XLINKS' MOROCCO-UK POWER PROJECT

Outline Onshore Construction Environmental Management Plan

Document Number: 7.7

PINS Reference: EN010164/APP/7.7

APFP Regulations: 5(2)(q)

November 2024

For Issue

xlinks.co

Document status					
Version	**Purpose of document**	**Authored by**	**Reviewed by**	**Approved by**	**Review date**
For Issue	Application	RPS	Xlinks 1 Ltd	Xlinks 1 Ltd	November 2024

Prepared by:

RPS

Prepared for:

Xlinks 1 Limited

Contents

Tables

Figures

Appendices

Glossary

Term	Meaning
Alverdiscott Substation	The existing National Grid Electricity Transmission substation at Alverdiscott, Devon, which comprises 400 kV and 132 kV electrical substation equipment.
Alverdiscott Substation Site	The National Grid Electricity Transmission site within which the Alverdiscott Substation sits.
Annoyance (dust)	Loss of amenity due to dust deposition or visible dust plumes, often related to people making complaints, but not necessarily sufficient to be a legal nuisance, as defined by the Institute of Air Quality Management.
Applicant	Xlinks 1 Limited.
Bipole	A Bipole system is an electrical transmission system that comprises two Direct Current conductors of opposite polarity (one conductor with positive voltage and one with negative voltage).
Construction Traffic Management Plan	A document detailing the construction traffic routes for heavy goods vehicles and personnel travel, protocols for delivery of Abnormal Indivisible Loads to site, measures for road cleaning and sustainable site travel measures.
Converter Site	The Converter Site is proposed to be located to the immediate west of the existing Alverdiscott Substation Site in north Devon. The Converter Site would contain two converter stations (known as Bipole 1 and Bipole 2) and associated infrastructure, buildings and landscaping.
Converter station	Part of an electrical transmission and distribution system. Converter stations convert electricity from Direct Current to Alternating Current, or vice versa.
Development Consent Order	An order made under the Planning Act 2008, as amended, granting development consent.
Earthworks	Covers the processes of soil-stripping, ground-levelling, excavation, and landscaping, as defined by the Institute of Air Quality Management.
Environmental Impact Assessment	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Environmental Statement	The document presenting the results of the Environmental Impact Assessment process.
Horizontal Directional Drilling	Horizontal Directional Drilling (HDD) is a method of installing underground pipelines, cables and service conduit (or ducts) through trenchless methods to avoid obstacles and sensitive features (e.g. roads, watercourses, woodlands, etc.). The term HDD is used here interchangeably with other similar trenchless techniques but excluding micro tunnelling or direct pipe methods.
HVAC Cables	The High Voltage Alternating Current cables which would bring electricity from the converter stations to the new Alverdiscott Substation Connection Development.
HVAC Cable Corridors	The proposed corridors (for each Bipole) within which the onshore High Voltage Alternating Current cables would be routed between the Converter Site and the Alverdiscott Substation Site.
HVDC Cables	The High Voltage Direct Current cables which would bring electricity to the UK converter stations from the Moroccan converter stations.
Landfall	The proposed area in which the offshore cables make landfall in the United Kingdom (come on shore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area at Cornborough Range, Devon, between Mean Low Water Springs and the transition joint bays inclusive of all construction works, including the offshore and onshore cable routes, and landfall compound(s).

Term	Meaning
Mean High Water Springs	The height of mean high water during spring tides in a year.
Mean Low Water Springs	The height of mean low water during spring tides in a year.
Onshore HVDC Cable Corridor	The proposed corridor within which the onshore High Voltage Direct Current cables would be located.
Onshore Infrastructure Area	The proposed infrastructure area within the Order Limits landward of Mean High Water Springs. The Onshore Infrastructure Area comprises the transition joint bays, onshore HVDC Cables, converter stations, HVAC Cables, highways improvements, utility diversions and associated temporary and permanent infrastructure including temporary compound areas and permanent accesses.
Order Limits	The area within which all offshore and onshore components of the Proposed Development are proposed to be located, including areas required on a temporary basis during construction (such as construction compounds).
Proposed Development	The element of Xlinks' Morocco-UK Power Project within the UK. The Proposed Development covers all works required to construct and operate the offshore cables (from the UK Exclusive Economic Zone to Landfall), Landfall, onshore Direct Current and Alternating Current cables, converter stations, and highways improvements.
Protected species	A species of animal or plant which it is forbidden by law to harm or destroy.
Receptor	The element of the receiving environment that is affected.
Runoff	Runoff occurs when there is more water than land can absorb. The excess liquid flows across the surface of the land.
Transition joint bay	A transition joint bay is an underground structure at the landfall area where the offshore cables are jointed to the onshore cables.
Utility diversions	Works required by statutory utility providers to re-route infrastructure around the Proposed Development.
Written Scheme of Investigation	A plan detailing the protocol for any archaeological investigation to be carried out prior to the construction of the Proposed Development, including procedures for field survey and watching briefs.
Xlinks' Morocco UK Power Project	The overall scheme from Morocco to the national grid, including all onshore and offshore elements of the transmission network and the generation site in Morocco (referred to as the 'Project').

Acronyms

Acronym	Meaning
AIL	Abnormal Indivisible Load
BSSS	British Society of Soil Science
CEMP	Construction Environmental Management Plan
CIRIA	Construction Industry Research and Information Association
CTMP	Construction Traffic Management Plan
CWS	County Wildlife Site
DCO	Development Consent Order
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
EMS	Environmental Management System
GHG	Greenhouse Gas
HDD	Horizontal Directional Drilling
HGV	Heavy Goods Vehicles
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IAQM	Institute of Air Quality Management
INNS	Invasive Non-Native Species
LEMP	Landscape and Ecology Management Plan
MLWS	Mean Low Water Springs
OHL	Overhead Line
On-CEMP	Onshore Construction Environmental Management Plan
PRoW	Public Right of Way
IQ	Institute of Quarrying
SRWMP	Site Resources and Waste Management Plan
SSSI	Site of Special Scientific Interest
WSI	Written Scheme of Investigation

Units

Units	Meaning
km	Kilometre
m	Metre
mm	Millimetre
m^3/day	Cubic metres per day

1 OUTLINE ONSHORE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

1.1 Introduction

Background

1.1.1 This document forms the Outline Onshore Construction Environmental Management Plan (On-CEMP), which has been prepared for the United Kingdom (UK) elements of Xlinks' Morocco-UK Power Project (the 'Project'). For ease of reference, the UK elements of the Project are referred to as the 'Proposed Development'.

1.1.2 A separate Outline Offshore CEMP has been developed, which forms part of the application for development consent (document reference 7.9). The Outline Offshore CEMP covers the offshore construction activities that would occur up to (and including) the Landfall.

1.1.3 This Outline On-CEMP presents the framework and outline of measures to manage potential environmental impacts that occur from the construction of the onshore elements only. This includes principles for the management of construction noise, dust, traffic, materials storage and waste management, drainage and ecological protection. The following elements occur landward of Mean High Water Springs (MHWS) and comprise:

- the Landfall (focusing on landward of MHWS);
- the Onshore High Voltage Direct Current (HVDC) Cable Corridor;
- the Converter Site, which contains two converter stations;
- highways improvements (e.g. road widening, junction improvements, etc.); and
- High Voltage Alternating Current (HVAC) Cable Corridors.

1.1.4 In addition to these elements, the Outline On-CEMP considers the temporary construction compounds, storage areas, haul roads and accesses required to support the construction of the onshore elements of the Proposed Development.

1.1.5 The relevant local planning authorities are Torridge District Council and Devon County Council.

Purpose of the Outline On-CEMP

1.1.6 The draft Development Consent Order (DCO) (document reference 3.1) includes a requirement for the preparation of a final On-CEMP(s). This is secured under DCO Schedule 2, Requirement 7 (management plans). The final On-CEMP(s) would be supported by a series of management plans as listed in **Table 1.1**. The final On-CEMP(s) must be submitted to and approved by the relevant planning authority prior to the commencement of onshore construction works.

1.1.7 The purpose of this Outline On-CEMP is to set out a written set of standards and measures that will be implemented during the construction process to ensure a consistent and effective approach to managing potential environmental impacts in

order to minimise nuisances to communities and to safeguard the environment. The measures include strategies, control measures and monitoring procedures for managing the potential environmental impacts and limiting disturbance from construction activities as far as reasonably practicable.

1.1.8 This is an outline document that is based on the design assessed in the Environmental Statement (ES) (see document reference 6.1.3).

1.1.9 This Outline On-CEMP incorporates legislative requirements, current standards and best practice measures to define the standards of construction practice that contractors will be required to adopt and implement. However, compliance with this Outline On-CEMP will not absolve Xlinks 1 Limited ('the Applicant'), Principal Contractor(s) or subcontractors from compliance with all legislation and byelaws relating to construction activities.

Scope of the Outline On-CEMP

1.1.10 The Outline On-CEMP applies to all of the construction activities of the Proposed Development landward of MHWS, including Landfall. The Outline On-CEMP does not apply to activities associated with the offshore works (i.e. seaward of MHWS).

1.1.11 Onshore preliminary activities would be undertaken prior to the commencement of construction and comprise the following (as defined in the draft DCO (document reference 3.1)):

- Pre-construction archaeological investigations.
- Early planting or landscaping works, where appropriate.
- Ecological and archaeological mitigation.
- Environmental surveys and monitoring.
- Site clearance (including vegetation clearance and site levelling).
- Investigations for the purpose of assessing ground conditions such as:
  - pre-entry soil surveys; and
  - drainage surveys.
- Remedial work in respect of any contamination or other adverse ground conditions.
- The diversion of existing services and the laying of temporary services.
- The diversion or undergrounding of overhead cabling.
- Site security works.
- Establishing compounds and the erection of temporary hardstanding, buildings (e.g. welfare facilities), structures or enclosures.
- Creation of site accesses.
- Temporary display of site notices and site advertisements.
- Receipt and erection of construction plant and equipment.

1.1.12 The onshore preliminary activities listed in **paragraph 1.1.11** would be carried out in accordance with the measures set out in this Outline On-CEMP as secured by the draft DCO (document reference 3.1).

1.1.13 The final On-CEMP(s) would be in general accordance with the principles established in the Outline On-CEMP and will be agreed with the relevant authority prior to commencing the relevant stage of the onshore works (above MHWS). For the purpose of this Outline On-CEMP, the term 'construction' includes all related engineering, construction and restoration activities as authorised by the DCO within the Order Limits.

Implementation of the Outline On-CEMP

Final On-CEMP(s)

1.1.14 This Outline On-CEMP is based on design information available at the time of the DCO application. It is a working document that would be updated as appropriate following the submission of the DCO application following further engagement with stakeholders.

1.1.15 In the event that the Proposed Development is granted development consent, final On-CEMP(s) would be prepared following the principles established in this Outline On-CEMP and agreed with the relevant local planning authority prior to the commencement of construction.

1.1.16 All construction staff will be required to follow the final On-CEMP(s) and implement the measures to control the environmental impacts during construction. The requirement to comply with the procedures of the final On-CEMP(s) will be as included in the contract conditions for each element of the works, including the supply chain as appropriate.

1.1.17 During the construction process, the implementation of the measures within the final On-CEMP(s) will be monitored to ensure the measures are implemented correctly and that the measures remain effective. The accompanying management plans are necessary documents for the implementation of the final On-CEMP(s) and the measures will be updated in discussion with the local planning authority, where necessary. During construction it will be necessary for the final On-CEMP(s) to be adhered to in addition to the accompanying documents, which are the management plans listed in **Table 1.1**.

Accompanying Documents to Support the final On-CEMP(s)

1.1.18 The final On-CEMP(s) will be supported by a series of management plans. **Table 1.1** sets out the management plans that would append the final On-CEMP(s), which would be secured by a DCO requirement.

Table 1.1: Documents to support the implementation of the final On-CEMP(s)

Document	Purpose of the Document	Status
Pollution Prevention Plan	To set out details of emergency procedures and provide good practice guidance for pollution prevention.	Outline version of the plan is included as an appendix to this Outline On-CEMP (see Appendix A: Outline Pollution Prevention Plan).
Construction Drainage Strategy	The Construction Drainage Strategy will ensure that existing land drainage is maintained during construction. The strategy will	Draft measures are incorporated in the Outline On-CEMP (see **paragraphs 1.6.44** to **1.6.50**).

Document	Purpose of the Document	Status
	identify specific drainage measures for each area of land based on information identified and recorded by a land drainage consultant prior to construction	
Site Resource and Waste Management Plan	To manage all waste generated and resource use during the construction phase of the Proposed Development.	Outline version of the plan is included as an appendix to this Outline On-CEMP (see Appendix B: Outline Sit Resource and Waste Management Plan).
Dust Management Plan	To set out dust control measures in line with Institute of Air Quality Management (IAQM) guidance.	Outline version of the plan is included as an appendix to this Outline On-CEMP (see Appendix C: Outline Dust Management Plan).
Soil Management Plan	To set out measures to conserve soil resources; avoid damage to soil structure; maintain soil drainage during construction; and identify principles for the reinstatement of the soil profile following the construction.	Outline version of the plan is included as an appendix to this Outline On-CEMP (see Appendix D: Outline Soil Management Plan).
Bentonite Breakout Plan	To set out the procedures and measures for minimising the potential for and management of a bentonite breakout, including a response plan should breakout occur.	Outline version of the plan is included within the DCO application (document reference 7.21).
Biosecurity Protocol	To set out the measures for managing biosecurity risks, including invasive species, diseases and pathogens.	A detailed Biosecurity Protocol would be developed as part of the final On-CEMP(s).
Community Liaison Plan	To set out a framework for engaging stakeholders (i.e., sets out methods of contacting and engaging with affected groups; methods of providing advance notifications); roles and responsibilities for implementing the communication and community liaison plan; and complaints procedure.	Draft measures are incorporated in the Outline On-CEMP (see **paragraphs 1.6.67** to **1.6.69**).
Construction Lighting Strategy	To set out construction lighting requirements and the measures to control light spill.	Draft measures are incorporated in the Outline On-CEMP (see **paragraphs 1.6.20** to **1.6.23**).
Discovery Strategy	To set out the procedures to ensure effective management of previously unidentified soil and/or groundwater contamination that may be encountered in order to minimise risks to controlled water and human health receptors.	Discovery Strategy to be developed as part of the final On-CEMP(s) (see **paragraph 1.8.79** for further details).

