B13

Outline Construction Environmental Management Plan

National Grid Cotswolds Visual Impact Provision (VIP) Project

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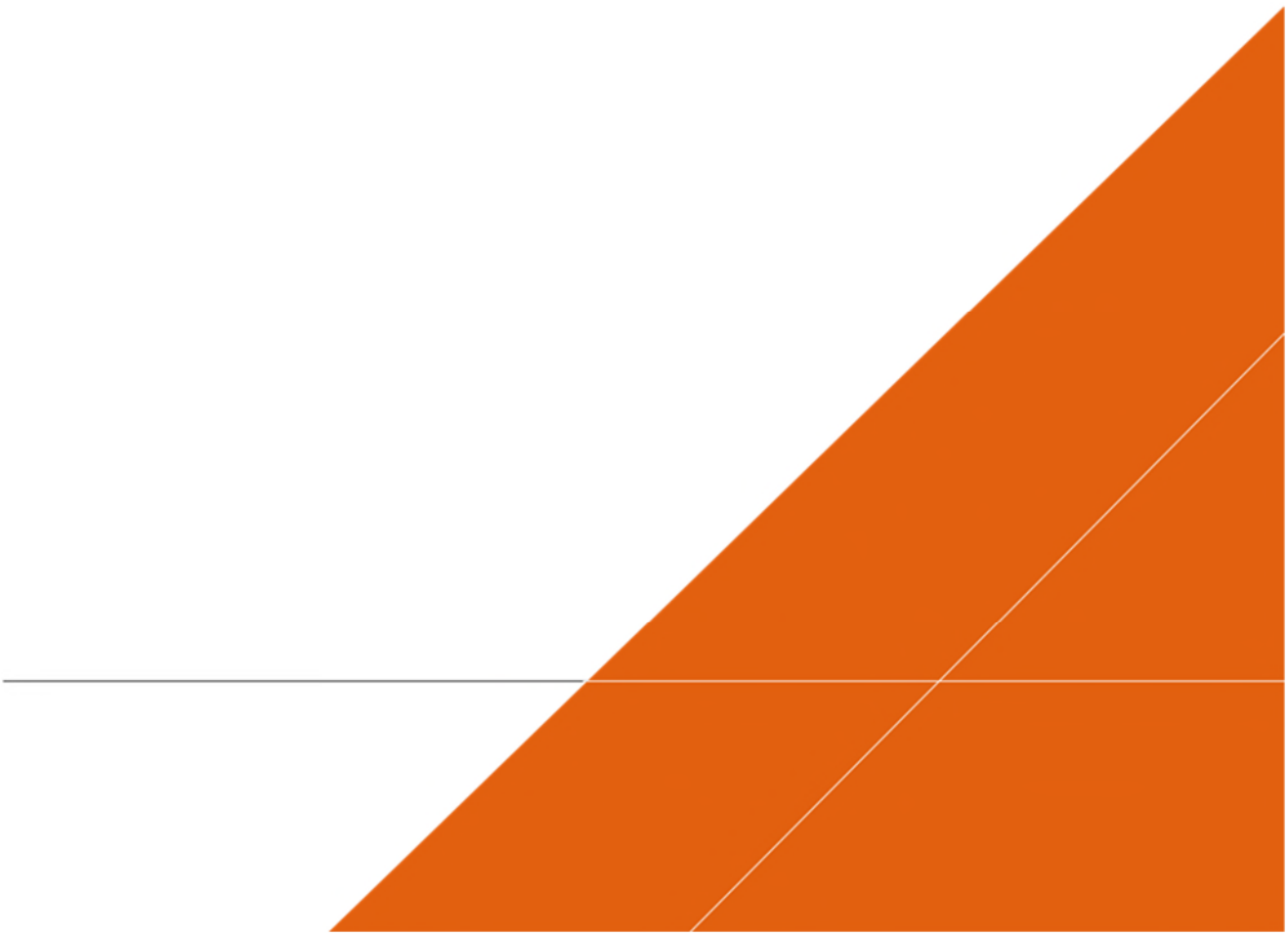

Version Control

Version	Date	Author	Reviewer	Approver	Changes
V01	23/01/24	A. Veasey	N. Lear	N. Hartley	Draft issued pending further information
V02	25/04/24	A. Veasey	N. Lear	N. Hartley	Updated draft following client comments, pending further information
V03	04/06/24	A. Veasey	N. Lear	N. Hartley	Updated following receipt of all CSEC reports
V04	05/06/24	A. Veasey	N. Lear	N. Hartley	Updated following receipt of wider project Arboricultural Impact Assessment

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1 Introduction

1.1 Purpose and Scope

1.1.1 This document forms the Outline Construction Environmental Management Plan (OCEMP) for the Cotswolds Visual Impact Provision (VIP) Project. This document covers the entire Cotswolds Visual Impact Provision (VIP) Project including cable sealing end compounds (CSECs), underground cabling and access works.

1.1.2 This document has been prepared by Arcadis on behalf of the client "National Grid". The contractor will take on the responsibility as specified in this document. The purpose of an OCEMP is to develop, maintain, implement, monitor and improve environmental control procedures in accordance with the relevant legal and regulatory requirements, contract specification and the relevant Contractor Business Management System complying with ISO 14001:2015.

1.1.3 The OCEMP will be updated post consent and will incorporate the requirements included within planning conditions, any changes that are made to mitigation or control measures and will include all relevant licences.

1.1.4 All contractors delivering the project will be required to comply with the requirements of the CEMP as well as the prevailing environmental legislation. The references to guidance documents within this OCEMP are not intended to be exhaustive.

1.2 Objectives

1.2.1 The objectives of the CEMP are to:

- Provide a mechanism for ensuring the delivery of mitigation measures, to reduce environmental effects identified in the environmental assessment phase;
- Ensure compliance with legislation and identify where it will be necessary to obtain authorisation from relevant statutory bodies;
- Provide a framework for compliance auditing and inspection to ensure the agreed environmental aims are being met; and
- Ensure a prompt response to any non-compliance with legislative and planning conditions, including reporting, remediation and any additional mitigation measures required to prevent a recurrence.

1.3 Supporting Plans

1.3.1 This Outline CEMP references a range of supporting documentation including a series of subject specific management plans for specific environmental topics and the environmental management measures that have been identified as mitigation requirements within the environmental assessment. These subject specific management plans will form appendices to the final CEMP and will include the:

- Site Waste Management Plan (OWMP); and
- Construction Traffic Management Plan (CTMP).

1.3.2 In addition to the above plan, the appointed Contractor will be required to develop a series of specific plans to set out in detail the management systems, procedures and approaches that will be implemented during construction to comply with the final CEMP. These plans will include:

- Construction Phase Safety, Health and Environmental (SHE) Plan;
- Emergency Response Plan (ERP), including Pollution Incident Control Plan;
- Site Drainage Plan (SDP);
- Quality Plans;
- Security Plan;
- Out of Hours Call Plan; and
- Construction Programme.

1.4 Structure of this Document

1.4.1 This document comprises the following sections specific to the Cotswolds VIP Project available at this stage:

1. Introduction;
2. The Project Site;
3. Environmental Management and Implementation;
4. Site Operations;
5. Environmental Control Measures; and
6. Communication.

1.4.2 The OCEMP and eventual final CEMP are live documents that should be updated regularly. Further information will be available for the final CEMP prior to construction commencing on site.

2 The Project Site

2.1 Project Description

2.1.1 The purpose of the Proposed Project is to underground a section of 400kV overhead electricity transmission lines, to mitigate the visual impact of existing electricity infrastructure through part of the Cotswolds National Landscape (previously known as Area of Outstanding Natural Beauty). The Proposed Project is located immediately south of the B4632 and from Breakheart Plantation, runs in a south-westerly direction to the east of Cleeve Common Site of Special Scientific Interest (SSSI), past Wontley, Drypool and Wood Farms, towards Dowdeswell Wood.

2.1.2 The Proposed Project will comprise:

- The removal of a section of overhead lines (OHL), including the permanent removal of 16 pylons (18 pylons will be removed in total, however, two will be replaced under Permitted Development).
- Underground cabling of approximately 7km in length.
- Two new cable sealing end compounds (CSECs) at each end (north and south) and associated replacement terminal pylons (as mentioned above), to connect the new underground cables to the remaining existing overhead line.
- Associated temporary works to facilitate construction, including temporary/permanent access junctions and roads, a temporary haul road, construction compounds, material storage and welfare facilities.
- Ancillary off-site infrastructure (including installation of arcing horns and shunt reactor installation/connection).

2.1.3 The majority of the works will be undertaken using Permitted Development rights under Schedule 2 of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended), however, the CSECs require planning permission.

2.1.4 The planning applications are for the construction of a CSEC at Winchcombe and a CSEC at Whittington, to facilitate the connection between new underground cables and the existing OHL and the associated permanent access roads (and bell-mouths) to the CSECs, in addition to temporary bell-mouths created to support the cable construction along classified roads.

2.1.5 The proposed works within the Winchcombe CSEC redline comprise:

- Installation of a terminal pylon to connect the new underground cables to the remaining existing overhead line (note: the pylon is Permitted Development).
- CSEC infrastructure.
- Underground cabling from the Winchcombe CSEC towards the Whittington CSEC (note: this is Permitted Development).
- A permanent access road to the CSEC, including a bell-mouth and turning area.
- A hardstanding area where the overhead line meets with the new underground cables.
- A retaining wall.
- New screening comprising native trees, woodland and scrub planting.
- Temporary bell-mouths with the B4632 and a classified road to facilitate construction.

2.1.6 The proposed works within the Whittington CSEC redline comprise:

- CSEC infrastructure.

- Underground cabling from the Whittington CSEC towards the Winchcombe CSEC (note: this is Permitted Development).
- A permanent access road to the CSEC, including a bell-mouth with Ham Road and a turning area.
- A hardstanding area where the overhead line meets with the new underground cables.
- New screening comprising native trees, woodland and scrub planting.
- Temporary bell-mouths on three classified roads to facilitate construction.

