CALEDONIA
Offshore Wind Farm

Code: UKCAL-CWF-CON-EIA-RPT-00007-7008

Volume 7 Standalone Appendices

Appendix 10 Outline Construction Environment Management Plan

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Volume 7 Appendix 10 Outline Construction Environment Management Plan

Code	UKCAL-CWF-CON-EIA-RPT-00007-7008
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Acronyms and Abbreviations

ACoW	Archaeological Clerk of Works
AMSC	Approval of Matters Specified in Conditions
CAR	Controlled Activities Regulations
CDM	Construction Demolition Management
CEM	Consents and Environment Manager
CEMP	Construction Environmental Management Plan
CIRIA	Construction Industry Research and Information Association
CLO	Community Liaison Officer
CMS	Construction Method Statement
COSHH	Control of Substances Hazardous to Health
CTMP	Construction Traffic Management Plan
DAQMP	Dust and Air Quality Management Plan
ECoW	Ecological Clerk of Works
EHO	Environmental Health Officer
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EMS	Environmental
FRA	Flood Risk Assessment
HDD	Horizontal Directional Drilling
HGV	Heavy Good Vehicle
HMP	Habitat Management Plan
HSE	Health and Safety Executive

IAQM	Institute of Air Quality Management
km	Kilometre
m	Metre
MLWS	Mean Low Water Spring
NETS	National Electricity Transmission Network
NVMP	Noise and Vibration Management
CEMP	Construction Environmental Management Plan
ONEC	Onshore Export Cable Corridor
OnTI	Onshore Transmission Infrastructure
OWF	Offshore Wind Farm
PPG	Pollution Prevention Guidelines
PPP	Planning Permission in Principle
PWS	Private Water Supply(ies)
RLB	Red Line Boundary
SEPA	Scottish Environment Protection Agency
SSEN-T	Scottish and Southern Electricity Networks - Transmission
SSSI	Site of Special Scientific Interest
SWMP	Site Waste Management Plan
TBC	To be confirmed
TBT	Toolbox Talks
TJB	Transition Joint Bay
WTG	Wind Turbine Generator

1 Introduction

1.1 Background and Purpose

1.1.1.1 This Outline Construction Environment Management Plan (CEMP) has been prepared on behalf of Caledonia Offshore Wind Farm Limited, ('the Applicant') in support of an application for Planning Permission in Principle (PPP) submitted to Aberdeenshire Council for the associated Onshore Transmission Infrastructure (OnTI) landward of Mean Low Water Spring (MLWS) that is required to export the power generated from the Caledonia Offshore Wind Farm (OWF) to the National Electricity Transmission Network (NETS). The Caledonia OWF comprises, Caledonia North and Caledonia South, collectively referred to as the Proposed Development (Offshore). The OnTI required to transfer the power from the Proposed Development (Offshore) to a connection to the NETS is referred to as the Proposed Development (Onshore).

1.1.1.2 A single Environmental Impact Assessment Report (EIAR) has been submitted in support of the Proposed Development which encompasses the Proposed Development (Offshore) and the Proposed Development (Onshore). This document should be read in conjunction with the EIAR.

1.1.1.3 The key components of the Proposed Development (Onshore), which this Outline CEMP covers, include:

- The Landfall Site: the area from MLWS where the Offshore Export Cable Circuits are connected to the Onshore Export Cable Circuits, via Horizontal Directional Drilling (HDD) ducts, within Transition Joint Bays (TJBs) (buried box-like structures which house the jointing between the Offshore and Onshore Export Cable Circuits). The Landfall Site is located at Stake Ness, 1 kilometre (km) west of the village of Whitehills and approximately 5km west of Banff;
- The Onshore Export Cable Corridor (ONEC): where the Onshore Export Cable Circuits will be located which connects the TJBs at the Landfall Site to the Onshore Substation Site. The ONEC extends approximately 37km from Stake Ness to an area in the vicinity of the existing New Deer Substation;
- The Onshore Substation Site: comprising two co-located Onshore Substations located adjacent to the existing New Deer substation; and
- The Onshore Grid Connection Cable Corridor: connecting the Onshore Substation to the Grid Connection Point at the existing New Deer Substation (for Phase 1) (owned by Scottish and Southern Electricity Networks Transmission (SSEN-T), via up to two onshore cable circuits with a nominal voltage of 400 kiloVolt (kV).