1.1.19 The construction activities of the Proposed Development would also be managed through management plans that will sit outside the final On-CEMP(s). Outline

versions of these plans are secured by a requirement of the DCO, which are set out below:

- An Outline Construction Traffic Management Plan (CTMP) (document reference 7.12), which sets out details of routes for construction traffic; delivery timings and logistics; location of wheel wash facilities. The document will also cover workforce travel.
- An Outline Landscape and Ecology Management Plan (LEMP) (document reference 7.10) which sets out the mitigation and management measures relevant to onshore ecology and nature conservation. In addition, the final LEMP(s) would set out the landscape strategy and detail its implementation and long-term maintenance and management regime. This would be developed in consultation with the relevant authorities.
- Design Principles Statement (document reference 7.4) detailing the design principles that will be used to guide the final layout, massing, scale and external appearance of the Converter Site.
- An Outline Onshore Written Scheme of Investigation (WSI) (document reference 7.8) provides further consideration of archaeology and the scope of work to be undertaken to mitigate those direct physical impacts on the historic environment such as:
  - procedures if previously unidentified heritage assets are discovered during construction (a 'chance find' procedure);
  - completion of archaeological evaluation (geophysical surveys, trial trenching etc.) where required; and
  - archaeological watching brief during topsoil stripping (where required).
- The Onshore Crossing Schedule (document reference 6.1.3.2) which details the techniques and procedures that will be deployed at crossing points during the construction phase.
- An Outline Public Rights of Way (PRoW) Management Plan (document reference 7.11) detailing how PRoW access will be managed during the construction phase.

Training

1.1.20 All construction staff will receive training on their responsibilities for minimising the risk to the environment and implementing the measures set out in the final On-CEMP(s).

1.1.21 The Principal Contractor(s) will ensure that contractors employ an appropriately qualified and experienced workforce. The Principal Contractor(s) will also be responsible for identifying the training needs of their personnel to enable appropriate training to be provided. Training will include daily site briefings and toolbox talks to provide the necessary knowledge on health, safety and environmental topics, and the relevant environmental control measures pertinent to the construction activities to be carried out that day.

1.1.22 The briefings will be attended by all personnel working on the site at the time involved in the activities concerned.

1.2 Project Description

Site Location

1.2.1 The onshore elements of the Proposed Development would be located within the Onshore Infrastructure Area (see **Figure 1.1**). The Onshore Infrastructure Area is wholly located within the local authority area of Torridge District Council and Devon County Council, in north Devon. The Onshore Infrastructure Area extends from the Converter Site to the Landfall at Cornborough Range.

Site Context

Landfall

1.2.2 The Landfall for the Proposed Development is located at Cornborough Range on the north Devon coast, to the south-west of Cornborough and approximately 4 km west of Bideford. This part of the Proposed Development lies within the North Devon Coast National Landscape and the Heritage Coast. The Mermaid's Pool to Rowden Gut Site of Special Scientific Interest (SSSI) is also situated along the coastline.

Onshore Infrastructure Area

1.2.3 The Onshore Infrastructure Area is located in an area that is predominantly rural. The settlements of Abbotsham, Bideford, Ford, Littleham, Landcross, East-the-Water, Gammaton Moor, Woodtown and Stony Cross are situated close to the Onshore Infrastructure Area. The existing Alverdiscott Substation is located within the Onshore Infrastructure Area and there are existing 132 kV, 33 kV and 11 kV overhead lines that cross the Order Limits and connect to the existing Alverdiscott Substation.

1.2.4 The Onshore Infrastructure Area includes parts of the North Devon National Landscape and Kynoch's Foreshore Local Nature Reserve. The Taw-Torridge Estuary SSSI is also situated approximately 1.3 km north of the Onshore Infrastructure Area.

1.2.5 The River Torridge flows through the central extent of the Onshore Infrastructure Area, with other watercourses also present along the route, including Kenwith Stream and multiple unnamed ordinary watercourses.

1.2.6 The Flood Map for Planning (GOV.UK, 2019) indicates the Onshore Infrastructure Area is located within Flood Zones 1, 2 and 3. The majority of the onshore HVDC Cable Corridor is located within Flood Zone 1. Areas along the onshore HVDC Cable Corridor within proximity to watercourses (including the River Torridge) are located within Flood Zones 2 and 3. Temporary construction compounds are located wholly within Flood Zone 1.

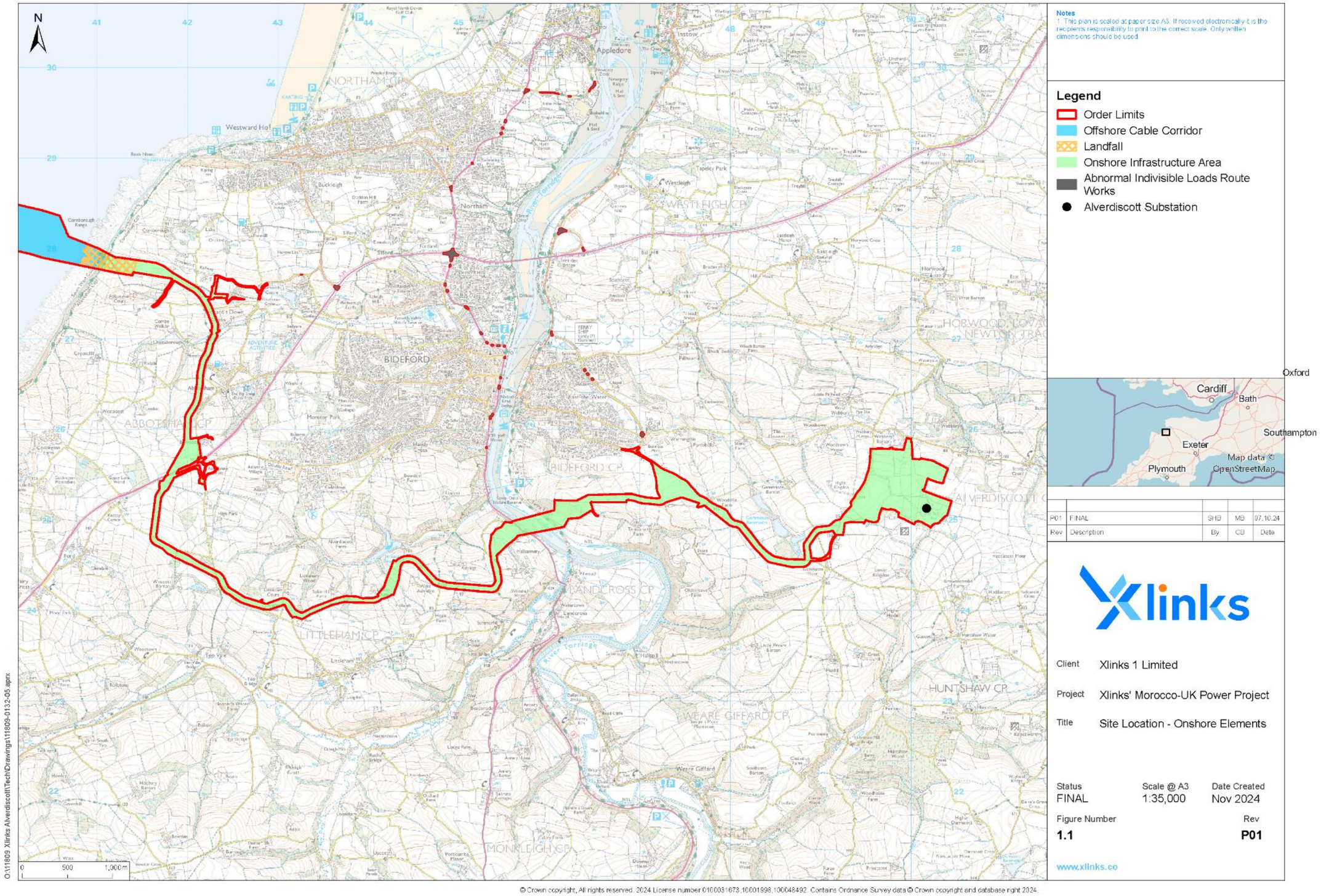

Figure 1.1: Site Location - Onshore Elements

Key Elements

1.2.7 The key onshore components of the Proposed Development include the following:

- Landfall:
  - Landfall: the site at Cornborough Range where the offshore cables are jointed to the onshore cables. This term applies to the entire landfall area between Mean Low Water Springs (MLWS) and the transition joint bays. This includes all construction works required to install the offshore and onshore cable routes, transition joint bays and compound(s) at Landfall.
- Onshore Elements:
  - Converter stations: two independent converter stations, known as Bipole 1 and Bipole 2, to convert electricity from Direct Current (DC) to Alternating Current (AC) before transmission to the national grid.
  - Onshore HVAC Cables: these cables would connect the converter stations to the national grid.
  - Onshore HVDC Cables: these cables would link the converter stations to the Landfall.
  - Highways improvements: improvements to the existing road network to facilitate access during construction, operation and maintenance, and decommissioning, including road widening, and new or improved junctions.
  - Temporary and permanent utility connections: temporary and permanent utility connections to the construction compounds and the Converter Site.
  - Permanent utility diversions: permanent diversion of existing utility services within the Onshore Infrastructure Area.

1.2.8 The onshore HVDC Cables and HVAC Cables would be installed within the respective cable corridors in cable ducts, as opposed to using a direct lay installation method. This allows timely closure of trenches pending later installation (pulling-through) and jointing of cables.

1.2.9 The onshore HVDC Cables and the HVAC Cables would be completely buried underground for their entire length. It is anticipated that the only visible parts of the onshore HVDC Cable Corridor would be maintenance covers and above ground cable markers. It is anticipated that the offshore cables would be buried in the seabed or laid on the seabed with protection.

1.2.10 No new overhead pylons would be installed as part of the Proposed Development. However, the Proposed Development would require the diversion of existing utilities, including 132 kV overhead lines (OHLs), 11 kV OHLs, gas and water assets.

1.2.11 In addition to the permanent components, temporary onshore infrastructure would be required for the construction phase, including construction compounds, welfare and site offices, utility connections, haul roads and construction drainage.

1.2.12 Further information is detailed within Volume 1, Chapter 3: Project Description of the ES (document reference 6.1.3).

1.3 Approach to Construction

General Approach

1.3.1 The Proposed Development will be constructed in an environmentally sensitive manner and will meet the requirements of all relevant legislation, codes of practice and standards as identified in the DCO, ES and any updates to legislation or standards adopted at the time of construction, to limit the adverse impacts on the local community and environment as far as reasonably practicable.

Approach to Environmental Protection

1.3.2 The design of the Proposed Development includes mitigation measures to avoid, minimise and compensate for impacts on ecology and nature conservation. The design at the time of writing has prioritised a simple hierarchy to protect the environment, which as far as reasonably practicable, includes the following:

- The avoidance of important ecological receptors such as:
  - known sites hosting protected species;
  - designated sites for conservation;
  - important undesignated habitats i.e. woodlands and watercourse; and
  - stand-off buffers from the above.
- Where complete avoidance is not possible, measures have been included to minimise and mitigate impacts (e.g. reduction in construction corridor width when crossing Devon hedgerows, use of trenchless methods to minimise impacts on habitat features such as wooded streams).
- Compensation for unavoidable impacts (e.g. full like-for-like replacement of hedgerows impacted by corridor).
- Enhancement measures (e.g. enhancement of hedgerows and additional tree planting at selected locations along the Onshore Infrastructure Area).

1.3.3 The final On-CEMP will seek additional improvements where practicable using the above hierarchy.

Health and Safety

1.3.4 Appropriate industry standards would be adopted and implemented for the health, safety and welfare of the construction staff on the Proposed Development. Arrangements would also be put in place to discharge duties under the Construction (Design and Management) Regulations 2015.

1.3.5 A Health and Safety Plan for the onshore works would be prepared by the Principal Contractor(s) post consent. The Health and Safety Plan would set out how the health and safety risks to construction workers, visitors and the public are identified and managed in accordance with legal requirements and best practice for the onshore works.

Environmental Management System

1.3.6 Each Principal Contractor is to be British Standard (BS) EN ISO 14001:2015 (Environmental Management System (EMS)) certified. The construction of the Proposed Development would operate under an EMS, which would provide the process for which environmental management is undertaken to ensure that the relevant findings of the ES are addressed during the construction phase, as well as ensure compliance with relevant legislation and standards. The EMS would set out the following:

- The procedures to be implemented to monitor compliance with environmental legislation and other relevant requirements.
- The processes for the management of risk associated with construction activities.
- The key environmental aspects of the construction works and how they would be managed.
- Staff competence and training requirements.
- Record-keeping arrangements (e.g., records of monitoring, including but not limited to results of routine site inspections, environmental surveys and equipment testing records).
- Monitoring the effectiveness of the measures included within the final On-CEMP(s), as approved by the relevant local planning authorities in consultation with the relevant stakeholders.

1.3.7 As part of the EMS, the Principal Contractor(s) is required to plan their works in advance to ensure that commitments set out in the final On-CEMP(s) are complied with. This would be documented in the method statements for the key construction activities and completed checklists/written observations from site walkovers by the Construction Supervisor.

1.4 Regulatory Requirements and Guidance

1.4.1 A primary function of the final On-CEMP(s) is to ensure all construction site personnel are aware of their legal duties and environmental responsibilities during the construction of the Proposed Development. A framework of legislation has been produced below. The list is not exhaustive and does not absolve the Principal Contractor(s) requiring the construction staff and sub-contractors from complying with other relevant legislation. The legislation register will be reviewed and updated during the construction process.

- Ecology and Nature Conservation:
  - Wildlife and Countryside Act (WCA) 1981 (as amended);
  - The Environment Act 2021
  - The Protection of Badgers Act 1992
  - Conservation of Habitats and Species Regulations 2017 (referred to as The Habitat Regulations);
  - Countryside and Rights of Way Act (CRoW) Act 2000 (as amended);
  - The Hedgerow Regulations 1997

  - Natural Environment and Rural Communities (NERC) Act 2006.
- Historic Environment
  - Ancient Monuments and Archaeological Areas Act 1979
  - The Hedgerow Regulations 1997
- Surface Water and Groundwater Environment
  - The Environment Act 2021;
  - The Contaminated Land (England) Regulations 2006
  - Environmental Damage (Prevention and Remediation) (England) Regulations 2015
  - The Flood and Water Management Act 2010;
  - The Land Drainage Act 1991;
  - The Environmental Protection Act 1990
  - Groundwater (England and Wales) Regulations 2009
  - The Environmental Permitting (England and Wales) Regulations 2016;
  - The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017;
  - The Flood Risk Regulations 2009
  - The European Floods Directive 2007;
  - Water Resources Act 1991;
  - The Water Act 2014.
- Traffic and Transport
  - The Infrastructure Act 2015; and
  - The Highways Act 1980.
- Noise and Vibration
  - Control of Pollution Act 1974
  - The Control of Noise (Code of Practice for Construction and Open Sites) Order 2015
- Air Quality
  - Ambient Air Quality Directive (2008/50/EC)
  - Air Quality Standards (England) Regulations 2010
  - IAQM (2024); Assessment of dust from demolition and construction;
- Land Use
  - Countryside and Rights of Way Act (CRoW) 2000.
- Landscape and Visual
  - Environment Act 1995
  - Countryside and Rights of Way Act (CRoW) 2000
  - Environment Act 2021
  - National Parks and Access to the Countryside Act 1949

1.4.2 Specific construction-related activities may be subject to regulatory controls through the provision of consents, licenses or permits, including a protected species licence.