2.1.7 The terminal pylon for the Whittington CSEC is located outside the CSEC redline (and is Permitted Development).

2.2 Site Description

2.2.1 The site is located within the Cotswolds National Landscape (previously known as Area of Outstanding Natural Beauty) and predominantly consists of farmland, enclosed by hedgerows, dry stone walls and post and wire fences, with areas of woodland, the largest of which is Breakheart Plantation towards the north of the site.

2.2.2 Two internationally designated Special Areas of Conservation (SACs) are located within 10km of the site, the closest of which is Dixton Wood SAC approximately 4.91km north west of the site. No other internationally designated sites were identified within 10km. There are five Sites of Special Scientific Interest (SSSIs) located within 5km of the site, the closest of which is Cleeve Common SSSI approximately 60m west of the site and Puckham Woods SSSI approximately 1.1km east of the site. There are twelve non-statutory sites located within 1km of the site, two of which are partly located within the site; Breakheart Plantation Local Wildlife Site (LWS) and Colgate Farm, Dowdeswell conservation road verge. Bat, badger, breeding bird, otter, Roman snail, water vole and white-clawed crayfish surveys have been undertaken on site. Hazel dormouse surveys were in progress at the time of writing this report. Please refer to the Ecological Impact Assessments and separate survey reports prepared by Arcadis (2024) for further details.

2.2.3 Sixteen veteran trees were identified during the baseline arboricultural survey and are therefore afforded protection under the National Planning Policy Framework (NPPF) (2023), Eight woodland blocks and one tree group are designated ancient woodland. Please refer to the Arboricultural Impact Assessments (Arcadis, 2024) for further details. It was confirmed by the Cheltenham, Cotswold and Tewkesbury Borough Councils that no trees surveyed are subject to Tree Preservation Orders or Conservation Area restrictions.

2.2.4 The Proposed Project is not located in an Air Quality Management Area (AQMA) and there are no AQMAs within the surrounding area of Gloucestershire.

2.2.5 The closest noise receptors to the Winchcombe CSEC include Dan Deri and Middle Mill Cottage located 70m north from the application site boundary, Corndean Cottages located 170m east and Postlip Lodge located 160m west from the application site boundary. The closest noise receptors to the Whittington CSEC include Upper Colgate Farm located 190m southwest from the application site boundary, Whittington Court located 220m east and Wood Farm located 440m to the northeast.

2.2.6 The Proposed Project is located within the hydrological catchments of the Rivers Chelt, Isbourne, Swilgate and Coln. There is one Environment Agency (EA) designated ‘main river’; the River Chelt, flowing through the Proposed Project in the south. There are several ordinary watercourses within 500m of the Proposed Project, namely Langley Brook, and a tributary of the River Coln, which flows to the east of the Proposed Project, and the headwaters of the River Isbourne, which becomes an EA designated main river approximately 9km north of the Proposed Project. Parts of the Proposed Project

lie downstream of Dowdeswell Reservoir, Please refer to the Water Resources Assessments prepared for the two planning applications (Arcadis, 2024) for further details.

2.2.7 The Environment Agency Flood Map for Planning (Rivers and Sea) shows that the majority of the Proposed Project is located in Flood Zone 1, with an annual chance of flooding from rivers and the sea less than 1 in 1,000 (0.1%). Parts of the Proposed Project are located in Flood Zones 2 and 3. Land in Flood Zone 2 has an annual chance of flooding from rivers of between 1 in 100 (1%) and 1 in 1000 (0.1%) or from the sea of between 1 in 200 (0.5%) and 1 in 1,000 (0.1%). Land in Flood Zone 3 has an annual chance of flooding from rivers greater than 1 in 100 (1%) or greater than 1 in 200 (0.5%) from the sea. The areas of Flood Zone 2 and 3 are associated with the River Isbourne and the River Chelt. The cable route does not cross any watercourses but crosses three surface water flow routes which lie in topographic depressions and along field boundaries; in these locations, the risk of flooding from surface water is low. The Proposed Project lies within an area where the risk of groundwater flooding is moderate, however, given the nature of the Project, vulnerability to groundwater flooding is low. All other sources of flooding assessed in the Flood Risk Assessment (Arcadis, 2024) are considered to pose a low risk to the Proposed Project. Please refer to the Flood Risk Assessments prepared for the two planning applications (Arcadis, 2024) for further details.

2.2.8 Public Rights of Way (PRoWs) cross or are located within the area of the Proposed Project. To the south, the Cotswold Way routes to the west of the construction corridor and is contiguous with this corridor for approximately 1.9km. PRoWs that cross the construction corridor (cable route) include, Southam Restricted Byway 64 and 140, Stevenhampton Restricted Byway 23, Southam Restricted Byway 64 and Winchcombe Footpath 22, 23, 24, 31, 63 and 70. Please refer to the Public Rights of Way Management Strategy (TTC, 2023) for further details.

2.2.9 The main sequence of bedrock geology comprises of Jurassic Oolitic Limestone underlain by Jurassic Lias Mudstone. The most predominant bedrock identified is the Birdlip Limestone Formation. No superficial deposits are present within the proposed route alignment but limited superficial deposits are present throughout the Proposed Project boundary and consist of alluvium and head. Further artificial ground may potentially be encountered on site.

3 Environmental Management and Implementation

3.1 Key Contacts

3.1.1 The key contact details will be provided in the final CEMP however, an example of the information to be provided is shown in **Table 3-1**. The final CEMP will be updated to include an organogram detailing the management structure of staff responsible for environmental work.

Table 3-1 Example key contact details

Client		
TBC	**Tel:**	TBC
	Mobile:	TBC
	Email:	TBC
	Contact:	TBC
Client Environmental Manager		
TBC	**Tel:**	TBC
	Mobile:	TBC
	Email:	TBC
	Contact:	TBC
Principal Designer		
TBC	**Tel:**	TBC
	Mobile:	TBC
	Email:	TBC
	Contact:	TBC
Principal Contractor		
TBC	**Tel:**	TBC
	Mobile:	TBC
	Email:	TBC
	Contact:	TBC
Environmental Manager		
TBC	**Tel:**	TBC
	Mobile:	TBC
	Email:	TBC
	Contact:	TBC
Clerk of Works		
TBC	**Tel:**	TBC
	Mobile:	TBC
	Email:	TBC
	Contact:	TBC

3.2 Key Roles and Responsibilities

3.2.1 Establishing roles and responsibilities on site is important to ensure the successful construction of the Proposed Project, including the implementation of including the implementation of the Contractor's CEMP.

3.2.2 Key roles and responsibilities are described in **Table 3-2.** This table will be updated in the final CEMP to include names and contact details.

Table 3-2 Key roles and responsibilities

Training	Recipient
Construction Manager (Principal Contractor)	The construction manager has overall responsibility for coordinating and managing all the activities during the construction works. The construction manager has overall responsibility for the environmental performance of the project and all staff. Duties associated with this role include: • Providing information on contract requirements to the Environmental Manager/Advisor following contract award and prior to start of works on site. • Approving the final CEMP and ensure that all controls specified within this CEMP are implemented by employees and sub-contractors. • Ensuring environmental and waste requirements are included on requisitions and in subcontracts and orders. • Ensuring that all required consents/licences are in place prior to work commencing on site. • Logging and monitoring incidents and non-compliances. Reporting incidents and non-compliances to the Client's Project Manager at the earliest possible opportunity. • Ensuring the Client is informed of all environmental complaints. • Providing an initial point of contact for members of the public/local community who have queries regarding the works. • Ensuring employees and sub-contractors receive Induction Training (including environmental) and toolbox talks, as appropriate. • Identifying the competencies of all staff and ensuring delivery of training (including environmental training). • Verifying actions resulting from non-compliances and observations raised during audits are completed by the deadlines set. • Undertaking inspections alongside the Construction Environmental Manager/Advisor to ensure that the environmental controls as set out within the final CEMP are in place and working effectively. • Ensuring all records are retained and readily available on Site. • Ensuring all necessary ecology and habitat surveys have been carried out. • Ensuring all relevant licences have been obtained and are complied with. • Liaising with project ecologist(s) and regulators. • Ensuring staff receive appropriate training and adequate communications. • Ensuring appropriate mitigation measures are implemented including those highlighted in the Landscape and Ecological Management Plan (LEMP).

Training	Recipient
	• Ensuring opportunities for increasing biodiversity are identified.
Site Materials and Waste Manager	The project's Site Materials and Waste Manager is responsible for: • Co-ordinating the designing out Waste and Resource Efficiency programme. • Management of project Materials Management Plan and Site Waste Management Plan. • Ensuring copies of all licences, certificates and exemptions are obtained and checked on the Environment Agency website prior to waste leaving site. • Undertaking waste transfer station audits if required. • Communicating waste management controls to the workforce. • Enforcing waste segregation arrangements. • Monitoring subcontractor waste performance and taking improvement action if required.
Construction Environmental Manager / Advisor	The Construction Environmental Manager / Advisor is responsible for ensuring the project complies with all environmental legislation, consents, objectives, targets and other environmental commitments. Duties associated with this role include: • Preparing the final CEMP and associated documentation, including construction method statements, work instructions and other procedures where they relate to environment. • Ensuring all required consents/licences are in place prior to work commencing on Site. • Providing toolbox talks and environmental inductions to all staff involved in the construction phase. • Undertaking frequent Site inspections to monitor compliance with the environmental licences/consents for the works, ensure that identified and appropriate control measures are effective and ensure compliance with the final CEMP. • Providing advice and liaise with construction teams to ensure that environmental risks are identified, and appropriate controls developed on site. • Acting as the main point of contact between the regulatory authorities and the project on environmental issues. • Dealing with community queries and correspondence on environmental issues. • Implementing follow-up corrective actions to ensure compliance with UK regulations and legislation. • Reviewing and approving of method statements and any changes to the final CEMP in consultation with the Client's Project Manager and the appropriate statutory bodies. • Maintaining and updating the final CEMP during the works. • Keeping records of all activities on Site, environmental problems identified, transgressions noted, and a schedule of all tasks undertaken. • Responding to environmental incidents.
All Site Staff (including subcontractors)	All Site Staff (including subcontractors) are responsible for receiving general environmental awareness training and working in accordance with Method Statements and toolbox talks. Only trained personnel are to manage particular

Training	Recipient
	tasks such as refuelling plant and equipment, managing stores, water quality monitoring and supervising the segregation and collection of waste. The responsibilities of all staff on site throughout the construction of the works will include the following: • Participating in environmental awareness training. • Adhering to all environmental policies, procedures and rules as set out in the final CEMP. • Adhering to legislation, codes of practice, guidance notes relevant to their work. • Determining and implementing good environmental methods of working as set out in the final CEMP. • Organising work to be carried out to the required standard with minimum risk to the environment. • Receiving instructions on their responsibilities to ensure correct environmental practice in line with the final CEMP. • Reporting environmental incidents immediately to the Construction Manager (who is responsible for advising the Client's Project Manager and ensuring that corrective actions are completed).

