SUNNICA ENERGY FARM

Preliminary Environmental Information Report

Appendix 16C: Framework Construction Environmental Management Plan

Sunnica Ltd

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Quality information

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
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Contents

Tables

1. Introduction

1.1 Introduction

1.1.1 This document presents a framework for the Construction Environmental Management Plan (CEMP). This document will be updated at the next stage of the Scheme design prior to the Development Consent Order (DCO) application and will be submitted with the suite of application documents but should be read as a draft version of that application document. A detailed CEMP will be produced for the Scheme following the appointment of the contractor in accordance with a Requirement of the DCO, prior to commencing construction, which will be required to be in accordance with the application Framework CEMP. It is considered likely that there will be more than one detailed CEMP prepared for the Scheme, for example separate detailed CEMP to cover different Sites. This will be determined by the appointed contractor once the detailed construction programme is known.

1.1.2 This document does not address operational or decommissioning activities, which would be subject to separate environmental management plans and procedures, secured as necessary through the DCO.

1.1.3 Potential impacts have been identified through the Environmental Impact Assessment (EIA) process and are reported in the Preliminary Environmental Information Report (PEI Report). A range of 'standard' or best practice mitigation and construction management measures were accounted for in the assessments presented within the PEI Report and these will be implemented during construction of the Scheme. This framework CEMP demonstrates how these commitments in the PEI Report will be implemented. It also sets out the monitoring and auditing activities designed to demonstrate that such mitigation measures are carried out and that they are effective.

1.1.4 This document provides the likely structure of the detailed CEMP(s) and some outline information relevant to the detailed CEMP(s). It indicates what additional information might be included under each sub-section within the detailed CEMP(s), which will be produced by the contractor selected to deliver the Scheme's construction phase.

1.1.5 The detailed CEMP(s)will be produced in line with this framework document following granting of the DCO consent and would be agreed with the appropriate local planning authorities, and where required and relevant with statutory consultees, in advance of starting works on the DCO Site. Therefore, the individual CEMPs would be reviewed only by the appropriate authority.

1.1.6 This framework CEMP covers the principal construction activities envisaged at the time of preparing the PEI Report. The final scope will be determined through consultation with the relevant local planning authorities and other relevant regulatory authorities. The key elements of this framework CEMP include:

- An overview of the Scheme and associated construction programme;
- Prior assessment of environmental impacts (through the EIA);
- Reduction of potential adverse impacts through design and other mitigation measures;
- Monitoring of effectiveness of mitigation measures;
- Corrective action procedure; and
- Links to other complementary plans and procedures.

1.1.7 In summary, the framework CEMP will identify how commitments made in the EIA will be translated into actions on the DCO Site and includes a process from implementing the actions through allocation of key roles and responsibilities.

1.1.8 The appointed contractor will be responsible for working in accordance with the environmental controls documented in the framework CEMP, pursuant to the DCO. The overall responsibility for implementation of the detailed CEMP(s)will lie with the appointed contractor as a contractual responsibility to the Applicant, as the Applicant is ultimately responsible for compliance with the requirements of the DCO.

1.1.9 The framework CEMP will be designed with the objective of compliance with the relevant environmental legislation and the mitigation measures set out within the PEI Report (and ES at the next stage).

1.1.10 Any additional construction licences, permits or approvals that are required will be listed in the detailed CEMP(s), including any environmental information submitted in respect of them.

1.2 The Applicant

1.2.1 Sunnica Ltd (hereafter referred to as 'the Applicant') has commissioned the DCO application for the construction, operation and decommissioning of the Sunnica Energy Farm (hereafter referred to as the 'Scheme'). The Application will be submitted to the Planning Inspectorate, with the decision of whether to grant a DCO being made by the Secretary of State pursuant to the Planning Act 2008 (Ref. 1).

1.3 The DCO Site

1.3.1 The DCO Site comprises four sites (the Sunnica East Site A, Sunnica East Site B, Sunnica West Site A and Sunnica West Site B), located within the administrative areas of West Suffolk Council (WSC), Suffolk County Council (SCC), East Cambridgeshire District Council (ECDC) and Cambridgeshire County Council (CCC). The Scheme includes the associated electrical infrastructure for connection to the national transmission system, comprising Grid Connection Route A, Grid Connection Route B and an extension to the Burwell National Grid Substation.

1.3.2 The maximum area of land potentially required for the construction, operation and maintenance of the Scheme, which includes land required for permanent and temporary purposes, is shown on Figure 2-1 in ***Chapter 2:***

Scheme Location. It is important to note that this may be subject to change between now and the DCO Application, but Figure 2-1 shows the envisaged maximum extent of temporary and permanent land take. The detailed land take for the Sunnica East Site A, Sunnica East Site B, Sunnica West Site A, Sunnica West Site B, cable route corridors and the Burwell National Grid Substation Extension will be refined as the Scheme design progresses, taking into account environmental and technical factors, and consultation responses.

1.3.3 The detailed CEMP(s)will include plans showing the land within each administrative area, plans illustrating the DCO Site, and the Works Areas and Schedule 1 of the DCO.

1.4 The Scheme

1.4.1 The Sunnica East Site A, Sunnica East Site B, Sunnica West Site A and Sunnica West Site B will consist of the same principal infrastructure as follows:

- Solar PV modules;
- PV module mounting structures;
- Inverters;
- Transformers;
- Switchgear (housed inside a building);
- Onsite cabling;
- One or more BESS (expected to be formed of lithium ion batteries storing electrical energy on Sunnica East A, Sunnica East B and Sunnica West A only);
- An electrical compound comprising a substation and control building (Sunnica East Site A, Sunnica East Site B and Sunnica West Site A only);
- Office/warehouse (Sunnica East Site A and Sunnica West Site A only)
- Fencing and security measures;
- Drainage features including swales;
- Internal access roads and car parking;
- Landscaping including ecological creation areas; and
- Construction laydown areas.

1.4.2 A detailed project description will be produced for the ES that will be referred to in the detailed CEMP(s).

2. Construction Programme

2.1 Construction programme

2.1.1 The current expectation is that site preparation, construction and commissioning of the Scheme will take approximately 24 months.

2.1.2 Allowing sufficient time to receive consent and to discharge the DCO Requirements, it is anticipated that the earliest that site preparation and enabling works on-site for the Scheme would start is Spring 2022, with an expected operational start date of Spring 2025.