1.1.1.4 The Outline CEMP will be updated and finalised post consent into a detailed CEMP in accordance with relevant planning conditions and in agreement with Aberdeenshire Council.

1.1.1.5 The detailed CEMP will form part of the mandatory induction for all employees, contractors and visitors attending the site. All employees and contractors shall familiarise themselves with the content of the CEMP.

1.1.1.6 The main purpose of this Outline CEMP is to establish the framework for the detailed CEMP for environmental management during the construction of the Proposed Development (Onshore), detailing the main mitigation and control measures that will be utilised to achieve the environmental objectives of the Proposed Development (Onshore). This will ensure the Applicant and their appointed contractor(s) comply with the planning conditions and relevant legislation, policy and guidance. Following appointment of a Principal Contractor and approval of the detailed CEMP, the CEMP will become a 'live document' and will be updated as required during the planning and construction process to detail individual Construction Method Statements (CMSs) and the document will be reviewed and agreed with the relevant stakeholders prior to the commencement of construction.

1.1.1.7 The Proposed Development (Onshore) is seeking to consent the OnTI across two phases of construction works (as described in Volume 1, Chapter 5: Proposed Development Phasing of the EIAR). Should there be a gap between phases or a change of Principal Contractor, the detailed CEMP would need to be updated accordingly ensuring any lessons learned from the previous phase are considered.

1.2 Content and Structure

1.2.1.1 This Outline CEMP details the overview and purpose of the CEMP, key roles and responsibilities, a description of the Proposed Development (Onshore), the minimum standards to be adopted during construction of the Proposed Development (Onshore), key correspondence and communication requirements, environmental training for employees, incident response protocols and environmental monitoring procedures.

1.2.1.2 It also provides information about the various Environmental Management Plans (EMPs) which should be read in conjunction with this Outline CEMP.

1.2.1.3 The structure of the detailed CEMP may be subject to change based on consultation responses provided in respect of the PPP application.

1.2.1.4 Once finalised, post-consent, the detailed CEMP will be one of a suite of plans required under the conditions of the PPP, for the Proposed Development (Onshore). The full list of final consent plans and associated documents is not currently known, however, several outline plans and

other associated documents have been prepared and submitted with the application, these include:

- Outline Construction Traffic Management Plan (CTMP);
- Outline Habitat Management Plan; and
- Outline Peat Management Plan.

1.2.1.5 These outline plans will be finalised alongside the development of any additional management plans post consent and prior to construction.

1.2.1.6 This Outline CEMP is structured as follows:

- **Section 1 – Introduction:** Details the background and purpose of the CEMP and sets out the key document control measures and roles and responsibilities in implementation of the CEMP;
- **Section 2 – Proposed Development (Onshore) Background**: provides an outline of the Proposed Development (Onshore) including the site context, development description and applicable consents and licences;
- **Section 3 – Communication:** summarises the key correspondence and communication required during construction;
- **Section 4 – Training and Induction:** describes the specific induction activities, training and briefing procedures in relation to environmental management throughout the construction (and if relevant, later) phase(s);
- **Section 5 – Environmental Monitoring and Incident Response:** sets out the required monitoring and maintenance activities and procedures for responding to environmental incidents;
- **Section 6 – Outline Construction Methods:** outlines the key construction methods which will be adhered to by all Applicant and Principal Contractor personnel;
- **Section 7 – Environmental Management Plans:** outlines the key environmental management methods and plans which will be adhered to by all Applicant and Principal Contractor personnel;
- **Appendix A – Legislation, Policy and Guidance**: Provides a summary of the applicable legislation, policy and guidance used to inform this Outline CEMP;
- **Appendix B – Schedule of Mitigation and Monitoring:** The Principal Contractor will be responsible for developing construction method statements (CMS) which adhere to the commitments of the Schedule of Mitigation and Monitoring;
- **Appendix C – Construction Method Statements; and**
- **Appendix D – Environmental Management Plans.**

1.3 Document Control

1.3.1.1 The detailed CEMP is a 'live document' and will be subject to a number of periodic reviews, updates and subsequent approvals by Aberdeenshire Council. The document is intended for use by the Applicant, the Principal Contractor and their subcontractors specifically involved in the construction of the Proposed Development (Onshore). A copy of this document will be kept in the site offices will be available for review at any time. When the document is amended the document revision record will be updated and the CEMP redistributed to those personnel specified in the distribution list (Table 1-1). The distribution list will be developed post consent.