Best Practice Guidance

1.4.3 Construction activities would be undertaken in accordance with the following best practice guidelines:

- Best Practicable Means under Section 72 Control of Pollution Act (1974) as amended;
- British Standard BS 10175 (British Standards Institution (BSI), 2011 and amended 2017) (BSI 10175:2011+A2:2017);
- Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance (Department for Environment, Food and Rural Affairs (Defra), 2012);
- Groundwater Protection Position Statements (Environment Agency, 2017 and amended 2018);
- Land Contamination: Risk Management (Environment Agency, 2019);
- CIRIA C741 Environmental Good Practice on Site (2015);
- Institute of Air Quality Management (2024) Assessment of dust from demolition and construction;
- British Standards Institution (BSI) (2014) British Standard 5228: Code of practice for noise and vibration control on construction and open site. Part 1: Noise +A1:2014; and
- British Standards Institution (BSI) (2014) British Standard 5228: Code of practice for noise and vibration control on construction and open site. Part 2: Vibration.

1.5 Roles and Responsibilities

Project Team

1.5.1 Whilst the key roles of the construction project team would not be assigned until post consent, the environmental roles required to implement the final On-CEMP(s) include the following.

Primary Management

Project Management Team

1.5.2 The Applicant's onshore project management team would be responsible for coordinating the works on behalf of the Applicant, ensuring that the measures in the final On-CEMP(s) are being implemented and giving necessary direction to Principal Contractor(s) (e.g., setting contractual obligations).

Principal Contractor(s)

1.5.3 The Principal Contractor(s) would be responsible for ensuring that all contracts include requirements to comply with the requirements of the On-CEMP and other delivering environmental mitigation. The Project Management Team will undertake regular oversight of the Principal Contractor(s) to assure and ensure compliance of the mitigations.

Secondary Management

Site Manager

1.5.4 The Site Manager has overall responsibility for the construction areas and would be responsible for the following:

- compliance with the final On-CEMP(s), procedures and legislation;
- compiling and reporting on sustainable construction objectives at progress meetings;
- managing specialist environmental subcontractors and service providers;
- ensuring that environmental issues are covered during all induction training sessions;
- reporting to the Project Management Team on all environmental incidents;
- ensuring environmental quality standards are adhered to and monitoring compliance during construction works; and
- ensuring that liaison with the environmental regulators is maintained as appropriate.

Environmental Co-ordinator

1.5.5 The Environmental Co-ordinator would be responsible for the interface between the environmental specialists and engineers including the following:

- coordinating and attending necessary meetings and consultations relating to environmental and sustainable construction aspects of the work;
- ensure that the commitments from statutory procedures, including the Examination process, are included in the final On-CEMP(s) and detailed environmental design;
- report on site environmental monitoring; and
- maintain all On-CEMP documents and management systems as working documents undertaking reviews and updates as necessary; and obtaining the relevant licences and consents.

Construction Supervisor

1.5.6 The Construction Supervisor would assist the Site Manager/Supervisor in the preparation of the method statements and would be responsible for overseeing

construction activities on a day-to-day basis to ensure all environmental commitments are met.

Health and Safety Manager

1.5.7 The Health and Safety Manager would be responsible for identifying and managing health and safety risk for the onshore works, in accordance with legal requirements and best practice, which would be set out in the Health and Safety Plan prepared post-consent.

Technical Roles

Clerk of Works

1.5.8 The Clerk of Works would be the overarching site representative for environmental matters and would be responsible for overseeing construction activities to ensure all environmental commitments are met and compliance with the conditions of all licences and permits.

Ecological Clerk of Works

1.5.9 The Ecological Clerk of Works (ECoW) would report on ecological matters and would be responsible for undertaking pre-construction surveys and monitoring. The ECoW would be the primary point of contact for ecological matters and would assist with site induction and tool-box talks, where necessary, to ensure ecological constraints are identified to all staff. It is anticipated that the ECoW would work with the Site Manager and report to the Environmental Co-ordinator.

1.5.10 Where specific licenses are required for impacts on protected species such as dormice and bats, the ECoW should be listed as an agent on the relevant licenses, or the ecologists named on the licenses would be substituted for the ECoW, where necessary to ensure that licensable issues are appropriately implemented.

Agricultural Liaison Officer

1.5.11 The Agricultural Liaison Officer would be appointed in time for commencement of pre-construction activities and would be the prime contact for ongoing engagement about practical matters with landowners, occupiers and their agents before and during the construction process.

1.5.12 The Agricultural Liaison Officer (or their company) would be contactable within the core working hours during the construction phase to landowners, agents and occupiers and will provide 24-hour team or company contact details for use in the event of emergency.

Community Liaison Officer

1.5.13 The Community Liaison Officer would be the dedicated contact for liaising with residents and local businesses and would be responsible for implementing the

Community Liaison Plan. The Communication Liaison would act as the primary point of contact should there be any queries or complaints.

Archaeological Clerk of Works

1.5.14 The Archaeological Clerk of Works would report on archaeological matters and would be responsible for undertaking the roles as set out in the Outline Onshore WSI (document reference 7.8).

1.6 General Requirements

1.6.1 This section sets out the general requirements for the construction phase of the onshore elements of the Proposed Development. These requirements are relevant to ensure that the construction standards and measures are adhered to.

Construction Programme

1.6.2 Subject to gaining development consent, pre-construction is anticipated to commence in 2026 and main construction in 2027. All works are anticipated to be completed by 2032. Pre-construction activities that would take place in advance of the main construction include archaeological investigation, species surveys and mitigation, working site access and welfare establishment.

1.6.3 A detailed construction schedule would be developed as the design of the Proposed Development progresses.

1.6.4 Further details are provided in Volume 1, Chapter 3: Project Description of the ES (document reference 6.1.3).

Working Hours

Core Working Hours

1.6.5 Normal construction working hours would be Monday to Friday 07:00-19:00 and Saturday 07:00-13:00. However, some operations may require work to take place outside these times. For example, abnormal indivisible loads (AIL) may be encouraged or required to travel overnight and crossings of roads may be constructed overnight to minimise disruption to traffic.

1.6.6 The normal working hours exclude start up and close down activities, which could take place up to one hour either side of the normal working hours. This includes the following activities:

- arrival and departure of the workforce at the site and movement around the main Proposed Development that does not require the use of plant;
- site inspections and safety checks; and
- site housekeeping that does not require the use of plant.

Continuous Working Hours

1.6.7 In certain circumstances, specific works may have to be undertaken on a continuous working basis (00:00 to 00:00, Monday to Sunday). During this period,

the Principal Contractor(s) may undertake activities that require continuous working hours, which would be notified to the relevant local authority in writing. These activities include, but may not be limited to:

- Horizontal Directional Drilling (HDD) (or other trenchless technology) operations. These activities may require 24-hour machinery operation, dependent on the ground conditions;
- continuous concrete pours;
- converter station component installation;
- oil filling of transformers at the converter stations;
- jointing operations along the onshore HVDC Cable Corridor; and
- testing and commissioning.

Activities Outside of Core Working Hours

1.6.8 It may be beneficial to carry out several activities outside of the core working hours such as delivery and unloading of AILs/construction plant delivery or works within the highway/footpaths. Further details are included within the Outline CTMP (document reference 7.12) and Public Rights of Way (PRoW) Management Plan (document reference 7.11).

1.6.9 Advanced notice would be provided for activities outside of the core working hours and, where necessary, agreed with the relevant local authority.

Emergency Works

1.6.10 Emergency works may also be undertaken outside of the core working hours. If emergency works are required, the relevant local authority and highways authority will be notified as soon as reasonably practicable. Alongside the notification, an explanation of the emergency and the works required in response would be provided.

General Site Layout and Good Housekeeping

1.6.11 A good housekeeping policy would be applied to the construction site at all times. As far as reasonably practicable, the following principles will be applied.

- All working areas would be kept in clean and tidy conditions.
- Adequate welfare facilities would be provided for construction staff and visitors in compliance with the Construction Design and Management Regulations 2015.
- Smoking would not be permitted within the construction site, a designated smoking area may be provided equipped with containers for smoking waste.
- Open fires on site would be prohibited at all times.
- All necessary measures would be taken to minimise the risk of fire and the Principal Contractor(s) would comply with the requirements of the local fire authority and Health and Safety Executive's guidance 168: Fire safety in construction.

- Waste from the construction site would be stored securely to prevent wind blow.
- Waste (particularly food waste) will be removed from the welfare facilities on a regular (e.g. weekly) basis.

Site Induction

1.6.12 A site induction would be provided for all personnel prior to working or visiting onsite. As well as covering safety issues, the site induction would highlight the environmental constraints onsite, environmental protection measures, and good practice measures.

1.6.13 Specific toolbox talks would be included where relevant to cover specific environmental topics and the associated mitigation covered in **Section 1.8** of this Outline On-CEMP. The Principal Contractor(s) would be responsible for ensuring all personnel working onsite have been properly inducted.

Site Security, Screening and Fencing

1.6.14 Construction compounds would be secured with fencing and lockable gates to restrict unauthorised access. Where possible, access to construction areas would be limited to specified entry points and all personnel entries/exits would be recorded for security and health and safety purposes, as required by the Construction Design and Management Regulations 2015.

1.6.15 All temporary working areas for the Converter Site, HVAC Cable Corridors, onshore HVDC Cable Corridor and Landfall would be clearly marked and secured with the appropriate fencing. Security at the Converter Site will be carefully managed during construction.

1.6.16 Fencing would be installed as part of the early construction works. The type of temporary fencing to be used would be selected to suit its location, the land use type, and its purpose.

1.6.17 All boundary fences/screens would be maintained in a tidy condition and would be fit for purpose.

1.6.18 Where the haul road meets a public highway, it would be gated or otherwise secured, where feasible and necessary, to prevent unauthorised access. Further details relating to construction traffic are provided within the Outline CTMP (document reference 7.12), which has been included as part of the DCO application.

1.6.19 Following the completion of works, all temporary screening and fencing would be removed as soon as reasonably practicable.

Lighting

1.6.20 External lighting of the construction site would be designed and positioned to:

- provide the necessary levels for safe working;
- minimise light spillage or pollution, where practicable; and
- minimise disturbance to adjoining residents and occupiers of buildings and to wildlife, where practicable.

1.6.21 Construction site lighting would only operate when required and would be designed, positioned and directed to avoid unnecessary illumination of adjacent properties, sensitive ecological receptors and users of public footpaths. Construction site lighting will be designed in accordance with latest relevant available guidance and legislation. It would also consider the requirements set out in British Standard EN 12464-2:2014 (BSI, 2014) and the Bats and Artificial Lighting at Night GN08/23 (Institute of Lighting Professionals and the Bat Conservation Trust, 2023. In accordance with the Bat Conservation Trust recommendations, lighting would be directed away from features with potential for roosting, foraging and commuting bats (see also the Outline LEMP (document reference 7.10).

1.6.22 However, outside normal working hours, motion-activated directional security lighting may be used at the Converter Site and where required/on demand for the buried onshore HVDC Cable Corridor, and at the construction compound areas. This is to ensure the safety and security of the site.

1.6.23 The details of the location, height, design and luminance of lighting to be used would be set out within the final On-CEMP(s), following the detailed design stages, which would be progressed post-consent. The design of the construction site lighting would accord with the details provided in **paragraphs 1.6.20** to **1.6.22**.

Management of Construction Waste

1.6.24 Waste from the construction of the Proposed Development would be managed in accordance with the principles of the waste hierarchy (i.e., avoid, reduce, reuse, recycle, recover and disposal) and the Outline Site Resource and Waste Management Plan (SRWMP), which is a part of this Outline On-CEMP (Appendix B: Outline SRWMP).

1.6.25 Final SRWMP(s) would be developed in accordance with the outline version. The SRWMP(s) would be updated during the detailed design process and would be maintained during the construction process to record the movement of waste from the construction areas.

1.6.26 The final SRWMP(s) would be prepared in line with the CL:AIRE (Contaminated Land: Applications in Real Environments) Definition of Waste: Development Industry Code of Practice (CL:AIRE, 2011). All waste will be transported and managed by appropriately licenced contractors and subject to the duty of care requirements.

1.6.27 Topsoil and subsoil would be stored in separate stockpiles and managed in line with the Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (PB13298) (DEFRA, 2018) (PB13298), Institute of Quarrying (IQ) Good Practice Guide for Handling Soils in Mineral Workings (IQ, 2021) and British Society of Soil Science (BSSS) Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction (BSSS, 2022).

Temporary Construction Works, Access and Compounds

Construction Access

1.6.28 The access strategy for the Proposed Development comprises both temporary and permanent alterations to roads. During construction, traffic would be routed to one of five main temporary compounds accessed directly from the highway each of which will require new or improved junctions (see **Figure 1.2**). Preliminary compound junctions have been designed to accommodate access for regular construction HGVs as well as AILs. Detailed designs of the access points would be developed in consultation with Devon County Council and in accordance with the principles established in the Outline CTMP (document reference 7.12).

1.6.29 Temporary internal haul routes would be constructed along sections of the cable corridor to remove frequent vehicle movements from the public highway. This applies to the Converter Site where arrivals at the Gammaton Road compound will be directed to a compound at the Converter Site via an off-road haul route.

1.6.30 Overall, the A39 would be used as the primary artery for construction access, which would connect construction vehicles to the A386, B3236, and Barnstaple Street into Manteo Way. These roads would be utilised for construction traffic before leading vehicles onto temporary haul roads along the cable corridor.

1.6.31 Measures would be implemented to minimise dust, mud and debris associated with the movement of construction vehicles. Further details are provided in the Outline CTMP (document reference 7.12) and Outline Dust Management Plan (Appendix C: Outline Dust Management Plan).

Construction Compounds

1.6.32 A number of temporary construction compounds would be provided within the Onshore Infrastructure Area and would comprise the following:

- **Landfall Compound**: situated at the Landfall (Cornborough Range) and accessed via the Cornborough Sewage Treatment Works private track.
- **A39 Compound**: located adjacent to the A39, south west from the Abbotsham Cross roundabout. The compound would be utilised as the main logistics base for all construction work across the onshore HVDC Cable Corridor. This compound may also include a HDD drilling site for the A39 crossing.
- **A386 Compound**: located off the A386 to the west of the River Torridge. This compound would include a HDD drilling site for the River Torridge crossing.
- **Gammaton Road Compound**: situated between Gammaton Road and Tennacott Lane, south of East-the-Water. The compound would be utilised as the main logistics base for the Converter Site.
- **Converter Site Compound**: situated within the Converter Site, which would include welfare facilities, soil and material storage, and storage of plant and equipment.
- **Smaller HDD Compounds**: required where trenchless techniques are used. HDD operations would require compounds to contain the drilling rig, equipment and the drill entry and exit pit.