2.1.3 More details on the construction phasing will be provided within the detailed CEMP(s)to be agreed with the local planning authorities post consent.

2.2 Working Hours

2.2.1 Core construction working hours on Site will run from 07:00 to 19:00 Monday to Saturday, with working days one 12-hour shift, with employees travelling to and from the Site outside these times. Where on-site works are to be conducted outside the core working hours they will comply with the restrictions stated in the CEMP and any other restrictions agreed with the relevant planning authorities.

2.3 Control of Noise

2.3.1 Section 61 Consents, where noisy works are anticipated, would be obtained for the Scheme which would include agreed construction noise limits for nearby noise sensitive receptors. Where required, these would include weekend, evening and night-time periods. Thus, 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. Compliance with these noise limits will ensure adverse effects are unlikely. Abnormal or emergency construction traffic movements may occur outside of normal working hours. In the event of these occurrences, specific noise mitigation measures will be put in place to reduce potential noise impacts at nearby noise sensitive receptors as set out below.

2.4 Control of Light

2.4.1 Construction temporary site lighting, in the form of mobile lighting towers with a power output of 8 kilo volt-amperes (kVAs), 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 DCO Site, whilst adopting mitigation principles to avoid excessive glare and minimise spill of light to nearby receptors (including ecology and residents) outside of the DCO Site as far as reasonably practicable.

2.4.2 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 minimised to that required for safe site operations;
- Lighting will utilise directional fittings to minimise 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 middle of the DCO Site rather than towards the boundaries.

2.5 Traffic Management

2.5.1 During construction, the appointed contractor will ensure that the impacts from construction 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 the Transport Assessment (***PEI Report Volume 2: Appendix 13A***), Framework Construction Traffic Management Plan (CTMP) (***PEI Report Volume 2: Appendix 13B***) and ***Chapter 13: Transport and Access*** of the PEI Report.

2.5.2 The Framework CTMP will set out the proposals to manage construction traffic during the construction of the Scheme and considers the management of all freight traffic (i.e. heavy goods vehicles (HGVs)), as well as staff traffic to the car parks located on the main development sites.

2.5.3 The detailed CTMP will be developed by the appointed contractor in consultation with the appropriate local planning authorities and will be secured by a Requirement of the draft DCO. This would include a Construction Worker Travel Plan (CWTP) and will encourage staff to utilise sustainable modes of transport for journeys to and from the site where possible.

2.6 Parking Provisions

2.6.1 There will be two central car parking areas off the main access routes during construction. Workers will be utilise these two car parks and will be transported to the various locations within the DCO Site via minibus, refer to CTMP (***PEI Report Volume 2: Appendix 13B***) A self-contained wheel wash will be installed to be used by vehicles prior to exiting the Site onto the public highway if there is mud or debris on the construction site. For loads unable to use the fixed wheel wash, a localised wheel washing would be set up to cater for these individually and as required to ensure no detrimental effect to the highway.

2.7 Recycling and Disposing of Waste

2.7.1 In order to control the waste generated on-site during site preparation and construction, the contractor will separate the main waste streams on-site,

prior to transport to an approved, licensed third party waste facility for recycling or disposal.

2.7.2 A Construction Resource Management Plan (CRMP) will be prepared by the Contractor, which will specify the waste streams to be estimated and monitored and goals set with regards to the waste produced. The CRMP will be finalised with specific measures to be implemented prior to the start of construction, in accordance with a DCO Requirement.

2.7.3 All waste to be removed from the DCO Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

2.8 Best Practice Measures

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

3. Management and Mitigation Plan

3.1 Purpose

3.1.1 This section of the framework CEMP sets out the mitigation and management measures to be included as a minimum in the detailed CEMP(s). It also sets out monitoring requirements and the responsible party identified for each mitigation/ enhancement measures or monitoring requirement. This section will be updated for the ES and again following consent when the framework CEMP is updated to a detailed version.

Table 3-1 Climate Change

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Greenhouse Gas (GHG) emissions from construction traffic and equipment Use of natural resources in construction materials Increased flood risk on-site due to climate change needing to be considered in the design	Appropriate standard and best practice control measures will be included in the detailed CEMP(s), which would include: • Adopting the Considerate Constructors Scheme (CCS) to assist in reducing pollution, including greenhouse gases (GHGs), from the Scheme by employing good industry practice measures which go beyond statutory compliance. These will be listed in the detailed CEMP(s); • Encouraging the use of lower carbon modes of transport by identifying and communicating local bus connections and pedestrian and cycle access routes to/ from the Scheme to all construction staff and providing appropriate facilities for the safe storage of cycles; • Implementing a CWTP to reduce the volume of construction staff and employee trips to the Scheme; • Switching vehicles and plant off when not in use and ensuring construction vehicles conform to current EU emissions standards; • Conducting regular planned maintenance of the plant and machinery to optimise efficiency; • Increasing recyclability by segregating construction waste to be re-used and recycled where reasonably practicable; • Designing, constructing and implementing the Scheme in such a way as to minimise the	To be confirmed in detailed CEMP(s)	The overall responsibility will be with the contractor. Specific responsibilities will be confirmed in the detailed CEMP(s)

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
	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; • Reusing suitable infrastructure already associated with the Scheme where possible to minimise the use of natural resources and unnecessary materials; • Storing topsoil and other construction materials outside of the 1 in 100-year floodplain extent (Flood Zone 3), as far as reasonably practicable; • Appointing at least one designated Flood Warden who is familiar with the risks and remains vigilant to news reports, Environment Agency flood warnings and water levels of the local waterways; and • Health and safety plans developed for construction activities will be required to account for potential climate change impacts on workers, such as flooding and heatwaves.		