Table 1-1: CEMP Distribution List

Organisation / Role	Contact Name	Email	Telephone Number
The Applicant (Caledonia Offshore Wind Farm Limited or other legal entity as decided following consent)	To be confirmed (TBC)	TBC	TBC
Principal Contractor	TBC	TBC	TBC
Ecological Clerk of Works (ECoW)	TBC	TBC	TBC
Archaeological Clerk of Works (ACoW)	TBC	TBC	TBC
Aberdeenshire Council	TBC	TBC	TBC

1.4 Roles and Responsibilities

1.4.1.1 All personnel (including contractors, subcontractors, suppliers etc) involved in the construction of the Proposed Development (Onshore) will be responsible in ensuring the CEMP, and all environmental mitigations and monitoring commitments, are implemented correctly. An organogram will be provided within this section of the detailed CEMP prior to construction.

1.4.1.2 Table 1-2 describes the key roles and responsibilities of the Applicant and the Principal Contractor(s) in implementing the CEMP. Different Principal Contractors may be required to deliver different scopes of work (such as the landfall HDD and TJB installation, the onshore export cable installation, and the onshore substation construction) and as such specific contractor roles will be reflected within the table when it is updated post consent and prior to construction.

Table 1-2: Key roles and responsibilities in implementing the CEMP

Role	Contact Details	Responsibilities
Applicant Led Roles		
The Applicant (Development Manager)	TBC post consent	The Applicant's Development Manager will be responsible for ensuring that the Proposed Development (Onshore) is built in accordance with the PPP planning conditions and that all environmental mitigation measures stated within the EIAR and the CEMP are implemented. They will be the main contact for all regulatory and stakeholder engagement.
Consents and Environment Manager (CEM)	TBC post consent	The CEM will be responsible for applying for the relevant consents and ensuring the Proposed Development (Onshore) is constructed in accordance with the PPP conditions, mitigation measures presented in the Schedule of Mitigation and Monitoring (Appendix B) and the other environmental management plans.
ECoW	TBC post consent	The ECoW will be appointed by the Applicant as an independent ecological specialist to monitor the implementation of the ecological mitigation measures. The ECoW will undertake watching briefs, Toolbox Talks and pre-construction checks as required.
ACoW	TBC post consent	The ACoW will be appointed by the Applicant as an independent archaeological specialist to monitor the implementation of the archaeological mitigation measures. The ACoW will undertake watching briefs, Toolbox Talks and pre-construction checks as required.
Community / Agricultural Liaison Officer (CLO)	TBC post consent	The CLO will lead on engagement with potentially affected residents, farmers / businesses, and Community Councils to ensure Proposed Development (Onshore) updates are communicated.

Role	Contact Details	Responsibilities
Contact for Road Safety	TBC post consent	To be determined within CEMP.
Site Materials and Waste	TBC post consent	To be determined within CEMP.
Other Environmental Specialists as required (e.g., Landscape Specialist, Noise and Vibration Specialist, Arboricultural Specialist)	TBC post consent	To be determined within CEMP.
Principal Contractor Led Roles		
Principal Contractor(s)	TBC post consent	The Contractor(s) appointed to undertake the construction works shall be responsible for ensuring that the CEMP is fully implemented as well as ensuring all personnel and sub-contractors adhere to and implement the final CEMP. The Contractor(s) is also responsible for obtaining all necessary consents, licences and permissions for their activities as required by current legislation governing the protection of the environment.
Site Manager(s)	TBC post consent	The Site Manager(s) is responsible for ensuring all site work is carried out in line with approved method statements and management plans and that any site personnel are properly briefed.
Site Environmental Manager	TBC post consent	The Site Environmental Manager will oversee the implementation of CEMP including environmental control measures, mitigation and procedures.
Construction Staff	TBC post consent	All construction staff will adhere to the final CEMP and be aware of the environmental sensitivities and requirements of the Proposed Development (Onshore).

