting dust and debris from construction activities or exposed ground or stockpiles. Pre-construction Road Condition Survey An independent pre-construction road condition survey will be carried out on the local highway network via video two weeks before the construction phase commences. The extent of the survey will be agreed with the local highway authority prior to commencement and as part of the Final CTMPsPPW. The survey is expected to comprise parts of the construction route as listed in Section 6.12 of the Outline CTMP [EN010168/APP/7.22 (Rev 5)]. These include: Lime Down A-C— The length of Alderton Road and Fosse Way between Grittleton crossroads and junction of Fosse Way and Unnamed Road to Sherston. Unnamed road between Fosse Way and Sherston: Circa 1.1km from the Fosse Way junction; and Un-mettalled highway surfaces forming part of the construction route on Fosse Way. Lime Down D— Unnamed road between the roundabout junction with Wellington Place Road and Bradfield Cottages - circa 1.7kmand	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
	- Unnamed road between the Bradfield Cottages / The Street junction and the proposed secondary access point to Lime Down area D — circa 460m; and • Other links that form part of the proposed construction vehicle route include A Roads and B Roads and are already associated with significant numbers of HGV movements. The effect of HGVs associated only with the Site could not be reasonably be determined. - The mitigation and management measures relevant to the PPW are listed in Chapter 6 of the Outline CTMP [EN0110168/APP/7.22 (Rev 5)]. <u>Un-mettalled highway surfaces forming part of the construction route, east of Hullavington crossroads; and</u> <u>Lime Down E</u> - <u>Unmetalled highway surfaces located on construction routes adjacent to Lime Down E.</u>	

3.9 Noise and Vibration

Table 3-8: Noise and Vibration

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Noise and vibration due to PPW activities causing annoyance at Noise Sensitive Receptors (NSR). Construction traffic, plant and machinery noise at nearby NSR.	The following Best Practicable Means (BPM) will be applied, as far as reasonably practicable, during PPW to minimise noise and vibration at NSRs, including, neighbouring residential properties and other sensitive receptors arising from activities: • Ensuring that all appropriate processes, procedures and measures are in place to minimise noise before works begin and throughout the PPW programme; • All contractors to be made familiar with current legislation and the guidance in BS 5228:2014 (Parts 1 and 2) which should form a prerequisite of their appointment; • When works are taking place within close proximity to sensitive receptors, the screening of noise sources via the erection of temporary screens would be employed where practicable; • All machinery would be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers; • All plant and equipment to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use; • As far as practicable, works will be programmed to avoid noisy operations occurring simultaneously in close proximity to the same sensitive receptor; • Adhere to the core working hours of the Scheme which are Monday to Friday 07:00 – 18:00 and between 08:00 and 13:30 on Saturdays; and • Provision of information to the relevant local authority and local residents to advise of the proposed dates, times and duration of potential noisy works that are due to take place.	Monthly reporting of information to and from local residents to advise of potential noisy works that are due to take place and for monitoring of noise complaints and reporting to the Applicant for immediate investigation and action. Any complaints received will be investigated and responded to following the procedure and timelines set out within Section 2.13 of this PPW Management Plan.

3.10 Air Quality

Table 3-9: Air Quality

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Fugitive dust emissions during the PPW.	Communications • Display the name and contact details of person(s) accountable for air quality and dust issues on the Site; • Display the Contractor's head or regional office contact information. 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; and • 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. 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; • Avoid site runoff of water or mud; • Remove materials that have a potential to produce dust from site as soon as possible, 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;	The following monitoring will be undertaken: • Carry out regular site inspections to record inspection results, and make an inspection log available to the local authorities when asked; and • 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. Any unforeseen issues that arise in relation to construction 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. <u>Any complaints received will be investigated and responded to following the procedure and timelines set out within Section</u>

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	• 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 15mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required, these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authorities, where appropriate); 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 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; • Avoid scabbling (roughening of concrete surfaces) if possible; and • 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. 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	2.13 of this PPW Management Plan.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- Only remove the cover in small areas during work and not all at once. Trackout - 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; and - 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.	
Vehicle and plant emissions during the construction phase	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 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).	The overall responsibility will be with the Applicant.

3.11 Socio Economic Tourism Recreation

Table 3-10: Socio Economic Tourism Recreation

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Disruption to users of Public Rights of Way	Recreational routes crossing or within the Order limits will be sought to be kept open during PPW, with any crossing or traffic conflict points overseen by spotters or banksmen for HGVs. Where closures are deemed to be necessary, these will be temporary in nature and supported by appropriate amount of notice and suitable diversions. Any diversions to routes will be appropriately signed, and the duration and length of diversions will be optimised to minimise impacts on accessibility and desirability.	A Community Liaison Manager, will be available for members of the public to report any concerns or issues with PRowWs during PPW. The CLM will report any concerns to the responsible construction site manager to oversee any investigative, and if required, remediation work.

3.12 Soils and Agriculture

Table 3-11: Soils and Agriculture

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Temporary loss of agricultural land. Impacts on soil.	<u>Topsoil stripping would be limited to those areas where temporary removal of soil is required for example for archaeological trenching or geotechnical investigation. There would be no long-term storage and management of topsoil or subsoil.</u> Soil management Method Statements will be produced by the Contractor(s) and will include but not be limited to consideration of the following: • Details of the soil resources present; • How the topsoil and subsoil will be stripped and stockpiled; • Suitable conditions for when soil handling will be undertaken, for example avoiding handling of waterlogged soil; • Indicative soil storage locations; • How soil stockpiles will be designed taking into consideration site conditions and the nature/composition of the soil; • Specific measures for managing sensitive soils; • Suitable protective surfacing where soil stripping can be avoided, based on sensitivity of the environment and proposed works; and • Approach to reinstating soil, including measures to remove compaction, where required.	Site inspections by a suitably experienced soil scientist to identify any emerging issues. Monitoring to ensure that disturbed land and soil resources continue to fulfil all their ecological functions.

3.13 Human Health

Table 3-12: Human Health

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Disruption to the local community	A Community Liaison Manager <u>Officer</u> will be appointed, to whom any comments, concerns or complaints about the development of the Scheme can be raised, either directly by members of the public, or via elected representatives on parish or town councils, councillors, and Members of Parliament. This role will be used to continue open channels of communication between the community and the operators of the Scheme as set up during the application and DCO process, and through the discharge of requirements process. In doing so, this will mitigate impacts on community identity and influence by allowing the community to continue to be involved in the development of their local environment as the Scheme is constructed.	No monitoring required. Any <u>complaints received will be investigated and responded to following the procedure and timelines set out within Section 2.13 of this PPW Management Plan.</u>

3.14 Ground Conditions

Table 3-13: Ground Conditions

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Displacement and exposure of soils Interaction with mine workings and unstable ground The discovery of ground contamination during groundworks Potential for risks to human health associated with waste generation, land contamination, airborne contamination, and groundwater contamination.	Intrusive ground investigation will be undertaken, as appropriate, to enable the characterisation of soil and groundwater conditions prior to the commencement of construction. Additional investigation will be scheduled in areas impacted by identified geohazards and in locations where permanent structures, i.e. substations and BESS Area, are to be deployed and also in areas where the Conceptual Site Model developed as part of ES Volume 1, Chapter 19: Ground Conditions [EN010168/APP/6.1 (Rev 4)], indicates there may be contaminant sources. • Ground investigation may be deployed if the proposed installation may infringe the mines. • Where shafts are identified which are flooded and require grouting, permits will be obtained for the abstraction and potential discharge of that water, as required; • Ground investigation will be designed and executed in line with BS10175 and other appropriate guidance documents; • Management of access to the PPW sites will be undertaken to minimise issues like dust, sedimentation of waterways, degradation of soil quality, loss of topsoil and surface run off. • Management of excavated and excess soils and aggregates to be used in all aspects of the activities to avoid fugitive emissions of dust and run off to water courses. • Management of any wastes generated to ensure no adverse impacts on receptors. • Where groundwater is encountered in excavations, appropriate provisions will be made to manage that water and ensure that no uncontrolled discharges occur.	The Environmental Manager will regularly record compliance in a log book.