Table 3-2 Cultural Heritage

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Potential for impact upon archaeological deposits. Temporary impacts on the setting of below ground scheduled monuments and other built heritage assets during construction associated with increased visual and noise intrusion.	• A programme of archaeological evaluation and associated paleoenvironmental sampling will accompany pre-construction site investigation works. This would allow a more detailed model of the deposits below the Scheme to be developed and paleoenvironmental information gathered; • The archaeological strategy will include provision for dating of deposits and geoarchaeological assessment to provide information on the timeframe of the deposit sequence and the environments in which it was laid down; • The number and spacing of investigation locations would be agreed with Historic England and the Senior Archaeologists for CCC and SCC. This would enable an assessment of the archaeological potential and value of deposits below the Scheme to be made; • The results of this archaeological sampling regime would inform any requirements for archaeological monitoring or excavation during construction; • Archaeological investigations would take an iterative approach to the evaluation of archaeological potential and establishing the requirements for archaeological mitigation work; • Additional evaluation following detailed design would allow for preservation in situ of archaeological remains where reasonably practicable. Where not reasonably practicable, it would enable the implementation of strategy for archaeological recording to preserve the remains impacted by record; • Implementation of the measures outlined in the OLEMP (***PEI Report Volume 2: Appendix 10I***) to reduce the impacts associated with increased visual intrusion; and • Implement noise measures as outlined in the detailed CEMP(s) to reduce noise impacts. **Archaeological Protection Areas** Nine areas of significant (high value) archaeological activity (totalling approximately 90 ha) have been removed from the developable area of the Site, and designated as 'Native Grassland Planting within Archaeological Mitigation Areas' (see Figure 3-1 and 3-2), comprising (refer to Geophysical Survey Report in ***PEI Report Volume 2: Appendix 7B*** for	The Overarching WSI will be submitted with the DCO Application and agreed with Historic England, CCC and SCC. Once agreed, this document would establish the objectives for the historic environment works and set out the mechanisms for the appointed archaeological contractor to design the investigation, undertake evaluation, analysis, reporting and deposit the archive prior to construction.	The overall responsibility will be with the contractor. Specific responsibilities will be confirmed in the detailed CEMP(s)

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	further information): 1. Expansive multi-phase settlement complex of 11ha (likely Roman) in Geophysical Survey Reporting Zone A 2. A single ring ditch (approximately 30m in diameter) in Geophysical Survey Reporting Zone B 3. Two ring ditch anomalies measuring approximately 25m and approximately 28m in diameter respectively in Geophysical Survey Reporting Zone D 4. A concentration of fragmented possible enclosures that appear to be contained within a rectilinear boundary in Geophysical Survey Reporting Zone E 5. An approximately 24ha area of multi-phase settlement activity located in Zone F 6. A series of ditches, large rectangular enclosures, and small rectilinear enclosures abutting the field edge immediately south of Foxburrow Plantation in Geophysical Survey Reporting Zone F 7. A barrow associated with the scheduled Chippenham barrow cemetery along with two further circular anomalies (all previously unknown) to the north-west, which also likely comprise barrows. The three anomalies are each between approximately 20m and approximately 30m in diameter (also located in Geophysical Survey Reporting Zone F)		

Table 3-3 Biodiversity

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Potential for obtrusive glare and light spill to impact on ecology. Potential for spillages to enter watercourses and impact ecology. Clearance or damage of habitat to facilitate construction – resulting in temporary or permanent reduction in habitat extent and potential direct and indirect effects on associated species. Dust deposition on sensitive ecological receptors. Loss of an area of grassland within the DCO Site which would be utilised as the construction laydown area, alongside removal of vegetation present within the DCO Site.	The Landscape and Ecology Management Plan (LEMP) will set out the measures proposed to mitigate the potential impacts and effects of the Scheme on biodiversity (and landscape) features, and to enhance the biodiversity, landscape and green infrastructure value of the DCO Site. There may be a requirement for more than one LEMP, and this will be determined by the appointed contractor once the detailed programme is known. A final Plan(s), which takes into account and is prepared in accordance with the principles of the Outline LEMP which will be submitted with the DCO application, a draft of which is at ***PEI Report Volume 2: Appendix 10I*** to the PEIR will be submitted to and approved by the relevant planning authority prior to construction. Measures proposed in the LEMP include: • Biodiversity and habitat protection, management and impact avoidance requirements including updated surveys, protected species licences, clerk of works, tree works, precautionary working methods and animal welfare requirements; • Measures proposed to enhance existing scrub, reedbed, grassland and hibernacula and habitat piles and tree planting; and • An implementation timetable for maintenance and management, including measures to protect, manage and enhance habitats. The detailed CEMP(s)will be required to take into account measures contained within that Plan(s) and the preliminary parameters set out in the Parameters Plans (see Figures 3-1 and 3-2 of the PEIR), including: • The Scheme would avoid, as far as reasonably practicable, areas of high quality habitat, such as mature trees and woodland/wetland habitats associated with Local Wildlife Sites (LWS) surrounding the DCO Site; and • Retained trees adjacent to construction working areas would be protected by clearly defined root protection zones to prevent damage/compaction of roots by plant and other machinery. **Ecological Clerk of Works** • A licensed Ecological Clerk of Works (EcoCoW) will be employed/contracted to advise on relevant environmental commitments, the findings of the updated surveys,	A pre-construction site walkover will be undertaken in advance of mobilisation/any potential advance works to re-confirm the ecological baseline conditions and to identify any new ecological risks. Updated species surveys, including bats, great crested newt, breeding birds, otter, water vole and badger, would be completed as appropriate to re-confirm the status of protected species identified, to inform mitigation requirements and support protected species licence applications, if required by Natural England. the Council(s) and EcoCoW. This is proposed to be secured by a Requirement of the	The overall responsibility will be with the contractor. Specific responsibilities will be confirmed in the detailed CEMP(s)

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	protected species licencing requirements and with reference to the relevant project programmes; • Immediately prior to site clearance and the start of construction in each relevant part of the DCO Site, further site walkover surveys would be undertaken by an ecologist to confirm whether the risks remain as previously assessed and/or to confirm the correct implementation of impact avoidance measures (e.g. protected species stand-offs). The scope of the required walkovers would be defined on a case by case basis, in consultation with the project team, ECDC and WSC or other relevant statutory consultees as necessary, based on the specific risks; and • Relevant site staff would receive toolbox talks on the ecological risks present, legal requirements and working arrangements necessary to comply with legislation. Toolbox talks would be repeated as necessary over the duration of the relevant works. • A display board will be installed on-site and a website will be set up. These will include contact details for the Site Manager or alternative public interface with whom nuisance or complaints can be lodged. A log book of complaints will be prepared and managed by the Site Manager. **Precautionary Working Methods** The following precautionary working methods would be employed to minimise potential adverse effects on protected/notable species prior to, and during, construction: • Precautionary working method statements, informed by the detailed CEMP(s), would be produced by the appointed contractor to specify working requirements and other impact avoidance measures. These would be controlled and implemented through the detailed CEMP(s); • Where reasonably practicable, vegetation clearance works would be undertaken outside the bird breeding season, which is generally between March and August inclusive. Where this is not reasonably practicable, an ecologist would inspect all areas of vegetation prior to clearance, and clearance would only be undertaken subject to the instruction and requirements of the ecologist to protect any birds and their nests; • Reasonable avoidance measures would be used during clearance of any habitat suitable for reptiles, to minimise the risk of direct impacts including phased clearance	draft DCO. Such surveys would be undertaken sufficiently far in advance of construction works to account for seasonality constraints and to allow time for the implementation of any necessary mitigation, prior to construction. Additional surveys may be required during the advance works, site clearance and construction phase as advised by the ECoW, 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.	