Role	Contact Details	Responsibilities
Subcontractors	TBC post consent	All subcontractors will adhere to the final CEMP and any contractual requirements as well as be aware of the environmental sensitivities and requirements of the Proposed Development (Onshore).

1.5 Subcontractor Management

1.5.1.1 The Proposed Development (Onshore) will engage various subcontractors to carry out Proposed Development (Onshore) construction related activities. These subcontractors are responsible for performing all work in conformance with relevant environmental legislation, the requirements of the CEMP, and contractual environmental requirements.

1.5.1.2 Subcontractors are required to develop suitable, adequate, and effective method statements that explicitly define the measures to be taken to manage significant environmental risks associated with their scope of works. No works will be permitted to commence until such method statements have been developed and approved by the CEM. Additionally, subcontractors are required to provide sufficient and competent resources to monitor conformance with their own defined method statements.

1.5.1.3 The Principal Contractor will conduct monthly Environmental Reviews that will assess the environmental performance of subcontractors.

2 Proposed Development (Onshore) Background

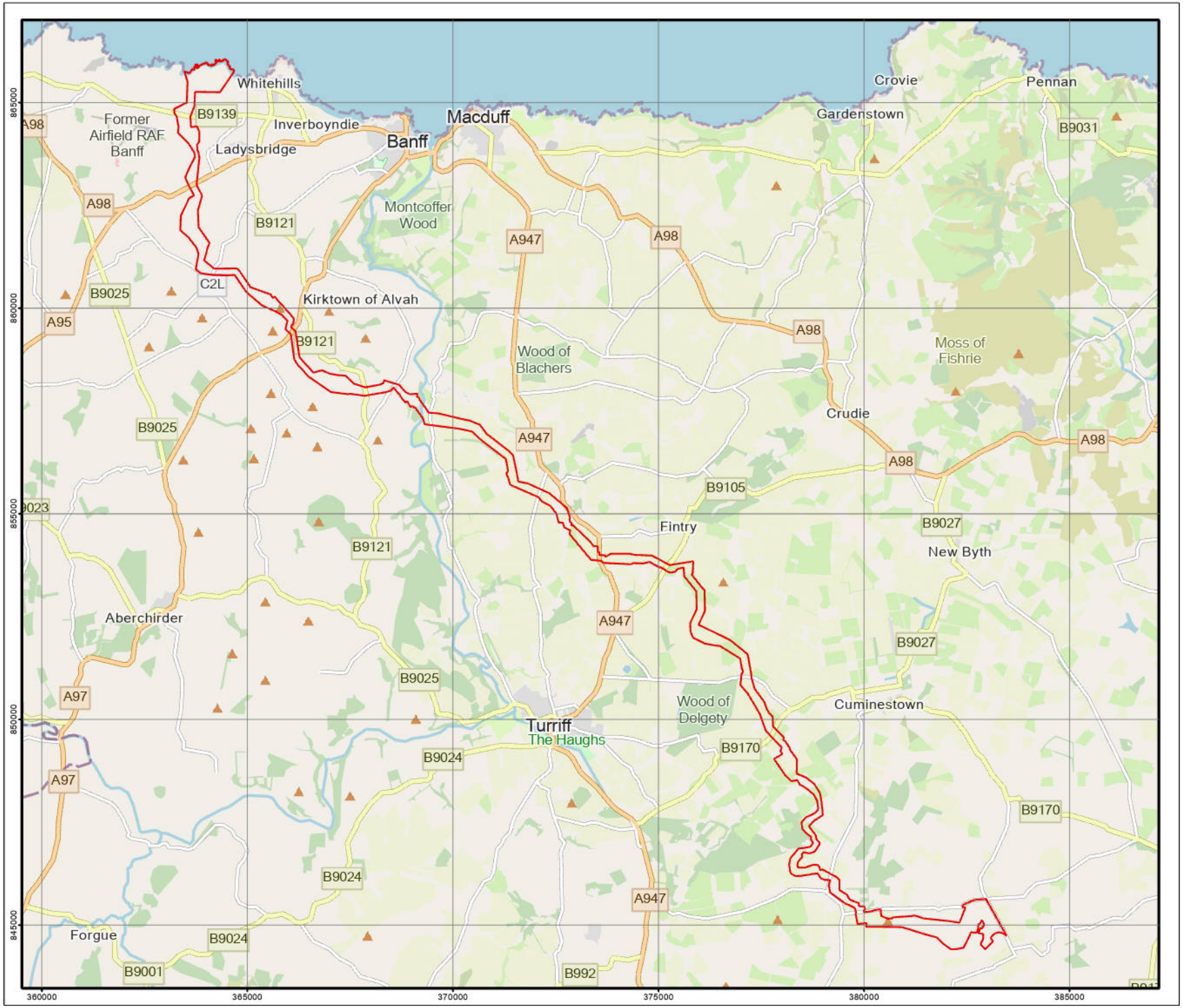
2.1 Overview of the Proposed Development (Onshore)