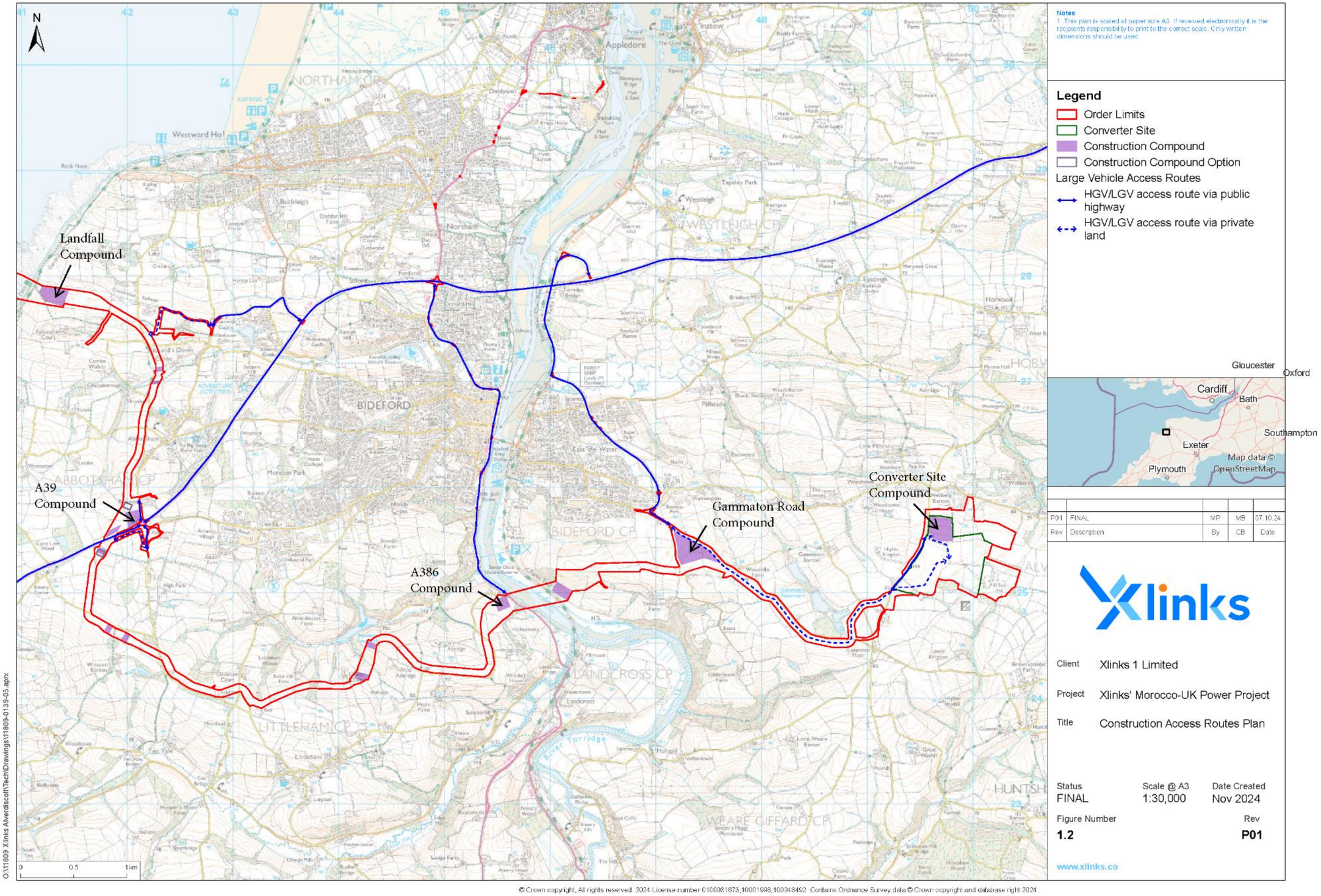

Figure 1.2: Construction Access Routes Plan

1.6.33 Compounds may include offices, welfare facilities and stores, as well as acting as a staging post and secure storage for equipment and component deliveries, as well as for laydown and storage of materials and plant.

1.6.34 Construction compounds would be established early in the construction programme, as part of the preliminary activities. The temporary construction compounds would be established by stripping and storing topsoil and subsoil and then utilising crushed stone or other suitable material to create hardstanding. Tarmacked areas would also be provided in areas of heavy vehicle use (e.g. car parking, access from public highway).

1.6.35 Where reasonably practicable, measures would be taken to contain and limit the visual intrusion of the onshore construction sites, including the temporary compounds. Where possible, the location and layout of the compounds (e.g. siting of welfare facilities) would be designed to avoid overlooking residential properties. Layout plans of the construction compounds would be provided, showing any sensitive areas and buffer zones (e.g. ecological habitats or protected species), and areas where storage of potential pollutants (e.g. fuels, oils and other chemicals) would be avoided.

1.6.36 In order to further reduce impacts from the HDD operations on nearby designated sites or other sensitive receptors, the construction works sites and HDD compounds would be screened with appropriate fencing or screening to act as a visual and sound barrier.

1.6.37 During construction phase, the Applicant will engage with emergency and health care services and provide notification at least one week prior to the implementation of any temporary road closures, diversions or lane closures. If emergency works are required, the relevant local authorities and emergency services will be notified as soon as reasonably practicable.

Site Clearance and Restoration

1.6.38 Temporary construction compounds, storage areas and accesses will be cleared on completion of the construction works. On completion of construction work all plant, temporary buildings or vehicles will be removed. Where practicable, material for temporary haul roads and temporary accesses will include recycled materials and will be available for re-use following construction.

1.6.39 Following completion of the onshore HVDC and HVAC cable installation and Converter Site, the working area would be reinstated to its pre-construction condition, as far as reasonably practicable and as agreed with the relevant planning authority. This would include the following.

- Reinstatement of topsoil and subsoil, including loosening or ripping of compacted soil.
- Reinstatement of land drainage systems. Where necessary, post-construction drains may be installed.
- Re-seeding of fields and any cover crop species mix to be agreed with the landowner with reference to soil type and land use.
- Reconstruction of any drains or ditches crossed using an open cut method.
- Replanting of any hedgerows or felled trees as described in final LEMP (secured in the DCO and approved by the relevant planning authority).
- Restoration or repair of fences, gates, tracks or hard standing.

1.6.40 The working area would be reinstated to its pre-construction condition, as far as reasonably practicable in line with the following guidance:

- Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (PB13298).
- IQ Good Practice Guide for Handling Soils in Mineral Workings (IQ, 2021).
- BSSS Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction (BSSS, 2022).

Trenchless Crossings

1.6.41 The onshore HVDC Cable Corridor will cross existing infrastructure and obstacles such as roads, rivers and other utilities. All major crossings, such as major roads and river crossings will be undertaken using trenchless technologies.

1.6.42 It is expected that there would be approximately six trenchless cable crossings within the onshore section of the Proposed Development, including the crossing at Landfall. It is currently proposed that the following features will be crossed by HDD (or other trenchless methodologies).

- The Mermaid's Pool to Rowden Gut SSSI, situated along the coastline at the Landfall, Cornborough Range.
- The following watercourses/woodland:
  - Kenwith Stream, situated just south of Rickard's Down and approximately 300 m north of Abbotsham.
  - A small stream, 290 m south of Jennetts reservoir and to the west of West Ashridge, which feeds into Jennetts reservoir.
  - River Torridge, to the south of Bideford (to note, one HDD will cross both the River Torridge and A386).
- The following major roads:
  - A39, at a section approximately 250 m south west from the Abbotsham Cross roundabout and north west from High Park Farm.
  - A386, to the south of Bideford (as stated above, one HDD will cross both the River Torridge and A386).
- An optional HDD at a site of suspected archaeological assets at Winscott Barton.

1.6.43 An Outline Bentonite Breakout Plan has been submitted with the DCO application and includes measures to reduce the risk of bentonite breakout associated with these trenchless crossing techniques (document reference 7.21).

Construction Drainage Strategy

1.6.44 As detailed within **Table 1.1**, a Construction Drainage Strategy(s) would be developed as part of the final On-CEMP(s). It would set out the key management and monitoring procedures in relation to surface water and drainage that would be required during the construction phase. The focus of the strategy would be to manage surface water runoff and site drainage from construction work areas to:

- minimise the pollution risk to waterbodies from contaminated water runoff; and

- minimise flood risk from increased surface water runoff.

1.6.45 The Construction Drainage Strategy(s) would be developed and agreed with the relevant authority prior to commencing construction of the relevant stage of the onshore works.

1.6.46 Construction Industry Research and Information Association (CIRIA) guidance would be adopted as standard mitigation as appropriate, including from the following publications:

- Environmental Handbook for Building and Civil Engineering Projects (3 Parts: C512, C528 and C529) (CIRIA, 2000).
- Control of water pollution from construction sites. Guidance for consultants and contractors (C532) (CIRIA, 2001).
- Control of water pollution from linear construction projects. Technical guidance (C648) (CIRIA, 2006) and site guide (C649) (CIRIA, 2006).
- Groundwater control: design and practice, second edition (C750) (CIRIA, 2016).
- Environmental good practice onsite guide (fourth edition) (C741) (CIRIA, 2015).

1.6.47 The Construction Drainage Strategy would include a number of pollution prevention and flood response measures to ensure the potential for any temporary effects on water quality or flood risk are reduced as far as practicable. This would include, but not limited to the following:

- The timing of certain works would be programmed to reduce the risk of flooding or water pollution (i.e. avoiding periods of very wet or prolonged wet weather when undertaking earth moving works and soil stripping to minimise risk of generating water runoff contaminated with fine particulates).
- Implementation of temporary measures to control water runoff and pollution from the construction compounds and work areas.
- Implementation of measures to manage the risk of surface water flooding and groundwater flooding. This includes managing the risk from groundwater flooding (during excavation) through the use of appropriate dewatering working practices to ensure safe dry working environments (dewatering is detailed in **paragraphs 1.6.49** to **1.6.53** below).
- Management of foul water from construction compounds.

1.6.48 The Construction Drainage Strategy(s) would also detail the proposed monitoring of surface water quality at agreed locations throughout the Onshore Infrastructure Area. Monitoring would be designed to demonstrate compliance with any environmental permits. Monitoring would also contribute to ensuring that mitigation measures are operating as planned, identifying any detrimental effects on the water environment and to allow any pollution incidents to be identified and remedied.

1.6.49 Furthermore, any field drainage intercepted during construction would be reinstated following completion of construction or diverted to a secondary channel. Landowners and occupiers would be informed of the design of drainage works required during construction, including pipe layout, falls, dimensions and outfalls (if required). The drainage would be reinstated in a condition that is at least as effective as the previous condition (as identified in the relevant condition and/or

drainage survey) and would follow best practice for field drainage installations taking into account site-specific conditions.

1.6.50 Further pollution prevention and flood control measures are detailed within **section 1.8** and the Outline Pollution Prevention Plan, which forms part of the application for development consent (Appendix A: Outline Pollution Prevention Plan).

Dewatering

1.6.51 The construction of the transition joint bays, onshore HVDC Cables, HVAC Cables and associated joint bays or link boxes would require dry excavations. Therefore, the dewatering of open trenches and excavations may be required where shallow groundwater is encountered. Dewatering refers to the process of removing or draining groundwater or surface water from a trench, watercourse, ditch, etc.

1.6.52 The groundwater removed by dewatering would be pumped to an appropriate location to allow any sediments present to be settled, prior to discharge to local surface watercourses or across ground away from the excavations.

1.6.53 In the event that trenches need dewatering, water from such activities would be discharged in agreement with Devon County Council and/or the Environment Agency to a local drainage ditch or watercourse and/or spread over ground. This would be undertaken in accordance with measures agreed through the On-CEMP, Pollution Prevention Plan, and Construction Drainage Strategy.

1.6.54 Long term dewatering activities, with a rate of over 20 m^3/day would require an abstraction licence. However, any construction dewatering option that is deemed to be exempt from an abstraction licence requirement would need to comply with all of the following conditions:

a. Abstraction is temporary and undertaken within a period of less than 6 months.
b. Does not cause or is likely to cause damage to a conservation site, specific feature, and protected species.
c. A total abstraction rate of less than 100 m^3/day.
d. Abstracted water is immediately discharged to a soakaway or back to ground via recharge wells.

1.6.55 Consents/permits relating to dewatering activities that may affect surface water and / or groundwater are to be obtained as and when required during the construction phase of the Proposed Development. The conditions of the consent would be specified to ensure that construction does not result in significant alteration to the hydrological regime or an increase in fluvial risk.

1.6.56 Following the completion of any ground investigation and the detailed design stages, a dewatering strategy would be developed in consultation with the relevant stakeholders.

Pest Control

1.6.57 The risk of pest/vermin infestation would be reduced by ensuring that food waste (from the welfare facilities) or other putrescible waste is stored appropriately and regularly collected (i.e., weekly) and effective preventative pest control measures

are implemented. Any pest infestations would be dealt with promptly and notified to the relevant authorities as soon as practicable.

Emergency Planning and Procedures

1.6.58 Emergency procedures would be developed by the Principal Contractor(s) taking into account the anticipated hazards of the construction site. The procedures would include measures for dealing with actual or suspected pollution incidents involving spillages of oils or chemicals, discharge of silty water or other pollutants to watercourses; floods; fire (emissions to air) and firewater runoff; and the discovery of potentially contaminated land.

1.6.59 General control measures would include the provision of emergency equipment such as spill kits, absorbent materials, drain covers and oil booms and the need for staff training in emergency procedures. Equipment would be located at the construction compound and other appropriate locations.

1.6.60 In the event of an actual or suspected pollution incident, the Principal Contractor(s) would implement the emergency procedures and report the incident to the Environment Agency.

1.6.61 The emergency procedures would also contain emergency phone numbers and the method of notifying local authorities and statutory authorities (e.g. the Environment Agency). The procedures would be displayed at the construction site and all staff would be required to follow them. In the event of an emergency, members of the public would be able to contact the Project Management Team via the contact details on the site entrance or the website.

Pollution Prevention

1.6.62 The Principal Contractor(s) would develop and implement appropriate measures to control the risk of pollution due to construction works, materials and extreme weather events. An Outline Pollution Prevention Plan (Appendix A) accompanies the application for development consent, which recognises the risk of pollution from construction activities and presents pro-active management practices to ensure that any pollution that may occur is minimised, controlled, reported to the relevant parties and remediated.