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	- Where demolition or disturbance of existing structures is required, asbestos surveys will first be obtained and where necessary, removal of asbestos containing materials (ACMs) will be undertaken in line with Health & Safety Executive guidelines and the Control of Asbestos Regulations. method - A discovery and inspection strategy will be put in place which details the requirements and procedures for encountering land and / or groundwater contamination, should they be encountered. The discovery and inspection strategy will be produced by the contractor in accordance with the Outline Discovery and Inspection Strategy at Appendix C of this PPW management plan. - Any confined space entry, i.e. entry to open trenches or excavations, will be preceded by checks using appropriate instrumentation to detect the presence of methane, carbon dioxide or hydrogen sulphide, or low oxygen conditions. - Temporary compounds and laydown areas will be appropriately located, designed and managed to minimise the risk of fugitive emissions from stored aggregates, materials and liquids. All fuels, oils, chemicals and other potentially polluting substances will be stored on impermeable surfacing and within suitable secondary containment (bundling) in accordance with relevant pollution prevention guidance. Bunded storage areas will be sized and maintained to contain at least 110% of the largest container or 25% of the total storage volume, whichever is greater, with rainwater and oil separation included where required; - Where intrusive activities, such as excavation, have the potential to interact with shallow groundwater or an underlying aquifer, properties not already known to be served by a private water supply (PWS) located within 50 m of the relevant construction activity will be contacted to establish whether they are served by a PWS, in accordance with the principles set out in the Environment Agency guidance The Environment Agency's Approach to Groundwater Protection (Version 1.2, February	

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
	2018). Where a PWS is identified, a site-specific risk assessment will be undertaken with reference to Section B of the aforementioned guidance, applying Source Protection Zone (SPZ) 1 and SPZ2 principles, as appropriate, having regard to the proximity of the PWS to the relevant construction activity. Excavations will be supported or graded to a stable angle which may vary depending on ground conditions. Groundwater and the requirement for dewatering will be considered.	

3.15 Materials and Waste

Table 3-14: Materials and Waste

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
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 contractor will consider the objectives of sustainable resource and waste management and seek to use material resources efficiently, reduce waste at source, reduce waste that requires final disposal to landfill and apply the principles of the waste hierarchy. This would include, where reasonably practical, segregation of construction materials on-site for appropriate re-use, recycling and recovery with landfill as a last resort. All waste management will be undertaken in accordance with the relevant regulations and waste would be transported by licensed waste hauliers to waste management sites which hold the necessary regulatory authorisation and/or permits for those wastes consigned to them.	The types, quantities and final destination of waste generated during by PPW would be identified, measured and recorded. A register of all waste loads leaving the Order limits 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.
Impacts of waste to the surrounding environment.	To minimise impacts of waste on the surrounding environment, the following measures would be implemented: • Damping down of surfaces during spells of dry weather and brushing/water spraying of heavily used hard surfaces/access points across the site as required; • Burning of waste or unwanted materials will not be permitted on-site; • All hazardous materials including fuels, chemicals, cleaning agents, solvents and solvent containing products to be properly sealed in containers at the end of each day prior to storage in appropriately protected and bunded storage areas; • All construction workers will be required to use appropriate personal protective equipment whilst performing activities on-site;	The types, quantities and final destination of waste generated during the PPW would be identified, measured and. A register of all waste loads leaving the Order limits 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
	- Any waste effluent will be tested and, where necessary, disposed of at a correctly licensed facility by a licensed specialist contractor/s; - Materials requiring removal from the site will be transported using licensed carriers and records will be kept detailing the types and quantities of waste moved, and the destinations of this waste, in accordance with the relevant regulations; and - To reduce trips associated with waste removed from the Site, waste compactors will be located within each Solar PV Site.	

3.16 Telecommunications, Television Reception and Utilities

Table 3-15: Telecommunications, Television Reception and Utilities

Potential Impact	Mitigation/Enhancement Measure	Monitoring Requirements
Utilities, Telecommunications and Television Receptors	In advance of any intrusive PPW activities, the Applicant would liaise with all utility providers with assets in the area in regard to timelines, activities, proximity to assets and management measures. - During the PPW, there may be safe working required beneath any overhead lines in line with National Grid's technical guidance note 287 Ref 7, 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; and - 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 guidance documents for third parties working in the vicinity of high pressure gas pipelines and associated installations.	No monitoring required.

4 Checking and Corrective Action

4.1 Monitoring

- 4.1.1 Monitoring and reporting will be undertaken by the Contractor for the duration of the PPW phase in order to demonstrate the effectiveness of the measures set out in the PPW EMP and related construction controls, and allow for corrective action to be taken where necessary.
- 4.1.2 As part of the monitoring process, the designated Environmental Manager will be present on-site throughout the PPW and when new activities are commencing. The Environmental Manager will observe site activities and report any deviations from the PPW EMP in a logbook, along with the action taken and general conditions at the time. The Applicant will be informed of any deviations from the PPW EMP as soon as possible following identification of such issues. The Environmental Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.
- 4.1.3 During PPW, the Environmental Manager will conduct walkover surveys to ensure all requirements of the PPW EMP are being met. Action from these surveys will be documented on an Environmental Action Schedule, discussed with the Site Manager for programming requirements and issued weekly for actioning.
- 4.1.4 The Environmental Manager will also arrange regular formal inspections and audits to ensure the requirements of the PPW EMP are being met. After completion of the works, the Environmental Manager will conduct a final review.

4.2 Records

- 4.2.1 The Environmental Manager/ Construction Project Manager will retain records of all monitoring, inspections and audits. These records will include:
- Results of routine site inspections by Environmental Manager / Construction 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 PPW EMP or complaints received from a third party.
- 4.2.2 Local authorities will be notified of routine improvements, substitutions and method changes to the PPW EMP. Any meaningful reduction in protection would require prior consultation or agreement with local authorities.