2.1.1.1 The area within which the Proposed Development (Onshore) will be located is shown within Figure 2-1 and is identified as the OnTI Red Line Boundary (RLB). The OnTI RLB is within the Aberdeenshire Council Local Authority area. The OnTI RLB encompasses:

- The Landfall Site: the area from MLWS where the Offshore Export Cable Circuits are connected to the Onshore Export Cable Circuits via HDD ducts within Transition Joint Bays (buried box-like structures which house the jointing between the Offshore and Onshore Export Cable Circuits). The Landfall Site is located at Stake Ness, 1km west of the village of Whitehills and approximately 5km west of Banff;
- The ONEC: where the Onshore Export Cable Circuits will be located which connects the TJBs at the Landfall Site to the Onshore Substation Site. The ONEC extends approximately 37km from Stake Ness to an area in the vicinity of the existing New Deer Substation;
- The Onshore Substation Site: comprising two co-located Onshore Substations located adjacent to the existing New Deer substation. Each substation aligns with the two project phases; and
- The Onshore Grid Connection Cable Corridor: connecting the Onshore Substation to the Grid Connection Point at the existing New Deer Substation (for Phase 1) (owned by SSEN-T, via up to two onshore cable circuits.

2.1.1.2 It should be noted that the onshore export cables will not utilise the whole of the ONEC but will be contained in a maximum 100 metre (m) wide corridor.

2.1.1.3 The OnTI RLB is situated in mainly agricultural land with smaller areas of forestry, ancient woodland, residential properties, and farm steadings in the surrounding area. The proposed Landfall Site is located within the Cullen to Stake Ness Site of Special Scientific Interest (SSSI), though cables will be installed beneath the designated site and construction compounds sited outside the SSSI.



0 1 2 3 4 km

REV	DATE	DOC STATUS	ORIGIN	REVIEW	APP
03	30/08/2024	Approved	CW	GS	GS
02	22/07/2024	For Review	CW	GS	EC
01	04/03/2024	For Review	MM	GS	EC

CALEDONIA Offshore Wind Farm

ARUP

CONTRACTOR DRAWING NO: UKCAL1_ARP_WNF_ENV_MAP_00546	CONTRACTOR REV: 03
GEODETIC PARAMETERS: OSGB36 / British National Grid (EPSG:27700)	

DRAWING TITLE

Figure 2-1: Proposed Development (Onshore) Red Line Boundary

STATUS: Approved	SCALE: 1:125,000	
DRAWING NUMBER: N/A	SHEET NO: 01 of 01	REV: N/A

2.2 Consents and Licenses

2.2.1.1 All applicable consents, licences and permits will be sought as required and copies of the application forms and consents will be kept within the Proposed Development (Onshore) files. The consents required / obtained will be listed in the completed CEMP following consent. Such consents and licences are anticipated to include the PPP consent, Controlled Activities Regulations (CAR) Licence(s), and European protected species Licences. Any conditions included in consents, licences and permissions will be documented in a consents register. A consents register will be developed and operated by the Principal Contractor as part of their Environmental Management System, and will be included within the detailed CEMP.