3.2.3 The above will be supported at key stages of the construction works by environmental specialists including an Ecological Clerk of Works (ECoW).

3.3 Environmental Standards and Legislation

3.3.1 The final CEMP will include the most up to date legal and other environmental obligations relevant to the construction activities on site and copies of the relevant documents noted in this OCEMP. These may include:

a) environmental legislation;
b) environmental commitments and other associated documents submitted as part of the planning application;
c) the conditions of the planning consent; and
d) other licences and consents required to construct the Project.

3.4 Environmental Targets and Objectives

3.4.1 Specific environmental targets and objectives will be developed and agreed between the Client and the Principal Contractor. These should include environmental, social and sustainability targets and key performance indicators ("KPIs"), such as targets for re-using and recycling waste on site.

3.4.2 The final CEMP will include information on targets and objectives set for the project during construction.

3.5 Consents, Permits and Licences

3.5.1 A number of sections of this Outline CEMP reference consents, permits and licences that will be required during construction. A Consents Register will be maintained by the Contractor's Environmental Manager which will document all existing consent conditions, record all new applications made and the status of the applications as well as any specific conditions associated with the consents and licences once they are secured.

3.5.2 The Project Environmental Manager will seek to obtain all required consents and licences prior to construction.

3.5.3 Any conditions included in consents/licences/permits will be documented and considered as part of the planning, design and construction process.

3.5.4 A schedule of the currently known consents, permits and licences required for the Project has been prepared, refer to **Table 3-3**. The final CEMP will list any required licences and consents required as part of the works.

Table 3-3 Required Consents, Permits and Licences

Consent/Licence	Consenting Body	Statutory Timescales
Bespoke Flood Risk Activity Permit (River Isbourne)	Environment Agency	2 months
Ordinary Watercourse Consent (River Isbourne tributary)	Lead Local Flood Authority (LLFA)	2 months
European Protected Species Mitigation (EPSM) Licence for bats (if required)*	Natural England	30 working days
EPSM Licence for Badger*	Natural England	30 working days
EPSM Licence for dormouse*	Natural England	30 working days
Public Path Orders	Gloucestershire County Council	TBC

* May be required dependent upon findings of pre-construction surveys.

3.6 Environmental Auditing

3.6.1 The Principal Contractor should set out in the final CEMP an audit plan for reviewing compliance with requirements of the final CEMP. The implementation of the CEMP should be audited at six-monthly intervals (as a minimum) during the construction period. Records of these audits should be documented and maintained throughout the duration of the project.

3.7 Environmental Reporting

3.7.1 A regular report will be produced recording the monitoring results. The report will record monitoring results, highlight any exceedances above pre-determined trigger levels and record any actions that were taken. The report will also record any complaints that were received and how these were dealt with.

3.7.2 The Principal Contractor will report its environmental performance internally regularly using a project reporting dashboard or similar summarising the required monitored aspects. In addition, regular project reviews will be scheduled with the Client.

3.8 Environmental Inspections

3.8.1 Work areas will be inspected regularly by members of the site team and monthly during Health & Safety advisor visits. Completed inspections will be reviewed by the Construction Manager with follow-up actions addressed and checked during subsequent inspections.

3.9 Environmental Monitoring

3.9.1 During the works, required monitoring will be detailed in the final CEMP and include as a minimum:

- Routine inspections;
- Monitoring for noise and vibration;
- Dust monitoring on-site and off-site;
- Supervision for vegetation clearance;
- Water usage;
- Environmental incidents;
- Communication and complaints;
- Waste and excavated material arisings, reuse on site, disposal, materials recycled content;
- Project energy consumption;
- Sub-contractor and supplier location;
- Construction traffic; and
- Biodiversity Net Gain.

3.9.2 Arrangements will be put in place to investigate and provide reports on any potential or actual significant pollution incidents, including, as appropriate:

- A description of the pollution incident, including its location (and Ordnance Survey ("OS") grid reference), the type and quantity of contaminant and the likely receptors;
- Contributory causes;
- Adverse effects;
- Measures implemented to mitigate adverse effects; and
- Any recommendations to reduce the risk of incidents occurring.

3.10 Non-Conformance

3.10.1 The implementation of the final CEMP will be audited during the construction period. The audit programme and review process will be documented within the final CEMP.

3.10.2 Control procedures required within the final CEMP will be recorded on a Non-Conformance Report. Corrective actions will be implemented to ensure that future non-conformance does not occur.

3.10.3 Two registers will be set up in the final CEMP as follows:

- a Non-Conformance & Corrective Action Register (which forms part of the Quality Procedures and is not exclusively for environmental issues); and
- an Environmental Incidents Register.

3.10.4 The Non-Conformance & Corrective Action Register will detail:

- the date the non-conformance was identified;
- a description of the non-conformance;
- the implications of the non-conformance in terms of environmental impacts;

- a description of the elements of the environment affected by the impact (receptors);
- the corrective actions aimed at addressing the non-conformance;
- the persons responsible for implementing corrective actions; and
- the timeframe for implementation of corrective actions.

3.10.5 The Environmental Incidents Register will detail:

- the date that the environmental incident occurred;
- a description of the environmental incident situation;
- the impact of the environmental incidents;
- a description of the elements of the environment which have been subjected to impacts caused by environmental incidents (receptors);
- the actions to be implemented in response to the environmental incident;
- the person responsible for undertaking actions; and
- the timeframe for implementing actions.

3.11 Training, Awareness and Competence

3.11.1 The Principal Contractor should ensure site staff (including subcontractors) are aware of their environmental obligations throughout the project lifecycle. Site staff should be required to participate in a site-specific induction outlining environmental protection and enhancement measures to be implemented.

3.11.2 Site staff should complete general environmental awareness training as part of their induction, and this should outline their responsibilities under the CEMP. The training should ensure site staff understand their obligation to exercise due diligence for environmental matters. Suitable induction training and on-going programmes of environmental training will, as a minimum, include:

- Importance and relevance of the CEMP;
- Roles and responsibilities in relation to compliance with consents and designations, permits and operating procedures;
- Location of sensitive receptors and areas of high environmental value;
- Familiarisation with site environmental controls;
- Spill response and emergency procedures;
- Hazard and risk management to ensure personnel understand the potential impacts and proposed mitigation measures; and
- Community complaints management procedure.

3.11.3 The Principal Contractor is responsible for identifying the training needs of site staff to enable appropriate training to be provided and will engage suitably qualified and experienced professionals for this purpose. The training will include relevant site briefings and toolbox talks to equip site staff with the necessary knowledge of health, safety, community relations and environmental management, and an ability to follow environmental control measures and to advise employees of changing circumstances as work progresses. A suggested programme of environmental training is provided in **Table 3-4.**

Table 3-4 Suggested programme of environmental training

Training	Recipient	Frequency	Delivered by
Induction to EMP	Site staff	Beginning of contract / new starters	Construction Environmental Manager / Advisor
Induction to EMP (refresher)	Site Staff	Two months after beginning of contract / new starters	Construction Environmental Manager / Advisor
Environmental toolbox talks	Site Staff	Once per month	Construction Environmental Manager / Advisor
Environmental impacts and mitigation	Site Staff	Beginning of contract and then quarterly	Construction Environmental Manager / Advisor
Spill kit training	Site Staff	Beginning of contract and then every six months	Construction Environmental Manager / Advisor
Site waste management training	Site Staff	Beginning of contract and then every six months	Construction Environmental Manager / Advisor

3.11.4 The final CEMP will set out the final agreed objectives and will include a programme of actions to achieve the project's environmental targets and objectives. Progress towards these should be monitored, measured and reported to the Client by the Principal Contractor monthly.

3.11.5 Toolbox talks are provided for delivery to the workforce including sub-contractors covering specific topics such as working near to water, spill controls, protected species, waste management, topsoil management. Where possible, toolbox talks will be delivered when seasonally appropriate (e.g. nesting birds in early Spring). Toolbox talks specific to the project site will be developed and included in the final CEMP.

4 Site Operations

4.1 Introduction

4.1.1 This chapter of the Outline CEMP describes the environmental management measures that will be implemented during the construction of the Proposed Project.

4.2 Construction Programme

4.2.1 A construction programme and phasing plan will be included in the final CEMP. The works are anticipated to commence in Q1 2026 and complete in Q3 2030.

4.2.2 The current envisaged programme is as follows:

- **Mobilisation**: this will include the construction of the site access junctions, establishment of laydown areas and compounds to the north and south of the cable route (additional laydown areas will be established along the haul road route in two locations), and the construction of the main staff car park. The latter will be situated to the south and will be accessed from the A40.
- **Enabling Work**: this will include the removal of boundary features along the route corridor and any necessary realignment of local access roads.
- **Access and Haul Route Construction**: this will comprise the construction of the haul route between the southern and northern site compounds.
- **Cable Installation**: trench excavation and laying of the underground cables.
- **Cable Sealing End Compound Construction**: the construction of the two compounds, which connect the underground and overhead line cables, with one compound constructed at either end of the route.
- **400kV Overhead Line Dismantling works**: this will comprise the systematic dismantling of the existing overhead line cable route, which will make use of the established haul road.
- **Reinstatement and Demobilisation**: this will comprise the removal of all temporary compounds, laydown areas, car parking and the haul road.