5 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 The Control of Pollution Act 1974. Available at:
<https://www.legislation.gov.uk/ukpga/1974/40> (Accessed July 2025).
- Ref 4 Considerate Constructors Scheme, The code of considerate practice. Available at:
<https://www.ccscheme.org.uk/resources/the-code-of-considerate-practice/> (Accessed July 2025).
- Ref 5 BSI (2014) BS 5228-1:2009+A1:2014. Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise & Part 2: Vibration 2009
- Ref 6 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 7 National Grid (2016). Technical Guidance Note 287: Third-party guidance for working near National Grid Electricity Transmission equipment.
- Ref 8 National Grid (2007). Specifications for Safe Working in the Vicinity of National Grid High Pressure Gas Pipelines and Associated Installations - Requirements for Third Parties.
- Ref 9 Northern Gas Networks (2017). Working safely near high pressure gas pipelines and associated installations: Third party requirements.
- Ref 10 British Standards (2009). BS 6031:2009 - Code of Practice for Earthworks
- Ref 11 UK Gov (2002). Control of Substances Hazardous to Health Regulations 2002. Available at: <https://www.legislation.gov.uk/uksi/2002/2677/contents> (Accessed July 2025).
- Ref 12 UK Gov (2001). Control of Pollution (Oil Storage) (England) Regulations 2001. Available at: <https://www.legislation.gov.uk/uksi/2001/2954/contents> (Accessed July 2025).
- Ref 13 UK Gov (1991). The Water Resources Act 1991. Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukpga/1991/57/contents> (Accessed July 2025).
- Ref 14 UK Gov (2016). Environmental Permitting Regulations (England and Wales) 2016. Available at: [The Environmental Permitting \(England and Wales\) Regulations 2016](#) (Accessed July 2025).

Ref 15CL:AIRE, 2025. Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention. CL:AIRE, Reading. Download at <https://www.claire.co.uk/piling> (Accessed September 2025)

Ref 16Suffolk County Council, Energy and Climate Adaptive Infrastructure Policy, Community Engagement and Wellbeing 2024. Available at: [community-engagement-and-wellbeing-policy](#) (Accessed June 2026)

Glossary

Term	Acronym	Definition
Asbestos Containing Materials	ACM	N/A
Arboricultural Clerk of Works	ACoW	Responsible for undertaking site visits and providing advice throughout construction 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 during construction at the Solar PV Sites and installation of the cables in the Cable Route Corridor.
Archaeological Mitigation Strategy	AMS	An archaeological mitigation strategy sets out proposals to minimise the impact of a development on archaeological remains present within the site.
Best Practicable Means	BPM	N/A
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 summary of the safety related information requirements which will be provided in advance of construction of the BESS.
Commencement of construction	n/a	Commencement is defined as beginning to carry out any material operation forming part of the authorised development other than PPW.
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 Exclusion Zone	CEZ	The area between the fencing and the trees will be a whereby no machinery, materials or spoil may enter.
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

Term	Acronym	Definition
		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 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.
Dust Management Plan	DMP	A Dust Management Plans (DMP) identifies potential sources of dust, assesses risks, and implements control measures to mitigate its potential dust impact.
Environmental Clerk of Works	ECoW	Oversee the management of, and provide advice about, environmental and ecological risks during construction including for example, management of protected species, surface water management, pollution, air quality and noise.
Ecological Clerk of Works	EcoCoW	Management of the risks to biodiversity on construction sites, advising protecting valued biodiversity features and providing practical solutions.
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
Ecological Protection and Mitigation Strategy	EPMS	The EPMS is to be produced in accordance with the Outline EPMS, as a DCO Requirement, following the appointment of a contractor, prior to the start of construction. The EPMS and the requirement to comply with it will ensure that ecological protection measures are followed during construction.
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.
Greenhouse Gases	GHG	N/A
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.

Term	Acronym	Definition
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.
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.
Non-Road Mobile Machinery	NRMM	N/A
Noise Sensitive Receptors	NSR	N/A
Operational Environmental Management Plan	OEMP	The OEMP is to be produced in accordance with the Outline OEMP, as a DCO Requirement, prior to the start of operation. The OEMP and the requirement to comply with it will ensure that appropriate environmental management practices are followed during operation.
Permitted Preliminary Works	PPW	Works undertaken after the DCO comes into effect and before the commencement of construction.
Per- and poly-fluoroalkyl substances	PFAS	N/A
Photovoltaic	PV	N/A
Public Rights 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
Root Protection Area	RPA	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

Term	Acronym	Definition
		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.
Tree Preservation Order	TPO	N/A
Temporary Construction Compounds	n/a	Any temporary area for storage of plant, materials, or equipment or for the use of welfare and site management.
Temporary Site Compounds	n/a	Temporary site compounds are those used in PPW for storage of plant, material or equipment. They are not the construction compounds shown in ES Chapter 3.
Written Scheme of Investigation	WSI	A Written Scheme of Investigation identifies known and potential archaeological features, deposits, or built heritage elements on a site, and proposes a structured approach for investigating them.

Appendix A Ecological Method Statements

6 Method Statement 5: Permanent Habitat Removal (Solar PV Sites) - including Avoidance of Impacts on Protected Species

6.1 Objectives

- 6.1.1 Habitat removal will be necessary in a limited number of locations, for example to facilitate access across the solar PV areas.
- 6.1.2 Many habitats within the Order Limits support protected species or are important in their own right. Consequently, their removal - whether temporary or permanent - will require precautionary measures to mitigate the impacts of their loss and/or the potential for unlawful or detrimental impacts on the species they support.
- 6.1.3 Habitats which are of particular value include: **hedgerows, ditches (dry or wet), woodland, individual trees, scrub, grassland, field margins, streams, rivers and ponds.**

6.2 General Precautionary Approach to Habitat Removal Works

- 6.2.1 The Site Manager(s) shall be responsible for liaising with the EcoCoW in order to agree locations and timings of advance inspections and clearance attendance, including all species-specific measures set out below, as necessary.
- 6.2.2 Habitat clearance should be undertaken during the months of March to October inclusive. This will avoid the principal hibernation season for species groups such as reptiles and amphibians and so avoid unlawful harm to these species. Should this not be possible, further precautions will be necessary, such as the possibility of taking any hibernating animals discovered during clearance into care over the winter, or translocation to suitable nearby receptor habitat or specially created hibernacula.
- 6.2.3 Sections of hedgerow to be permanently removed for new internal access tracks where no existing gap is present will typically be between 3.5 m to 6 m wide, with a maximum of 10 m of hedgerow to be removed in any one location for this element of the Scheme.
- 6.2.4 Prior to the commencement of works, the actual extent of hedgerow removal required at each location shall be determined through detailed design and construction planning, applying the mitigation hierarchy to avoid and minimise vegetation loss wherever reasonably practicable. Existing gaps within hedgerows shall be utilised in preference for access points and infrastructure crossings where reasonably practicable, thereby reducing the need for additional hedgerow removal. Where removal cannot be avoided, it shall be

limited to the minimum extent reasonably necessary to safely and efficiently construct the authorised development.