1.6.63 Good practice guidance detailed in the Environment Agency's Pollution Prevention Guidance notes (including Pollution Prevention Guidance notes 01, 05, 08 and 21) will be followed where appropriate, or the latest relevant available guidance.

1.6.64 Mitigation measures will be implemented to manage environmental risks through the duration of the construction phase as far as reasonably practicable, including the following:

- Storage of excavated materials (soils and arisings) to prevent run-off by means of temporary bunding
- Storage of stockpiled materials on an impermeable surface to prevent leaching of contaminants and use of covers when not in use to prevent materials being dispersed and to protect from rain;
- The implementation of dust suppression measures during construction to minimise nuisance dust emissions during the works;

- A construction drainage strategy would be implemented to minimise surface water runoff and pollution;
- Bulk storage areas to be secured and provided with secondary containment (in accordance with the Oil Storage Regulations and best practice);
- Storage of oils and chemicals away from existing watercourses, including drainage ditches or ponds;
- Use of a documented spill procedure and use of spill kits kept in the vicinity of chemical/oil storage;
- The disposal of solid waste, including surplus spoil, would be managed to maximise the environmental and developmental benefits from the use of surplus material and to minimise any adverse effects of disposal. In general, the principles of the waste management hierarchy, reduce-reuse-recycle would be applied;
- Potential waste arising from excavation would be sampled and analysed to determine the waste classification required to establish relevant waste streams, suitability for reuse/recycle and disposal/storage requirements; and
- The Site Resource and Waste Management Plan will provide details of the broad types of waste produced during construction and will include good practice measures for managing waste generated during construction. All waste generated would be disposed of by a suitably licensed waste contractor.

Bentonite Breakout Prevention

1.6.65 Bentonite clay is used in the trenchless drilling process as a lubricant as well as a means of removing the excavated material (cuttings or arisings). In HDD, it is also used as a means stabilising the drilled bore to ensure that it does not collapse between the completing of the final bore diameter and the pulling in of any ducting. Drilling fluid (bentonite) can sometimes break out from the bore to surface in cases of highly fissured clay, gravels or where there are large, interconnected fissures in the ground.

1.6.66 Construction works will be carried out in such a way to minimise these risks using mitigation outlined in the Outline Bentonite Breakout Plan (document reference 7.21).

Communications

1.6.67 A Community Liaison Group would be set up prior to construction and would continue through the construction phase of the Proposed Development as a formal forum for local issues to be raised. A Community Liaison Officer will be appointed to lead discussions with local communities, and also act as the primary point of contact should there be any queries or complaints.

1.6.68 A Community Liaison Officer would be provided as the main point of contact for landowners to provide construction updates and to resolve any queries that arise during construction. The Principal Contractor(s) would adopt a proactive approach to communications. They would provide a dedicated point of contact to manage communications with local residents, local businesses, emergency services and the local authority. The approach would include the following steps:

- A site notice board would be erected at the entrance(s) of the construction site that meets statutory requirements and sets out key facts about the construction programme, where further information could be found and the contact details for the key members of the construction team.
- Information regarding the Proposed Development (including key information on the construction programme and areas of works) would be added to the website and would be updated regularly.
- Where relevant, occupiers of nearby properties and relevant planning authorities would be informed in advance of works taking place (in particular, those affecting PRoWs and local roads), including the anticipated duration of the works.
- Occupiers of nearby properties would be informed of particularly noisy construction activities, works to be undertaken outside the normal working hours, or the arrival of any abnormal loads.
- Local residents or businesses would be given advance notice of temporary disruption to services, if any.

1.6.69 A complaints procedure would be implemented during the construction phase. Complaints would be investigated and, where required, further mitigation may be implemented, in consultation with the relevant stakeholders if applicable. All complaints would be logged and the response will be recorded. This information would be made available to Torridge District Council and Devon County Council.

1.6.70 The construction phase would include community consultation and sharing of non-technical information relating to the Proposed Development (e.g., explaining compliance with public exposure guidelines, actual risks associated with the Proposed Development), to allow people to express concerns and gain awareness of actual health effects. The Applicant would develop a Community Liaison Plan, which will detail measures to facilitate community feedback and presentation of relevant technical information. The point of contact for community liaison would also be provided on the Proposed Development website.

1.7 Environmental Aspects Register

1.7.1 An outline of the Environmental Aspects and Impacts register is provided in **Table 1.2.** The register summarises sensitive receptors and the potential impacts that could arise due to the proposed construction works based on the information submitted in the ES. It has been provided to reflect how the final On-CEMP(s) and accompanying management plans will provide the appropriate control measures to adhere to in order to reduce the effects on sensitive receptors during construction of the Proposed Development landward of MLWS.

1.7.2 Measures to mitigate these impacts are discussed in the Environmental Control Plans (see **section 1.8**) within this Outline On-CEMP. The register will be updated as required during detailed design and will provide useful information for the construction teams when preparing their method statements.

Table 1.2: Environmental aspects and impacts register

Environmental Topic	Sensitive Receptors	Potential Impacts During Construction	Environmental Control Plans
Ecology and Nature Conservation	• Statutory and locally designated sites. • Hedgerows. • Watercourses with wooded banks. • Protected species including hazel dormice *Muscardinus avellanarius*, otters *Lutra lutra*, bats, breeding birds, wintering and migratory birds.	• Temporary and permanent loss of habitat. • Disturbance of protected species. • Damage to retained habitats. • Spread of invasive non-native species.	• Reinstatement of hedgerows on a 'like-for-like' basis. • Timing and methods of vegetation clearance. • Limiting lighting and noise disturbance due to construction activities. • Further surveys/monitoring. • Biosecurity protocol.
Surface Water, Groundwater and Ground Conditions	• Water bodies (Main rivers and ordinary watercourses). • Groundwater bodies. • Designated sites (Mermaid's Pool to Rowden Gut SSSI and Taw-Torridge Estuary SSSI). • Nitrate Vulnerable Zones. • Field drainage. • Local abstractions.	• Increased risk of flooding. • Pollution of surface and groundwater. • Impacts to existing field drainage. • Damage to flood defences.	• Flood control measures. • Pollution control measures. • Use of trenchless methods to avoid watercourses, designated sites, and flood defences. • Implementation of effective buffers between construction works and receptors.
Transport and Access	• Users of the local highway network, footways, and cycleways.	• Traffic delays as a result of construction vehicles. • Impacts on the safety of users of the highway network.	• Development and use of construction haul roads. • Construction Traffic Management Plan. • Management of Abnormal Load deliveries.
Noise and Vibration	• Noise sensitive receptors (i.e. residential and ecology receptors)	• Noise and vibration disturbance from construction activities. • Noise due to increased traffic flows.	• Best Practicable Means.

Environmental Topic	Sensitive Receptors	Potential Impacts During Construction	Environmental Control Plans
Air Quality	• Nearby residents . • Ecological receptors.	• Deposition of dust affecting designated sites and habitats. • Potential dust nuisance to human receptors. • Deposition of construction dust on nearby roads.	• Dust control measures set out in a Dust Management Plan in line with IAQM guidance.
Land Use and Recreation	• Local residents and users of Public Rights of Way. • Agricultural land. • Soils.	• Disruption and reduced access to agricultural land. • Disruption and reduced access to recreational resources (e.g. PRoW, cycle routes, village greens, etc.).	• Soil Management Plan. • Measures to maintain operation of farm holdings. • PRoW Management Plan.
Landscape and Visual Impact	• North Devon Biosphere Reserve and the North Devon Coast National Landscape • Local residents and users of PRoWs. • Landscape character.	• Temporary disruption in the tranquillity and natural darkness in the area. • Impacts to views and visual amenity.	• LEMP. • Appropriate lighting measures to minimise light spillage and disturbance.
Historic Environment	• Buried archaeology. • Heritage assets (e.g. Scheduled Monuments, Listed Buildings, etc.).	• Impacts to the setting of heritage assets. • Damage to or permanent loss of buried archaeological assets. • Impacts to the character of the historic landscape.	• An Outline WSI, which will detail survey and archaeological mitigation requirements.
Climate Change	• Global atmospheric mass of Greenhouse Gas (GHG) emissions. • The Proposed Development (i.e. infrastructure elements that may be vulnerable to future climate change). • Construction workforce (during construction of the Proposed Development.	• GHG emissions arising from the manufacturing and installation of the Proposed Development, contributing to global GHG emissions concentrations and climate change. • Impacts associated with future climate change (e.g. increased storm events, drought, etc.).	• Measures to reduce GHG emissions associated with the construction of the Proposed Development. • Consideration of adverse weather/extreme events in the development of risk assessments.

1.8 Environmental Control Plans

Ecology and Nature Conservation

Objectives

1.8.1 To minimise the impact of construction works on protected species and designated sites and to minimise the loss of nature conservation features such as hedgerows, woodland and mature trees.

Management Measures

1.8.2 The design of the Proposed Development includes mitigation measures to avoid, minimise and compensate for impacts on ecology and nature conservation. The Proposed Development design has taken into account the hierarchy of mitigation actions, which as far as reasonably practicable, include the following:

- the avoidance of Important Ecological Receptors (e.g. diversion of the onshore HVDC Cable Corridor to avoid Littleham Wood);
- where complete avoidance is not possible, measures have been included to minimise and mitigate impacts (e.g. reduction in construction corridor width when crossing Devon hedgerows, use of trenchless methods to minimise impacts on habitat features such as wooded streams);
- compensation for unavoidable impacts (e.g. full like-for-like replacement of hedgerows impacted by corridor); and
- enhancement measures (e.g. enhancement of hedgerows and additional tree planting at selected locations along the Onshore Infrastructure Area).

1.8.3 An Outline LEMP has been prepared as part of the application for development consent (document reference 7.10). Final LEMP(s) would be developed in accordance with the Outline LEMP. The final LEMP(s) are secured as a requirement of the DCO and would be agreed with the relevant planning authority. The plan would include details of mitigation planting at the converter site, including the number, location, species and details of management and maintenance of planting.

1.8.4 The final LEMP(s) would also include requirements and measures relating to ecology and nature conservation. It would include but not be limited to the following:

- A series of pre-commencement ecological surveys, to understand conditions prior to construction (this provides an opportunity to address any changes prior to any works).
- Requirements and management measures relating to ecology and nature conservation.
- Methodologies required for removal and reinstatement of hedgerows or other habitats to be reinstated.
- Methods required to prevent disturbance to or to comply with protected species licensing as relating to dormice (or any other species found to require licensing as a result of pre-commencement surveys).

- Details and specifications for an ECoW, including duties, responsibilities and reporting structure.

1.8.5 An ECoW would be appointed by the Principal Contractor(s) to oversee enabling works and construction where necessary. The ECoW would be a suitably experienced professional ecologist. The ECoW would review results of protected species surveys prior to the commencement of works in different areas and would contribute to the preparation of crossing method statements where they could impact on sensitive environmental features such as a watercourse.

Habitats

1.8.6 Measures would be implemented to ensure adequate protection of streams with wooded banks. These would include measures to protect bank-side habitats and provide adequately protected 10 m buffers from the watercourses, along with suitable screening and protections against contamination from any works

1.8.7 The contractor(s) would retain vegetation where practicable and in accordance with the final LEMP(s). Measures to protect retained vegetation and habitat features (e.g. hedgerows, woodland and individual tree Root Protection Zones) would be developed prior to construction. These would include, but not limited to, the following:

- Installation and maintenance of appropriate temporary fencing with guidance from ECoW.
- Inclusion of suitable signage to indicate that habitat and features to be retained.
- Inclusion of protection measures and need for adherence to them within the site induction.

1.8.8 However, where hedgerow habitat removal is unavoidable, impacts would be reduced as far as possible by reducing the sizes of gaps in hedgerows or other features of value and, if possible, utilising existing gaps and gateways. Methods of clearance would be implemented to further minimise impacts on these habitats and associated species, such as considering timings of clearance to avoid specific impacts.

1.8.9 Where licenses are in place relating to disturbance of, or damage to, habitats supporting protected species such as dormice or bats, clearance measures will comply with the licenced method statements in place. Compliance with licensing conditions is a legally binding requirement, and any proposed deviation from the licensed methodology would need a prior amendment to the licence. If such amendments are required, they should be identified to the ECoW as soon as possible.

1.8.10 The design of the onshore HVDC Cable Corridor has sought to minimise the impact on mature vegetation, hedgerows and trees both through the site selection and route refinement process and narrowing the route where it crosses important hedgerows or using existing hedgerow gaps (including Devon hedge-banks).

1.8.11 In all instances where hedgerows and Devon hedge-banks are crossed by the onshore HVDC Cable Corridor, they would be reinstated on a 'like-for-like' basis. Where feasible and as far as reasonably practicable, existing hedge-bank materials and root-stock would be stored and re-used to form the reinstated Devon hedge-banks, including viable woody species stools. Hedgerow reinstatement would include replanting with suitable species mixes tailored to

replicate and enhance the diversity of the existing hedgerows, using appropriate native species of local provenance, where reasonably practicable. A suitably experienced hedging contractor familiar with creation of Devon hedge-banks would be appointed to complete this work.

1.8.12 Agricultural land would be temporarily disturbed during construction. However, topsoil and subsoil would be stored separately during construction for replacement in the correct sequence, and care would be taken with regard to levels of soil compaction. Soil management measures are detailed within the Outline Soil Management Plan, which forms part of the application for development consent (Appendix D: Outline Soil Management Plan).

1.8.13 As set out in **paragraphs 1.6.20** to **1.6.23**, construction site lighting would only operate when required and would be designed, positioned and directed to avoid unnecessary illumination to sensitive ecological receptors. Construction site lighting will be designed in accordance with latest relevant available guidance, including Bats and Artificial Lighting at Night GN08/23 (Institute of Lighting Professionals and the Bat Conservation Trust, 2023) and other relevant guidance and legislation. The ECoW would be consulted and agree lighting positions required.

1.8.14 Good practice air quality management measures will be applied where ecological receptors are present within 50 m, as described in Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction (2024). Further detail on dust management measures are provided in **paragraphs 1.8.111** to **1.8.113**, as well as the Outline Dust Management Plan (Appendix C: Outline Dust Management Plan).

1.8.15 Post-construction, the working area would be re-instatement to pre-existing conditions, as far as reasonably practical in line with the guidance set out in **paragraph 1.6.39**.

1.8.16 Where the construction sites and compounds lie adjacent or close to designated sites such as Hallsannery County Wildlife Site (CWS), Abbotsham Cliff CWS, Torridge Estuary CWS, Lodge Plantation Unconfirmed Wildlife Site and Haddacott Moor CWS, appropriate buffers will be set out and maintained, and suitable barriers and measures will be put in place to ensure that visual and noise disturbance is minimised as much as possible. Measures as set out in **paragraphs 1.8.61** to **1.8.73** to control contamination risks by air or water will be regularly reviewed and enforced by the ECoW at sites in the vicinity of designated sites.