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	of vegetation to gradually reduce suitability for reptiles, thereby encouraging animals to move away from affected areas into adjacent suitable habitat; • Cleared ground would be maintained in a disturbed state in the run-up to construction commencing to minimise the risk of ground nesting birds attempting to nest on cleared ground; • Precautionary measures would be implemented to prevent trapping wildlife in construction excavations in order to ensure compliance with animal welfare legislation. All excavations deeper than 1m would be covered or fenced overnight, or where this is not practicable, a means of escape would be fitted (e.g. battened soil slope or scaffold plank) to provide an escape route should any animals stray into the construction site and fall into an excavation; • A Biosecurity Management Plan which sets out procedures to ensure any imported building/landscaping materials are free from invasive non-native species (e.g. Schedule 9 species) will be prepared; • The perimeter security fence around the Scheme will be implemented early in the construction phase to secure the Site; • No works will be undertaken within 10m of watercourses; • Pre-commencement surveys for Stone-curlew will be undertaken in advance of the works commencing; • Avoidance of construction traffic through designated sites; • Where invasive non-native species have been identified, e.g. Lee Brook, no in-channel works will be undertaken to avoid the spread of invasive non-native species. These works will be monitored by an Ecological Clerk of Works (ECoW); and • Reasonable avoidance measures along the cable corridors, including buffers of 30m around any identified Badger setts or trees with bat roost potential. **Lighting** Controls on lighting/illumination to minimise visual intrusion and potential adverse effects on sensitive ecology, such as bats, will be considered as far as reasonably practicable. Temporary construction site lighting will be designed as far as reasonably practicable so as		

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
	to minimise artificial light spill from the DCO Site. **Habitat Restoration** Habitats to be temporarily lost or damaged during construction would be fully reinstated on a like-for-like basis at the same location on completion of construction works, where practical. Some habitats would be restored and managed with the aim of increasing their biodiversity value in the long-term as set out within the LEMP.		

Table 3-4 Flood Risk, Drainage and Surface Water

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Leakage or accidental spillage of construction materials and potential pollutants used on-site, migrating to nearby surface watercourses or infiltrating to groundwater. Any flooding during construction could flood construction equipment and/materials, causing release of pollutants to nearby surface watercourses or infiltrating to groundwater.	**General** The contractor will comply with: • Guidance for Pollution Prevention (GPP) 2 Above ground oil storage tanks (Ref. 5); • GPP 4 Treatment and disposal of wastewater where there is no connection to the public foul sewer Ref (Ref. 6); • GPP 5 Works and maintenance in or near water (Ref. 7); • GPP 8 Safe storage and disposal of used oils (Ref. 8); and • GPP 21 Pollution incident response planning (Ref. 9). Requirements in these guidances will be listed in or appended to the detailed CEMP(s). A Water Management Plan (WMP) will be prepared to document the mitigation measures to be implemented to protect the water environment from adverse effects during construction. Local watercourses are shown in Figure 9-1 in ***Chapter 9: Flood Risk, Drainage and Water Resources***. **Management of Construction Site Runoff** Mitigation measures are described in detail below and would be adhered to during the construction phase of the Scheme. They apply equally to all components of the Scheme. The measures outlined below, will be required for the management of fine particulates in surface water runoff as a result of the construction activities: • 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 construction activities. The measures will accord with the principles set out in industry guidelines including the CIRIA report 'C532: Control of water pollution	Temporary drainage will be monitored throughout construction. Specific details will be confirmed in detailed CEMP(s)	Staff training will be undertaken by the contractor. Storage of materials, and disposal and discharge of site runoff would be managed by the contractor. Specific responsibilities to be confirmed in detailed CEMP(s)

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	from construction sites' and CIRIA report C648 Control of water pollution from linear construction sites' . 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; • A temporary drainage system will be developed to prevent runoff contaminated with fine particulates from entering surface water drains without treatment. This will include identifying all land drains and waterbodies on the DCO Site and ensuring that they are adequately protected using drain covers, sand bags, earth bunds, geotextile silt fences, straw bales, or proprietary treatment (e.g. lamella clarifiers); • Site drainage, including surface runoff and dewatering effluents, will be discharged to sewers where possible 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); • DCO Site drainage will provide appropriate pollution control measures as agreed with the sewerage undertaker or the Environment Agency as appropriate. Holding or settling tanks, separators and other measures as may be required, will be provided and maintained; • The relevant sections of BS 6031: Code of Practice for Earthworks will be followed for the general control of site drainage; • Where practical, earth works will be undertaken during the drier months of the year. When undertaking earth moving works periods of very wet weather will be avoided, where practical, to minimise the risk of generating runoff contaminated with fine particulates. However, it is likely that some working during wet weather periods will be unavoidable, in which case other mitigation measures (see below) will be implemented to control fine sediment laden runoff. Water may also be required to dampen earthworks during dry weather to reduce dust impacts, and any runoff generated will need to be appropriately managed by the Contractor in accordance with the pollution prevention principles described in this chapter; • To protect watercourses from fine sediment runoff, topsoil/subsoil will be		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	stored a minimum of 20m from watercourses on flat lying land. Where this is not practicable, and it is to be stockpiled for longer than a two-week period, the material will either be covered with geotextile mats, seeded to promote vegetation growth, or runoff prevented from draining to a watercourse without prior treatment; • Appropriately sized runoff storage areas for the settlement of excessive fine particulates in runoff will be provided. Construction site runoff will either be treated on site and discharged under a Water Discharge Activity Permit from the Environment Agency to Controlled Waters (potentially also including infiltration to ground) or to the nearest public sewer with sufficient capacity for treatment following discussions with Anglian Water, or removed from site for disposal at an appropriate and licenced waste facility; • Equipment and plant are to be washed out and cleaned in designated areas within the DCO Site compound where runoff can be isolated for treatment before disposal as outlined above. • Mud deposits will be controlled at entry and exit points to the DCO Site using wheel washing facilities and / or road sweepers operating during earthworks activities or other times as required; • 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; and • The WMP will include details of pre, during and post-construction water quality monitoring. This will be based on a combination of visual observations and reviews of the Environment Agency's automatic water quality monitoring network. **Management of Spillage Risk** The measures outlined below will be implemented to manage the risk of accidental spillages on site and potential conveyance to nearby waterbodies via surface runoff or land drains. The following mitigation measures relating to the control of spillages and		