- 6.2.5 The proposed extent of hedgerow removal at each location shall be reviewed and agreed by the Ecological Clerk of Works (EcoCoW) prior to works commencing, with justification provided where removal is required. The approved limits of removal shall be clearly demarcated on site before any vegetation clearance takes place. All retained sections of hedgerow shall be protected throughout construction through the installation and maintenance of Biodiversity Protection Fencing in accordance with Method Statement 2.
- 6.2.6 Wherever the above habitats listed in bold above are to be affected, an EcoCoW will be present and have undertaken an inspection in advance to ensure legal compliance and avoid undue harm to species potentially present.
- 6.2.7 Habitat clearance will be conducted under an EcoCoW-led ecological watching brief in order to ensure species such as nesting birds, reptiles, amphibians and small mammals are not harmed. Depending upon the nature and density of the vegetation, this inspection may include a combination of a fingertip inspection of vegetation and early morning surveillance of habitat for evidence of bird nesting behaviour. Further species-specific information is given in the sections below. The vegetation may also need to be cleared a small amount at a time to allow the EcoCoW to search the area thoroughly.
- 6.2.8 Habitat removal at wet ditches will observe good practice guidance on the use of temporary dams and sediment traps. The input of a hydrological engineer is advisable in order to minimise drainage disruption and localised flooding. All permanently breached ditches should remain interconnected via the use of culverts or clear-span crossings.

6.3 Tree and Building Inspections for Roosting Bats and Nesting Birds

No works involving the removal of buildings are anticipated. All existing buildings within the Order Limits identified as holding potential to support roosting bats, as identified in ES Volume 3, Appendix 9-3 Bat Survey Report [APP-200] will be retained. These are listed in **Table** below. These buildings are also likely to provide nesting opportunities for birds which typically nest in buildings, such as hirundine species as well as barn owls.

Table 6-1: Buildings within Order Limits with Bat Roost Potential to be Retained

Location	Grid Reference	Description	Photograph
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Lime Down A South-west corner of Field A4	ST 86117 84971	An open-fronted dilapidated barn, constructed from stone with a metal single-pitched roof on steel supports. Wooden cladding present on each gable end.	
Lime Down C Western end of Field C25.	ST 86663 83500	An open-fronted barn with a corrugated metal roof and walls on three sides. Building in use as a hay store.	
Lime Down E North-west corner of Field E32	ST 93169 81768	A stone-built barn, with a pitched metal roof. Timbers partially collapsed. Holes in render in elevations and collapsed roof	
Cable Route Corridor	ST 89973 66228	Domed, corrugated metal shelter, open on the north aspect with dark internal conditions at southern end.	

Cable Route Corridor	ST 89973 66266	Open-fronted, brick-built animal stall with corrugated cement fibre pitched roof.	
Cable Route Corridor	ST 87640 82549	Agricultural barn with metal walls and corrugated cement gable roof, with a single pitch extension on the south face of the structure	
Cable Route Corridor	ST 86522 83920	Stone and mortar, open-fronted agricultural storage building, with stone supporting pillars. Roof comprising wooden beams, with lath and plaster lining and clay tiles.	

- 6.3.1 In the event that PPW require trees or buildings to be impacted, altered or removed, these will be thoroughly inspected by a suitably qualified (and licensed, in the case of bats) ecologist in advance. This includes where new or existing access tracks are to be used by heavy plant during construction within approximately 10 m of retained buildings, since significant noise and vibration could result in disturbance to strictly protected species such as bats and nesting barn owls.
- 6.3.2 Depending on the nature of proposals within a particular area and the potential for roosting bats to be present, further surveys may be recommended. In the event a bat roost is discovered which is likely to be impacted by works, a licence from Natural England may be required in order to proceed lawfully and ensure adequate compensation for roost losses is provided.

- 6.3.3 In the event that active bird nests are recorded, works may need to temporarily cease or be delayed until nesting is completed. Losses of nesting opportunities should be compensated as advised by the EcoCoW.

6.4 Nesting Bird Surveys

- 6.4.1 Clearance of hedgerow, ditch, scrub, trees, woodland and tussocky grassland should be avoided between the months of March and August inclusive due to the risk of unlawful impacts on nesting birds. However, where work to suitable habitat within this period is absolutely unavoidable, a nesting bird check will be required. This will consist of one or more visual inspections of the habitat to be affected by an appropriate number of suitably experienced ecologists to look for signs of nesting behaviour or nests themselves. Such inspections will likely need to be carried out in the early morning prior to construction activities commencing on site for the day.
- 6.4.2 Where any active bird nests are found, a buffer zone of at least 10 m (actual distance dependent upon species and nest location, as advised by the EcoCoW) will be created around the nest, the buffer maintained and not disturbed until the nest is no longer in use. Depending upon the location, protective fencing may be appropriate. The ecologist will be able to advise on the anticipated date of fledging based upon the status of the nest and the species involved. Regular inspections of the nest site by an EcoCoW around the anticipated date of fledging will be necessary to ensure works can continue once the birds have fledged.

6.5 Badgers

- 6.5.1 See Method Statement 8 for specific measures relating to badgers.

6.6 Riparian Mammals

- 6.6.1 See Method Statement 9 for specific measures relating to riparian mammals.

6.7 Dormice

- 6.7.1 See Method Statement 13 for specific measures relating to dormice.

6.8 Other Small Mammals - Including Polecat, Hedgehog, Brown Hare and Harvest Mouse

- 6.8.1 As it is an offence to cause harm to wild mammals, the EcoCoW will carry out a fingertip search of all habitat to be removed before and during the clearance operation as appropriate. Any burrows discovered will either be avoided where practicable through alteration of the location of works, or if unavoidable, be destructively searched by hand and in a methodical manner in order to ensure no animals are trapped underground or harmed. Any animals discovered during works will be relocated by hand, where collection is possible, to a suitable

undisturbed location to be determined by the EcoCoW. Any injured animals should be taken to the nearest wildlife rescue service as given at the front of this document.

6.9 Reptiles and Amphibians

- 6.9.1 Habitat clearance areas will also be thoroughly inspected by hand before and during works for widespread reptile and amphibians species such as toads *Bufo bufo* and slow worms *Anguis fragilis*, in order to remove any animals as the clearance works progress. Any amphibians, reptiles or other animals will be hand released in suitable nearby retained habitat as determined by the EcoCoW.
- 6.9.2 In order to avoid inadvertent mortality of reptiles during this process, the creation works will not take place within the winter months (November to February inclusive) or during temperatures below 8°C and all areas of the habitat mentioned above will be hand searched and removed with hand tools only once reasonable likelihood or absence of reptiles has been established. All such habitat creation work should be carried out by individuals with experience of identifying reptiles and their habitat.

7 Method Statement 8: Specific Measures for Avoidance of Impacts on Badgers

7.1 Objectives

- 7.1.1 Multiple badger setts have been identified within and adjacent to the Order Limits. Badgers are also likely to use the land within the Order Limits for foraging and dispersal in various locations. Badgers are legally protected from disturbance and harm, as well as interference with their setts. Measures given here will ensure that development works proceed lawfully.

