

Appendix 4-2: Outline Construction Environmental Management Plan (CEMP)

Calderdale Energy Park

PEIR Volume 3

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7 April 2026



Preliminary Environmental Information Report

Calderdale Energy Park

**Draft Outline Construction
Environmental Management Plan**

For Calderdale Wind Farm Limited

7 April 2026

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1 Introduction

1.1 Purpose of this Document

- 1.1.1 This draft outline Construction Environmental Management Plan (oCEMP) has been prepared on behalf of Calderdale Wind Farm Limited ('the Applicant'). This oCEMP details the preliminary management methods to be implemented for the construction of the proposed on-shore wind farm development of Calderdale Energy Park (hereafter referred to as the 'Proposed Development') to ensure that potential impacts on the environment during construction will be mitigated.
- 1.1.2 This oCEMP is preliminary and has been produced based on the current details of the Proposed Development at this stage. A revised oCEMP will be submitted as part of the DCO Application, which will consider the latest environmental and engineering details, consultation responses and feedback with stakeholders.
- 1.1.3 A CEMP will be produced by the Principal Contractor for the Proposed Development prior to the commencement of the construction phase. The CEMP will be substantially in accordance with the oCEMP submitted with the DCO application. This oCEMP therefore sets out the likely structure and the measures that will be included within the CEMP to deliver the construction phase of the Proposed Development.
- 1.1.4 Updates to the CEMP will be undertaken to align with construction works and environmental conditions, to ensure each document remains relevant and effective. The CEMP will be prepared following the appointment of a Principal Contractor, prior to the start of construction of the Proposed Development and approved by the relevant Host Authority.
- 1.1.5 This document does not address measures for the operational or decommissioning phases, which will be provided in a separate outline Operational Environmental Management Plan (oOEMP) and an outline Decommissioning Environmental Management Plan (oDEMP) respectively, both of which will be provided for the DCO application. Other phase and aspect specific management plans as detailed in Section 1.2, below.
- 1.1.6 Likely significant effects have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Preliminary Environmental Information Report (PEIR). A range of best practice mitigation and construction methodology measures were accounted for in the aspect assessments of the PEIR, and these will be implemented during construction of the Proposed Development. This oCEMP demonstrates how these measures will be implemented. It also sets out the known monitoring activities designed to ensure that mitigation measures are carried out, and that they are effective.
- 1.1.7 This oCEMP has been prepared with the objective of compliance with the relevant legislation and mitigation measures identified through the EIA process. Any additional construction licenses, permits or approvals that are required for the construction phase of the Proposed Development, will be set out in the CEMP, including any environmental information submitted in respect of them.
- 1.1.8 The appointed Principal Contractor will be responsible for working in accordance with the environmental controls documented in any approved CEMP. The overall responsibility for implementation of the CEMP will lie with the appointed Principal Contractor as a contractual responsibility to the Applicant.

1.2 Complementary Plans and Procedures

1.2.1 A suite of complementary outline environmental plans and procedures are proposed to be included within the DCO Application and these set out the proposed mitigation for the construction phase, and in some cases the operational and maintenance phase. Additional management plans will be prepared prior to the construction phase once the Principal Contractor is appointed. These additional management plans are detailed in the relevant PEIR technical chapters.

1.2.2 Proposed outline management plans supporting the DCO application include:

- Outline Operational Environmental Management Plan (oOEMP);
- Outline Decommissioning Environmental Management Plan (oDEMP);
- Outline Construction Traffic Management Plan (oCTMP)
- Outline Public Rights of Way Management Plan (oPRoWMP);
- Outline Landscape and Ecology Management Plan (oLEMP);
- Outline Precautionary Working Method Statement (PWMS);
- Outline Bird Protection Plan (BPP);
- Outline Peat Management Plan (oPMP);
- Outline Soils Management Plan (oSMP);
- Outline Employment, Skills and Supply Chain Management Plan (oESSCMP);
- Outline Site Waste Management Plan (oSWM);
- Outline Construction Method Statement (oCMS); and
- Outline Written Scheme of Investigation (WSI);

1.2.3 Where the specific details of mitigation are yet to be determined, further detailed plans are proposed, which will be approved by the relevant Host Authorities, and where relevant in consultation with other stakeholders. These will be developed alongside the CEMP.

1.3 The PEIR Boundary

1.3.1 The Proposed Development at this point in time includes a number of components and associated areas, as follows:

- Turbine Area;
- Eastern Access Route and Western Access Route (collectively referred to as the 'Access Routes'); and;
- Bradford West Cable Corridor.

1.3.2 Altogether, these areas are termed the PEIR Boundary. The 'Turbine Area' is a term used for the area covered by the wind turbines as well as onsite ancillary infrastructure, including the onsite substation and site internal access tracks.

- 1.3.3 The Turbine Area consists of approximately 2,227 hectares (ha) of land at Walshaw Moor north of Hebden Bridge, located on either side of the three Walshaw Dean Reservoirs in West Yorkshire. The nearest point of the Turbine Area boundary is located approximately 3.5km to the north of Hebden Bridge, approximately 10.4km to the northwest of Halifax and approximately 7.2km to the east of Burnley. The turbine area is located within the administrative boundary of Calderdale Metropolitan Borough Council ('Calderdale Council'). The Bradford West Cable Corridor will link the Turbine Area with the proposed Point of Connection into the electricity grid at the Bradford West Substation and is within the administrative area boundaries of Calderdale Council and the City of Bradford Metropolitan District Council ('Bradford Council').
- 1.3.4 A complete description of the PEIR Boundary is included in **Chapter 3: Description of the Site and Surrounding Area.**

1.4 The Proposed Development

- 1.4.1 The Proposed Development comprises the construction, operation and maintenance and decommissioning of an up to 34 turbine wind farm and associated infrastructure such as grid connection, and Access Routes. The Applicant is in the process of securing a connection to the Bradford West Substation which will allow the export of approximately 240 MW of electricity from the Proposed Development. A complete description of the Proposed Development is presented in **Chapter 4: The Proposed Development.**

2 Construction Environmental Management

2.1 Introduction

2.1.1 This Section sets out the construction and general site arrangements for the Proposed Development.

2.2 Construction Activities

2.2.1 Activities expected to be undertaken through the construction of the Proposed Development will likely include, but are not limited to:

- Additional site surveys, as required
- Construction of fencing and security measures;
- Enabling works, including highway improvement works and creation of accesses;
- Set up of temporary construction compounds (including offices and welfare and storage facilities) and batching plant;
- Preparation of peat receptor sites;
- Targeted site clearance and implementation of protective measures (where required);
- Establishment of site borrow pits, earthworks and excavations;
- Works for drainage systems, crossings and water management;
- Construction and formation of internal site access tracks;
- Excavated peatland to be translocated to suitable receptor sites during groundworks;
- Foundation installation;
- Construction of crane hardstanding, substation compound and associated infrastructure;
- Installation of internal electrical cables and substation equipment;
- Installation of export cable;
- Erection of the WTGs;
- Infrastructure commissioning and testing;
- Removal of construction compounds, site reinstatement works (e.g. crane hardstandings) alongside site finishes; and Landscaping and habitat enhancement.