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
	leaks will be included in the CEMP and adopted during the construction works: • Fuel will be stored and used in accordance with the Control of Substances Hazardous to Health Regulations 2002, and the Control of Pollution (Oil Storage) (England) Regulations 2001. 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); • 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 possible or only at designated areas within the DCO Site 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 washing down of vehicles and equipment will take place in designated areas and wash water will be prevented from passing untreated into watercourses; • 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 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; • The WMP will include details for pollution prevention and will be prepared and included alongside the detailed CEMP(s). Spill kits and oil absorbent material will be carried by mobile plant and located at high risk		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	locations across the DCO Site and regularly topped up. All construction workers will receive spill response training and tool box talks; • The DCO Site will be secure to prevent any vandalism that could lead to a pollution incident; • Construction waste / debris are to be prevented from entering any surface water drainage or water body; • 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; • Suitable facilities for concrete wash water (e.g. geotextile wrapped sealed skip, container or earth bunded area) will be adequately contained, prevented from entering any drain, and removed from the Site for appropriate disposal at a suitably licenced waste facility; and • Water quality monitoring of potentially impacted watercourses will be undertaken to ensure that pollution events can be detected against baseline conditions and can be dealt with effectively. In addition, any site welfare facilities will be appropriately managed, and all foul waste disposed of by an appropriate contractor to a suitably licenced facility if it is not possible to connect to the public sewer. **Management of Flood Risk** Construction works undertaken adjacent to, beneath and within watercourses will comply with relevant guidance during demolition and construction, including Environment Agency and Defra guidance documents. The detailed CEMP(s) will incorporate measures aimed at preventing an increase in flood risk during the construction works. Examples of measures that will be implemented within the Scheme area include: • Topsoil and other construction materials will be stored outside of the 1 in 100 year floodplain extent. If areas located within Flood Zone 2 are to be utilised for the storage of construction materials, this would be done in		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	accordance with the applicable flood risk activity regulations, if required; • Connectivity will be maintained between the floodplain and the adjacent watercourses, with no changes in ground levels within the floodplain as far as practicable; and • During the construction phase, the Contractor will monitor weather forecasts on a monthly, weekly and daily basis, and plan works accordingly. For example, works in the channel of any watercourse will be avoided or halted were there to be a significant risk of high flows or flooding. • The construction laydown area site office and supervisor will be notified of any potential flood occurring by use of the Floodline Warnings Direct or equivalent service. The appointed contractor will be required to produce an Emergency Response Plan which will provide details of the response to an impending flood and include: • A 24 hour availability and ability to mobilise staff in the event of a flood warning; • The removal of all plant, machinery and material capable of being mobilised in a flood for the duration of any holiday close down period where there is a forecast risk that the site may be flooded; • 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 appointed contractor will sign up to Environment Agency flood warning alerts 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 de-watering methods will be used. Any groundwater dewatering required in		

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
	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) and the Environmental Permitting Regulations (2016); 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. **Management of Risk to Morphology of Waterbodies** A pre-works morphology survey of the channel of each watercourse to be crossed by high voltage cables will be undertaken. This is to ensure there is a formal record of the condition of each watercourse prior to commencement of works to install cables beneath the channel. Although cables will be installed using non-open cut techniques, the survey is a precautionary measure so that should there be any unforeseen adverse impacts there is a record against which any remedial action can be determined.		

Table 3-5 Landscape and Visual Amenity

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Loss of existing landscape features, e.g. vegetation Visibility of construction activities	The LEMP will set out the measures proposed to mitigate the potential impacts and effects on landscape (and biodiversity) features, and to enhance the landscape and biodiversity value of the DCO Site (i.e. the green infrastructure). A final Plan, which takes into account and is prepared in accordance with the principles of the Outline LEMP which will be submitted with the DCO application, a draft of which is included in ***PEIR Report Volume 2: Appendix 10I***. The detailed CEMP(s)will be required to take into account measures contained within that Plan and the preliminary parameters set out in the Parameters Plans (see Figures 3-1 and 3-2 of the PEIR), Measures proposed for inclusion in the LEMP include: • To protect and retain existing trees and vegetation via construction exclusion zones and tree protective fencing (see below Tree Works); • Lighting at the minimal levels of lux and luminance as necessary during the temporary construction lighting (see below); • Landscape and biodiversity management and enhancement measures including replacement tree planting; • Landscape, arborists and EcoCoW to ensure that the landscape and ecology requirements of the detailed CEMP(s)are adhered too and that the construction works are monitored; • The perimeter security fence around the Scheme will be implemented early in the construction phase to secure the Site; and • An implementation timetable for maintenance and management proposals, including an annual landscaping maintenance plan. **Tree Works** • The findings of the pre-construction tree survey and Arboricultural Report, accompanied by an Arboricultural Method Statements, where construction works are likely to affect trees, will be taken into account by the appointed contractor;	An arboricultural survey in line with BS5837:2012 (Ref. 10) would be undertaken concurrently with detailed design of the Scheme, to identify where trees are likely to be affected by the construction works and to inform the development of the detailed design. Such pre-construction surveys would be undertaken in accordance with the LEMP. Additional surveys may be required during the advance works, site clearance and construction phase as advised as necessary by the appointed contractors arboricultural specialist, based on the findings of the tree survey, or otherwise as	The LEMP sets out roles and responsibilities for implementation.