7.2 Pre-commencement Survey

- 7.2.1 As badgers can excavate new setts in a relatively short time, an update survey for badger setts of land within the Order Limits prior to construction commencing will be necessary. This will specifically focus on all habitats potentially suitable for sett excavation by badgers on within the Order Limits, in particular hedgerows, field margins, scrub, tussocky grassland and woodland or groups of trees. The survey will pay close attention to locations of these habitats which are the subject of habitat loss or land use change under the works plans. The locations of new hedgerow gaps for PPW construction access will be particularly key, but also locations where landscaping, access tracks, fencing, and other infrastructure will be installed within a 30 m radius of suitable habitats.
- 7.2.2 The survey will be carried out by an appropriately experienced ecologist (EcoCoW) who is an associate or full member of CIEEM with prior experience of surveying for badgers.
- 7.2.3 The survey will be carried out no more than 2 months prior to the commencement of PPW within a particular area at the Solar PV Sites. The Site Manager(s) will liaise with the EcoCoW to ensure that this survey is completed in good time ahead of works in a particular location.
- 7.2.4 The survey will look for evidence of badger activity within the Order Limits, including setts, paths, hairs, footprints or faeces and record the location of and type of all setts present, as well as their activity status. Where necessary, should any new setts be identified, the BPF as detailed in Method Statement 3 will be adapted to incorporate a revised buffer zone around the identified entrances. Typically, 'outlying' or 'annexe' setts require a minimum 10 m buffer, while 'subsidiary' and 'main' setts require a minimum 30 m buffer.
- 7.2.5 The results of the survey/s will be communicated to the Site Manager(s) with any necessary recommendations for revised buffers or precautionary working methods and supervision.

7.3 Toolbox Talk

- 7.3.1 Prior to the commencement of works at any of the Solar PV Sites a toolbox talk will be provided by the EcoCoW to the Site Manager and contractors. The toolbox talk will include details on the potential for encountering badger setts and other mammal burrows during works to suitable habitats, along with information on their legal obligations and what to do if a sett or burrow is discovered. The talk will establish the role of the EcoCoW and site personnel during works.
- 7.3.2 In the event a change in Site Management personnel occurs during PPW or a pause in works of a period of more than 30 consecutive days occurs, the toolbox talk will need to be provided again by the appointed EcoCoW. The Site Manager will be responsible for relaying information within the toolbox talk to all subsequent site staff during their initial site inductions.

7.4 Licensed Sett Closure

- 7.4.1 Any newly-discovered setts will ideally be avoided by PPW if practicable, under the advice of the EcoCoW.
- 7.4.2 In the event that an active sett is to be unavoidably impacted by PPW activities, a licence from Natural England would likely be necessary to temporarily or permanently close the sett prior to works commencing. Works to badger setts can only be undertaken between July and November inclusive due to the possibility of dependent young being underground at other times of year. Outside of this licence period no works affecting the sett would be permitted and a buffer zone free of potentially disturbing activities (i.e. noise, damage or vibration), as informed by the EcoCoW, would be required. Work in other parts of the Order Limits, however, can continue as advised by the EcoCoW. It can take up to six weeks for a licence application to be determined by Natural England, depending on the licence type being applied for.

8 Method Statement 9: Specific Measures for Avoidance of Impacts on Riparian Mammals

8.1 Objectives

- 8.1.1 Evidence of the presence of otters and water voles has been confirmed at the Solar PV Sites, comprising regularly wet ditches and streams. This Method Statement must be followed during any works affecting the suitable habitats identified above, to ensure that unlawful impacts (such as killing/injury of individual otters and water voles, or the damage/destruction of their burrows, holts and resting sites) can be avoided.

8.2 Toolbox Talk

- 8.2.1 Site operatives will be provided with a toolbox talk prior to commencing any work which affects ditches and watercourses within the Order Limits. Contractors will be provided with visual guides on the identification of otters, water voles, and their holt sites and burrows, in the unlikely event that any are encountered during the works.
- 8.2.2 In the event a change in Site Management personnel occurs during PPW or a pause in works of a period of more than 30 consecutive days occurs, the toolbox talk will need to be provided again by the appointed EcoCoW. The Site Manager will be responsible for relaying information within the toolbox talk to all subsequent site staff during their initial site inductions.

8.3 Precautionary Approach to Works

- 8.3.1 Particular attention will be paid to any habitat removal works affecting, or within 30 m of, a watercourse for the potential presence of otters, water voles and other riparian mammal species, such as beaver.
- 8.3.2 All applicable habitat removal works will be preceded by a pre-commencement inspection of all accessible habitat at least 50 m upstream and 50 m downstream of the clearance extent to look for signs of these species and their sheltering sites. The inspection will be carried out two months in advance of works commencing by a suitably qualified ecologist.
- 8.3.3 Where the inspection results indicate no riparian mammals or their breeding/resting sites and shelters will be impacted, habitat removal will commence with the EcoCoW in attendance in a watching brief role.
- 8.3.4 In the event that burrows, holts or likely sheltering sites are found, the EcoCoW will discuss this with the Site Manager(s) and efforts to alter the location of the clearance to avoid direct impacts will be made in the first instance.
- 8.3.5 Should impacts upon holts, burrows or sheltering sites be unavoidable, it will be necessary to delay commencement until a mitigation licence from Natural

England is obtained. Licences will be contingent on seasonal timing restrictions, sensitive working methods and habitat compensation.

- 8.3.6 Culverted or overbridged ditches and watercourses should be designed to permit the continued passage of water voles, otters, and other riparian mammal species. The advice of the EcoCoW should be sought in this instance.

9 **Method Statement 10: Avoidance of Impacts on Ground Nesting Birds of Open Habitats**

9.1 **Objectives**

- 9.1.1 Skylark *Alauda arvensis*, yellow wagtail *Motacilla flava*, corn bunting *Emberiza calandra*, grey partridge *Perdix perdix* and quail *Coturnix coturnix* are all species of ground nesting birds that have been recorded within the Order Limits and which occupy open habitats such as arable and pasture grassland. As development operations will occupy large areas of these habitats, precautions will be necessary to avoid unlawful impacts on the birds and their nests.

9.2 **Nesting Bird Checks**

- 9.2.1 Between the months of March and August inclusive, when undertaking PPW within arable or pasture fields, nesting bird checks will be carried out to ensure no nests are at risk of harm and that development works do not commit unlawful acts. As the species concerned are dependent on long, unbroken sightlines of between 75 m and 200 m for predator avoidance, they are unlikely to be present within close proximity to existing development activities. Therefore, nesting bird checks are most important when development activities progress into previously undeveloped fields during the nesting season. In order to minimise disruption to development activities, close communication on the development programme between the Site Manager(s) and the EcoCoW is essential. Habitat degradation, such as mowing vegetation to a short sward height, and dissuasion techniques, such as kite deterrents, may be employed in advance of the nesting season (and maintained up until the onset of development activities) in order to reduce the requirement for nesting bird checks.
- 9.2.2 In the event a nest is discovered, its location shall be mapped and shared with the Site Manager(s) and the location will be avoided, and a buffer radius of at least 50 m observed, to be advised by the EcoCoW (depending on species). The nest location will be revisited around the time of predicted fledging (derived from the status of the nest upon discovery) to confirm fledging and inactivity, enabling development activities to resume.

10 Method Statement 11: Avoidance of Impacts on Overwintering Birds

10.1 Objectives

- 10.1.1 Flocks of overwintering birds such as fieldfare, redwing and finches have been recorded within the Order Limits during the winter months. Due to the numbers of birds within such flocks, unnecessary disturbance to them and displacement can be energetically costly and have an adverse impact on the local population. Precautions are given below to minimise this risk.