4.2.3 At this stage in the design process, the project programme is preliminary and may be adjusted by the appointed contractor. To accommodate this, a degree of flexibility has been built into the construction programme to enable activities to be brought forward or pushed back as required.

4.3 Hours of work

4.3.1 The hours of work on site are as follows:

- 07:00hrs – 19:00hrs Monday to Friday.
- Saturdays (at reduced hours).
- No works are permitted on Sundays and Bank Holidays.
- Additional after-hours working and weekend working may be required and is to be agreed with the Project Manager, the Site Manager and the Client and comply with Statutory Imposed Planning Conditions.

4.4 Access and Egress

4.4.1 The three proposed construction routes are:

- Construction Route 1c (construction route for northern access): B4632 – High Street/Deep Street – B4075 – A435 – A46 – M5;
- Construction Route 2a (construction route for southern access): A40 – A436 – A417 – M5; and
- Construction Route 2b (construction route for southern access): A40 – A429 – A424 – A44 – A46 – M5. This route is used as a quarry route by Farmington Quarry. It may be used as one of the primary construction routes if there are issues along the other construction routes.

4.4.2 A temporary haul road on site will provide access to the whole cable route corridor and transport personnel, materials and waste between the construction works and the compounds and laydown areas.

4.4.3 As the construction works would require the delivery of cable drums which are considered to be Abnormal Indivisible Loads (AILs), an Abnormal Load Assessment (ALA) (Report Reference: PDD-101300-REP-026) has been prepared by TTC. Within the ALA, TTC have highlighted that the preferred route for AILs to the proposed haul road at the A40 would be Route 2a, and Route 1c to the proposed haul road at the B4632.

4.5 Site Layout

4.5.1 As far as reasonably practicable and appropriate, the site layout and appearance has been designed using the following principles:

- The compound will be demarcated. The construction site will be fully secured.
- Existing features will screen the construction compounds where possible.
- Storage sites, fixed plant and machinery equipment and temporary offices will be located to limit environmental impacts, as far as reasonably practicable, and having due regard to neighbouring areas, as far as allowed by the constraints of the site.
- Site lighting will be located and directed so as not to intrude into occupied residential properties, sensitive areas, sensitive ecology or constitute a road hazard.
- Security cameras will be sited and directed so that they do not intrude into occupied residential properties.
- Site plant and facilities will be powered from mains electrical sources, where practicable.

Compound Offices/Welfare

4.5.2 Construction will require the establishment of construction compounds to accept material deliveries, provide storage for materials, tools, plant and equipment, provide office and welfare facilities for workers and a base for vehicle recovery. The compounds will need to be located in such a way to allow easy access and egress from site. The final CEMP will include a plan of the proposed construction compound layouts.

Site Security and Signage

4.5.3 The Principal Contractor has a statutory duty to prevent unauthorised access to the Site. Site specific assessments of the security and trespass risk will be undertaken and appropriate control measures implemented.

4.5.4 The general security of the site falls into two main categories:

- Maintaining a secure perimeter; and
- Preventing unauthorised access.

4.5.5 Measures implemented by the Principal Contractor to prevent unauthorised access to the site may include:

- Use of high perimeter fencing/hoarding where necessary for site security and public safety.
  - Standard hoarding will be of a suitable height and material;
  - Suitable measures will be used for tree protection;
  - Where reasonably practicable existing walls, fences, hedges and earth banks will be retained;
  - Notices will be displayed on all site boundaries, to warn of hazards on site such as deep excavations, construction access, etc;
  - Appropriate sight lines/visibility splays will be maintained to ensure safety of both vehicles and pedestrians is preserved; and
  - Temporary fences may be used in certain areas, such as for short term occupation of areas.
- Lighting at site perimeters where required (designed as per the lighting specification set out above);
- Security guards and patrols;
- CCTV and infrared surveillance, computerised access control systems and alarm systems where required;
- Consultation with neighbours on site security matters;
- Consultation with local crime prevention officers on security proposals for each site with regular liaison to review security effectiveness and response to incidents; and
- Immobilisation of plant out of hours, removing or securing hazardous materials from site, securing fuel storage containers and preventing unauthorised use of scaffolding to gain access to restricted areas and neighbouring properties.

4.5.6 Robust signage will be placed at strategic locations to ensure pedestrian and site personnel are made aware of high-risk areas. The signage will highlight the following aspects:

- Live construction areas;
- Directional signage;
- Lifting operations etc;
- PPE working area and safe zones;
- Emergency exits;
- Storage areas;
- Logistics board showing site access and egress routes (updated as construction progresses); and
- No Crossing Zones.

Construction Materials

4.5.7 The construction materials required will likely be those normally associated with a project of this nature, including cables, steel, concrete, stone, gravel, membrane and tarmac. Where feasible, materials will be sourced locally.

Storage of Materials

4.5.8 The Principal Contractor shall make available a suitable quantity of pollution control and prevention equipment, including sorbent pads and sorbent granules or similar material. These materials shall be

readily available at the site always and will be under regular checks. Appropriate provision shall be made to ensure that sorbent pads booms and granules are kept dry prior to use. Secure, hard-standing space will be designated alongside loading and unloading areas for the initial storage of plant and materials. Details of this will be included in the final CEMP and SWMP.

4.5.9 The following measures shall be implemented on site for the storage of materials by the contractor:

- All oil and diesel storage facilities will be at least 10m from any watercourse including surface water drains; and at least 50m from any borehole or well;
- Spill kits and drip trays will be provided for all equipment and at locations where any liquids are stored and dispensed;
- All static Plant, such as pumps and generators, will have integral drip trays where possible or as secondary requirement external drip trays, that are to be checked and emptied daily in accordance with the Pollution Prevention & Control Plan or Water Management Plan;
- For larger items of Plant or mobile Plant such as side-booms, excavators etc, where the continuous use of drip trays is not practical, the Plant shall undergo daily inspections by a competent person to check for defects. Records of inspections shall be maintained and held on file by the Contractor. Where defects are evident the item of Plant shall be removed from the Site immediately; and serviced or replaced as soon as possible;
- All hazardous substances (including liquids and solids) will be stored within secure, impermeable, bunded areas, protected from the rain, to remove the risk of migration to groundwater or a nearby watercourse to the satisfaction of the Environment Agency and in accordance with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). The measures proposed will reduce the risk of contaminants and suspended solids to migrating to surface and groundwater and protect water quality and the ecosystems that the water resources support;
- Storage facilities will be kept secure to prevent acts of vandalism that could result in leaks or spills; and
- All containers of any size will be correctly labelled indicting their contents and any hazard warning signs.

Deliveries

4.5.10 For deliveries activities it will be ensured that:

- Site specific procedures are in place for bulk deliveries and AILs;
- Delivery points and vehicle routes are clearly marked;
- Emergency procedures are displayed and a suitably sized spill kit us available at all delivery points and staff are trained in these procedures and the use of spill kits;
- Suitable facilities (for example, drip trays, drum trolley) meet the sites specific dispensing needs and are maintained and used;
- Tank capacities and current content levels are checked prior to accepting a delivery to ensure that they are not overfilled;
- All deliveries are supervised throughout the delivery operation;
- Spill prevention equipment is used during dispensing activities; and
- All spillages occurring during dispensing and handling activities are cleared up and reported via the SHESQ Manager and are dealt with.

Vehicles and Plants

4.5.11 The Principal Contractor will ensure:

- Vehicles and plant provided for use will be in good working order to ensure optimum fuel efficiency and are free from leaks. Plant with integral bunding and/or drip trays will be specified;
- Any hired vehicles and plant will be checked on delivery and not accepted if they are not in good working order;
- Ensure as a minimum that all vehicles that access the construction site shall carry a spill kit for immediate use in the event of a pollution incident;
- Vehicles and plant will be regularly maintained to ensure that they are working at optimum efficiency and are quickly repaired when not in good working order;
- Vehicles and plant will not be overfilled with fuel;
- Fuel/oil refilling will take place on hardstanding using dip trays and not over or nears drains or where thus is not reasonably practicable, drip trays and/or drain covers will be used to reduce the risk of spills; and
- Plant containing oils will be inspected daily and maintained to prevent and identify leaks.

5 Environmental Control Measures

5.1 General Arrangements

5.1.1 Copies of the following documents will be held on site:

- Planning approval;
- The final CEMP;
- Any licences required;
- Construction Traffic Management Plan;
- All relevant Environmental Management Plans; and
- Staff training records.

5.1.2 To reduce the likelihood of either an environmental incident or nuisance occurring the following measures will be used, where relevant:

- Inductions/briefings for all personnel.
- Prohibition of open fires, and a requirement to take preventative measures to reduce the likelihood of fires;
- Removal or stopping and sealing of drains and sewers taken out of use;
- Use of one-way systems, passing places and turning circle within compound and working areas to minimise reversing noise;
- No discharge of site runoff to ditches, watercourses, drains, sewers or soakaways without consultation with the appropriate authority;
- Maintenance of wheel washing facilities or other containment measures;
- Provision of dust suppression facilities where required;
- Location of storage, machinery, equipment and temporary buildings to reduce environmental effects and where practicable, outside flood risk areas;
- Use of modern well-maintained plant and equipment;
- The use of modern specification noise alarms that meet the particular safety requirements of the site, such as broadband reversing warnings, or proximity sensors to reduce the requirement for traditional reversing alarms;
- Controls on lighting/illumination to reduce visual intrusion or any adverse effect on sensitive ecology;
- The location of site accommodation;
- Containing and limiting visual intrusion of construction sites, as far as reasonably practicable;
- Provision of maps showing sensitive areas and buffer zones where no pollutants are to be stored or used;
- Where reasonably practicable, maintenance of public rights of way (including temporary bypasses) for pedestrians, cyclists and equestrians affected by the Project, including reasonable adjustments to maintain or achieve inclusive access;
- Adequate welfare facilities for staff; and
- Smoking areas at site offices/compounds or work sites equipped with containers for smoking wastes - these will not be located at the boundary of working areas or adjacent to neighbouring land.