2.3 Proposed Development (Onshore) Mitigation Schedule

2.3.1.1 The Proposed Development (Onshore) Mitigation Schedule within Volume 7, Appendix 7: Proposed Development (Onshore) Schedule of Mitigation identifies the environmental commitments required to address the potential environmental effects of the Proposed Development (Onshore). This will be appended to the detailed CEMP within Appendix B.

2.3.1.2 The measures set out within it must be implemented. The measures may, however, be developed further by the relevant Principal Contractor as detailed design progresses. All CMS and EMPs will take account of the Schedule of Mitigation and Monitoring presented here.

3 Correspondence and Communication

3.1 Communication

3.1.1.1 Internal communications will be established following consent but are anticipated to include weekly internal construction meetings with the Principal Contractor(s) during the construction phase. These meetings will include environmental matters and shall be attended by the CEM and ECoW.

3.1.1.2 Environmental performance meetings will be arranged as required. These meetings will be attended as appropriate by the CEM, ECoW and representatives of the workforce.

3.1.1.3 Site Environmental Notice Boards will display the Environmental Policy of the Applicant and the Principal Contractor and any other relevant information.

3.1.1.4 The Applicant and the CEM will arrange external meetings with relevant statutory bodies and consultees as required.

3.2 Community Liaison

3.2.1.1 A CLO will be employed by the Applicant to lead on engagement with potentially affected residents, farmers / businesses, and Community Councils. At the earliest possible stage the Applicant and CLO will proactively engage with residents to discuss the programme of work and establish how to minimise impacts of construction on local residents and farmers / businesses.

3.2.1.2 The CLO will be the main point of contact for the community to be kept informed of the Proposed Development (Onshore) progress and for any queries and/or grievances regarding the construction of the Proposed Development (Onshore). Communication with the wider community will be undertaken through signage and letter drops as appropriate. Advance notice of works will be provided as required.

4 Environmental Training

4.1 Inductions

4.1.1.1 An Environmental Induction will be a compulsory requirement for all construction personnel and sub-contractors. No personnel, including sub-contractors, will be permitted to undertake any work on site without undertaking a site induction. The site induction will evolve to reflect changes in the CEMP as the Proposed Development (Onshore) develops. Environmental topics covered in the induction shall include, but will not be limited to:

- Water Resources;
- Pollution Prevention;
- Emergency Response Procedures;
- Waste Management and Housekeeping;
- Duties and Responsibilities;
- Relevant Procedures;
- Ecologically and Ornithological Sensitive Areas and Times;
- Incident and Non-Conformance Reporting;
- Consents, Licences and Compliance;
- Legislation; and
- Environmental Good Practice.

4.2 Toolbox Talks

4.2.1.1 Toolbox Talks (TBTs) will focus on specialised topics in addition to the Environmental Induction. TBTs shall be used to highlight issues of concern and to distribute any new information or responsibilities. They will also be used as a means of providing basic environmental training to construction personnel and sub-contractors on a specific environmental topic such as habitat / species protection. TBTs will be provided routinely but also when corrective actions have been identified as part of site audits; work is being undertaken in a sensitive area; changes to environmental conditions and/or legislation require changes in construction practice.

4.3 Specialist Training

4.3.1.1 Specialist Training will be provided as required for members of construction crews and sub-contractors. Environmental Monitoring and Incident Response.

4.4 Inspections and Audits

4.4.1.1 Inspections and audits will be carried out regularly by the CEM to record environmental performance and identify any corrective actions required. The Principal Contractor will have responsibility for undertaking a programme of formal monthly environmental audits. Formal audits will be undertaken against audit checklist, providing a means of monitoring legislative standards, licence conditions and conditions agreed with statutory bodies.

4.4.1.2 Where problems, insufficiencies or opportunities for improvement are identified, corrective actions will be identified by the CEM and Principal Contractor and will be implemented by the Principal Contractor within a defined time frame. The CEM will make aware the Principal Contractor and Application of any construction activities they deem should be ceased in order to avoid unacceptable impacts on the environment or breach of legislative standards.

4.5 Environmental Standards

4.5.1.1 All site employees will comply with the Environmental Policy requirements and the Environmental Management System (EMS).