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
	• Where works in close proximity to retained trees cannot be practically avoided, these works will be undertaken in accordance with current best practice, defined in British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations and National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Ref 5); and • All necessary protective fencing will be installed prior to the commencement of any site clearance or construction works. **Lighting** Temporary site lighting during construction required to enable safe working during construction in hours of darkness will be designed as far as reasonably practical so as not to cause a nuisance outside of the DCO Site. Standard best practice measures would be employed to minimise light spill, including glare during construction. **Screening** Existing vegetation along the boundary of the DCO Site will be retained and managed where practicable to ensure its continued presence and to aid the screening of low-level views into the DCO Site.	identified as appropriate by the Applicant or their appointed main contractor.	

Table 3-6 Noise and Vibration

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Vibration due to construction activities causing annoyance at Noise Sensitive Receptors (NSR) and damage to building structures. Construction traffic, plant and machinery noise at nearby NSR.	Best Practicable Means (BPM) will be applied, as far as reasonably practicable, during construction works to minimise noise and vibration at NSRs, including, neighbouring residential properties and other sensitive receptors arising from construction activities; including, as appropriate: • Ensuring that all appropriate processes, procedures and measures are in place to minimise noise before works begin and throughout the construction programme; • All contractors to be made familiar with current legislation and the guidance in BS 5228 (Parts 1 and 2)which should form a prerequisite of their appointment; • Ensuring that, where reasonably practicable, noise and vibration is controlled at source (e.g. the selection of inherently quiet plant and low vibration equipment), review of the construction programme and methodology to consider quieter methods, consideration of the location of equipment on-site and control of working hours (see Section 2.2); • Use of modern plant, complying with applicable UK noise emission requirements; • Hydraulic techniques for breaking to be used in preference to percussive techniques, where reasonably practicable; • When piling, use of lower noise piling where reasonably practical; • Drop heights of materials will be minimised; • Plant and vehicles will be sequentially started up rather than all together; • Off-site pre-fabrication where reasonably practicable; • Use of screening locally around significant noise producing plant and activities; • Regular and effective maintenance by trained personnel will be undertaken to keep plant and equipment working to manufacturer's specifications; • All construction plant and equipment to be properly maintained, silenced where appropriate, operated to prevent excessive noise and switched off when not in use; • Loading and unloading of vehicles, dismantling of site equipment or moving equipment	Section 61 consents would be obtained where noise works are anticipated by the appointed contractor, or work outside of core hours is required. The Section 61 would form the basis of noise limits and monitoring requirements including monitoring locations, noise monitoring methods and frequency, and the noise control measures to be employed. The detailed CEMP would also set out a scheme for the provision of monthly reporting information to and 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. Further details are to be confirmed in the	To be confirmed in the detailed CEMP(s)

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
	or materials around the DCO Site to be conducted in such a manner as to minimise noise generation, as far as reasonably practicable; • All vehicles used on-site shall incorporate reversing warning devices as opposed to the typical tonal reversing alarms to minimise noise disturbance where reasonably practicable; • Appropriate routing of construction traffic on public roads and along access tracks pursuant to the Construction Traffic Management Plan; • Provision of information to ECDC and WSC and local residents to advise of potential noisy works that are due to take place; • Monitoring of noise complaints and reporting to the Applicant for immediate investigation and action. A display board will be installed on-site and a website will be set up. These will include contact details for the Site Manager or alternative public interface with whom nuisance or complaints can be lodged. A log book of complaints will be prepared and managed by the Site Manager.	detailed CEMP(s).	

Table 3-7 Socio-Economics and Land Use

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Temporary loss of agricultural land Loss of trees and other vegetation Impacts on soil Disruption to users of Public Rights of Way	The following measures will be implemented to address impacts on land use: • Agricultural soils will be managed, preserved, retained and reinstated in accordance with Department for Environment, Food and Rural Affairs (Defra) guidance. Key mitigation measures from this guidance will be included in the detailed CEMP(s). • Further measures to mitigate effects on agricultural land during construction will be set out in the detailed CEMP(s). Temporary diversions of PRoWs during the construction phase will be put in place monitored to ensure they are suitable and well maintained for use. All diversions would be sign-posted accordingly, and closures will be advertised in advance. Further details will be included in the detailed CEMP(s).	Monitor temporary diversions of PRoWs during the construction phase to ensure they are suitable and well maintained for use.	To be included in the detailed CEMP(s).
Disruption to local residents, businesses and community facilities	Measures to mitigate the effects of construction noise are outlined in Table 3-6. Measures to mitigate the effects of visual impacts from construction are outlined in Table 3-5. Measures to mitigate the effects of construction traffic are outlined in Table 3-8.	To be included in the detailed CEMP(s)	To be included in the detailed CEMP(s).

Table 3-8 Transport and Access

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Increased traffic flows, including HGVs on the roads leading to the DCO Site. Severance and intimidation associated with increased construction traffic and abnormal loads.	A CTMP and CWTP would be produced prior to construction based on the Framework CTMP (***PEI Report Volume 2: Appendix 13B***). Details to mitigate impacts from increased construction traffic will be included in these. A list of measures likely to be implemented are provided below: • Pedestrian and cycle access routes to and from the DCO Site will be identified and communicated to employees during construction. Appropriate facilities will be provided on the site for the safe storage of cycles; • Potential implementation of staff minibuses and car sharing options; • Implementation of a CTMPto reduce the volume of construction staff and employee trips to the DCO Site; • Construction vehicles will be required to use only approved access routes to the DCO Site; • Deliveries to the DCO Site will be recorded. The source of the delivery, vehicle weight, registration number, date and time will be stored on the operator's system; • HGV arrivals, including deliveries, will be managed as far as reasonably practicable such that they are spread evenly over the day. HGV deliveries will be scheduled to avoid peak hours as far as practical; • The HGV routing plan would be distributed to all drivers during their induction; • Signage will be used at the main junctions to ensure that all HGV traffic relating to the Scheme travel in the appropriate directions; • In the interests of highway safety, wheel cleaning facilities will be installed on-site from the start of the construction phase. All HGVs leaving the DCO Site will be required to wheel wash. The need for this measure would be periodically reviewed throughout the construction phase; • A 24 hour contact name and number will be displayed on a notice board at the DCO Site entrances, on the Applicant's website for members of the public to contact should they have any issues regarding construction traffic; • Two evenly split temporary car parking areas are proposed to be used throughout	The appointed contractor will undertake such monitoring as is necessary. Further details to be confirmed in the detailed CEMP(s).	Travel Plan Co-ordinator to oversee management, monitoring and implementation of the individual measures within the Construction Traffic Management Plan (CTMP) and the Construction Worker Management Plan (CWMP). Other responsibilities are to be confirmed in the detailed CEMP(s).