10.2 Precautionary Approach to Works

- 10.2.1 During the winter months of November to February inclusive, any significant commencement or re-commencement of development works within fields will be immediately preceded (in the morning) by an inspection for the presence of flocks of overwintering birds. The aim will be to ensure that flocks of overwintering birds are not subject to displacement and disturbance stresses at this vulnerable time of year. As these flocks move about within the landscape on a daily basis, it should be possible to postpone mobilisation into undeveloped fields which are occupied by them by approximately one day to avoid impacts.
- 10.2.2 The inspections will be carried out by the EcoCoW. The Site Manager(s) will be responsible for liaising with the EcoCoW in advance of mobilisation into previously undeveloped fields or fields where work is re-commencing during the winter months in order to avoid disturbance of overwintering flocks of birds.

11 Method Statement 13: Specific Measures for Avoidance of Impacts on Dormice

11.1 Objectives

- 11.1.1 The presence of dormice has been assumed across all suitable habitats within the Order Limits, comprising hedgerows, scrub and woodlands. This Method Statement must be followed during any works affecting the suitable habitats identified above, to ensure that unlawful impacts (such as killing/injury of individual dormice, or the damage/destruction of their nests) can be avoided.
- 11.1.2 This Method Statement also applies to any temporary trimming or cutting back of hedgerows required to facilitate construction activities where complete hedgerow removal is not necessary, including to provide suitable access within Highway Improvement Areas

11.2 Toolbox Talk

- 11.2.1 Site operatives will be provided with a toolbox talk prior to commencing any work which affects hedgerow, scrub or woodland habitats within the Order Limits. Contractors will be provided with visual guides on the identification of dormice and their nests in the unlikely event that any are encountered during the works when the EcoCoW is not present. In the event that dormice are encountered, they will be left in-situ unless they are at risk of immediate harm. The Site Manager will ensure that the EcoCoW is contacted immediately, and any associated works in the area within which the dormouse/nest was found must temporarily cease until further advice is sought from the EcoCoW.
- 11.2.2 In the event a change in Site Management personnel occurs during PPW or a pause in works of a period of more than 30 consecutive days occurs, the toolbox talk will need to be provided again by the appointed EcoCoW. The Site Manager will be responsible for relaying information within the toolbox talk to all subsequent site staff during their initial site inductions.

11.3 Precautionary Approach to Works

- 11.3.1 Prior to any removal of hedgerow or dense scrub, a suitably experienced and licensed EcoCoW will carry out a pre-commencement inspection to ensure that there are no dormice or dormouse nests present within the sections of vegetation due to be removed. This inspection will comprise a fingertip search of all vegetation to be removed, including the hedgerow bases, for signs of summer or winter hibernation dormouse nests.
- 11.3.2 Where no signs of dormice or their nests are found within a particular section, vegetation clearance can progress under the supervision and direction of the EcoCoW via a single-stage clearance. This is appropriate for any time of year due to the relatively small sections of hedgerow requiring removal in any one location, meaning all areas can be comprehensively checked in accordance

with Mammal Society guidance for finger-tip searching. In areas of dense vegetation, the EcoCoW may need to repeat the fingertip search as more areas become accessible, and it may be necessary to cut hedgerow to approximately 300 mm above ground level in the first instance to ensure that the hedgerow base is accessible and can be inspected by the EcoCoW prior to removal.

- 11.3.3 In the unlikely event that any dormouse nests are recorded in any section of hedgerow or scrub to be removed, all work must stop in the immediate vicinity until the EcoCoW has assessed the risk and evaluated the need for follow-up licensing and working restrictions.

Appendix B Outline Arboricultural Method Statement (OAMS)

12 Outline Arboricultural Method Statement (OAMS)

12.1 Objectives of this OAMS

- 12.1.1 This OAMS seeks to provide precautionary methods of working that must be followed during PPW, to mitigate the potential impacts to trees, tree groups and woodlands (hereafter referred to as 'arboricultural features') within the Order Limits.
- 12.1.2 This OAMS provides practical guidance, that if followed correctly will ensure existing arboricultural features for retention are suitably safeguarded during construction, in particular those of high value such as veteran trees and Category A trees of high quality.
- 12.1.3 This OAMS must be made available and followed by all relevant contractors, sub-contractors and project consultants completing works within the Order Limits.

12.2 Arboricultural Features within the Order Limits

- 12.2.1 High level tree surveys of the Solar PV Sites were undertaken between November 2023 and August 2024.
- 12.2.2 All tree surveys were carried out in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction' (BS5837:2012). Tree stem positions within the Solar PV Sites were recorded using a topographical survey. The canopy spread, canopy height, root protection areas and veteran tree buffer zones (latter where appropriate) were recorded for all arboricultural features. Full tree results can be found in **Appendix 10-2 Tree Survey Schedule [EN010168/APP/6.3]** and are visually represented in **Figures 10-1-1 to 10-1-23 Tree Constraints Plans [EN010168/APP/6.2]**
- 12.2.3 The tree survey recorded a total of 1021 individual trees, 226 groups of trees, 57 hedgerows and 11 woodlands. Of these, 52 trees were recorded as veteran trees with none of those veteran trees found to be ancient. 6 ancient woodlands are adjacent to the Order Limits. No TPOs or Conservation Areas are within the Order Limits (see **Table 1** for dates when TPO data was reviewed, please note new TPOs may have been made since the dates in **Table 1**).

12.3 Possible Arboricultural Impacts from the Scheme

- 12.3.1 The arboricultural impact assessment in Section 12.5 of this report made an assessment of the worst-case arboricultural impacts at the Solar PV Sites. Impacts to trees during construction may include:
- Tree removal;
 - Tree pruning at temporary and permanent access points, near access tracks and for visibility splays;

- Root loss/damage from excavation or soil compaction within RPAs;
- Dust/sediment impacts to adjacent woodlands (including ancient woodlands); and
- Damage to canopies/stems from machinery movements.

12.3.2 These potential impacts are explained in full in Section 12.5 of the impact assessment and accompanied by **ES Figures 10-2-1 to 10-2-23 Tree Impact Plans [EN010168/APP/6.2]** showing possible tree removals, canopy impacts and root impacts to trees on the Site. The assessed impacts shown on the plans are worst-case and indicative only. This is because the design of the Solar PV Sites is indicative only at this stage and will be determined during construction and post DCO-consent.

12.4 How to Use this Document

- 12.4.1** This OAMS details a suite of precautionary working methods to be followed when working near trees at the Solar PV. These precautionary working methods will be followed by construction personnel in collaboration with a supervising Arboricultural Clerk of Works.
- 12.4.2** The measures outlined in this OAMS will be presented to all personnel, visitors and sub-contractors involved with Scheme PPW within the Order Limits.
- 12.4.3** It is the responsibility of the site manager or nominated personnel with an appropriate arboriculture qualification to communicate the contents of this OAMS to all personnel, visitors and sub-contractors undertaking relevant activities. A copy of this document must be kept on site during PPW for ease of reference. Arboricultural Clerk of Works (ACoW)
- 12.4.4** An ACoW will be assigned to the Scheme prior to PPW. The responsibilities of the ACoW include ensuring that the precautionary working methods described in this OAMS are adhered to during preliminary works. The ACoW will be responsible for undertaking site visits and providing advice throughout construction on how tree impacts will be avoided and minimised. The ACoW will also be responsible for keeping a record of site visits and advice provided during PPW. These activities are often termed collectively as arboricultural monitoring and supervision.
- 12.4.5** It is the responsibility of the main construction contractor to instruct an ACoW prior to the commencement of construction and any enabling works. A key responsibility of the construction contractor is to ensure this OAMS is followed, ensuring all relevant personnel working on the Scheme have been briefed on this OAMS and the precautionary working methods to follow when working near trees. It is also the responsibility of the construction contractor to inform the ACoW of any breach of this OAMS and the guidance prescribed within and to seek advice on any remedial action required.