2.2.2 Biodiversity and moorland mitigation compensation and enhancement will be made onsite and offsite. These measures are under review and in consultation with Natural England. Further details once known will be presented in the oCEMP as part of the ES. Similarly, replacement land for the loss of a small quantum of open access land is under review (with replacement open access land proposed within the existing PEIR boundary) and will be presented in the ES.

2.2.3 An outline construction method statement for the export cable route will be developed as part of the ES.

2.2.4 A detailed list of activities will be produced within the CEMP (as relevant for the component of the Proposed Development that the CEMP points towards), in accordance with requirements within this oCEMP.

2.3 Roles and Responsibilities

2.3.1 The Principal Contractor shall make available sufficient time and resource for the effective management of environmental risks that could arise during construction work. This includes appointing adequately qualified personnel with knowledge and capability in the environmental management of construction site works. Persons having responsibility for environmental site management, and in particular any persons required to undertake and oversee response to any incidents with potential environmental consequences, shall be empowered to make decisions and take the appropriate action necessary to avoid or mitigate adverse environmental effects, even when this may lead to delay and/or additional cost to the Principal Contractor.

2.3.2 The Applicant and all appointed contractors will be responsible for ensuring that the potential risks to the environment are adequately avoided or controlled by the mitigation measures as documented within the CEMP, which shall be complied with throughout construction. The key roles and responsibilities during the construction phase in managing environmental impacts will likely include, but are not limited to:

- Project Director – Overall responsibility for Site compliance. Responsible for providing appropriate resources to the team including competent staff and training.
- Site Manager – Overall responsibility for activity onsite and will be based onsite full time.
- Construction Project Manager – Overall responsibility for ensuring all elements in the DCO, CEMP 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, reporting and responding to any incidents or non-compliance. The Environment Manager will liaise with relevant environmental bodies and other third parties as appropriate.
- Environmental Clerk of Works (EnvCoW) – Oversee the management of and provide advice about environmental and ecological risks during construction including for example, management of protected species, peat, surface water management, pollution, air quality and noise
- Ecological Clerk of Works (ECoW) - Management of the risks to biodiversity and ornithology on construction sites, advising on protecting protected species, valued biodiversity features and providing practical solutions.
- Health and Safety Manager – Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site

2.3.3 These roles and responsibilities are indicative and will be confirmed in the CEMP.

2.4 Construction Programme

- 2.4.1 The construction phase is anticipated to occur over a period of 30 months. Subject to being granted consent, the earliest the Proposed Development construction phase is anticipated to commence in Quarter 4, 2029.
- 2.4.2 The final programme will depend on the detailed design, and the timing of construction activities will take account of potential environmental constraints, such as seasonality constraints for biodiversity and ornithology. The final programme will be included within the CEMP.

2.5 Working Hours

- 2.5.1 Construction working hours will be 07:00 to 18:00 Monday to Friday and 08:00 to 14:00 Saturday, with no working on Sundays or Public / Bank Holidays. Exceptions to these working hours may arise, for example, it is likely that some AILs are delivered and offloaded out of hours, and that intensive activities like Horizontal Directional Drilling (HDD) for cabling and concrete pouring for turbine foundations also occur out of hours. There may also be a requirement to erect turbines over a 24-hour period. Further details will be provided in the ES and confirmed in the CEMP.

2.6 Construction Compounds

- 2.6.1 As part of the establishment of the Proposed Development, temporary construction compounds will be installed. The construction compounds will have an approximate area of 5,000m², but this size will be dependent on onsite constraints and the overall size of the compounds is likely to vary. Each construction compound will be fenced off. Within the boundary of each of the construction compounds will be the office and welfare facilities for the appointed contractor.
- 2.6.2 Each construction compound will include space for:
- Portacabins for site office and staff welfare facilities with provision for sealed waste storage and removal;
 - Storage areas;
 - Hardstanding and parking for construction related vehicles; and
 - Containerised storage for tools and spare equipment.
- 2.6.3 The storage areas will contain secure containers for the storage of any hazardous materials such as chemicals, hydrocarbons, solvents, and paints required for construction activities. All materials will be stored according to the Control of Substances Hazardous to Health (COSHH) Regulations 2002¹.
- 2.6.4 The construction compounds will include facilities for site staff and will require temporary power and water supplies. Power will likely be supplied using low noise, double banded generators. Potable water supplies will be transported to the Proposed Development. Requirements for a groundwater borehole will be reviewed in consultation with relevant authorities, with further detail provided within the ES if a groundwater borehole is required. A longer-term option of rainwater harvesting at the portacabins will be assessed and implemented if appropriate.
- 2.6.5 Appropriate bunding arrangements will be employed in all areas where fuel and oil storage tanks will be situated in order to prevent contamination of the surrounding soils, vegetation as well as surface

¹ Control of Substances Hazardous to Health (COSHH) Regulations 2002. Available at: The Control of Substances Hazardous to Health Regulations 2002 [Accessed November 2025].

and ground water. The fuel storage areas will be above ground with secondary containment, in accordance with good practice guidance from NetRegs, such as the Guidance for Pollution Prevention (GPPs) (albeit these have been withdrawn for England)², and regulatory guidance from the UK Government (GOV.UK), such as Oil Storage for Businesses (for Above Ground Oil Storage Tanks)³ and Pollution Prevention for Businesses⁴. The fuel storage areas will be situated a minimum of 50m from watercourses to reduce the risk of pollution of watercourses. Any contaminated run-off within the sealed bund will be removed to a suitably licensed waste management facility. All materials will be stored according to the COSHH Regulations 2002.

2.6.6 Surface water drainage at the construction compounds will discharge via an appropriately designed oil separator. Foul drainage will discharge to a septic or foul tank and will be removed offsite for disposal at a wastewater treatment plant.

2.6.7 The set up, layout and use of compounds will be confirmed by the Principal Contractor with further details described in the CEMP.

2.7 Batching Plant

2.7.1 At this stage of the Proposed Development, it is assumed that 100% of aggregate materials required for concrete will be imported to the Proposed Development; and that all concrete will be batched onsite utilising one batching plant. The details, including the location of the batching plant will be provided in the ES, when further information is available.

2.8 Borrow Pits

2.8.1 The Proposed Development will require imported quarried stone to construct the running surface and structural base for new tracks, hardstandings and compound areas, and to improve the existing tracks within the Turbine Area. Material from proposed onsite borrow pits will be used to form the sub-grade of onsite tracks and hardstand areas. The utilisation of onsite borrow pits will assist with reducing the potential environmental and transport network effects associated with transporting imported aggregate to the Proposed Development. Further information on the borrow pits and identification of aggregate requirements for the Proposed Development will be presented in the ES.

2.9 Watercourse crossings

2.9.1 All road/track watercourse crossings will be either clear span bridges, bottomless arch culverts or circular culverts of appropriate sizes to convey design flows and have no detrimental impact on ecology. Any temporary structures will be removed with the watercourse reinstated. A crossing register will be provided as part of the CEMP.

2.9.2 Below ground watercourse crossings associated with the cable route will utilise HDD where practicable, to minimise impacts to existing watercourses. Launch and receiving pits will be located outside of areas of fluvial and pluvial risk to remove the risk of flood waters entering the pits. Cable crossing depths would take account of potential deepening of watercourse channels over the lifetime of the Proposed Development.