5.1.3 Prior to the commencement of construction full details of all plant to be used, including manufacturers' specifications, will be discussed with the relevant local authorities.

5.2 Emergency Procedures

Dealing with Spills

5.2.1 There is a risk of contaminants such as hydrocarbons being introduced to the environment through leakage or spillage from storage, vehicles, plant and machinery (e.g. during refuelling) and the storage and disposal of wastewater. The Principal Contractor will adhere to industry standard best practice measures to minimise this risk, including the following:

- Refuelling of plant and vehicles on site will be undertaken in a designated area away from drains with the use of drip trays under pumps;
- A spillage kit with sand, earth or commercial products that are approved for stored materials will be kept on site close to the storage area; training will be provided to staff on site on how to use and dispose of these correctly;
- In the event of a spillage on-site, the material will be contained (using an absorbent material such as sand or soil or commercially available booms). Sorbents will be used to soak up a spill and stop it spreading on hard surfaces. Using sorbents generates waste and this method will only be used on small spills, or where a spill has been contained to stop further spread. All used sorbents will be disposed of at an accredited site for disposal;
- If it is not possible to stop the spill at source, significant attempts will be made to stop it as close to the source as possible. If possible, the spilling material will be safely moved into another container to limit the size of the spill. Use of a suitable container and pump may be required;
- Fuel, oil and chemicals will be stored in secondary containment and located a minimum of 10m from any water course; and
- Any storage of oil will be compliant with the Control of Pollution (Oil Storage) (England) Regulations 2001. These regulations apply to the storage of any volume of any kind of oil, more prescriptive requirements applying to industrial, commercial and institutional sites storing over 200 litres of oil.

Unexploded Ordnance

5.2.2 A desk-based assessment has been undertaken for unexploded ordnance (“UXO”) (refer to the UXO Desk Study & Risk Assessment prepared by Zetica, 2023). The assessment identified no significant sources of UXO hazards on the site and the site to be at a low UXO hazard level. The report concluded that if additional comfort is required to address the residual UXO risk, a formal UXO awareness briefing can be provided, however no additional measures are considered essential to reduce the UXO risk on the site to As Low As is Reasonably Practicable (ALARP).

5.2.3 The Contractor shall undertake construction risk assessments and prepare an emergency response plan based on this information.

5.2.4 Awareness of hazards from UXO will be highlighted through the site induction process and toolbox talks. This will assist in establishing appropriate actions to take in the event that a suspect item is uncovered.

5.2.5 Should the Principal Contractor(s) consider it likely that UXO could be encountered during the works an emergency response procedure will be prepared in accordance with Unexploded ordnance, A guide for the construction industry CIRIA C681 (CIRIA, 2009) as part of the final CEMP and implemented by the Principal Contractor to respond to any discovery of UXO. This emergency response procedure will include notifications to the relevant local authorities and emergency services.

COSHH

5.2.6 The Principal Contractor will produce and maintain a Control of Substances Hazardous to Health (COSHH) inventory and method statement setting out the process for preferentially selecting chemical products with lower health and environmental impacts subject to performance needs.

5.3 Construction Traffic Management Plan

5.3.1 This OCEMP should be read in conjunction with the Cotswolds VIP Outline Construction Traffic Management Plan (TTC, 2023). The CTMP should be appended to **Appendix A** in the final CEMP.

5.4 Dust Mitigation

5.4.1 Construction activities such as demolition, excavation, ground works, cutting, construction and storage of materials have the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from highway surfaces.

5.4.2 Construction Dust Assessments have been prepared for the two planning applications (Arcadis, 2024) (refer to report references 30167905-ARC-NC-260-RP-A-00002 and 30167905-ARC-SC-260-RP-A-00003). **Appendix B** contains outline activities to manage dust on site during construction as indicated within the Construction Dust Assessments.

5.5 Noise and Vibration Mitigation

5.5.1 The construction phase of the Project may introduce additional sources of noise and vibration during construction activities such as, construction work and operation of construction traffic, plant and equipment. Please refer to the separate report prepared by WSP (2024).

5.5.2 **Appendix C** contains outline proposals to manage noise and vibration during construction.

5.6 Ground Conditions, Contaminated Land and Mining Mitigation

5.6.1 The construction of the Project may potentially introduce additional sources of contamination during works. Please refer to the Geotechnical Desk Study prepared by BakerHicks (2023).

5.6.2 **Appendix D** contains construction phase measures to be incorporated into the final CEMP to mitigate potential impacts.

5.7 Landscape Mitigation

5.7.1 Outline Landscape and Ecological Management Plans (LEMPs) have been prepared separately which contain the landscape management elements to be considered during construction. The final CEMP will incorporate the recommended landscape mitigation measures outlined in the final LEMPs.

5.8 Ecological Mitigation and Management

5.8.1 The Ecological Impact Assessments and Outline LEMPs reflect the results of the ecological surveys undertaken. The final LEMPs will detail measures to manage the risk of adversely affecting flora and fauna on and within the vicinity of the site, including method statements for protected species identified on site. The LEMPs will also detail ecological watching brief requirements, monitoring or additional survey requirements. The final CEMP will incorporate the recommended protected species measures outlined in the LEMPs.

5.9 Arboricultural Mitigation

5.9.1 An Arboricultural Impact Assessment (AIA) has been prepared by Arcadis (2024) for the whole project and AIAs have been prepared for the two planning applications, detailing tree removals or Root Protection Area (RPA) incursions within RPAs of the retained trees as a result of the Proposed Project. The AIAs detail trees to be removed due to the design and access requirements and any proposed tree facilitation pruning works. This is also be accompanied by an assessment of the likely impacts due to construction activity on the trees to be retained. Indicative arboricultural mitigation measures are provided which including recommendations for tree re-provisioning. The AIAs are accompanied by Tree Impact and Protection Plans based on the proposed design.

5.9.2 Any tree works must be carried out by a qualified contractor must be in accordance with BS 3998: 2010: Tree Work – Recommendations.

5.9.3 All earthworks must remain a minimum of 1.5m from the edge of retained trees and groups of trees RPAs and veteran tree buffer zones as defined by tree protection fencelines shown in the AIAs.

5.9.4 Temporary ground protection will be required where pedestrians, machinery and/or vehicles are working within the RPAs of some trees (please refer to the AIA report). This should be capable of supporting any traffic entering or using the site without being distorted or causing compaction of underlying soil. For example, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane. Ground protection should remain in-situ throughout the duration of the proposed works and only be removed upon completion.

5.9.5 Site operations involving plant with booms, jibs and counterweights should be planned in advance to prevent contact with retained trees. All operations involving such plant in close proximity to trees should be conducted under the supervision of a banksman to ensure that adequate clearance from the retained trees is maintained.

5.9.6 Adequate allowance for the planning and implementation of site compounds and storage areas and the routing of services for the Proposed Project must be made to avoid encroachment with the RPA of, or prevent direct contact with, all retained trees on site.

5.9.7 Please refer to the AIA for further detail.

5.10 Heritage/Archaeology Mitigation

5.10.1 The proposed project has the potential to result in direct permanent impacts to buried archaeological and cultural heritage remains. Please refer to the Archaeological Statement prepared by Cotswold Archaeology (2024).

5.10.2 **Appendix F** contains outline details of the management of the heritage/archaeology assets during construction.

5.11 Water Mitigation

5.11.1 Please refer to the Water Resources Assessments and Flood Risk Assessments (Arcadis, 2024).

5.11.2 **Appendix G** contains outline details of the management of the water environment during construction.

5.12 Site Waste Mitigation

5.12.1 A Site Waste Management Plan will be prepared by the Principal Contractor, prior to the commencement of construction. Appendix H contains outline details of site-specific waste mitigation measures during construction.

5.13 Soil Mitigation

5.13.1 The construction phase of the Proposed Project will result in temporary disturbance to agricultural land/soils and will include the loss of approximately 0.5 hectares of agricultural land from the development of the cable sealing end compounds (CSECs), however, land will also be returned to agriculture from the permanent removal of 16 OHL pylons. The soil mitigation measures outlined in **Appendix I** are required to be incorporated into the final CEMP and implemented to minimise soil mishandling during construction, allowing for excavated materials to be reused on-site.

5.13.2 The sustainable re-use of the soil resource will be undertaken in line with the Construction Code of Practice for the Sustainable Use of Soil on Construction Sites. This has been achieved through the development of an Agricultural Land Classification (ALC) Survey Report to detail the soil (topsoil and subsoil) resources present and determine the quality of agricultural land. This will inform the Soil Management Plan (SMP) to be prepared post consent detailing how these soil resources will be stripped, stockpiled, and re-used. These plans will form part of the final CEMP.

5.13.3 **Appendix I** contains outline details of soil mitigation during construction.

6 Communication

6.1 Community Liaison

6.1.1 During construction, a programme of effective and sustained communications is to be incorporated into the Communication Plan including:

- A project newsletter/dedicated webpage updates will be issued on a regular basis and will provide information regarding construction progress and planned works.
- Notification to local residents, and other key stakeholders on progress of construction works. The Principal Contractor will notify the local authority, occupiers of nearby or affected properties, businesses and adjacent or affected parish councils a minimum of two weeks in advance of planned construction works that may affect them. Information included in the notifications will include, as appropriate:
  - The location of the planned works.
  - The activities to be carried out.
  - The duration of the planned works and the periods within which works will be undertaken (i.e., whether during normal working hours, during the evening or overnight).
  - The anticipated effects of the planned works.
  - The measures to be implemented in line with the final CEMP to mitigate the impact of the planned works.
  - Enquiries and complaints procedure.