1.8.17 There would be a 15 m buffer between working areas and woodland habitat where reasonably practicable along the onshore HVDC Cable Corridor. This would include the temporary construction compounds at Hallsannery Lodge Plantation, Town Park Plantation, Kenwith Stream and West Ashridge. Woodland protection will be implemented on the boundary of the Converter Site as far as reasonably practicable. Woodland protection measures will be overseen and regularly checked by the ECoW during the construction period.

1.8.18 Furthermore, measures to protect retained vegetation and tree root protection zones are included within the Outline Arboricultural Method Statement, which forms Appendix E of this Outline On-CEMP.

1.8.19 HDD (or other trenchless methodologies) would be utilised to allow the onshore HVDC Cable Corridor to pass beneath the River Torridge, which is designated as a Local Nature Reserve (Kynoch's Foreshore) and County Wildlife Site at the crossing location. At this location, the HVDC Cables will pass beneath the river, its

floodplain, the Tarka Trail and Lodge Plantation Unconfirmed Wildlife Site. Construction working areas associated with the River Torridge Crossing would be located outside of any designated areas. Working depths and methods would be appropriate (especially under the Torridge Estuary) to ensure that levels of noise and vibration would be reduced sufficiently to minimise impacts on migratory fish using the watercourse as far as reasonably practicable.

1.8.20 To further reduce impacts from the HDD operations on nearby designated sites or other sensitive receptors, the construction work sites would be screened with appropriate fencing or screening to act as a visual and sound barrier, where reasonably practicable.

Species Specific Measures

Dormice

1.8.21 A licence under Regulation 55 of the Conservation of Habitats and Species Regulations 2017 (as amended) would be required from Natural England prior to the commencement of construction. All construction works would be carried out in accordance with the Method Statement approved by Natural England as part of the licensing process.

1.8.22 Clearance works would be carried out at times when the risk of injury to individual dormice are minimised, taking into account dormouse ecology and behaviour. This would mean that upstanding vegetation is cut and removed during the winter period when dormice are hibernating in nests at ground level, with grubbing out of roots and hedge banks undertaken from May to September, when dormice would be active and using the tree canopy.

1.8.23 Construction areas would be carefully searched as far as reasonably practicable prior to clearance operations. If any dormice are encountered, they would be moved to suitable, safe locations beyond the working areas but within their existing range (in accordance with guidance in the Dormouse Conservation Handbook).

1.8.24 Prior to the construction phase, habitat reinforcement, e.g., dormouse nest boxes, would be implemented beyond the areas of habitat removal. This would be applied in areas where any dormice displaced by the habitat clearance are likely to go i.e. appropriate locations on hedgerows to either side of gaps made by cabling operations. In the limited case where hedgerows are to be permanently removed, dormouse nest boxes would be placed in suitable locations in hedgerows and woodland edge areas with direct connectivity to the hedges to be removed to offer opportunities for dormice displaced by the phased hedgerow removal.

1.8.25 Once the construction phase is completed, the reinstatement and enhancement of any dormouse habitat would be undertaken, including creation of new hedgerows and woodland areas.

Birds

1.8.26 Clearance of all vegetation, identified as being of potential value to birds for nesting, would be undertaken outside of the bird nesting season, where reasonably practicable. If this is not reasonably practicable, the vegetation requiring removal would be subject to a nesting bird check by a suitably qualified Ecological Clerk of Works. If nesting birds are present, the vegetation will not be

removed until the young have fledged or the nest failed. Following removal and works, habitat reinstatement would be carried out for renewed opportunities for bird nesting, once re-established.

1.8.27 The installation of the Landfall and the onshore HVDC Cable Corridor at the River Torridge crossing would be undertaken by HDD. Measures to minimise disturbance to birds as far as reasonably practicable using particularly important features such as the Landfall and Torridge Estuary would be put in place. This would include the erection of temporary visual/sound barriers around work sites associated with the HDD on both sides of the estuary. Where works on the onshore HVDC Cable Corridor (outside of the HDD work sites) lie within 100 m of any habitats likely to be used for wintering water birds, works should be timed to avoid the period when they are present (November to February inclusive).

1.8.28 Where works on the onshore HVDC Cable Corridor (outside of the HDD work sites) lie within 100 m of any habitats likely to be used for wintering birds, works should be timed to avoid the period when they are present (November to February inclusive).

Otters and Water Voles

1.8.29 On the basis of the survey findings, no mitigation for water voles *Arvicola amphibius* is required. An updated survey would be undertaken prior to construction. If water voles are identified in watercourses affected by the construction works, reasonably practicable measures for their protection would be agreed upon with Natural England.

1.8.30 In terms of otters, the onshore HVDC Cable Corridor has avoided habitat of significant value, where practicable. However, the corridor would pass through some areas of suitable habitat and cross several watercourses. Where the cable route crosses the River Torridge, trenchless techniques would be implemented to reduce the potential impact as far as possible by passing under the river and associated terrestrial habitats. Construction work sites, including HDD and other compounds, would be located a suitable distance away from areas of habitat of high potential value to otters to minimise disturbance levels. In general, a minimum buffer of at least 10 m would be in place alongside all streams falling within construction areas.

1.8.31 To minimise potential disturbance to otters, temporary construction compounds within 15 m of watercourses would be screened with solid fencing on sides adjacent to the watercourse, and working lighting would be located to avoid as far as reasonably practicable light-spill onto currently unlit sections of watercourse during the construction period.

1.8.32 Prior to construction, an updated survey will be undertaken for all minor watercourses affected by the proposed onshore HVDC Cable Corridor prior to the commencement of works to ensure that no new holts or other places of rest for otters have been formed prior to the commencement of construction. If a new holt or place of rest is found, an appropriate mitigation strategy would be formulated in discussion with Natural England. If construction works are unable to avoid an impact on such a holt or place of rest, a Natural England development licence for otters would be required before works can commence.

1.8.33 Measures to ensure that construction works are carried out in a tidy fashion, with good standards of handling potentially harmful materials, would prevent access by

otters to these materials. Similarly, ensuring that open excavations are left with suitable plank or battered back 'escape routes' or alternatively covered where necessary would also prevent otters (and other mammals, such as badgers *Meles meles*) from becoming trapped in deep excavations.

Bats

1.8.34 For hedgerows known to be used by high numbers of bats, temporary structures would be used to replicate as reasonably practicable the linear feature's canopy and left in place overnight during the construction activity. These could be formed of suitable materials such as 'Heras' fencing panels adorned with camouflage netting and stoutly anchored to the ground. The set up and use of construction phase lighting will be designed to minimise as far as reasonably practicable the impact on Cat II bats unless assessed as unsafe for site workers. Contractors would be made aware of the importance of carrying out this task, through briefing at site inductions and toolbox talks. It would not be necessary to undertake this measure during the winter period (November to February inclusive) when bats are inactive.

1.8.35 Lighting during construction would take into account the requirements set out in British Standard EN 12464-2:2014 (BSI, 2014) and the Bats and Artificial Lighting at Night GN08/23 (Institute of Lighting Professionals and the Bat Conservation Trust, 2023, as set out in **paragraph 1.6.21**. Furthermore, lighting outside the standard construction working hours will be restricted to that necessary for individual tasks and would be directional to avoid light spill onto areas where lighting is not required.

1.8.36 Trees with bat potential have been identified and are subject to monitoring/climbing surveys to assess if they are used by bats, and if present to confirm roost status. These surveys are being undertaken in 2024 and early 2025. These surveys will confirm as far as reasonably practicable the presence or absence of bat roosts in trees directly affected (felling) or indirectly affected by the construction works (noise, lighting, vibration). The following measures to reduce disturbance to any bat roosts will be implemented as far as reasonably practicable:

- fencing around the HDD work site to control lighting and disturbance.
- directional lighting to avoid light spillage and turning off lights overnight.
- artificial bat roosting facilities would be provided in alternative trees (for each moderate to high potential value tree to be felled, three bat boxes would be installed in the vicinity to provide alternative roosting opportunities).

1.8.37 Up to five trees with moderate or high bat potential have been identified in locations which mean that they may require removal. Additional climbing survey would be required to establish if they do contain bat roosts. If so, licensing under Regulation 55 of the Conservation of Habitats and Species Regulations 2017 (as amended) would be required from Natural England prior to the commencement of construction. Furthermore, mitigation measures would be developed and implemented, including the following:

- Sectional 'soft-felling' of such trees under supervision of licensed ecologist at appropriate season.
- Provision of bat boxes suitable to species of bat using roost in adjacent/nearby suitable locations.

- If feasible, consider using section of felled tree with existing roost to be attached to suitable nearby trees, in addition to provision of artificial bat roost boxes.

1.8.38 This approach will be taken for any other roosts identified in previously un-surveyed locations or if discovered during pre-commencement surveys.

Badgers

1.8.39 No active badger setts have so far been identified within the onshore HVDC Cable Corridor or would be directly affected by it. Therefore, at the time of writing, no license is required and no mitigation specific to badgers is required.

1.8.40 Although no active badger setts have so far been identified, activity along the onshore HVDC Cable Corridor would be subject to continued monitoring on a quarterly basis for a full year immediately prior to commencement of construction, to review whether badgers have excavated and commenced to inhabit any new setts in locations which might be affected by the proposed onshore HVDC Cable Corridor or converter station construction works.

1.8.41 In the event that newly-occupied setts were identified in locations where they would be damaged or disturbed by the construction works, a license would be applied for under the Protection of Badgers Act 1992. This would require an appropriate mitigation package to include sufficient details to understand if the sett to be affected a main sett, annexe, subsidiary or outlier and whether an artificial sett within the existing territory of the badger social group would be required. Methods to create this, if required, along with methods of exclusion of badgers from the sett and measures to permanently or temporarily close the sett, would be required.

1.8.42 Measures to ensure that construction works are carried out in a tidy fashion, with good standards of handling sensitive materials, would prevent access as far as reasonably practicable by badgers to toxic materials. Similarly, ensuring that open excavations are left with suitable plank 'escape routes' or alternatively covered where necessary would also prevent badgers and other mammals from becoming trapped in deep excavations.

Reptiles

1.8.43 Areas of high potential value to reptiles, which could be affected by construction works, would be subject to phased habitat degradation in order to encourage reptiles to evacuate the construction areas prior to the commencement of works. Immediately prior to clearance of remaining vegetation and earthworks, an update survey would be required to ensure that any present reptiles are temporarily removed to good (not degraded) habitat either side of the works. Details and methodologies are included within the Outline On-CEMP, submitted with the application for development consent.

1.8.44 These measures would be preferable to capture and translocation of reptile populations, as at each identified location, reptile habitat loss is temporary and in addition, adjacent suitable habitat similar to that being affected is available (primarily hedgerow margins in each case). This offers reptiles immediate and familiar habitat locations and while temporarily concentrating population numbers, offers the benefit that reptiles can proceed to re-colonise disturbed areas as soon as construction activity ceases.

1.8.45 Habitat degradation work would consist of the following measures:

- Areas identified with potential for reptiles would be confirmed and their extent highlighted on site by the ECoW.
- Prior to commencement of any works within the area highlighted, an initial hand-search should be undertaken by a suitably experienced ecologist. This should be undertaken during the period when reptiles would be expected to be active (nominally March to October inclusive**).** This will ensure that if any struc**t**ures or features are identified that could support hibernating reptiles, they are not disturbed while in torpor.
- Any such hibernation features would be carefully inspected and dismantled by the experienced ecologist to ensure that no reptiles were present.
- Any reptiles found would be carefully captured and removed to areas of safety outside the working areas. All reptiles captured would be removed to the railway corridor and released there. All reptiles captured would be recorded as to species, life stage and sex.
- Once an initial inspection of the areas to be worked upon is completed, an initial cut of grassland and other vegetation down to 150 mm above ground level should be undertaken, followed by a further inspection by the ecologist.
- After completion of the initial cut and inspection, once any reptiles encountered have been removed to safety, a further cut of vegetation down to ground level should be undertaken. After inspection by the ecologist, vegetation cutting may be undertaken using mechanical flail machinery, if necessary.

1.8.46 The highlighted area should be maintained with very short vegetation throughout the construction period to deter reptiles from entering this area for foraging purposes.

1.8.47 Immediately prior to clearance of remaining vegetation and earthworks, an update survey would be required to ensure that any present reptiles are temporarily removed to good (not degraded) habitat either side of the works, where they would remain until construction is complete with habitat reinstatement. These works would be overseen by a suitably experienced ECoW.

Invasive Species

1.8.48 Management measures to control the spread of plant and animal disease will be set out in the Biosecurity Protocol, which would be developed and agreed with relevant statutory consultees prior to the commencement of construction. The Biosecurity Protocol would form part of the final On-CEMP(s) and would contain measures to address the following:

- To prevent the spread of any Invasive Non-Native Species (INNS) identified during field surveys within the Onshore Infrastructure Area.
- To identify and prevent the spread of other INNS which may be identified within the Onshore Infrastructure Area during pre-construction surveys and monitoring.
- To prevent the spread of notifiable animal disease, plant pests and plant pathogens.

1.8.49 Pre-construction surveys would be undertaken by appropriately qualified ecologists that are competent in the identification of INNS, as defined by the Chartered Institute of Ecology and Environmental Management Competency Framework (2021). These surveys would ensure that there is available up-to-date information on the location, distribution and extent of INNS within and adjacent to the Onshore Infrastructure Area.

1.8.50 Where the presence of INNS have been identified, the Principal Contractor(s) would produce specific method statements for the INNS species identified (and the locations within which they are present) with specific measures to be implemented during construction works and/or vegetation and soil removal to ensure that there is no spread of INNS.

1.8.51 Where necessary, works would be supervised by the ECoW. Known locations of invasive plant species would be marked on site and vehicle movements restricted in the vicinity of these locations until the invasives have been appropriately removed.

1.8.52 Any soil containing or likely to contain invasive plant material would be stored separately from non-contaminated soil, and treated as appropriate, with control measures adopted. These would be detailed in the Biosecurity Protocol, attached to the final On-CEMP(s).

Surface Water, Groundwater and Ground Conditions

Objectives

1.8.53 To minimise the risk of surface water flooding during the construction phase, to prevent pollution of surface watercourses and to minimise the impact on local surface water features.

Management Measures

Flood Protection Measures

1.8.54 Volume 2, Chapter 3: Hydrology and Flood Risk of the ES (document reference 6.2.3) and its associated appendices identify the potential flood risks associated with the Proposed Development and outline mitigation measures to reduce potential impacts.

1.8.55 A Flood Management Plan will form part of the final On-CEMP(s) and will be prepared for works taking place within a Flood Warning/Flood Alert area. During the construction phase the Principal Contractor(s) would sign up to the Flood Warning Service and would be alerted by a phone call or text when a Flood Warning becomes active. The flood warning would be applied to the entire Onshore Infrastructure Area located within Flood Zones 2 and 3 to enable site personnel to be evacuated from the site in a timely manner prior to a flood event occurring, if appropriate.