² Available at: <https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/>.

³ Environment Agency and DEFRA (2023) Guidance: Oil storage regulations for businesses. Available at: <https://www.gov.uk/guidance/storing-oil-at-a-home-or-business>. Accessed January 2026.

⁴ DEFRA and Environment Agency (2024) Pollution Prevention for Businesses. Available: <https://www.gov.uk/guidance/pollution-prevention-for-businesses>. Accessed January 2026.

2.10 Site Security

- 2.10.1 Site security during construction will be managed by the Principal Contractor. The security fencing will remain in place throughout the duration of the construction period. Any storage of materials will be kept secure to prevent theft or vandalism. A safe storage system for accessing the materials storage areas would be implemented by the Principal Contractor.
- 2.10.2 CCTV will be installed on fencing at locations determined by the Principal Contractor.
- 2.10.3 Site security and fencing to be installed during the construction phase will be confirmed by the Principal Contractor and included in the CEMP.

2.11 Control of Light

- 2.11.1 Temporary construction site lighting, in the form of mobile lighting towers will be required in areas where natural lighting is unable to reach (sheltered/confined areas) and during core working hours within winter months. Artificial lighting would be provided to maintain sufficient security and health and safety for the Proposed Development, whilst adopting the mitigation principles to avoid excessive glare and reduce spill of light to nearby receptors (including ecological and residential) outside of the Proposed Development as far as reasonably practicable.
- 2.11.2 All construction lighting will be deployed in accordance with the following recommendations to prevent or reduce the impact on human and ecological receptors:
- The use of lighting will be reduced to that required for safe site operations, in line with relevant guidance,
 - Lighting will utilise directional fittings to reduce outward light spill and glare (e.g. via the use of light hoods/cowls which direct light below the horizontal plane, preferably at an angle greater than 20° from horizontal); and
 - Lighting will be directed towards the interior of the Order Limits rather than towards the boundaries.
- 2.11.3 Where necessary, e.g. emergency requirements, lighting will be designed in line with principles set out in guidance from the Institution of Lighting Professionals and the Bat Conservation Trust to avoid impacts on bats and other light adverse animals.

2.12 Control of Noise

- 2.12.1 Noise thresholds have been identified for nearby sensitive receptors during construction, presented in **Chapter 15: Noise and Vibration**. These will be defined in the CEMP. Thus, potential impacts of construction noise will typically be limited to daytime hours only. Biodiversity and ornithological receptors are also sensitive to noise, which are outlined in **Chapter 8: Biodiversity** and **Chapter 9: Ornithology**. The CEMP will include specific measures to limit the potential impact of noise during construction, such as those set out in **Section 3** (Mitigation and Management) below. These measures include non-acoustic mitigation, such as communication and regular updates to residents of planned noisy construction activities, and monitoring and reporting of noise complaints during construction.
- 2.12.2 Specific consideration of noise and vibration mitigation measures to reduce impacts at these receptors will be included in the CEMP, along with general measures to limit noise and vibration impacts at noise sensitive receptors.

- 2.12.3 Where on-site works are to be conducted outside the core working hours, they will comply with any restrictions agreed with the relevant planning authorities, in particular regarding the control of noise and traffic. These restrictions may include noise limits, or may include other noise control measures such as minimum separation distances between construction works and sensitive receptors, maximum duration of works outside core hours in a single area, implementation of mitigation measures specific to the works to be undertaken etc. Consent will be voluntarily obtained under Section 61 (S61) of the CPA 1974 for noisy works outside of normal working hours. Compliance with these noise limits will ensure adverse effects are unlikely.
- 2.12.4 Noise and vibration generated by construction traffic will primarily be controlled by routing of heavy vehicles away from sensitive receptors wherever practicable, restrictions on timing of vehicle movements and locations of site access points will be described in the outline Construction Traffic Management Plan (oCTMP) to be submitted as part of the ES. Should abnormal or emergency construction traffic movements occur outside of normal working hours specific noise mitigation measures will be put in place to reduce potential noise impacts at nearby noise sensitive receptors.

2.13 Construction Traffic Management and Access Routes

- 2.13.1 During construction, the Principal Contractor will ensure that the impacts from construction traffic on the local community (including residents and businesses and users of the surrounding transport network) are reduced, where reasonably practicable by implementing the measures set out in the oCTMP, which will be submitted as part of the ES.
- 2.13.2 A CTMP will be secured through the DCO and agreed with the relevant highways authorities prior to commencement of construction activities. The CTMP will be developed in accordance with the requirements of the outline CTMP included in the DCO application.
- 2.13.3 The contractor will implement measures to control and mitigate dust tracking onto the highway, such as, but not limited to: vehicle wheel cleaning. Additionally, a road sweeper will be deployed when required, to remove any mud and dust that has tracked onto the highway.

2.14 Protection of Below Ground Utilities

- 2.14.1 Engagement with utilities companies will be undertaken prior to commencement of construction activities to identify utilities and agree safe methods of working around existing utilities.
- 2.14.2 Offsets around major utilities will be implemented, as agreed with each utility owner, to avoid impacts.

2.15 Construction Waste Management

- 2.15.1 In order to minimise and appropriately manage the waste generated during site preparation and construction, the Principal Contractor will separate the main waste streams on-site, prior to transport to an approved, licensed third party waste facility for recycling or disposal.
- 2.15.2 A Site Waste Management Plan (SWMP) will be prepared by the Principal Contractor which will provide a waste estimate, and specify key responsibilities, reporting and auditing requirements and waste recovery targets. The SWMP will be based on the outline SWMP and finalised with specific measures to be implemented prior to the start of construction.
- 2.15.3 Waste Duty of Care will be ensured with respect to all waste generated on Site. All waste to be removed from the Proposed Development will be undertaken by fully licensed waste carriers and taken to suitably licensed waste management facilities and managed in line with the requirements of the Waste (England and Wales) Regulations (2011) and the Hazardous Waste (England and Wales)

Regulations (2005) (as amended). The Scheme will apply the waste management hierarchy, in priority order: prevention, preparation for reuse, recycle, other recovery and disposal. The management of Construction Waste will also provide appropriate alignment with the amendments for Hazardous and other waste, in The Waste (Circular Economy) (Amendment) Regulations 2020 and the emerging UK policy for the Circular Economy Act 2025 (being consulted upon until it is set to be adopted in 2026).

- 2.15.4 If required, a Materials Management Plan (MMP) would be developed under the Contaminated Land: Applications in Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice by the Principal Contractor prior to construction commencing to support the reuse of excavated materials, reduce off-site disposal, and to demonstrate the necessary lines of evidence to support the proper reuse/off-site disposal of materials and ensure compliance with regulatory guidance.

2.16 Responding to Environmental Incidents and Emergencies

- 2.16.1 An Emergency Preparedness and Response Plan (EPRP) will be developed prior to construction commencing in consultation with the relevant Host Authorities' 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.
- 2.16.2 The plan will also detail the procedures for responding to incidents (such as spills, leaks or generation of silt laden runoff in order to prevent pollution) and emergencies (such as flooding) onsite, and any required reporting procedures. This will also include the arrangements for all incidents, including environment incidents, and will include the procedures for the immediate response, reporting, stakeholder communications, and incident investigation.