6.2 Internal Communication

6.2.1 Regular internal project meetings will be held and include as a minimum:

- Prestart Safety and Environmental Induction Meeting (all sub-contractors).
- Site Safety and Environmental Meeting (all sub-contractors).

6.2.2 The Project Environmental Co-ordinator will arrange regular site environmental meetings with the Site Supervisors and others as required. The purpose will be to:

- Continually assess compliance with environmental requirements.
- Determine liaison requirements with external authorities.
- Assess environmental competencies and training needs.
- Review environmental inspections and performance on site.
- Review the findings from internal and external environmental audits.
- Share best practice and accidents/near misses.

6.3 Complaints

6.3.1 A project information line will be used to deal with enquiries and complaints from the public. The information line will consist of a phone line, email and website contact facility. The relevant contact number, email and website addresses for the information line will be displayed on signs around the construction site. Responsibility for maintaining the information line will be confirmed by the Client.

6.3.2 An enquiry and complaint handling system will be implemented by the party responsible for maintaining the information line and include measures to:

- Log enquiries and complaints in a register;

- Deal with enquiries and complaints appropriately, recognising that they may be due to the effect of construction works on the interests of, and impacts on persons and their properties;
- Pass on the enquiry or complaint to the correct person for review and appropriate action if the person recording it cannot do so;
- Take appropriate action and response to enquiries or complaints; and
- Outline the process to review enquiries and complaints regularly to assess the adequacy, efficiency and effectiveness of the enquiries and complaints system and the measures being taken to respond to any enquiries or complaints.

6.3.3 The extent of the action taken will depend on the nature of the complaint. All complaints will be investigated to establish the cause of the complaint and whether the works comply with the Project's environmental requirements and other relevant requirements such as legislation, standards and codes of practice.

Appendix A

Construction Traffic Management Plan and Public Right of Way Management Strategy

Please refer to the Cotswolds VIP Outline Construction Traffic Management Plan (CTMP) and separate Public Right of Way Management Strategy.

The CTMP and Public Right of Way Management Strategy will be developed once a Principal Contractor is appointed.

The following control measures are identified in the Transport Appraisal (Arcadis, 2024) and will be applied during construction.

The identified control measures will be included in the CTMP to be updated by the FEED contractor. The CTMP is a live document, which will be updated to include any relevant developments and results of evaluation of its effectiveness, which occur during the execution of the FEED stage of the Proposed Project.

Control measures to be applied during the construction phase of the Proposed Project are as follows:

Site Access Control

- A traffic marshal will be appointed to control access to and from each site where required and ensure drivers have been through the site induction process.

Site Security Measures

- Appropriate security fencing will be established around the sites including compounds, works areas and areas used for the storage of plant and machinery and hazardous substances. These will be subject to regular inspection.
- Where necessary, Closed Circuit Television (CCTV) will be installed within construction areas. Remote cameras will be installed at compounds for security purposes when items of value are left, with permanent CCTV being installed at the primary compounds.
- Access to working areas will be restricted to approved personnel only, with the Site Supervisor to monitor and manage traffic and site visitors.

Personnel Access

- Security gates will be used to ensure that only authorised personnel and deliveries can enter and will remain closed at all other times on access to the CDM work area (gates within the site may remain open).
- Personnel requiring access to the site for reasons other than carrying out physical construction work will be treated as a site visitor. All visitors will be granted access by appointment only and must in all cases be authorised by a senior manager at each site and be required to attend a site induction session to maintain health and safety.
- All visitors, except for authorised collection or delivery drivers, shall always be the responsibility of the permanent pass holder whilst on site and must sign in at security.
- Visitors must always use the pedestrian walkways and access gates provided for safe and easy access to site office.
- Compounds will be segregated into non-PPE and PPE areas. Personnel will not be allowed access into PPE areas without the appropriate equipment as per construction standards.

Pedestrian Routes

- Safe pedestrian access routes between car parking locations, access points, work areas, site offices and welfare facilities will be provided. Where pedestrian and vehicle routes interact, appropriate crossing points and segregation will be provided.

HGV Booking

- A booking system (Delivery Management System - DMS) will be used to ensure deliveries to the sites will be spread across the whole day where possible.
- Dedicated members of staff will travel on the construction routes and monitor LGV and HGV traffic using the routes associated with the Proposed Project. Staff will be trained to conduct this monitoring process, collect and collate data.
- Delivery vehicle dwell times will be kept to a minimum; vehicle engines will also be turned off to reduce noise pollution. Appropriate traffic management including clear and visible construction works signage will be implemented and used when/where required; this will be submitted by the Contractor prior to commencement, as requested. Banksmen will also be in position as and when required.

Traffic Marshal

- Trained personnel (Traffic Marshal) will be in place at key locations when necessary, during the construction of the Proposed Project.

HGV Emissions

- All vehicles used in the construction of the Proposed Project will be to Euro standard V class or better.

Parking and Loading

- Appropriate loading/unloading and parking areas for construction vehicles will be designated to avoid the need for parking or waiting on the highway.
- Upon arrival to each site compound, all deliveries will report to the coordinated delivery contact. This will be communicated to all suppliers and subcontractors at their site induction for all new drivers.
- Whilst on-site, the delivery operation will be controlled by a trained Traffic Marshal, from the point of guiding a vehicle to its designated off-loading area to guiding the vehicle back onto the Local Road Network. Both the Traffic Marshal and drivers will follow relevant safety procedures and operate the same signalling systems.
- Adequate parking will be provided to ensure that the safety and efficient operation of the public highway is not reduced. At no time will construction personnel, including contractors and suppliers, be authorised to park outside of the site boundaries, including on the public highway, unless prior permission has been granted by either the relevant landowner or the Local Highway Authority (LHA).
- On-site parking will be managed to ensure safety of all personnel. Parking terms and regulations will be clearly displayed using signage displayed in the immediate vicinity of the parking provision.

Road Safety

- Suitable space within the works site will be provided for all vehicles to park, unload and manoeuvre, therefore enabling all egressing vehicles to exit onto the access road in a forward-facing direction. Reversing onto any public highway will not be permitted.
- A ‘Near Miss’ reporting system will be implemented for all highways incidents. The contractor will ensure that all accidents and near misses are recorded within this system and that drivers are instructed to report all issues recorded through the system. Any accidents or near misses involving vehicles travelling to / from the site will be recorded, investigated, and reported internally and to the client referring specific incidents to the LHA as deemed necessary.
- The contractor will retain records of all incidents (e.g. speeding and driver hours) and submit to the relevant authorities upon request. If emerging issues are identified, the contractor and the LHA will initiate discussions with relevant stakeholders.

Road Condition Surveys

- Each access point to the Local Road Network by any access road or track used by the Proposed Project will be inspected. These inspections shall take place before first use, regularly during use and following final use, to ensure that the surface of the highway altered for the Proposed Project remains in good repair and safe for the public traffic using the highway. Any repairs that are required

to maintain the altered highway throughout the construction period will be carried out in a timely manner.

- Regular inspections will be carried out in all locations where the works corridor passes over a public highway, private road, or PRoW. These will be recorded, and remedial action will be taken to remove any dirt and debris resulting from construction operations. Any damage to the surface will be scheduled for repair at the earliest opportunity.
- The haul road will be surveyed weekly to ensure its integrity is maintained and any remedial work completed as necessary.

Wheel Washing/Dry Rumble

- When leaving the CDM construction site, all vehicles exiting the site either via the A40 or B4632 will be checked and cleaned if required prior to using the Local Road Network. If required, a road sweeper will be utilised to further ensure that the Local Road Network remains safe and clear of debris.

Tipper Covers

- It is expected that all tippers importing or removing loose material will be covered if required and it is the responsibility of the Traffic Marshall to ensure vehicles do not leave site without the appropriate covers. Any vehicles arriving to site without appropriate covers will be reported immediately to ensure the supplier is informed and appropriate action taken.

Vehicle Identification

- Vehicles dedicated to the Proposed Project long term, i.e. staff cars, Site Supervisor commercial LGVs, will also be inducted and their registrations stored on record.
- If the public have any issues with the vehicles travelling to/from Site, they will be able to report this to a free phone line, which will then be investigated.

Pedestrian Access Routes

- Safe pedestrian access routes between car parking locations, access points, work areas, site offices and welfare facilities will be provided within the car park, laydown areas and compounds, where possible. Pedestrian access along the haul road will not generally be permitted, though all personnel will be afforded PPE and all construction vehicle drivers will be instructed to travel no more than15 mph along the haul road. Where pedestrian and vehicle routes interact, appropriate crossing points and segregation will be provided.
- Pedestrians accessing the construction compounds and other work areas are always required to wear the mandatory PPE.

Vehicle Holding Area

- There is no intention in providing a remote HGV holding area, therefore a vehicle call up procedure is not required.

Information Packs

- Information packs will be provided to all contractors, which will form part of the contractual agreement between the contractors and National Grid. The information pack may contain the details of the following CTMP requirements:
    - Site induction;
    - HGV restrictions;
    - Construction routes;
    - Non-compliance guidance;
    - Complaints procedure;
    - CTMP protocols and indications required for all contractors including a code of good practice;

    - Guidance on standard communication procedures between contractors and site; and
    - CTMP contacts (emergency and non-emergency).
- Information packs and communications details will be shared with relevant Local Planning Authorities (LPAs) and LHAs ahead of any construction works.

Staff Travel Plan

- The construction personnel numbers are not expected to exceed one hundred personnel on-site at any one time. In addition, the remote work areas and varied work activities may make it impracticable for construction teams to commute to site other than in a van or LGV. Therefore, it is not considered necessary to produce a travel plan for the Proposed Project.
- Notwithstanding the above, if deemed possible and appropriate, construction teams would be transported to the site from local accommodation or agreed pick-up points in personnel transport vans. These vans will only be parked on site within the defined working areas, and only while construction staff are on site during work hours. Outside of working hours there will be no parking of personnel vans on site.