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	the construction period, one within Sunnica West Site A and the other in Sunnica East Site B, which are accessed as follows: ○ Sunnica West Site A – to be accessed off an unclassified road which links to the A11 as well as a number of unclassified roads within the rural area to west of the A11. ○ Sunnica East Site B – to be accessed off the B1085, which heads north from its junction with the A11 near to Red Lodge. • A parking management system will be employed, including assigned car parking spaces, one-way system within each car park, single entry/egress onto the local highway network, with appropriate signage in place; • A car parking permit system is proposed to be implemented across the two car parking areas. Before commencing work on site, staff will be allocated to one of the two car parking areas which will be based on their starting location for their travel to the Site; and • A mini-bus service will be used to transport staff around and between Sunnica East Site (A and B) and Sunnica West Site (A and B) making use of internal routes where possible.		

Table 3-9 Air Quality

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Increased nitrogen dioxide (NO_2) and particulate matter (PM_{10}) from on-site and off-site construction vehicle/plant emissions. Increased particulates and deposited dust from Site activities, materials transportation, storage and handling, including use of haul roads.	Appropriate standard and best practice control measures will be included in the detailed CEMP(s), which may include, but not be limited to: **Communication** • Develop and implement a stakeholder communications plan that includes community engagement before work commences on-site; • Display the name and contact details of person(s) accountable for air quality and dust issues on the DCO Site. This may be the environment manager/engineer or the site manager; • Display the head or regional office contact information; and • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local Authority. **Site Management** • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; • Make the complaints log available to the local authority when asked; • Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook; and • Hold regular liaison meetings with any other high-risk construction sites within 500m of the DCO Site (if applicable), to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/ deliveries which might be using the same strategic road network routes. **Monitoring** • Undertake periodic visual dust monitoring on the DCO Site boundary; and • Agree dust monitoring locations with the Local Authority. **Preparing and Marinating the Site** • Plan site layout so that machinery and dust causing activities are located away from	Measures in the detailed CEMP(s)will include the implementation of: • Inspection procedures at the DCO Site boundary to periodically visually assess any dust and air pollution which may be generated. Additional monitoring measures will be provided in the detailed CEMP(s) •	To be included in the detailed CEMP(s).

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	receptors, as far as is possible; • Avoid site runoff of water or mud; • Keep site fencing and barriers clean using wet methods; • Remove materials that have a potential to produce dust from the DCO 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 vehicles switch off engines when stationary - no idling vehicles; • Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable; and • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas. **Operations** • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate; and • Ensure equipment is readily available on-site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. **Waste** • Avoid bonfires and burning of waste materials. In addition, activity specific mitigation measures include: **Earth Works** • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as		

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	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 • Only remove the cover in small areas during work and not all at once. **Construction** • 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; and • For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust. **Track-out** • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use; • Avoid dry sweeping of large areas; • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport; • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; • Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned; • Implement a wheel washing system; • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits; and • Access gates to be located at least 10 m from receptors where possible.		

Table 3-10 Ground Conditions

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Potential for risks to human health associated with waste generation, land contamination, airborne contamination and groundwater contamination. The discovery of ground contamination during groundworks. Levelling of the DCO Site including the possible introduction of new fill materials.	Ground investigation works will be undertaken prior to commencing construction. Results would be reviewed by the appointed contractor, including any additional investigation or mitigation measures beyond the impact avoidance measures stated here. Best practice avoidance and mitigation measures proposed include: • All plant (i.e. inverters, transformers and switchgear) will be installed on concrete bases with suitable bunding where appropriate; • The detailed operational drainage design will be carried out pre-construction with the objective of ensuring that drainage of the land to the present level is maintained. It will follow either the design of a new drainage system taking into account the proposed new infrastructure (access tracks, cable trenches, structure foundations) to be constructed, or, if during the construction of any of the infrastructure, there is any interruption to existing schemes of land drainage, then new sections of drainage will be constructed. The surface water drainage strategy will be submitted with the DCO application.. Infiltration drainage design will be in accordance with BRE 365 and infrastructure will be placed at least 10m away from watercourses; • All workers would be required to wear Personal Protective Equipment (PPE) such as dust masks as applicable; • Containment measures would be implemented, including drip trays, bunding or double-skinned tanks of fuels and oils; all chemicals would be stored in accordance with their COSHH guidelines, whilst spill kits would be provided in areas of fuel/oil storage; • All plant and machinery would be kept away from surface water bodies wherever possible, checked regularly and, where necessary, the use of drip trays would be employed. Refuelling and delivery areas would be located away from surface water drains; • An emergency spillage action plan will be produced, which staff would have read and understood, and provisions made to contain any leak/spill; • Should any potentially contaminated ground, including isolated ‘hotspots’ of contamination and/or potential deposits of asbestos containing materials (ACM), be encountered, the contractor would be required to investigate the areas and assess	To be included in the detailed CEMP(s).	To be included in the detailed CEMP(s).

Potential Impact	Mitigation / Enhancement Measure	Monitoring Requirements	Responsibility
	the need for containment or disposal of the material. The contractor would also be required to assess whether any additional health and safety measures are required; • To further minimise the risks of contaminants being transferred and contaminating other soils or water, construction workers would be briefed as to the possibility of the presence of such materials; • In the event that contamination is identified, appropriate remediation measures would be taken to protect construction workers, future site users, water resources, structures and services; • The contractor would be required to place arisings and temporary stockpiles away from watercourses and drainage systems, whilst surface water would be directed away from stockpiles to prevent erosion; • The risk to surface water and groundwater from run-off from any contaminated stockpiles during construction works would be reduced by implementing suitable measures to minimise rainwater infiltration and/or capture runoff and leachates, through use of bunding and/or temporary drainage systems. These mitigation measures would be designed in line with current good practice, follow appropriate guidelines and all relevant licences/permits; • The contractor would ensure that all material is suitable for its proposed use and would not result in an increase in contamination-related risks on identified receptors, including any landscaped areas and underlying groundwater; • Any waters removed from excavations by dewatering would be discharged appropriately, subject to the relevant permits being obtained from the Environment Agency; • The contractor will implement a dust suppression/management system in order to control the potential risk from airborne contamination migrating off-site to adjacent sites; and • Piling design and construction works will be completed following the preparation of a piling risk assessment.		