2.17 Good Practice Measures

- 2.17.1 The Considerate Constructors Scheme (CCS) will be adopted to assist in reducing pollution and nuisance from the Proposed Development, by employing good practice measures which go beyond statutory compliance.
- 2.17.2 The Proposed Development will be tidy, secure, and have clear Access Routes that are well signposted to avoid hazards from occurring on this site. The appearance of a tidy, well-managed site can also reduce the likelihood of theft, vandalism, complaints and/or specific hazards that could affect the safe operation of the other businesses in the area, such as bird hazards and wind-blown litter.

2.18 Working with other Projects

- 2.18.1 The Applicant is committed to working with other developers to reduce potential cumulative impacts where possible or practicable. Where there are any temporal or spatial construction overlaps the Applicant will:
- Engage proactively with other developers to share relevant information on construction programmes, site access arrangements, and key activities;
 - Coordinate works, where practicable, to avoid or reduce cumulative impacts such as traffic congestion, noise, dust, waste, or disruption to local communities and land users;
 - Participate in any local or planning authority-led coordination groups, liaison committees, or working groups as required;

- Seek to agree on mitigation measures with other developers where necessary to manage overlapping environmental effects (such as transport routes);
- Keep relevant local authorities, statutory consultees, and stakeholders informed of any coordination activities and outcomes; and
- Document and maintain records of all engagement and cooperation efforts with third-party developers.

2.18.2 This approach will be maintained throughout the construction phase. Post consent, the CEMP will be updated as necessary to reflect changes in either project or surrounding development activities

3 Construction Environmental Management and Mitigation Procedures

3.1 Overview

- 3.1.1 **Table 3-1** summarises the construction related mitigation and management measures to be included as a minimum in the CEMP, which takes information directly from the PEIR or other relevant documents at this stage of the Proposed Development.
- 3.1.2 The overall responsibility for **Table 3-1** will be with the Applicant who will delegate implementation to the Principal Contractor. Specific responsibilities will be confirmed in the CEMP.
- 3.1.3 Measures will be reviewed and updated as necessary following consultation and development of the Proposed Development design, with the agreed measures presented in the oCEMP that will be appended to the ES and submitted with the DCO application.

Table 3-1: Summary of Environmental Mitigation and Management Measures

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Biodiversity	<p>Measures to avoid/reduce the effects of disturbance noise and vibration, including:</p> <ul style="list-style-type: none"> • Use of noise and visual barriers around working areas where practicable; • Use of working hours to ensure construction activity is limited to set times of day, i.e. no nocturnal working hours and avoid dawn/dusk. <p>Measures to avoid/reduce the air quality pollutants and dust deposition, including:</p> <ul style="list-style-type: none"> • Traffic management to reduce dust as a result of vehicle movements including speed control, route management and dust suppression (i.e. wetting of access routes); • Management of construction areas to suppress dust; and • Management of traffic to reduce number of vehicle movements through sensitive habitats. <p>Measures to avoid/reduce risk of surface water pollution including:</p> <ul style="list-style-type: none"> • Use of best practice approaches to manage use of materials and construction machinery onsite; • Surface water management plans for construction areas to prevent pollution incidents; and • Deployment and use of spill kits and fuelling areas/pads to avoid contamination of habitats. <p>Measures to avoid/reduce direct impacts on ecological features, including:</p> <ul style="list-style-type: none"> • Pre-commencement surveys to confirm the ongoing presence/absence of protected and notable species. • Identification of 'biodiversity protection zones' and areas adjacent to specific features such as watercourses, habitats and identified resting places for protected species. • The location and timing of sensitive works to avoid harm to ecological features (such as timing of habitat clearance to avoid hibernation periods for amphibians and reptiles). • The times during construction when specialists are required to be present to oversee works (i.e. in areas where risk of GCN occurring necessitate presence of licenced Ecological Clerk of Works (ECoW). • A sensitive lighting strategy will be employed to avoid unnecessary light pollution and avoid/reduce impacts of lighting on nocturnal species such as bats and otter. • Responsible persons and lines of communications. • Defining the role and responsibilities of an EnvCoW and ECoW. 	As detailed in the PWMS.	EnvCoW, ECoW, Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> Use of protective barriers and warning signs to avoid and prevent harm to biodiversity. 		
Ornithology	<p>Measures to reduce working areas to avoid unnecessary habitat removal/alteration and disturbance, and measures to avoid/reduce the generation of additional noise, dust, light spill, vibration and pollution. Measures will be proportionate and tailored to the ecology/ornithology of the Proposed Development, identified through the onsite assessments, and based on the following considerations:</p> <ul style="list-style-type: none"> Identification of 'biodiversity protection zones' and areas adjacent to specific features, such as nesting sites; Inclusion of details for the implementation of working method statements to achieve ornithological outcomes and mitigation measures; Identification of practical measures and sensitive working practices to avoid construction related impacts; The location and timing of sensitive works to avoid harm to ornithological features; The times during construction when particular specialists are required to be present to oversee works; Responsible persons (i.e. ECoW as described below) and lines of communications; Defining the role and responsibilities of an Ecological Clerk of Works (ECoW) and EnvCoW; and Use of protective barriers and warning signs to avoid and prevent harm to ornithology/biodiversity. <p>An ECoW would be appointed to address issues relating to ornithological (and wider ecological) features during construction. Their responsibilities would include:</p> <ul style="list-style-type: none"> Undertake pre-construction surveys/check to ensure that significant effects to any newly colonised ornithological feature would be avoided; Inform and educate site personnel of sensitive ornithological features within/near to the working areas and how effects on these features could occur; Oversee management of ornithological issues during the construction period and advise on ornithological issues as they arise; Monitoring and reporting on complaints with legal, planning contract requirements; Provide guidance to contractors to ensure legal compliance with respect to protected habitats and species onsite and offsite; Liaise with officers from consenting authorities, other relevant bodies and contractors with regular updates in relation to construction progress; and 	As per the Proposed Development ornithological monitoring strategy and BPP. To be taken over a multi-year period.	EnvCoW, ECoW, Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> Monitoring post-construction/implementation success of mitigation methods and aftercare of sensitive habitats and features. <p>Construction work would avoid the peak nesting periods (April – May) wherever practicable to reduce impacts on the qualifying breeding bird species of the South Pennine Moors Phase 2 SPA and South Pennine Moors SSSI. Attempts will also be made where practicable to avoid the wider breeding bird season (March - August) and/or limiting works during this period to those which are less impactful (i.e. those that do not require extensive habitat removal and those that will not cause extensive disturbance and displacement to bird species). This would be prioritised wherever practicable, but if construction work does need to take place during these times, then standard good practice appropriate mitigation measures would be put in place. Opportunities to restrict the timing of construction work to avoid potential ornithological impacts will continue to be reviewed during the development of the ES and post consent, prior to and during construction.</p> <p>Pre-Construction Surveys: Prior to the commencement of construction works, a programme of pre-construction ornithological surveys will be undertaken. These surveys will be carried out by suitably qualified and experienced ornithologists and will focus on identifying any active nests, breeding territories, roost sites or other sensitive locations within and adjacent to the construction footprint. The purpose of these surveys is to confirm the status and location of key species and to inform the implementation of appropriate protection measures, including the establishment of exclusion buffers, timing restrictions and other controls.</p> <p>Site Clearance: Any removal of suitable bird nesting habitat (particularly habitat associated with the qualifying breeding bird species of the South Pennine Moors Phase 2 SPA and South Pennine Moors SSSI) to be removed during the breeding bird season, would first be checked for nests by the ECoW immediately prior to clearance. If nests are found, they would be retained (with a suitable, species-specific buffer from works established) and protected from damage or abandonment until the young have fledged.</p> <p>The Bradford West Cable Corridor will be a temporary construction feature, with all disturbed land reinstated following completion of works. Reinstatement will restore soils, hydrology and vegetation to reflect pre-construction conditions as far as practicable, returning land to its former agricultural or semi-natural habitat use.</p>		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<p>Noise: prevention measures would be implemented to reduce the impact of disturbance on birds, including:</p> <ul style="list-style-type: none"> • All plant and machinery to comply with specific noise legislation (The Noise Emission in the Environment for use Outdoors Regulations 2001) and to be turned off when not in use; • Contractors to control noise on the working areas in accordance with British Standard 5228, Noise Control on Construction and Open Sites⁵. Site inspections by the appointed contractor(s) shall include checks to ensure that plant is being operated with any specified acoustic covers in place. Excessively noisy plant shall be removed from the Proposed Development for repair or maintenance. Quieter construction methods would be used, where required and considered reasonable and feasible; • Where feasible to do so, plant and equipment that generates low levels of noise and vibration shall be adopted as well as the use of hand-held equipment to carry out works where practicable in lieu of mechanical means; and • Regular briefings for operators of moving plant to emphasise the importance of noise mitigation, specific avoiding movement over irregular surfaces (which tends to create more noise/vibration emissions). <p>Lighting: In general, artificial light creates a barrier to crepuscular species, so the use of artificial lighting during construction would be avoided wherever practicable. Construction activities within the Proposed Development would take place during daylight hours where practicable to reduce disturbances to crepuscular species. If works are required to take place at night, the EnvCoW/ ECoW would limit night-time works to sections of the Proposed Development that avoid sensitive features. Where lighting is required, directional lighting (i.e., lighting which only illuminates work areas and not nearby habitat features) would be used to prevent light spill. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvers, and shields to direct the light to the intended areas only.</p> <p>Other measures include:</p> <ul style="list-style-type: none"> • No removal of habitats or movement of construction machinery would occur outside of the construction working areas during the construction phase, clearly marking out the working areas footprints for site staff; 		