4.5.1.2 Environmental Inductions and TBTs will help foster a strong environmental culture amongst all employees, contractors, subcontractors and suppliers.

4.6 Specific Environmental Monitoring

4.6.1.1 Monitoring of specific environmental parameters and receptors will be carried out as necessary. The requirement for specific additional environmental monitoring will be reviewed consents and licences are issued and following consultation with statutory bodies. Specific parameters that may require environmental monitoring might include, but is not limited to:

- Site Inspections;
- Noise Monitoring;
- Traffic Monitoring;
- Construction Dust Monitoring;
- Protected Species Monitoring;
- Ornithology Monitoring;
- Water Quality / Pollution Prevention Monitoring;
- Archaeological Monitoring; and
- Peat / Soils Monitoring.

4.7 Environmental Incidents and Corrective Actions

4.7.1.1 Environmental incidents and near misses shall be investigated and reported by the relevant person (anticipated to be the CEM) to the Applicant and Principal Contractor. The Principal Contractor will comply with the response procedure to be developed in adherence to the Applicant's and/or Principal Contractors Health and Safety Plan. Where relevant, the appropriate environmental bodies / authorities (e.g., NatureScot, Scottish Environment Protection Agency (SEPA), Aberdeenshire Council) shall be informed immediately.

4.7.1.2 Copies of incident investigation reports shall be supplied by the CEM to the Principal Contractor and the Applicant and action taken to prevent recurrence. All corrective action, incident and near miss report forms shall be held in a register at the construction site.

4.8 Complaints Procedure

4.8.1.1 Contact details will be provided by the Principal Contractor for all written complaints to be addressed. Complaints will be addressed by the CEM. All complaints will be logged and recorded with a copy made available to the Principal Contractor, CEM and Aberdeenshire Council. The CEM shall ensure that all complaints receive a written response, which will include information on any actions undertaken to address as deemed appropriate.

5 Outline Construction Methods

5.1 Risk Assessments and Construction Method Statements

5.1.1.1 All activities undertaken on site shall be subject to site specific risk assessments and the implementation of method statements in accordance with the applicable legislation in advance of construction works. All site specific risk assessments will be carried out pre-construction in accordance with the Construction (Design and Management) (CDM) Regulations 2015 (UK Parliament, 2015[1]) with mitigation implemented across the construction area as required.

5.1.1.2 Site specific risk assessments and method statements will be completed by the Principal Contractor(s) following best practice and industry standards taking account of hazard impacts probability and Health, Safety and Environment (HSE) risk and commitments.

5.1.1.3 A Health and Safety Plan will be prepared prior to the start of construction and in accordance with The Health and Safety at Work Act 1974 and good practice.

5.1.1.4 Construction Method Statements will be included in Appendix C of this CEMP once finalised post consent.

5.2 Working Hours

5.2.1.1 Core working hours for construction of the Proposed Development (Onshore) will be typical working hours which are taken to be 7am to 7pm Monday to Friday and 7am to 12pm Saturday and for public holidays. This will also apply to the movement of Heavy Goods Vehicles (HGVs). Certain works such as HDD may have to be undertaken outside of normal working hours with the potential for 24 hours working required. Any instances of works being undertaken outside of normal working hours will be approved by Aberdeenshire Council's Environmental Health Officer (EHO).

5.2.1.2 As per Volume 5, Chapter 8: Airborne Noise and Vibration of the EIAR, an assessment of construction noise has been undertaken to provide Aberdeenshire Council with the relevant information to assess any additional requirements for construction noise management under the Control of Pollution Act 1974.

5.3 Construction Access

5.3.1.1 There is a requirement for several temporary access roads to facilitate delivery of key plant and equipment to install the OnTI. The location of these access roads will be determined at detailed design. All Proposed Development (Onshore) access roads will use local pre-existing infrastructure such as road networks, farmer tracks and utility access as first priority, to minimise the construction of new roads.

5.3.1.2 Temporary access roads and haul roads will be designed to have an indicative width of 5m. This indicative width comprises a standard width of a single-track road to permit one way HGV movements as well as passing bays to allow vehicles meeting along the haul road to pass safely.