Events

- Discussions will be held with the LHA to discuss potential mitigation for scheduled events which are anticipated to generate an increase in the typical daily traffic flows such as Gold Cup Week. Temporary measures may be necessary for the duration of the event(s).

Appendix B

Dust Mitigation

The following mitigation measures outline how to mitigate and/or minimise potential impacts in relation to dust during construction.

Communications

Develop and implement a Communication Plan that includes:

- Community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary.
- Display the head or regional office contact information.

Dust Management

- Develop and implement a Dust Management Plan (DMP) which may include measures to control other emissions, approved by the Local Authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in the Construction Dust Assessments. The desirable measures should be included as appropriate for the site.

Site Management

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the Local Authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the log book.

Monitoring

- Undertake regular on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the Local Authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of site boundary, with cleaning to be provided if necessary.
- Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and create an inspection log available to the local authority when asked.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Agree dust deposition, dust flux, or real-time PM10 continuous monitoring locations with the Local Authority. Where possible, commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction.

Preparing and Maintaining the Site

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Enclose specific operations where there is a high potential for dust production, where possible.
- Avoid site runoff of water or mud.

- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site.
- Consider seeding stockpiles and bunds 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.
- Impose and signpost a maximum-speed-limit of 15mph on haul roads and work areas (if long haul routes are required, these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the Local Authority, where appropriate).
- Review and update when required the Construction Logistics Plan to manage the sustainable delivery of goods and materials.
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing).

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, when necessary.
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- Avoid bonfires and burning of waste materials.

Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable.
- Only remove the cover in small areas during work and not all at once.

Construction

- Avoid scabbling (roughening of concrete surfaces) if possible;
- Ensure sand and other fine 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.

Trackout

- 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.
- Record all inspections of haul routes and any subsequent action in a site log book.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).
- Ensure there is an adequate area of hard surfaced road between vehicle washing facilities and the site exit, wherever site size and layout permits.

Appendix C

Noise and Vibration Mitigation

The following construction phase mitigation measures would mitigate and/or minimise potential noise and vibration impacts:

- The Contractor shall implement Best Practicable Means (BPM) as per recommendations set out in BS5228 (Code of practice for noise and vibration control on construction and open sites) and current guidelines set down by the Health and Safety Executive.
- The Contractor will comply with the noise regulations or restrictions imposed by the Local Authorities. The Contractor will apply to the Local Authorities for prior consent under Section 61 of the Control of Pollution Act for noisy activities where required.
- The Contractor shall implement all noise control measures required to meet any noise limits agreed with the Local Authorities.
- The Contractor shall bring to the site only plant conforming to relevant national or international standards, directives and recommendations on noise and vibration emissions.
- All generators and compressors used on the site shall be 'sound reduced' models fitted with acoustic linings and all ancillary pneumatic percussive tools shall be fitted with mufflers or silencers.
- All the Contractor's equipment shall be kept in good repair and condition.
- Operations shall be stopped whenever unreasonable noise or disturbance results from faulty equipment. Faults to equipment shall be remedied by the Contractor immediately or the equipment shall be replaced.
- All powered equipment in intermittent use shall be shut down in the intervening periods between works or throttled down to a minimum required.
- For all construction activities the following construction noise limits as set out in Section E5 of BS5228 will apply (subject to any alternate agreement in terms of a Section 61 Consent):
  - 65 dB for daytime;
  - 55 dB for evening and weekends (Saturday after 1pm and Sunday); and
  - 45 dB for night-time.
- The Contractor will undertake sound level readings in the event of receipt of complaints regarding noise and/or vibration.
- The Contractor shall ensure that audible warning systems, e.g. vehicle reversing sirens, are switched to a setting, which is compatible with Health and Safety Executive requirements.

Appendix D

Ground Conditions and Contaminated Land

The following construction phase mitigation measures would mitigate and/or minimise potential ground conditions and contaminated land impacts:

- During the removal of vegetation, stripping of topsoil, excavation, earthworks and construction a watching brief protocol will be adopted where required, with site workers remaining vigilant to visual or olfactory signs of contamination.
- A contamination discovery strategy plan to be produced and implemented if unexpected contamination discovered on site.
- Within the construction site compound, specific areas will be designated for the storage of chemicals, waste oils and fuel and refuelling activities. These areas will be bunded and placed on hardstanding to prevent downward migration of contaminants. Any transfer of fuel or other potentially contaminated liquids will only take place within a designated fuel transfer area. Drip trays will be provided to reduce the risk of spillages. These areas will be designed with appropriate drainage to ensure any spillages can be isolated.
- During the construction phase, localised contamination may occur within the compound areas through spillages / leakages of fuel and therefore a repeat baseline survey will be undertaken once the construction has finished and the compound dismantled to demonstrate the area has been returned to its previous state. If contamination has occurred during the lifetime of the compounds, remediation will be undertaken to return the land to its previous land quality state.
- To reduce the risk to surface water, excavated materials will be appropriately segregated and stored to ensure that water runoff from stockpiles does not enter the water environment via drains and nearby watercourses. If necessary, stockpiles will be covered. Pollution prevention best practice protocols will be adopted to ensure contamination does not enter surface water.
- A Site Waste Management Plan (SWMP) and a Materials Management Plan (MMP) (forming part of the CEMP following the protocols within the CL:AIRE Definition of Waste: Development Industry Code of Practice) will be implemented to ensure that excavated materials are re-used appropriately, sustainably and remain legitimately outside the waste hierarchy.
- During the construction phase, construction / site workers could be exposed via ingestion, inhalation or dermal contact with soil and any contamination present. To mitigate risks from contaminated soils / materials all site workers will be made aware of the findings of the intrusive investigations and the hazards associated with handling potentially contaminated materials via the CEMP. All works will be conducted in accordance with relevant Health and Safety Executive (HSE) publications Construction (Design and Management) (CDM 2015) Regulations.
- Suitable Personal Protective Equipment (PPE) including Respiratory Protective Equipment (RPE) (if necessary) will be available to all site workers. Appropriate site hygiene protocols will be adopted during the construction phase.

Appendix E

Landscape and Ecological Considerations

Please refer to the separate Ecological Impact Assessments and the Landscape and Ecological Management Plans.

Appendix F

Heritage/Archaeological Mitigation

Please refer to the Archaeological Statement (Cotswold Archaeology, 2024).

- The Contractor shall minimise archaeological and heritage impacts during construction in accordance with relevant legislation and guidance and as advised by the relevant authorities and statutory undertakers.
- In all instances where archaeological remains are identified, the creation of a permanent record will be required, including public dissemination of the results prior to their removal.
- Where practicable, maintain/protect elements within the landscape such as vegetation, dry stone walls and hedgerows (including reinstating hedgerows at historic field boundaries, fences and walls).

Appendix G

Water and Flood Risk Mitigation

The following construction phase mitigation measures would mitigate and/or minimise potential impacts to water resources and flood risk during construction:

- Measures to safeguard the water quality of waterbodies within the study area:
  - Construction machinery would be refuelled within bunded areas with sealed drainage systems, away from waterbodies.
  - Wastewater generated from the construction compounds would be disposed of via appropriate means, for example, to foul sewer or pumped out and removed from site by tanker.
- An emergency spillage response plan would document measures to be implemented to prevent pollutant infiltrating into the soils beneath the site and reaching the surface and groundwater receptors.
- Appropriate equipment (e.g absorption mats) would be made easily accessible on site to deal with accidental spillages and the plan would provide a full list of protocols and communication channels with the EA in the event of an accidental pollution incident.
- At the construction compounds, materials would be stored in accordance with best practice and the compounds would have suitable surface water drainage provision. This would prevent pollution of the water environment.
- Where the temporary access route crosses watercourses on site, namely the River Isbourne and one of its tributaries, existing crossing routes would be utilised where practicable to reduce effects.
- Works within the floodplains of the watercourses at the Proposed Project location would be avoided where possible. The floodplains of the watercourses follow the watercourse channels closely, rarely extending more than 65m from the watercourse itself. Topsoil and excavated material would be stored outside the floodplain of the watercourses at the Proposed Project (demarked by Flood Zone 3).
- As part of pre-construction works, a record of existing land drainage would be compiled and, subject to landowner/occupier agreement, new drains would be established to help prevent damage to soil structure, maintain work areas in a dry condition and to enable current drainage systems to continue to operate through the construction period.
- Following installation of the cable, topsoil and excavated material would be reinstated to ensure no detriment to the existing land drainage regime.
- Any Flood Risk Activity Permits, and/or Ordinary Watercourse Consents would be secured prior to the commencement of the construction period.
- Construction compounds would have suitable surface water drainage provision.
- During construction there is the potential for the topsoil and subsoil storage areas to affect existing land drainage regimes. This could result in temporary increases in the risk of flooding from surface water during construction. The following measures are therefore proposed to manage this risk:
  - As part of the pre-construction works, the location and condition of existing land drainage would be established, and a record of condition compiled. Where necessary, and subject to agreement with the landowner/occupier, new or restored field drains would:
    - Enable farmers' current drainage system to continue working throughout the period of construction.
    - Help prevent damage to the soil structure.
    - Aid recovery after completion of the construction activity.
    - Maintain the site work areas as dry as practicable.
  - The design of these drainage schemes would be agreed by National Grid, the contractor, and the landowners/occupiers. Permanent records of the land drainage locations would be produced. Following installation of the cable topsoil, excavated material would be reinstated to ensure no detriment to the existing land drainage regime.

  - Where the cable route crosses surface water flow routes, crossing methods would aim to maintain the flow regime. Methods used would be outlined in a method statement and would be included in the final CEMP to be prepared by the contractor.