Table 3-11 Waste

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Disposal of large volumes of waste (potential waste streams are listed in ***Chapter 14: Other Environmental Topics)*** Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if not stored and managed appropriately.	The contractor would 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, working towards a cut and fill balance for excavations; segregation of construction materials on-site for appropriate re-use, recycling and recovery, with landfill as a last resort. This would be achieved by a combination of measures, including: • The contractor would prepare and implement a CRMP; • All waste transported off site will be delivered to the appropriately licenced receivers of such materials; and • As part of the CRMP, the contractor would segregate construction waste to be re-used and recycled where reasonably practicable. To minimise impacts of waste on the surrounding environment, the following measures would be implemented: • Off-site pre-fabrication, where reasonably practicable, including the use of pre-fabricated structural elements, cladding units, mechanical and electrical risers and packaged plant rooms. Pre-fabrication could be utilised for the office/warehouses and control rooms associated with the substations; • Burning of waste or unwanted materials would not be permitted on-site; • All hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas; and • Materials requiring removal from the DCO Site would be transported using licensed carriers and records kept, detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations.	The types, quantities and final destination of waste generated during the construction phase would be identified, measured and recorded through the CRMP. A register of all waste loads leaving the DCO Site 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.	To be confirmed in detailed CEMP(s).

Table 3-12 Human Health

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Human Health risks are covered in the following tables: Table 3-9 Air Quality, Table 3-4 Flood Risk, Drainage and Surface Water, Table 3-6 Noise and Vibration, Table 3-7 Socio-Economics and Land Use, Table 3-8 Transport and Access, Table 3-10 Ground Conditions, and Table 3-11 Waste.			

Table 3-13 Major Accidents and Disasters

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
All works will be undertaken in accordance with relevant Health and Safety legislation and guidance. Details of fire, police, emergency services and hospitals will be publicised and included in the site induction. *Furthers risks of major accidents and disasters are covered in the following tables: Table 3-4 Flood Risk, Drainage and Surface Water, Table 3-8 Transport and Access, Table 3-10 Ground Conditions, and Table 3-11 Waste.*			

Table 3-14 Glint and Glare

Potential Impact	*Mitigation / Enhancement Measure*	*Monitoring Requirements*	*Responsibility*
Glint and Glare risks are covered in the following tables: Table 3-8 Transport and Access and Table 3-5 Landscape and Visual Amenity.			

4. Complementary Plans and Procedures

4.1.1 A suite of complementary environmental plans and procedures for the construction phase will be developed alongside the CEMP, including a CRMP, as discussed in the tables above. These plans and procedures will build on the principles and procedures set out in this framework CEMP and described in the PEI Report and subsequent ES. These supporting and supplementary plans and procedures will be clearly outlined in the detailed CEMP(s)and cross referenced.

5. Implementation and Operation

5.1.1 The detailed CEMP(s)will set out all roles, responsibilities and actions required in respect of implementation of the measures described in this framework CEMP, including:

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

6. Checking and Corrective Action

6.1 Monitoring

6.1.1 To meet the requirement of the detailed CEMP(s), environmental monitoring of the Scheme and its impacts will be undertaken throughout the construction phase:

6.1.2 As part of the monitoring process the contractor will allocate a designated Environmental Site Officer(s), who will be present on Site throughout the construction process and when new activities are commencing. The Environmental Site Officer will observe site activities and report any deviations from the detailed CEMP(s)in a logbook, along with the action taken and general conditions at the time. The Applicant will be informed of any deviations from the detailed CEMP(s)as soon as possible following identification of such issues. The Environmental Site Officer would also act as day-to-day contact with relevant local authorities and other regulatory agencies such as the Environment Agency.

6.1.3 During construction, the Environmental Site Officer will conduct walkover surveys to ensure all requirements of the detailed CEMP(s)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.

6.1.4 The Environmental Manager/ Project Manager will arrange regular formal inspections to ensure the requirements of the detailed CEMP(s)are being met. After completion of the works, the Environmental Site Officer will conduct a final review.

6.2 Records

6.2.1 The Environmental Manager/ Project Manager will retain records of environmental monitoring and implementation of the detailed CEMP(s). This will allow provision of evidence that the detailed CEMP(s)is being implemented effectively. These records will include:

- Environmental Action Schedule;
- Licences and approvals;
- Results of inspections by Environmental Manager/ Project Manager;
- Other environmental surveys and investigations; and
- Environmental equipment test records.

6.2.2 The detailed CEMP(s)will be updated as necessary, with a full review as required (at least quarterly) throughout the construction period.

6.2.3 A brief report will be produced and submitted to the relevant local authorities on a quarterly basis and following completion of commissioning. This will summarise the monitoring process, observed deviations from the detailed CEMP(s)and the corrective actions taken.

7. Management Review

7.1.1 The detailed CEMP(s)will be signed off on completion of the construction works and will form the basis of a operational environmental management plan (OEMP); which will be used to manage the environmental performance of the project through operation.

8. References

Ref. 1 HMSO (2008) The Planning Act 2008, Available at: https://www.legislation.gov.uk/ukpga/2008/29/pdfs/ukpga_20080029_en.pdf [Date Accessed: 07/07/2020].

Ref. 2 HMSO (1974); Control of Pollution Act 1973, Available at: http://www.legislation.gov.uk/ukpga/1974/40/data.pdf [Date Accessed: 07/07/2020].

Ref. 3 HMSO (1995); Environmental Act 1995, Available at: https://www.legislation.gov.uk/ukpga/1995/25/pdfs/ukpga_19950025_en.pdf [Date Accessed: 07/07/2020].

Ref. 4 British Standards Institute (2014) BS 5228:2009+A1:2014 – Code of practice for noise and vibration control on construction and open sites, Noise, BSi, London.

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