⁵ British Standards Institution (2014) *Code of practice for noise and vibration control on construction and open sites*. (BS5228:2014).

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> All edible and putrescible waste would be stored and disposed of in an appropriate and timely manner. Construction materials would be stored and stockpiled according to strategies set out within the CEMP; Standard good practice pollution prevention guidance including managing the input of dust, cement, silt, hydrocarbons, and other chemicals to watercourses and other habitats. Measures such as silt traps, plant inspection, good practice re-fuelling of machinery, and drainage monitoring would be implemented as part of the CEMP. An emergency plan for the construction phase to deal with accidental spillages would be contained within the CEMP; and Delineation of buffer zones of sensitive habitats (e.g. important areas of the South Pennine and Moors Phase 2 SPA and South Pennine Moors SSSI) in order to safeguard and limit these habitats from construction related disturbance. 		
<p>Hydrogeology, Hydrology, Geology and Peat</p>	<p>It is proposed to limit the extent of cut and fill (i.e. areas of decreasing ground levels and areas of increasing ground levels, respectively) across the turbine locations and the use of cut and fill access roads within the Turbine Area as far as practicable. Iterative layout design has, and will continue, to consider hardstanding orientations as well as turbine positioning to minimise cut and fill footprints. Internal site access tracks will be aligned to minimise overlap with deeper peat deposits or, where possible, routed over gradients sufficiently shallow to enable floated (non-excavated) construction. Opportunities to reuse infrastructure for dual purposes (reducing the number of footprints) and to reduce the number of temporary hardstandings will also be investigated further for the ES.</p> <p>Individual turbine layouts will be iterated in response to increasingly resolute peat depth data to allow any identified areas of deeper peat to be avoided where possible, or to prioritise deeper peat for temporary infrastructure (which will be reinstated post-construction phase).</p> <p>Where peat must be excavated to enable construction, opportunities will be sought to reuse peat in a positive way to support habitat recreation (e.g. through patch repair of bare ground, restoration of eroded gullies and reinstatement of peat in cutover areas). Peatland restoration opportunities will be identified to improve the quality of the peatland as part of the Proposed Development.</p> <p>Measures and methods to be used when handling excavated materials, storage and reuse of peat are detailed in the Appendix 10-3: Outline Peat Management Plan.</p>	<p>As per the Water Quality Monitoring Plan and Peat Management Plan</p>	<p>Principal Contractor</p>