Flood Control Measures

1.8.56 A Construction Drainage Strategy would be developed post-consent and in accordance with this Outline On-CEMP. The Construction Drainage Strategy

would incorporate pollution prevention and flood response measures to ensure that the potential for any temporary effects on water quality or flood risk are reduced as far as reasonably practicable during the construction stage. Further details are included in **paragraphs 1.6.44** to **1.6.50.**

1.8.57 In order to manage impacts to field drainage, the contractors would develop field drainage plans in consultation with the relevant landowners. If required, and as far as reasonably practicable, additional field drainage would be installed to ensure the existing drainage of the land is maintained during and after construction.

1.8.58 Fences, walls, ditches and drainage outfalls would be retained at the Landfall and along the onshore HVDC and HVAC Cable Corridors, where reasonably practicable. Where it is not reasonably practicable to retain them, any damage would be repaired and reinstated as soon as reasonably practical. The Environment Agency must be notified if damage occurs to any Environment Agency main river or related flood infrastructure.

1.8.59 Where required, trenched techniques may be used for minor ditches or smaller watercourses that are frequently dry. In these cases, measures will be implemented to protect water quality and flow and these will be detailed within the final On-CEMP(s).

1.8.60 In order to avoid impacts to land within Flood Zone 3, the location of stockpiled materials would be positioned outside of areas of Flood Zone 3, over 8 m from ordinary watercourses and non-tidal Main Rivers and over 16 m from tidal Main Rivers. There would also be no alterations to the ground profile within areas of Flood Zone 3.

Pollution Control Measures

1.8.61 The construction phase would incorporate pollution prevention measures to ensure that the potential for any temporary effects on water and groundwater quality are reduced as far as practicable. An Outline Pollution Prevention Plan is included in the DCO application (Appendix A), which sets out the pollution prevention measures, and emergency incident response procedures, which will be implemented by the Principal Contractor(s) during construction.

1.8.62 A Pollution Prevention Plan would be developed in accordance with the Outline Pollution Prevention Plan. Good practice guidance detailed in the Environment Agency's Pollution Prevention Guidance notes and CIRIA guidance would be followed where appropriate, or the latest relevant available guidance.

1.8.63 All construction work will be undertaken in accordance with the final On-CEMP, Pollution Prevention Plan and good practice guidance including, but not limited to:

- the control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors CIRIA (C650) (CIRIA, 2001);
- CIRIA – Sustainable Drainage Systems (SuDS) Manual (CIRIA, 2015);

1.8.64 HDD is to be used to cross Kenwith Stream, River Torridge and Jennets Reservoir Tributary. HDD is also to be used to cross the shingle bar at Cornborough Range.

1.8.65 The trenchless crossing depth will be determined by the depth of suitable rock as identified during supplementary ground investigation surveys. The anticipated crossing depth underneath watercourses is as follows:

- 5 m for Kenwith Stream;

- 9 m for the tributary of Jennett's Reservoir; and
- 15 m for the River Torridge.

1.8.66 The trenchless crossing depth for all other watercourse crossings is to be ascertained at detailed design stage and a factor of safety incorporated within engineering calculations to account for climate change impacts to peak watercourse flows and rates of incision.

1.8.67 Where EA flood defences are present, a minimum 1.5 m vertical clearance will be maintained between the hard bed of the watercourse and the landward toe of those flood defences.

1.8.68 HDD entry and exit points would be located at least 8 m away from Environment Agency ordinary watercourses, 8 m from Environment Agency surface watercourses or the landward toe of the surface watercourse flood defences, and 16 m from a tidal Main River or sea defence structure.

1.8.69 The following buffers would be maintained between watercourses and temporary working areas for the onshore HVDC Cable Corridor, HVAC Cable Corridors, temporary compounds, and the Converter Site:

- 8 m away from the banks of ordinary watercourses;
- 8 m from EA Main Rivers and the landward toe of associated formal and informal flood defences (non-tidal); and
- 16 m from tidal EA Main Rivers and the landward toe of associated formal and informal flood defences.

1.8.70 The same buffer will be maintained for the converter stations.

1.8.71 Furthermore, an Outline Bentonite Breakout Plan is included as part of the DCO application (document reference 7.20), which sets out the procedures and measures for minimising the potential for and management of a bentonite breakout, including a response plan should breakout occur.

1.8.72 Consents/permits relating to dewatering activities that may affect surface water and / or groundwater are to be obtained from the Environment Agency as and when required during the construction phase of the Project. The permitting authority will decide the conditions of the consent to ensure that construction does not result in significant alteration to the hydrological regime or an increase in fluvial risk as far as reasonably practicable.

1.8.73 Surface water quality would be monitored throughout the construction phase and would be designed to demonstrate compliance with any environmental permits.

1.8.74 If required, land Drainage consents will be sought where required from the Devon County Council (as Lead Local Flood Authority) in consultation with the Environment Agency.

Geology and Ground Conditions

1.8.75 Prior to the commencement of construction works, a risk assessment would be undertaken for identified sensitive surface and groundwater receptors, including springs, private water supplies and ordinary watercourses to identify the need for further investigations such as a water features survey. The work would inform any mitigation measures required to minimise potential impacts as far as reasonably practicable.

1.8.76 Where a potential impact is identified concerning Gammaton Reservoirs, options to mitigate this impact will be developed based upon the findings of the risk assessment and in consultation with relevant stakeholders, incorporating feedback as far as reasonably practicable. Geomorphological surveys would also be undertaken on ordinary watercourses that may be crossed by trenched techniques. Surveys would be used to inform detailed design of crossing methodologies prior to construction. Indicative crossing methodologies are presented within Volume 1, Appendix 3.2: Onshore Crossing Schedule of the ES (document reference 6.1.3.2).

1.8.77 Ground investigation would be completed within areas where potentially significant sources of contamination have been identified either within, or in close proximity to, the Order Limits. Where ground investigation identifies potential risks to sensitive receptors from any contamination identified, then a remediation strategy would be prepared. The strategy would comprise the following:

- implementation plan setting out the objectives and requirements of the remediation or mitigation measures to be incorporated into construction techniques/design of the Proposed Development to minimise any impact;
- validation sampling to confirm that remediation objectives have been met and/or mitigation measures implemented; and
- verification report.

1.8.78 The scope of the remediation strategy would be agreed with the Environment Agency/relevant local planning authority prior to its implementation. The verification report would also be sent to the Environment Agency/relevant local planning authority for approval.

1.8.79 A Discovery Strategy will be prepared, prior to construction, to detail the procedure should any previously unknown contamination be discovered. The discovery strategy would detail the need for a watching brief that would be undertaken by suitably briefed personnel during construction activities such as ground clearance and earthworks.

1.8.80 If ground surveys confirm presence of contamination, the construction of piled foundations would use mitigation measures as defined in the following guidance: Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (EA, 2001), or latest relevant available guidance.

1.8.81 Appropriate Personal Protective Equipment will be used and relevant good working practices applied to avoid potential risk to human health including from any potential ground contamination, in line with relevant available guidance.

1.8.82 All construction personnel conducting intrusive works, in any part of the site, would attend a toolbox talk regarding explosives safety & awareness. This should comprise part of the standard site induction briefing and would form a component of the Health and Safety Plan for the site adhering to the requirements of Construction Design and Management Regulations 2015. All personnel working on site would be briefed on unexploded ordnance recognition and made aware of the possible risks. They would be informed of the actions to take to alert the site manager and to keep people and equipment away from the hazard.

Traffic and Transport

Objectives

1.8.83 To maintain highway safety and minimise adverse effects on local communities and highway users.

Management Measures

Traffic Management

1.8.84 The primary access roads used for construction HGVs and Light Goods Vehicles will be the A39, the A386, B3233 Barnstaple Street, Manteo Way and Gammaton Road. The B3236 Buckleigh Road and unnamed roads in the vicinity of Abbotsham will also be used as will the road network leading south from Appledore Quay (Newquay Dock). The Principal Contractor(s) will ensure that access to neighbouring sites is not blocked by the construction works at any time.

1.8.85 The main construction compounds along the onshore HVDC Cable Corridor would include the following:

- the A39 compound situated next to the Abbotsham Cross roundabout; and
- the Gammaton Road compound, which is situated between Tennacott Lane and Gammaton Road, and to the south of East-the-Water.

1.8.86 These construction compounds would form the main compounds for the construction workforce and are situated in areas easily accessible from the A39 and Manteo Way, respectively. This would allow construction vehicles to be directed towards the relevant compounds whilst reducing movements along minor roads as far as reasonably practicable.

1.8.87 The Proposed Development includes the provision of an appropriate number of parking facilities for construction workers at the Gammaton Road and Abbotsham Cross temporary construction compounds during the construction phase. The number of parking spaces required would be determined during the preparation of the compound plans.

1.8.88 Haul road(s) will be installed within the temporary working area of the onshore HVDC Cable Corridor to avoid the need to use local Devon lanes.

1.8.89 The original highway will be reinstated after construction work is completed at all vehicle accesses where accommodation works are undertaken to allow the movement of vehicles between the Onshore Infrastructure Area and the highway. The design of HGV access points, including visibility standards and, where necessary, temporary speed restrictions on the adjacent highway will be agreed with the relevant highway authorities.

1.8.90 For HDD crossings, the drilling compound is anticipated to receive a greater number of HGV movements than the receiving compound (HDD exit point). Where reasonably practicable, the drilling direction will be set to minimise the number of HGV movements through sensitive receptors.

Construction Traffic Management Plan

1.8.91 Prior to the commencement of material traffic movements, final CTMP(s) for the construction of the Proposed Development, will be prepared in consultation with Devon County Council. The CTMP(s) will set standards and procedures for:

- managing the numbers and routing of HGVs during the construction phase;
- managing the movement of employee traffic during the construction phase; and
- details of measures to manage the safe passage of HGV traffic via the local highway network.

1.8.92 The CTMP(s) will set out that a pre-entry road condition survey will be undertaken before the start of works and after the substantial completion of works on minor highway links and new junctions used by HGVs to access the Onshore Infrastructure Area. Any damage to the highway that has been demonstrably caused by construction traffic associated with the Proposed Development will be repaired.

1.8.93 The CTMP(s) will set out restrictions on HGV operating hours along those sections of the highway network that provide access to local schools. The CTMP(s) will restrict HGV movements along the A386 through the Bideford quayside area during school drop-off and pick-up times.

1.8.94 The CTMP(s) will set out restrictions on construction HGV movements through the Barnstaple Street/Manteo Way junction to limit these to no more than 10 during the peak hours.

1.8.95 Traffic management measures would be identified and implemented at points where cable trenches are cut across highways or where existing access rights are affected.

1.8.96 Furthermore, wheel cleaning methods will be required at appropriate locations where it is necessary to eliminate the risk of mud and debris on the highway. The CTMP(s) will also set out measures to minimise dust and dirt from the movement of construction vehicles.

1.8.97 The CTMP(s) will include provision of appropriate parking facilities for construction workers.

Abnormal Loads

1.8.98 A route for AILs will be identified. The route timing and method of transport of AILs will be discussed and agreed with the relevant highway and bridge authorities, as well as the police, to minimise delays to other road users.

1.8.99 It is expected that a number of AILs comprising large components such as transformers will be transport to the Onshore Infrastructure Area. The heavy haulage contractor appointed to undertake this work will be required to comply with statutory regulations in terms of consulting with the relevant highways and bridge authorities and the police.

1.8.100 The timing of AIL deliveries will be discussed with the relevant highway authorities to minimise delay for other road users and to minimise risk to highway users, where possible. The timing of AIL deliveries to the Onshore Infrastructure Area will be discussed to minimise delays to other road users, where possible.

1.8.101 The routeing of AIL deliveries will be agreed with the relevant highway authorities. The delivery of AILs will typically be undertaken in convoy and under escort. Where AILs require the full width of the carriageway or for unusual manoeuvres at junctions, appropriate temporary road closures and traffic management will be put in place as appropriate to maintain the safety of other road users.

Noise and Vibration

Objectives

1.8.102 To control and limit noise and vibration levels, so far as is reasonably practicable, to minimise disturbance to sensitive receptors.

Management Measures

1.8.103 This Outline On-CEMP recognises that construction activity by its very nature can generate adverse noise and vibration impacts on human and ecological receptors located near the development site. The objective would be to control and limit noise and vibration levels, so far as is reasonably practicable and to minimise disturbance to sensitive receptors.

1.8.104 To manage noise generating construction activities, all works would be carried out in accordance with the following principles:

- Construction works would be undertaken in accordance with the best practicable means (as defined in Section 72 of the Control of Pollution Act 1974), to minimise noise and vibration effects. Noise control measures would be consistent with the recommendations of the current version of BS 5228 'Code of Practice for Noise and Vibration Control on Construction and Open Sites'.
- Best Practicable Means including the following:
  - The use of quieter alternative methods, plant and/or equipment, where reasonably practicable.
  - The use of site hoardings, enclosures, portable screens and/or screening nosier items of plant, where reasonably practicable.
  - Maintaining and operating all vehicles, plant and equipment in an appropriate manner, to ensure that extraneous noise from mechanical vibration is kept to a minimum.
  - Plant and vehicles to be fitted with mufflers/silencers that are maintained in good working order.
  - The use of silenced equipment as far as possible and low impact type compressors and generators fitted with lined and sealed acoustic covers.
  - Ensuring engines are switched off when machines are idle.

1.8.105 Based on noise modelling results, where noise has the potential to cause significant adverse effects, mitigation measures such as mufflers and acoustic barriers would be implemented, where practicable, where HDD (or other trenchless techniques) is being undertaken. Physical barriers would be located to ensure that an enhanced level of noise reduction is provided to the most sensitive receptors.

Control and monitoring of noise and vibration

1.8.106 Volume 2, Chapter 6 Noise and Vibration of the ES (document reference 6.2.6) has identified likely significant effects could occur at properties located close to the River Torridge HDD compound (west side) if works were required at nighttime. These potential significant effects are predicted to occur despite the above assumptions on basic noise mitigation techniques.

1.8.107 Therefore, there is a need for further mitigation measures to be implemented at the River Torridge HDD compound to reduce the impact at nearby receptors should nighttime working be required. Appropriate mitigation measures will be established at the detailed design stage. Mitigation options which will be explored are expected to include, but not be exclusive to:

- Appropriate compound design to maximise distance between noise sources and receptors where practicable.
- Introduction of screening around construction compounds and dominant noise sources.
- Carrying out HDD works from the eastern side of the River Torridge, away from nearby receptors.
- Minimise the need for nighttime working where practicable.

1.8.108 A noise monitoring strategy may be required as part of the On-CEMP(s) to demonstrate compliance with agreed noise threshold values. These thresholds will be determined in consultation with the local planning authority to ensure protection of nearby noise sensitive receptors in line with BPM.