- 12.4.6 As a minimum, the following meetings between the ACoW and the construction contractor must take place as detailed in **Table** below.

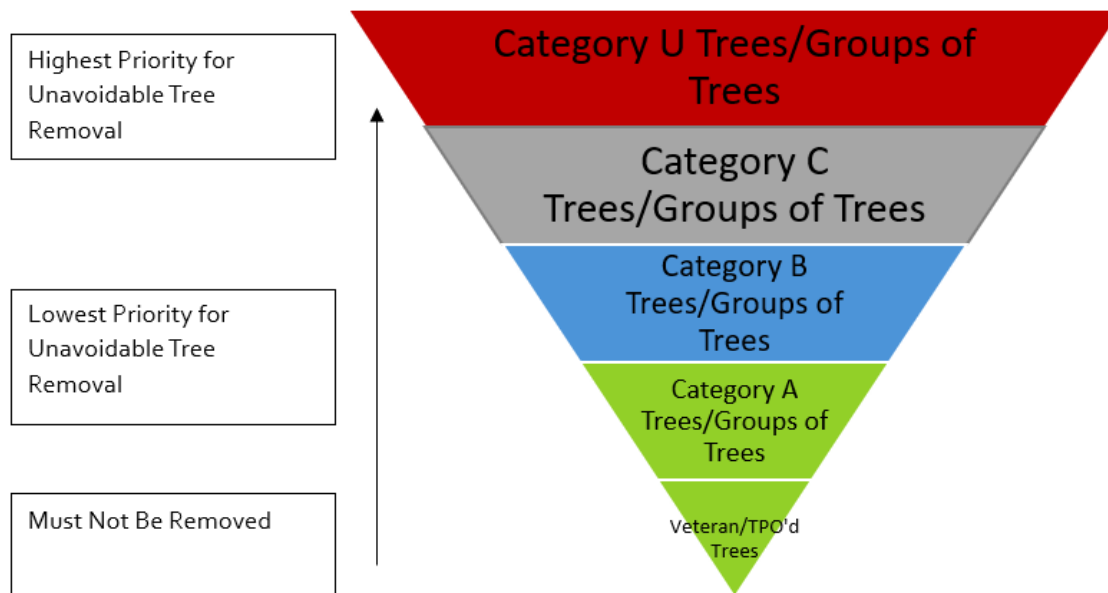
Table 12-1: ACoW Meetings with Construction Contractor

Timing	Purpose of Meeting
Pre-enabling works at the Solar PV Sites	ACoW to brief contractor on the precautionary working methods within this OAMS and provide ACoW contact details. Contractor to brief ACoW on programme of works and provide contact details of key personnel (e.g. Site Manager).
Pre-enabling works along the Cable Route Corridor	As above
Prior to construction works commencing at a Site or Section of Cable Route Corridor	ACoW to undertake a site visit to check tree protection measures once installed, advise on any further site visits/ACoW supervision and mark up any trees requiring removal or pruning.
During construction at the Solar PV Sites or along the Cable Route Corridor	ACoW to undertake site visits to provide toolbox tools to relevant personnel undertaking works within Root Protection Areas of retained trees or in the vicinity of their crowns and to supervise those works where necessary.

12.5 Tree Removal

- 12.5.1 In line with the Scheme embedded mitigation commitments, tree removal will be avoided wherever feasible throughout the Order Limits. Should tree removal be unavoidable, trees of lower quality and life expectancy will be preferably removed over those of higher quality and life expectancy as per **Figure 7.1** below. In **Appendix 10-3 Tree Survey Schedule [EN010168/APP/6.3]**, trees with a BS5837:2012 Quality Category of U shall be preferentially removed followed by Category C, B and A trees in that order of priority. Veteran trees will not be removed under any circumstances. Further details on embedded mitigation can be found at section 2.2 of the Outline Arboricultural Impact Assessment.

Figure 7.1 Tree Removal Hierarchy



- 12.5.2** Trees to be removed for construction will be marked up on site by the ACoW. Indicative tree removals have been provided in **ES Figures 10-2-1 to 10-2-23 Tree Impact Plans [EN010168/APP/6.2]**
- 12.5.3** However, many of the trees shown for possible removal in these plans could be retained following detailed design of the Solar PV Sites, and sensitive siting of temporary construction compounds outside of RPAs. Involvement of the ACoW in marking up tree removals will therefore ensure that the Tree Removal Hierarchy in **Figure 7.1** is followed.
- 12.5.4** All tree work will be undertaken by a suitably qualified, insured and experienced arboricultural contractor working in accordance with British Standard 3998: 2010 'Tree Work – Recommendations'. No tree works will be undertaken by construction workers unless qualified and instructed to do so.
- 12.5.5** Prior to any necessary tree removal being carried out, due regard must be given to any legal restrictions on tree pruning including: nesting birds which are protected under The Wildlife and Countryside Act 1981 (as amended) and roosting bats which are protected by Regulation 43 of The Conservation of Habitats and Species Regulations 2017 (as amended).
- 12.5.6** The Scheme has been designed so as to avoid impacts to any trees currently protected by a Tree Preservation Order (TPO) or within Conservation Areas. With regard to trees within the Order Limits that may be protected by a Tree Preservation Order (TPO) made after development consent for the Scheme is granted, the relevant article number of the Draft Development Consent Order provides 'deemed consent' to the Applicant to undertake works to such trees. As

such, the submission of a tree works application to the local planning authority prior to works being undertaken to a tree subject to a later TPO is not required.

- 12.5.7 The article states that “The undertaker may, if it reasonably believes it to be necessary to do so in order to prevent the tree from obstructing or interfering with the construction, maintenance, operation or decommissioning of the authorised development or any apparatus used in connection with the authorised development, fell or lop or cut back the roots of any tree that is subject to a tree preservation order that is within or overhanging land within the Order limits provided the relevant tree preservation order was made after the date of this Order.”
- 12.5.8 It is therefore important that works to (future) TPO trees only take place if the Applicant “reasonably believes it to be necessary to do so” for reasons of obstructing or interfering with construction, maintenance or operation of the Project’s apparatus. Advice from the ACoW will be sought to confirm whether the works are necessary and whether any alternative measures can be employed to avoid undertaking works to protected trees.