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<p>Temporary infrastructure will be designed to reduce the number of watercourse crossings and encroachments into 50m buffer zones around all mapped water features will be adhered to during construction.</p> <p>Infrastructure will be located at appropriate buffer distances from any confirmed GWDTEs where possible or construction measures will be employed to mitigate for effects.</p> <p>Temporary drainage measures to ensure the existing drainage regime is maintained during construction and that the potential for pollution of surface water runoff is managed will be included in the CEMP.</p> <p>Any potential temporary changes to the existing fluvial / pluvial flow routes will be addressed within the CEMP, which will outline any temporary measures that would be put in place to control flood flows (such as preventing flows from entering open excavations). Furthermore, the CEMP would ensure that construction activities would not impede or alter overland flow routes to ensure that flood risk is not increased elsewhere.</p> <p>Where appropriate, access roads will be constructed using permeable materials.</p> <p>It is proposed that suitable offsets will be provided from the top of bank of all watercourses to ensure that ecological corridors are maintained and access for maintenance works is provided, where practicable.</p> <p>Where cable route and vehicular crossings are to be constructed across/beneath watercourses, suitable land drainage consent for ordinary watercourses would be obtained to undergo works.</p> <p>Construction works undertaken adjacent to or within watercourses (i.e. to construct new crossings) will comply with relevant guidance. The CEMP will provide detail regarding the mitigation to be implemented to protect the water environment, including drinking water protected areas and SGZs, from adverse effects during construction.</p> <p>A suite of good practice procedures, methods and measures for activities such as fuel handling and storage, concrete batching, pollution prevention, etc will be produced. Further details are provided in Appendix 10-1: Good Practice Methods.</p>		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<p><u>Additional mitigation includes:</u></p> <p>Erosion and Sedimentation</p> <ul style="list-style-type: none"> • Additional drainage management, such as capture and treatment (e.g. sediment traps and bunds or if necessary in specific locations the use of siltbusters or similar) • Water quality monitoring programmes over the course of construction works in proximity to the watercourses; and • Sequencing to limit the amount of construction works in any one catchment, particularly during wetter period. <p>Alteration of Flow, Natural Drainage Patterns/Runoff Volumes and Rates – Groundwater Flows</p> <ul style="list-style-type: none"> • Groundwater discharges, along with infiltration of rainfall, will limit the down gradient effects on low permeability peat to short distances, up to ~10m, from excavations. Upgradient effects will be limited to a few metres due to the steepness of drawdown curves in low permeability peat and deep cut off ditches in areas of peat should be avoided to limit any other dewatering effects or interception of shallow groundwater. • As with effects from erosion and sedimentation, a monitoring programme will also be established for the private water supplies identified in the PWS assessment, in consultation with local affected residents. This will involve baseline data collection prior to construction to ensure that all private water supplies are identified / understood, with regular monitoring throughout the construction stage. This programme will allow any potential impacts on the private water supplies to be promptly identified and remedial actions undertaken. Remedial actions are likely to require the installation of an alternative supply if the flows are reduced substantially. The monitoring programme will be secured as part of the CEMP. <p>Potential pollution events affecting groundwater and surface water quality</p> <ul style="list-style-type: none"> • Construction methods will be adhered to in agreement with United Utilities – Water for the North West (UUN) to protect water supply within Source Protection Zone (SPZ) 1 at the River Laneshaw. This is likely to include restrictions on fuels, oils or other chemicals. <p>Peat Instability</p> <ul style="list-style-type: none"> • Detailed ground investigation at critical locations, including collection of site-specific peat strength data; • Specification of design measures to prevent or reduce construction-induced failure; and 		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> Specification of control measures to limit impacts (e.g. temporary debris fences during construction for critical locations) and general good practice measures (including raising awareness of peat instability for site personnel through toolbox talks), active monitoring of construction locations, and preparation of emergency response and cleanup protocols. <p>Loss of Peat</p> <ul style="list-style-type: none"> Management of peat is contained within the Appendix 10-3: oPMP and PMP. <p>Monitoring</p> <ul style="list-style-type: none"> A monitoring programme will be developed and implemented in conjunction with Yorkshire Water Services and UUW for the public water supply reservoirs to understand the parameters of concern and to set up reporting requirements, a process for information transfer and an emergency response plan. A baseline water quality monitoring programme will be completed followed by monitoring during construction (and reinstatement / site restoration / early post construction sub-phases) to ensure that no adverse effects occur as a result of the Proposed Development. The monitoring programme will be secured as part of the CEMP. A monitoring programme will be established for the private water supplies, in consultation with local affected residents. This will involve baseline data collection prior to construction to ensure that all private water supplies are identified / understood, with regular monitoring throughout the construction stage. This programme will allow any potential impacts on the private water supplies to be promptly identified and remedial actions undertaken. Remedial actions may include additional protection of the source, enhanced treatment or an installation of an alternative supply. The monitoring programme will be secured as part of CEMP. 		
Carbon and Climate Change	<p>Measures to reduce emissions during the construction phase include:</p> <ul style="list-style-type: none"> Reduction of traffic movements from staff travel during the construction phase, and encouraging low-emission transport modes (ride-share, electric vehicle, and active mode transport, where feasible) via the development of a Travel plan for local staff movements. Procedures to separate and recover construction waste, increase recycling rates, and promote use of circular economy materials and processes. Use of existing roads and tracks to locate access routes as much as practicable to reduce land take for access. 	N/A	Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> • Avoid placing infrastructure on deep peat, to reduce peat land take, wherever possible (see Appendix 10-3: oPMP). • Measures to re-home Peat displaced and to reduce net Peat loss (see Appendix 10-3: oPMP). • The principles of the Considerate Constructors Scheme and its Code of Considerate Practice (CoCP) will be adhered to, as well as measures to reduce the creation of waste and to maximise the use of materials with lower embodied GHG emissions. <p>Onsite measures to ensure the Proposed Development is resilient and able to adapt to climate change will include:</p> <ul style="list-style-type: none"> • Contractors will monitor weather forecasts and plan works accordingly, protecting workers and resources from any extreme weather conditions such as storms, flooding. • Contractors will receive Environment Agency's flood alerts and plan works accordingly, protecting workers and resources from flooding. • Site staff will be provided with appropriate PPE and undertake works in accordance with approved RAMS. • Health and Safety Manager will be responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site. Health and safety plans and RAMS developed for on-site activities will be required to account for potential heat impacts on workers and equipment. • Air conditioning in cabs of powered machinery to protect operators. 		
Landscape and Visual	<p>Measures to reduce landscape and visual impacts during the construction phase include:</p> <ul style="list-style-type: none"> • careful siting of compounds / borrow pits; • temporary lighting controls and a lighting strategy. <p>The Export Cable will be buried and intended to be undergrounded. Once the Export Cable is constructed the land will be restored to the current baseline use and condition. Landscape features or elements that will be removed during the construction phase, such as stone walls will be reinstated. Notable landscape features identified to date, where trenchless techniques (such as horizontal directional drilling (HDD) is proposed to be used to limit disturbance to the local landscape. There is potential for localised tree loss along the Bradford West Cable Corridor, and this will be reviewed in further detail in relation to an Arboricultural survey that will be undertaken prior to construction commencing.</p>	N/A	Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
Historic Environment	<p>Measures to reduce historic environment impacts during the construction phase include:</p> <ul style="list-style-type: none"> A Cultural Heritage Management Strategy, incorporating a Chance Finds Procedure to be prepared prior to construction commencing: This plan will set out environmental mitigation measures (those not embedded into the design of the Proposed Development) to reduce the potential adverse effects to buried archaeological remains resulting from the construction phase. This will be achieved through preservation in situ (where practicable) and preservation by record. Preservation by record will consist of an approved programme of archaeological fieldwork and recording which will lead to the creation of an archaeological archive so that the remains can be preserved by record for future generations. Fieldwork recording may vary across the PEIR Boundary depending upon the archaeological resource but may include trial trenching, watching brief, strip map and sample investigation, or formal excavation as appropriate. A programme of post-fieldwork assessment and analysis of the archive generated by fieldwork will be agreed, leading to publication and dissemination of the results of that work and the creation and deposition of an archive for the Proposed Development in a suitable receiving museum or other body. The details of the archaeological fieldwork will be set out within an Outline Written Scheme of Investigation (WSI) to be prepared and submitted with the application for the DCO and agreed with the relevant statutory consultees. The Outline WSI will detail the method, areas, techniques to be applied as well as programme in the context of the post-consent, pre-construction period. A detailed WSI will be prepared by the Principal Contractor prior to construction commencing and will be prepared in accordance with the outline WSI. 	N/A	Principal Contractor
Transport and Access	<p>Transport related construction measures are included in the oCTMP and will be secured by a requirement in the DCO.</p> <p>The Principal Contractor will ensure that speed limits are adhered to by their drivers and associated subcontractors. This is particularly important at crossing points. Advisory speed limit signage will also be installed on approaches to areas where path users may interact with construction traffic.</p> <p>Signage will be installed across the PEIR Boundary that makes drivers aware of local speed limits and reminding drivers of the potential presence of pedestrians, cyclists and equestrians. This will also be emphasised in weekly toolbox talks for construction staff and delivery drivers. Users of the Public Rights of Way (PRoWs) will be separated from construction traffic using barriers (where permitted and appropriate) which will ensure that safe access to the PEIR</p>	As per relevant transport related management plans	Principal Contractor The Applicant