1.8.109 The noise threshold values are expected to be in keeping with BS5228-1 threshold values for potential significant effects at dwellings which are:

- Night-time: 45 dB(A).
- Evenings and weekends: 55 dB(A)..
- Daytime: 65 dB(A)

1.8.110 The relevant limits will be agreed with the local planning authority at the detailed design stage, if the need arises.

Air Quality

Objectives

1.8.111 To minimise the generation of dust near sensitive receptors during construction.

Management Measures

General Measures

1.8.112 The Principal Contractor(s) would inform site personnel about the need to minimise dust as well as about the health hazards of exposure to excessive dust. Their training would include advice relating to the commitments made in the detailed final On-CEMP(s).

1.8.113 Detailed Dust Management Plan(s) would be prepared based on the Outline Dust Management Plan (Appendix C) as taken from the IAQM Guidance on the assessment of dust from demolition and construction (IAQM, 2024). The Dust Management Plan will be approved by the Local Authority.

1.8.114 The Outline Dust Management Plan also contains procedures to check the dust controls and how to action the complaints procedure.

1.8.115 Best practice measures in the detailed Dust Management Plan(s) would accord with guidance set out by the IAQM (2024) where appropriate and practicable, and would include measures for monitoring and reporting dust levels, and dust suppression and mitigation measures during construction and operation.

1.8.116 Management measures relating to air emissions from construction vehicles are described in the Outline CTMP (document reference 7.12).

1.8.117 Dust control measures are proposed to monitor dust levels are set out within the Outline Dust Management Plan (Appendix C).

Land Use and Recreation

Objectives

1.8.118 To maintain the quality of agricultural land and minimise disruption to recreational access (e.g. PRoWs).

Management Measures

1.8.119 The following measures will be adopted as part of the Proposed Development during the construction phase:

Soil Management

1.8.120 An Outline Soil Management Plan has been prepared as part of this document (Appendix D). Detailed Soil Management Plan(s) would be developed in accordance with the Outline Soil Management Plan. Measures to be adopted as far as reasonably practicable would include:

- Separate stripping and storage of identified topsoil and subsoil resources to prevent mixing of soil materials which can reduce overall soil quality.
- Location of topsoil and subsoil stockpiles to avoid cross-contamination of materials and the trafficking of soil stockpiles by construction traffic.
- Maintenance of topsoil and subsoil heaps to reduce potential losses of soil materials throughout the duration of storage (e.g. maintaining soil heaps to prevent it blowing away in the wind, or spilling into drainage ditches).
- Control of the timing of soil handling operations to reduce potential soil damage through handling in unsuitable conditions (e.g. avoiding the movement of soil in periods of severe wet weather).
- Choice of soil handling machinery and method for its use, to reduce potential for soil compaction and soil damage.
- Implementation of appropriate soil aftercare following reinstatement of land in accordance with the Outline Soil Management Strategy.

- Careful supervision of soil handling operations on site to ensure that recognised good practice is effectively implemented on site.

1.8.121 Prior to construction, further soil survey work would be undertaken to identify the depths of different topsoil and subsoil units (if necessary) to be stripped within the working areas and to inform detailed Soil Management Plan(s), to ensure that soil types are separately stored where required. The detailed Soil Management Plan(s) would be prepared and agreed post-consent as part of the final On-CEMP(s).

1.8.122 Soil would be stored and managed in accordance with Construction Code of Practice for Sustainable Use of Soils on Construction Sites or the latest relevant available government guidance.

Farm Holdings

1.8.123 The application of measures to maintain the operation of the farm holdings would include where reasonably practicable the following:

- The maintenance and reinstatement of existing water supplies and drainage systems following construction.
- The maintenance of access routes across individual fields where these are severed during construction.
- The maintenance of farm access routes between fields within a farm holding
- Appropriate fencing of the construction work areas within the Onshore Infrastructure Area, dependent upon the nature of the individual farm holding affected.
- Appropriate construction practices to be implemented to ensure that the potential risk for the spread of animal and plant diseases is reduced where reasonably practicable.
- Timing of construction works, where feasible, to minimise disruption to landowners/farming practice, through consultation with landowners.

Public Rights of Way

1.8.124 An Outline PRoW Management Plan has been developed and submitted with the DCO application (document reference 7.11), which includes measures to manage impacts to the PRoW network affected during construction.

Landscape and Visual

Objectives

1.8.125 To minimise the disturbance to landscape character and visual receptors during construction.

Management Measures

1.8.126 An Outline LEMP has been prepared as part of the application for development consent (document reference 7.10). A LEMP would be developed in accordance with the Outline LEMP. The LEMP is secured as a requirement of the DCO and

would be agreed with the relevant planning authority. The plan would include details of mitigation planting at the converter site, including the number, location, species and details of management and maintenance of planting.

1.8.127 Where practicable, landscape mitigation planting would be established as early as reasonably practicable in the construction phase to screen the converter stations.

1.8.128 As identified within **paragraph 1.6.20**, appropriate lighting would be used to minimise light spillage and pollution, and minimise the disturbance to adjoining residents and occupiers of buildings and wildlife. Furthermore, construction compounds may employ hoardings at the perimeter or at task specific locations.

Protection of Trees and Hedgerows

1.8.129 Prior to construction, tree protection fencing would be installed around trees to be retained. The fencing will demark construction exclusion zones and it would be positioned according to the root protection zone of recorded trees. The tree protection fencing will remain *in situ* until the completion of construction. All required tree protection would be defined by tree protection plans to be developed as part of the final On-CEMP(s), and implemented in accordance with the Outline Arboricultural Method Statement (Appendix E).

1.8.130 Where possible, unprotected areas of woodland, mature and protected trees (i.e. veteran trees), as well as other ecologically sensitive habitats have and would be avoided.

1.8.131 As detailed in **paragraph 1.8.7** the contractor(s) would retain vegetation where practicable and in accordance with the detailed LEMP(s). Where hedgerow habitat removal is unavoidable, impacts would be reduced as far as possible by reducing the sizes of gaps in hedgerows or other features of value and, if possible, utilising existing gaps and gateways. Hedgerows impacted during construction would be reinstated on a 'like-for-like' basis, as soon as practicable.

Historic Environment

Objectives

1.8.132 To avoid/minimise the effect of the Proposed Development on the setting of the existing heritage assets and archaeological remains during construction.

Management Measures

1.8.133 Detailed Onshore WSI(s) would be developed in line with the Outline Onshore WSI, which forms part of the DCO application (document reference 7.8). The Outline Onshore WSI details the survey and archaeological mitigation requirements in advance of and during construction. The further programmes of archaeological and geoarchaeological investigation would lead to analysis, reporting of results and archiving of data.

1.8.134 Activities associated with the Proposed Development onshore works (other than the converter stations) would take place within the settings of designated heritage assets. Construction activities would be undertaken in such a way as to ensure that effects on the setting of heritage assets is minimised, as per the Outline CTMP (document reference 7.12), the Outline Dust Management Plan (Appendix

C), the construction lighting principles (see **paragraphs 1.6.20** to **1.6.23**) and noise management measures (see **paragraphs 1.8.103** to **1.8.105**).

1.8.135 As set out previously in **paragraph 1.8.126**, an Outline LEMP (document reference 7.10) has been prepared as part of the application for development consent. The detailed LEMP(s) would be developed in accordance with the Outline LEMP. Where practical, landscape mitigation planting would be established as early as reasonably practicable in the construction phase to screen the converter stations.

1.8.136 In addition, the ongoing programmes of geophysical survey and archaeological trial trenching would be completed prior to construction.

Climate Change

Climate Risk – Management Measures

1.8.137 As detailed in **paragraph 1.3.5**, a Health and Safety Plan for the onshore works would be prepared by the Principal Contractor(s) post consent. All construction activities would be undertaken in line with relevant health and safety guidance. Contractors would consider adverse weather in the development of risk assessments and when scheduling works.

1.8.138 Flood protection management measures are detailed in **paragraphs 1.8.54** and **1.8.55** above, which would ensure that the Principal Contractor(s) and construction workforce are able to effectively respond to potential flood events.

1.8.139 With respect to climate, detailed LEMP(s) would be developed in accordance with the Outline LEMP (document reference 7.10), which forms part of the application for development consent. The LEMP would detail the design of the landscaping plan across the Proposed Development and the planting specification, which would include the selection of species that are resilient to future climatic changes of the local environment.

GHG Emissions – Management Measures

1.8.140 In order to reduce GHG emissions associated with the construction of the Proposed Development, the following measures would be implemented:

- Pre-fabricated elements delivered to the site ready for assembly, which will reduce on-site construction waste and reduce vehicle movements as part of the construction process.
- Vehicles used in road deliveries of materials, equipment and waste arisings on- and off-site would be loaded to full capacity, wherever practicable, to minimise the number of journeys associated with the transport of these items.
- All machinery and plant would be procured to adhere with relevant good practice emissions standards at the time of procurement and should be maintained in good repair to remain fuel efficient.
- When not in use, vehicles and plant machinery involved in site operations would be switched off to further reduce fuel consumption.
- The volume of waste generated would be minimised, and resource efficiency maximised, by applying the principles of the waste hierarchy throughout the

construction period. Segregated waste storage should be employed to maximise recycling potential for materials.

- Equipment and machinery requiring electricity would only be switched on when required for use. Procedures would be implemented to ensure that staff adhere to good energy management practices, e.g. through turning off lights, computers and heating/air conditioning units when not in use.
- Temporary construction haul roads would be developed utilising recycled aggregates to minimise embodied carbon impacts.

1.8.141 The following measures are to be implemented where reasonably practicable, during the construction phase to minimise greenhouse gas emissions:

- Hybrid, electrical or lower carbon plant and equipment will be used.
- Low energy solutions for temporary construction compounds such as renewable energy, battery storage or biofuels within generators will be considered and implemented.
- Low carbon construction materials (as reported in Environmental Product Declarations) will be used subject to relevant Building Regulations and Standards or guidance in the construction contracts

1.9 Monitoring Plan

1.9.1 A monitoring plan would be developed post consent to monitor the performance of environmental mitigation and measures implemented during construction. The plan would be based on the monitoring principles set out in the ES and will reflect all mitigation requirements as set out in the ES, licences/consents.

1.9.2 The objective of the monitoring would be to:

- Determine if the environmental measures have achieved or are achieving their intended purpose.
- Identify any successes, failures or weaknesses in the implementation of those measures.
- Identify remedial measures required to achieve the environmental requirements.
- To ensure that the agreed environmental commitments as set out within the final On-CEMP(s) are being implemented.

Inspections

1.9.3 Monitoring of site operations with respect to environmental protection would be carried out on a regular basis by site management to confirm compliance with the final On-CEMP(s) and other environmental mitigation. Regular inspections would be carried out and recoded by site construction staff on a rota basis. Health and safety, environmental and quality managers would also carry out regular inspections and audits. Any environmental investigations required would be carried out by the Site Environmental/Compliance Manager.

1.9.4 Any corrective actions that are identified during inspections are to be recorded and responded to in accordance with criteria and timelines set out in the final On-CEMP(s).

1.10 Environmental Records

1.10.1 All environmental documents and records would be maintained and stored within the Applicant's data management system. Hardcopies of key environmental documentation would be maintained on site in their most current version. These would include:

- Environmental Statement;
- Environmental Risk Register;
- Onshore Construction Environmental Management Plan(s);
- Emergency Response Plan;
- Construction Traffic Management Plan;
- Site Resource and Waste Management Plan (and Waste Transfer Notes);
- All environmental permits and consents
- Remediation Plan (where required);
- Construction Drainage Strategy;
- Bentonite Breakout Plan;
- Soil Management Plan;
- Dust Management Plan;
- Pollution Prevention Plan;
- Landscape and Ecology Management Plan, including the requirements of the Ecological Clerk of Works; and
- Monitoring Plan.

1.11 References

Bat Conservation Trust and Institute of Lighting Professionals (2023) Guidance Note 8 Bats and Artificial Lighting GN08/23.

British Society of Soil Science (2022). Working with Soil Guidance Note on Benefitting from Soil Management in Development and Construction. Available at: https://soils.org.uk/wp-content/uploads/2022/02/WWS3-Benefitting-from-Soil-Management-in-Development-and-Construction-Jan-2022.pdf (Accessed: October 2024).

British Standards Institution (BSI) (2014) British Standard 5228: Code of practice for noise and vibration control on construction and open site. Part 1: Noise +A1:2014; and

British Standards Institution (BSI) (2014) British Standard 5228: Code of practice for noise and vibration control on construction and open site. Part 2: Vibration.

CIEEM (2021). Competency Framework. Available at: https://cieem.net/wp-content/uploads/2023/09/Competency-Framework-2022-Web.pdf (Accessed: September 2024).

CIRIA C741 Environmental Good Practice on Site (2015);

CIRIA (2001) 'Control of Water Pollution from Construction Sites – Guidance for Contractors' and CIRIA (2015) 'Environmental Good practice on Site'.

CIRIA (2000). Environmental Handbook for Building and Civil Engineering Projects Part 1-3 (C512, C528 and C529).

CIRIA (2001). Control of water pollution from construction sites. Guidance for consultants and contractors (C532).

CIRIA (2006a). C648 Control of Water Pollution from Linear Construction Projects – Technical Guidance. CIRIA (2015b). Environmental good practice on site guide (fourth edition) (C741).

CIRIA (2016). Groundwater control: design and practice, second edition (C750).

CIRIA (2015). The SuDS Manual.

Control of Pollution Act 1974. [online] Available at: https://www.legislation.gov.uk/ukpga/1974/40/section/72 [Accessed 18 Mar. 2024].

Defra, (2012) Environmental Protection Act 1990: Part 2A. (2012). Available at: https://assets.publishing.service.gov.uk/media/5a757dfa40f0b6360e47489d/pb13735cont-land-guidance.pdf.

Defra (2018) Construction code of practice for the sustainable use of soils on construction sites. Available at: https://assets.publishing.service.gov.uk/media/5b2264ff40f0b634cfb50650/pb13298-code-of-practice-090910.pdf (Accessed: October 2024).

GOV.UK (2019). *Flood map for planning - GOV.UK*. [online] Service.gov.uk. Available at: https://flood-map-for-planning.service.gov.uk/.

Groundwater Protection Position Statements (Environment Agency, 2017 and amended 2018);

Institute of Air Quality Management (2024) Assessment of dust from demolition and construction;

Institute of Quarrying (2000). Institute of Quarrying (IQ) Good Practice Guide for Handling Soils in Mineral Workings.

Land Contamination: Risk Management (Environment Agency, 2019);

Traffic Signs Manual Chapter 8, Part 1: Design (2009). Part 2 Operations (2009) and Part 3: Update (2016).