12.6 Tree Pruning

- 12.6.1 Prior to any necessary tree pruning, the ACoW will liaise with the construction contractor on the requirements for pruning and the ACoW will provide a specification for the pruning works required which will then be implemented by a suitably qualified, insured and experienced arboricultural contractor working in accordance with British Standard 3998: 2010 ‘Tree Work – Recommendations’.
- 12.6.2 Pruning works to veteran trees will be avoided and pruning will aim to prioritise trees of low quality (BS5837:2012 Category U and C trees) over trees of moderate or high quality (BS5837:2012 Category A and B trees). No tree works will be undertaken by construction workers unless qualified and instructed to do so.

12.7 Tree Protection Fencing

- 12.7.1 Prior to PPW commencing at the Solar PV Sites, perimeter fencing will be installed in the locations shown at **ES Figure 3-4: Landscape and Ecology Mitigation Plans EN010168/APP/6.2** and/or at the outer limits of RPAs. This fencing will consist of wire mesh and wooden post fencing with a maximum height of 2.5m and serve as tree protection fencing for the duration of the works. The area between the fencing and the trees will be a Construction Exclusion Zone (CEZ) whereby no machinery, materials or spoil may enter.
- 12.7.2 The aim of the tree protection fencing is to fence off the RPA of the tree to ensure it is protected from PPW. Perimeter fencing as shown on the Landscape and Ecology Mitigation Plans has already been designed to protect the RPAs of retained trees. For reference, the distance to offset fencing from a tree is provided by the column ‘Radius of the RPA (m) in **Appendix 10-2 Tree Survey**

Schedule [EN010168/APP/6.3] where trees have been recorded by the tree survey. To calculate the fencing offset distance from a tree not recorded in the survey, the stem diameter in metres of the tree will be measured at 1.5m height in accordance with BS5837:2012 and multiplied by 12 to provide the required offset distance.

- 12.7.3 Prior to PPW commencing in each area of the Cable Route Corridor, the ACoW will mark up the line at which temporary tree protection fencing must be installed prior to works commencing. This fencing will consist of post and rope or Heras fencing as appropriate to prevailing Site conditions and the scope of works planned in the vicinity of retained trees. Once installed, clear signage will be attached at regular intervals to the fencing informing staff members that the roped off area is a 'Construction Exclusion Zone' (CEZ) whereby no machinery, vehicles or materials/spoil may enter.
- 12.7.4 Once fencing has been installed and before construction activities begin, a site check by the ACoW will take place to check the locations and suitability of the tree protection fencing.
- 12.7.5 Once installed, tree protection fencing will not be moved or altered in any way without prior consultation and sign off from the ACoW. If fencing does need to be moved back to create construction space, appropriate ground protection as per Section 7.9 below must be used to cover the exposed RPAs during works until such time as the tree protection fencing can be reinstated in its original position.
- 12.7.6 It is the responsibility of all construction personnel to ensure that the tree protection fencing remains intact and in the correct locations throughout construction. It is also the responsibility of all persons working on the Site to respect the CEZ created by the tree protection fencing. In the event that any fence panels are damaged, this must be rectified immediately to restore the CEZ.

12.8 Ground Protection

- 12.8.1 If PPW must occur within the RPA or veteran tree buffer zone of a retained tree, ground protection will be installed by the construction contractor prior to works occurring within the RPA In order to protect the tree from soil compaction.
- 12.8.2 Ground protection must be suitable for the weight of the traffic using the area to ensure that underlying soils are not compacted. Ground protection specifications will meet the recommendations set out in paragraph 6.2.3.3 of British Standard 5837:2012 (Ref 17).
- 12.8.3 *"for pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane;*

- 12.8.4 *for pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane;*
- 12.8.5 *for wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.”*
- 12.8.6 *For construction traffic exceeding 2 tonnes, appropriate ground protection will constitute a 150mm woodchip or sharp sand layer topped with heavy-duty ground protection mats (multiple providers are available for rent or purchase) that are suitable for the weight of the heaviest vehicle requiring access to the area”.*
- 12.8.7 In all cases the objective must be to avoid soil compaction within RPAs and any other unnecessary negative effects. A single pass of a heavy vehicle, especially in wet ground conditions, can cause compaction to soil structures.
- 12.8.8 Once ground protection is installed, the ACoW must check the suitability of the ground protection and sign it off prior to works within the RPA commencing. Once all works within the RPA have concluded, the ground protection may be removed.

12.9 Works within Root Protection Areas

- 12.9.1 Works within RPAs of retained trees may be required to create permanent or temporary access points, access tracks within the Solar PV Sites.
- 12.9.2 Prior to any works occurring with the RPAs of retained trees, the ACoW will be contacted, briefed on the scope of the works and advice sought on the precautionary working methods to employ to minimise damage to roots.
- 12.9.3 Precautionary working methods may include: ground protection (as per Section 7.9 of this OAMS) or hand digging with pre-emptive root pruning. Ground protection will be employed where no excavation is required within RPAs and only access to the RPA for working space is required. Where excavation within RPAs is required, the following precautionary working methods (hand digging and pre-emptive root pruning) will be followed in accordance with National Joint Utilities Volume 4 (Ref 18).
- 12.9.4 Prior to excavation occurring within an RPA, the ACoW will mark up on Site a line whereby root pruning is required, this will likely represent the edge of a proposed excavation closest to the tree's stem. Along this line, hand tools will be used to dig a trench to the depth of the proposed excavation. Any roots larger than 25mm in diameter that are encountered will be assessed by the ACoW and where necessary pruned back cleanly to the side of the excavation on the stem side by construction personnel. Roots smaller than 25mm will be

cut back cleanly with secateurs to the side of the excavation closest to the tree stem.

- 12.9.5 Once root pruning has been carried out, the proposed works within the RPA will commence. In instances where a significant amount of large roots have been pruned, the ACoW will advise on any remedial tree works required for health and safety. Builders' sand will not be used to backfill the trenches due to its high salt content which is toxic to tree roots. If sand is required, sharp sand will be used or other granular fill.

12.10 Working near Tree Canopies

- 12.10.1 When tall machinery is working near the canopies of tree canopies the machine operator will be accompanied by a banksman who will work from ground level and ensure that moving machinery parts avoid the stems and branches of retained trees.

12.11 Movement of Construction Machinery and Material/Spoil Storage

- 12.11.1 No vehicles, construction machinery, materials or spoil will enter the RPAs of retained trees during works at the Solar PV. RPAs will be fenced off at the start of PPW as per Section 12.7.8 and the area between the fencing and the trees considered a CEZ. This will ensure that RPAs are not subject to soil compaction which can have significant negative impacts to tree health in the long term. If spoil or machinery does require access to RPAs, ground protection will be employed as per Section 12.7.9 of this OAMS.

12.12 Temporary Construction Compounds (TCCs)

- 12.12.1 TCCs will be located away from trees and outside of the canopy spreads and RPAs of adjacent trees. Adjacent trees will be protected for the duration the TCC is in use by tree protection fencing and ground protection as necessary as per section 12.7.8 and 12.7.9 respectively of this OAMS.

References

Ref 17 BSI Standards Publication (April 2012). BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.

Ref 18 National Joint Utilities Group. (16th November 2007). NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.

Appendix C 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: <https://www.hazwasteonline.com> (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: [DoW:CoP](#) (Accessed: 22 September 2026).