- The construction of the turning areas at the CSECs would be the only works that would result in a permanent increase in impermeable land take. Any new land take resulting in the addition of impermeable surface would be drained in accordance with the planning policy requirements/local Sustainable Drainage Systems (SuDS) guidance of the Lead Local Flood Authority (LLFA; Gloucestershire County Council).
- Where the temporary access route crosses watercourses on site, namely the River Isbourne and one of its tributaries, existing crossing routes are proposed to be used. Were this not practicable, provision of new temporary crossings designed to convey flows under both flood and low flow conditions would avoid any adverse impact on baseline flood risk and the hydromorphology of the watercourses. Works would be undertaken in accordance with a Flood Risk Activity Permit from the EA (River Isbourne) and Ordinary Watercourse Consent from the LLFA (River Isbourne tributary). These require that the works would cause no detriment to the flow regimes of watercourses and no increase in flood risk either upstream or downstream. Therefore, undertaking the works in accordance with the permit/consent would ensure no increase in flood risk.

Appendix H

Site Waste Mitigation

A Site Waste Management Plan (OSWMP) for the Proposed Project will be prepared by the Principal Contractor which will forecast the type and quantity of waste that will be produced on site and set out how waste might be managed so that it is reused, recycled, or disposed of appropriately. The SWMP is a live document and will be updated during the duration of the project by the client and the Principal Contractor to record the movements of waste, how it will be managed and to encourage better waste management practices.

- As part of the final SWMP the Principal Contractor will need to monitor waste arisings and management practices. Auditing and measurement will enable more effective management of waste through the setting of performance targets for recycling and segregation and monitoring subcontractors on all the sites.
- A log will be maintained of all materials that come on to site, and details will be obtained from the waste disposal company of the exact amount of waste materials removed from site. Details will also be provided outlining the recovery/disposal actions for the specific waste streams
- Waste receptacles will be monitored by the contractor to ensure that contamination has not occurred, results will be recorded.
- The Principal Contractor will continually review the type of surplus materials being produced and the SWMP will seek to identify opportunities to implement the waste minimisation methodology and avoid waste to landfill. It will outline how to manage demolition/construction wastes generated at the worksites, so far as reasonably practicable, in accordance with the national waste hierarchy and within the relevant regulatory controls and cost restraints.
- The Principal Contractor will also visit any waste transfer facility to ensure that we are effectively discharging 'Duty of Care'. They will also periodically follow waste transfer vehicles to their final point of disposal to monitor compliance. Details of these visits will be recorded for audit purposes.
- The phasing of the Proposed Project allows the potential opportunity for the Construction, Demolition and Excavation (CD&E) wastes to be reused or recycled on-site in subsequent stages of the project. The SWMP will ensure such opportunities are maximised as the preferred option for dealing with waste arising from the site.

Waste minimisation methods will be utilised. Any 'waste' materials generated will be re-used or recycled where possible. Reuse will occur within the project where possible, but beneficial reuse of materials on other projects will also be considered.

The following waste will be segregated;

- Hazardous (any waste which contains high levels of chemicals, identified in testing process); and
- General uncontaminated construction and demolition waste.

The following measures will be taken to avoid disposal of materials:

- Storage in an appropriately dedicated areas to prevent spoilage, damage and contamination;
- Training of the construction team on the importance of correct ordering of materials so as to avoid excess materials;
- Review of packaging requirements where possible to avoid, reduce and reuse; and
- Offsite manufacturing.

All waste carriers, landfill and transfer stations will have certification/permits checked prior to any waste movement to ensure compliance with legislation. Skips will be checked prior to leaving site to ensure there is no cross contamination of waste.

The site will use the hauliers' waste-transfer notes and complete the form to ensure that the following details are correctly completed and present on the ticket:

- Full written description of the waste;
- Six figure EWC;
- Name and Address of the holder (producer) of the waste;
- Name and Address of the Waste Carrier, including their carriers or exemption number;
- Name and Address of the disposal point (Landfill or Transfer Station). Plus, their applicable Waste Management Licence or exemption number;
- Quantity of waste and whether loose/in a container, and if so what kind of container;
- Date, time and place of transfer;
- SIC code of the waste producer;
- Declaration to waste management hierarchy; and
- Signed by producer and carrier.

A copy of the Duty of Care waste transfer note will be kept on site or within the filing system for two years as the Environment Agency can ask to view completed Waste Transfer Notes at any time during that period. Periodically, the Principal Contractor may visit a waste transfer facility to ensure compliance with the 'Duty of Care', this will also include following waste transfer vehicles to their final point of disposal to monitor compliance.

The disposal of hazardous waste shall only be undertaken by an approved contractor. Movements of hazardous waste are subject to a 'consignment note' under the Duty of care which will be supplied by the waste disposal company. Copies of the consignment note must be retained on site or within the filling system for 3 years. Any supporting documentation recording the hazardous properties of the waste and the associated control measures must be attached to the consignment note i.e. material data sheet, COSHH assessments, lab test results etc.

Appendix I

Soil Mitigation and Management

A detailed Soil Management Plan (SMP) for the Proposed Project will be produced pre-construction once the project design and supporting Agricultural Land Classification (ALC) Survey Report (Arcadis, 2024) has been finalised. The SMP, which will form part of the final CEMP, will detail the soil characteristics across the construction footprint (based on the ALC report) and detail how the soil resources will be stripped, stockpiled, and re-used. The SMP will be linked to the Site Waste Management Plan (SWMP).

Strategy, Guidance and Methodology

The SMP will be supported by the ALC survey undertaken in November and December 2023, providing baseline information on the soil resources present and the grade of agricultural land. The policy and guidance to be followed and used for developing the SMP in relation to the Proposed Project is as follows:

- The Safeguarding our Soils: A Strategy for England (Defra, 2009)[1];
- Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009)[2];
- Good Practice Guide for Handling Soils (MAFF, 2000)[3];
- Institute of Quarrying Good Practice Guide for Handling Soils in Mineral Workings (IoQ, 2022)[4];
- BS 3882 Specification for topsoil (British Standards Institution, 2015)[5]; and
- BS 8601 Specification for subsoil and requirements for use (British Standards Institution, 2013)[6].

Roles and Responsibilities

The implementation and responsibility of soil management measures will be outlined in the detailed SMP.

Baseline Conditions

The development of the SMP will be based on the soil descriptions as presented in the ALC Assessment Report. This provides descriptions of the soil physical characteristics. This survey information will be used to develop a detailed calculation of soil volumes to be stripped, re-used on site, or exported off site. Information on soil volumes will be presented in the SMP. Should stripped soil resources be taken off site the full testing suite as required by BS 3882:2015[5] will be undertaken for topsoil and BS 8601:2013[6] for subsoil resources. The full results of the testing will be included as an appendix to the SMP.

Soil Management

The handling, storage and re-use of all soils will be undertaken in line with the best practice below:

- Pre-construction planning will ensure that the Site Manager or appointed individual are provided with training by the Soil Scientist on (but not limited to): soil types in the site, understanding constraints on soil handling due to weather and soil conditions, soil field plasticity testing, and approaches to soil handling.

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[1] Safeguarding our Soils – A strategy for England (2009) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69261/pb13297-soil-strategy-090910.pdf [date accessed: 12/01/2024].

[2] Department for Environment, Food and Rural Affairs (Defra) (2009). Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

[3] Ministry for Agriculture, Fisheries and Food (MAFF) (2000). Good Practice Guide for Handling Soils.

[4] The Institute of Quarrying. (2022). Good Practice Guide for Handling Soils in Mineral Workings. Available at Soils Guidance (quarrying.org) [date accessed: 12/01/2024].

[5] British Standards Institution. (2015). BS 3882:2015 Specification for topsoil. London: British Standards Institution.

[6] British Standards Institution. (2013). BS 8601:2013 Specification for subsoil and requirements for use. London: British Standards Institution.

- Toolbox talks will be used to inform all those working on the Site of the requirements for soil handling and soil protection measures outlined in the SMP.
- Soils will be sufficiently protected from being trafficked by plant or other site vehicles by setting out clearly demarcated access routes.
- Prior to soil stripping commencing any existing vegetation will be cleared with arisings removed to ensure the soil is free from significant quantities of foreign matter or other materials which would make the soils unsuitable for their intended re-use.
- Soil handling will be determined based on soil moisture content and soils will be tested for plasticity prior to stripping by the Soil Scientist or trained appointed individual. Where practicable, soil will be handled in appropriate weather conditions as required by the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009)[2]. Soil handling will be avoided when soil moisture content is above the lower plastic limit to minimise compaction of wet soils.
- If sustained heavy rainfall occurs any topsoil stripping operations must be suspended and not restarted until the ground meets the moisture criteria to allow the restarting of soil handling operations;
- Soil will be stripped using a hydraulic excavator or tracked dozer. The methodology used will be in line with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (Defra, 2009)[2], Good Practice Guide for Handling Soils (MAFF, 2000)[3] and the Institute of Quarrying (IoQ, 2023)[4] guidance. The exact approach will be detailed in the SMP once full construction details are available.
- Stripped topsoil and subsoil resources will be stored separately in stockpiles which are clearly labelled to prevent cross contamination and located in appropriate locations to avoid flooding the area, watercourses, and topographic depressions. Any potential contaminated soil will be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.
- Soils will be stockpiled within the maximum height stated in SMP to avoid compaction and anaerobic conditions.
- Industry standard measures will be put in place to control pollution, including silt-laden runoff or dust, for example through the use of coverings or through seeding where stockpiles will be in place for longer than 3 months.
- Measures contained in relevant Defra and Environment Agency best practice guidance documents on the control and removal of invasive weed species will be implemented on stockpiles where appropriate.
- Soil will be reinstated to an appropriate condition relevant to its preconstruction condition. This will be achieved by primarily reinstating the full soil profile in the correct sequence of horizons, and in a state where good soil profile drainage and plant root development are achieved.
- Where soils stripped during the construction phase will not be reinstated, they will be removed off-site in accordance with measures which would be set out in a detailed SWMP. The SMP will include details of the volumes of topsoil and subsoil which will be generated and how the soil will be re-used or disposed of.
- The SMP will set out the aftercare period and the requirements of likely management interventions required. Monitoring, including regular checks by the Soil Scientist during construction and during the aftercare period, will be undertaken (which will cease once the required soil condition has been established and the reinstatement signed off).

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