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<p>Boundary for recreational purposes will be maintained. Crossing points will be provided where required, with path users having right of way and diversions will be provided where necessary.</p> <p>Appropriate and compliant temporary road signage would be provided to assist at these crossings for the benefit of all users.</p>		
Noise and Vibration	<p>Measures to reduce noise and vibration impacts during construction include:</p> <ul style="list-style-type: none"> • Locating noise producing activities/design elements (e.g. borrow pits) away from noise sensitive receptors, wherever practicable. • Good site practices would be implemented to reduce effects. Section 8 of British Standard 5228 recommends a number of simple control measures as summarised below that would be employed onsite during construction: <ul style="list-style-type: none"> • Keep local residents informed of the proposed working schedule, where appropriate, including the times and duration of any abnormally noisy activity that may cause concern; • Ensure that any extraordinary site work continuing throughout 24 hours of a day (for example, crane operations lifting components onto the tower) would be programmed, when appropriate, so that haulage vehicles would not arrive at or leave between 19:00 and 07:00, with the exception of abnormal loads that would be scheduled to avoid peak traffic times; • Ensure all vehicles and mechanical plant would be fitted with effective exhaust silencers and be subject to programmed maintenance; • Select inherently quiet plant where appropriate – all major compressors would be 'sound reduced' models fitted with properly lined and sealed acoustic covers, which would be kept closed whenever the machines are in use; • Ensure all ancillary pneumatic percussive tools would be fitted with mufflers or silencers of the type recommended by the manufacturers; • Instruct that machines would be shut down between work periods or throttled down to a minimum; • Regularly maintain all equipment used onsite, including maintenance related to noise emissions; • Vehicles would be loaded carefully to ensure minimal drop heights so as to reduce noise during this operation; and 	N/A	Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> Ensure all ancillary plant such as generators and pumps would be positioned so as to cause minimum noise disturbance and if necessary, temporary acoustic screens or enclosures should be provided. <p>To protect the amenity of local residents, construction noise activities would be controlled under the COPA which includes provisions on the control of noise pollution. In particular, Part III Section 60 of the COPA refers to the control of noise on construction sites. It provides that Local Authorities can serve a notice imposing requirements regarding the way in which works are to be carried out, including controlling noise from construction sites to prevent disturbance occurring. The COPA also includes provision that the SoS may prepare codes of practice to give guidance on methods of minimising noise and requires the SoS to approve a code of practice for carrying out works to which Section 60 applies. British Standard 5228 is approved as a code of practice by the SoS.</p> <p>Where construction activities may occur which could result in the 55 dBA threshold being exceeded, namely junction upgrades at site entrances and HDD activities, it is recommended that construction should be restricted to BS 5228 daytime periods where practicable.</p>		
Air Quality	<p>At this stage the exact measures to mitigate dust impacts are unknown. These will be informed by a Construction Dust Risk Assessment that will be prepared and appended to the ES. This will identify the risk of dust impacts to human receptors and the mitigation measures required to ensure that effects are not significant in accordance with IAQM. Further detail on mitigation measures will be included within the oCEMP at the ES Stage.</p> <p>Measures to reduce NRMM emissions include:</p> <ul style="list-style-type: none"> The Proposed Development layout will take account of the location of sensitive receptors, and the distance between NRMM and sensitive properties will be maximised, as far as possible. All vehicles and plant will be switched off when not in use. In addition, the West Yorkshire Guidance requires that all NRMM adhere with London Best Practice Guidance, which currently requires all to meet Stage IV emissions standards to ensure that older engines with higher NO_x and PM emissions are not used. Any NRMM emissions required near to sensitive properties in the area for the Bradford West Cable Corridor will be short-term. It is judged that there is negligible risk of significant human health effects as a result of on-site machinery emissions. 	As per results of the Construction Dust Risk Assessment	Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	Traffic will be managed in a way which reduces the potential air quality impacts at sensitive receptor locations through measures included within the CTMP.		
Socio-Economics and Tourism	Socio-economic and tourism measures will be included in the below management plans: <ul style="list-style-type: none"> oESSCMP oPROWMP 	N/A	Principal Contractor
Human Health	Measures to protect human health during the construction phase include: <ul style="list-style-type: none"> Locating noise producing activities and design elements away from noise sensitive receptors wherever practicable; Good site practices would be implemented to reduce noise effects such as locating noise producing activities and design elements away from noise sensitive receptors wherever practicable and measures recommended in Section 8 of British Standard 5228, including keeping local residents informed of the proposed working schedule (i.e. times and duration of any abnormally noisy activity that may cause concern); and Temporary drainage measures to ensure that the potential for pollution of surface water runoff is managed and any temporary measures to control flood flows and ensure that flood risk is not increased elsewhere. Other human health related measures will be included in a variety of other plans, including: <ul style="list-style-type: none"> oCTMP oPROWMP oLEMP oESSCMP oSWMP 	N/A	Principal Contractor
Aviation and Radar	Measures to reduce aviation and radar impacts of the Proposed Development will be implemented during the construction phase, including: <ul style="list-style-type: none"> Installation of aviation lighting on the turbines in accordance with a CAA-approved lighting scheme once WTG are erected. Installation of lighting as agreed with the MoD once WTG are erected. 	N/A	Principal Contractor
Major Accidents and Disasters	Measures to prevent and control major accident and disaster risks include: <ul style="list-style-type: none"> Restriction of access to suitably qualified workers only; Adherence to relevant legislation, including the Health and Safety at Work etc. Act. 1974, The Control of Substances Hazardous to Health Regulations 2002, the CDM Regulations 	N/A	Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<p>2015, The Lifting Operations and Lifting Equipment Regulations 1998 and The Working at Height Regulations 2005. Good practice working measures, including risk assessments and method statements, will be put in place in accordance with this legislation;</p> <ul style="list-style-type: none"> • Adherence to relevant guidance, including the HSE's Avoiding danger from underground service⁶, Fire Prevention on Construction Sites: Joint Code of Practice⁷ and the HSE's Fire Safety in Construction⁸; • Preparation of a Construction Phase Plan, required by the CDM Regulations 2015 prior to construction commencing; • Detailed ground investigations in line with relevant standards and guidance, including British Standard 3930:2015⁹ and BSEN1997: Part 2: 2007 Eurocode 7¹⁰; • Earthworks and foundation design in accordance with national standards and guidance, including British Standard 6031:2009: Code of Practice for Earthworks¹¹ and Building Regulations Approved Document A - Structure¹²; • Use of methods to address unstable ground / geotechnical hazards, including temporary works (such as the shoring of excavations); • Communication of the potential risks of discovering UXO to construction workers, with the provision of safety training given. Safety monitoring will be adopted where required; and • Appropriate storage, handling and disposal of chemicals in line with the Control of Substances Hazardous to Human Health Regulations 2002. <p>Additional measures include:</p> <ul style="list-style-type: none"> • Transport related measures as identified in the oCTMP. • Regular risk assessment of fire/wildfire risk, drawing on the principles of DEFRA's wildlife management plan guidance¹³. Early and regular engagement with the relevant fire authorities will also be undertaken. This will include the development of a fire management plan in consultation with the relevant fire authorities prior to construction commencing and updated prior to operations commencing. This plan will include measures such as avoiding 		

⁶ HSE (2014) Avoiding danger from underground services HSG47.

⁷ The Fire Protection Association (2023) Fire Prevention on Construction Sites: Joint Code of Practice 9th edition

⁸ HSE (2022) Fire safety in construction HSG168.

⁹ British Standard 5930: 2015 + A1:2020 Code of Practice for Site Investigations.

¹⁰ British Standards Eurocode 7: Geotechnical Design (2006).

¹¹ British Standard 6031:2009: Code of Practice for Earthworks.

¹² HM Government (2013) Approved Document A - Structure.

¹³ <https://www.gov.uk/government/publications/wildfire-management-plan>.

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	using construction machinery on high-risk days, reducing fuel loads directly near infrastructure, having fire extinguishers onsite, ensuring construction workers are trained for emergency situations and running exercises with the emergency services to ensure they are familiar with the Proposed Development.		
Shadow Flicker	There are no specific embedded environmental measures relevant to Shadow Flicker for the construction phase.	N/A	N/A
Waste and Materials	<p>Measures to reduce waste and materials impacts during the construction phase include:</p> <ul style="list-style-type: none"> • Optimisation of material use; • Reuse of materials generated in the construction phase i.e. seeking to balance cut and fill across the Proposed Development through reuse of soils in line with Contaminated Land: Applications in Real Environments (DoW:CoP); • Use of recycled materials where viable for design parameters; • Preference for offsite construction where viable; • Identification of opportunities to use infrastructure for the temporary compounds that can be reassigned or reused upon completion of the Proposed Development; and • Sustainable procurement considerations for materials and waste that encourage circular economy outcomes throughout the construction, operation and decommissioning of the Proposed Development. <p>Specific Waste and Materials management measures will be included within an outline SWMP and SWMP.</p>	In line with legal duties and best practice	Principal Contractor
Other Matters (Land Contamination, Minerals and Agricultural Land)	<p>Agricultural Land To protect soils and agricultural land during construction, best practice measures for soil handling, storage and reinstatement during earthworks, including cable trench installation will be implemented. In addition, the outline Soil Management Plan, which will set out the measures to avoid, reduce and protect soils during the construction phase.</p> <p>Land Contamination Measures to prevent land contamination and to protect workers from potentially contaminated land include:</p> <ul style="list-style-type: none"> • Construction workers will be made aware of the possibility of encountering localised contamination through toolbox talks. The implementation of good standards of personal hygiene, provision of welfare facilities on-site, and use of appropriate levels of personal PPE will be implemented; 	N/A	Principal Contractor

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	<ul style="list-style-type: none"> • Implementation of pollution prevention measures to protect groundwater and surface water courses in accordance with DEFRA and Environment Agency guidance (Environment Agency (2025). Protect groundwater and prevent groundwater pollution); • The implementation of trackside drainage, etc. to reduce surface water run-off. • A Discovery Strategy which includes a watching brief for contamination during future intrusive works and as required, assessment by a land contamination specialist. This will include, but not be limited to, stopping works in the affected area whilst ensuring the identified contamination does not pose a risk. An assessment will then be undertaken by a land contamination specialist and a method agreed to deal with the identified contamination. If required, the relevant Local Planning Authorities will be notified; • An emergency response plan will be implemented, detailing fire control procedures, measures for pollution prevention and emergency procedures to manage accidental spillages and leaks; • Specific measures will be put in place for fuel and oil bunding (>110% capacity) and safe chemical storage in line with COSHH Regulations; • Stockpile management measures including: <ul style="list-style-type: none"> • Dust suppression • Avoidance of over stockpiling to reduce compaction of soil and loss of integrity; • Timely removal of soil from the Proposed Development (where applicable) to prevent windblown dust and surface water run-off; and • All soil wastes will be disposed of using licenced contractors in accordance with Duty of Care. This will ensure that material handling during construction will not put human health or environmental receptors at risk. • Roles and responsibilities; • Monitoring and reporting; • Public communication and engagement; and • Incident response. 		

4 Implementation

4.1 Implementation Strategy

4.1.1 The CEMP will set out all roles, responsibilities and actions required in respect of implementation of the measures described within this oCEMP, including:

- An organogram showing team roles, names and responsibilities;
- Training requirements for relevant personnel on environmental topics;
- Information of onsite briefings and Toolbox Talks that will be used to equip relevant staff with the necessary level of knowledge to follow environmental control procedures;
- Measures to advise employees of changing circumstances as work progresses;
- Communication Strategy (internal and external);
- Procedures for monitoring, inspections (including HSE inspections) and reporting of site operations;
- Document control; and
- Environmental emergency procedures

4.1.2 The CEMP will also include further details of the following measures:

- Construction Method Statements;
- Construction programme;
- Environmental Constraints Plans;
- Hours of work;
- Details of construction lighting;
- Details of site security and fencing arrangements;
- Details of Site set up, layout and use of Construction Compounds, including parking provisions and a Travel Plan;
- Information regarding procedures for the accidental release of potential pollutants including fuel/oil spillage and surface water release, including pollution incident response plans;
- Monitoring requirements; and
- Accordance with the SWMP.

5 Monitoring and Reporting

5.1 Process for Monitoring, Inspections and Audits

- 5.1.1 Monitoring and reporting will be undertaken for the duration of the construction phase in order to demonstrate the effectiveness of the requirements and measures set out in the CEMP, and related construction controls; and allow for corrective action to be taken where necessary.
- 5.1.2 The Principal Contractor will be informed of any deviations from the CEMP as soon as possible by the relevant responsible individuals as outlined in Section 2.3, following identification of such issues, and if required further follow up will be sought. The Environmental Manager would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.
- 5.1.3 During construction, the Environmental Manager and/or their representatives will conduct walkover surveys to ensure all requirements of the CEMP 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.
- 5.1.4 The Environmental Manager will also arrange regular formal inspections and audits to ensure the requirements of the CEMP are being met. Details of monitoring, inspection and audits to be undertaken will be provided in the CEMP. After completion of the works, the Environmental Manager will conduct a final review.
- 5.1.5 During construction, the ECoW will also regularly monitor and inspect the construction operations for the Proposed Development, especially in relation to typical seasonal constraints for biodiversity such as overseeing the management and protection of protected species. They will also have oversight of peat operations and surface water management, pollution, air quality and noise. They will discuss practical solutions with the Environment Manager, and Site Manager. The Environment Manager will liaise with the wider Construction and Project Management teams in accordance with an agreed Roles and Responsibilities process and will record all conversations, meetings and proposed (or agreed) actions.

5.2 Records

- 5.2.1 Records will be managed through the Quality and Safety Management Systems (QMS) and the Environmental Management System (EMS) of the Principal Contractor which will be certified in line with the ISO 14001 standards.
- 5.2.2 The Environmental Manager will retain records of all monitoring, inspections and audits and records related to environmental issues at the Site. Documents shall be stored in a suitable manner and backups created to safeguard the records.
- 5.2.3 The CEMP will be updated if it is necessary to add additional control measures, with a full review as required throughout the construction period. Existing control measures and mitigation will not be amended without prior agreement with the Host Authorities.



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