5.3.1.3 Access roads will be prepared by removing vegetation and stripping the soils before capping with crushed rocks. Public Road Improvements may also be required where necessary to allow for Abnormal Indivisible Load vehicles such as substation equipment deliveries, and cable drum deliveries. These will be agreed in consultation with Aberdeenshire Council.

5.3.1.4 In addition to temporary access roads, two haul roads, to accommodate works across each potential phase within the ONEC will be required to facilitate cable laying. This internal route will allow construction vehicles to move between different areas and construction compounds while minimising the need to travel on the public road network. It should be noted however, that where the ONEC crosses a public road, construction traffic will be required to exit the haul road/construction site, cross the public carriageway, then rejoin the haul road on the opposite side.

5.4 Construction Traffic

5.4.1.1 An Outline Construction Traffic Management Plan (CTMP) is provided in Volume 7E, Appendix 9-2: Outline Construction Traffic Management Plan to manage the potential impact of construction traffic. The Outline CTMP set out a basic framework and series of vehicle management actions or principles that will help facilitate the safe operation of construction vehicles to, from, and within the limits of the OnTI RLB.

5.4.1.2 A detailed CTMP will be prepared as part of the Approval of Matters Specified in Conditions (AMSC) planning applications. The CTMP will include further details of specific construction activities, detailed vehicle route assessments, site compound operations and swept path assessments.

5.4.1.3 The CTMP will be finalised post consent and consulted on with relevant stakeholders for approval as a standalone document.

5.5 Construction Compounds, Laydown and Welfare

5.5.1.1 Temporary construction compounds will be required to facilitate construction. Compounds are anticipated to include but not be limited to, boundary fencing, security lighting, temporary construction site facilities (welfare cabins, stores, skips, etc.), and equipment storage. The type and exact location of temporary site infrastructure will be selected by the Principal Contractor and detailed in the detailed CEMP.

5.5.1.2 It is expected that any excavated materials will also be stored within the OnTI RLB and as a result material storage areas will be required. Precise locations for materials storage will be determined at detailed design.

5.5.1.3 Temporary laydown and materials storage areas will be prepared in a similar manner to temporary access roads, by removing vegetation and stripping and storing the topsoil and subsoil material. Soil and vegetation will be reinstated following completion of construction works.

5.5.1.4 Welfare cabins, toilets, changing rooms, drying facilities and kitchen areas will be provided within construction areas for the use of site personnel in line with the CDM Regulations, 2015 (UK Parliament, 2015[1]). All foul waste will be disposed of by a suitable contractor to a licenced facility. The risk of pests and vermin infestation will be minimised by collection and storage of waste and pest control measures as required.

5.6 Drainage and Flood Risk

5.6.1.1 An outline Drainage Impact Assessment has been drafted and is provided alongside the PPP application (see Application Document 6: Outline Drainage Impact Assessment). The Drainage Impact Assessment details the drainage measures to be implemented during construction.

5.6.1.2 The information required to inform a detailed Flood Risk Assessment (FRA) is not available to support the PPP application. In the absence of an FRA to support the PPP, potential effects upon flood risk to and from the Proposed Development (Onshore) is reported on within Volume 5, Chapter 6: Hydrology and Hydrogeology. Should an FRA be required for the detailed planning application, Aberdeenshire Council and SEPA will be consulted on the scope.

5.6.1.3 Mitigation measures for the management of the water environment are included within the Water Environment Management Plan (Appendix D within this document).

5.6.1.4 A final Drainage Impact Assessment and FRA (if required) will be included within AMSC application and appended to the CEMP if required.

5.7 Lighting

5.7.1.1 Temporary lighting will be required for security purposes within construction compounds.

5.7.1.2 The Principal Contractor will comply with the requirements of the Environmental Protection Act (UK Parliament, 1990[2]). Measures to reduce the impacts of artificial lighting will include that any unnecessary lighting will be avoided and, following completion of activities, lighting will be switched off and/or removed. Lighting will also be designed to avoid visual intrusion and/or light spillage and positioned and directed to avoid nuisance to residents and wildlife.

5.8 Security

5.8.1.1 Security measures will be put in place, for example a Permit to Work system (or equivalent), to ensure only authorised construction staff are allowed within the construction area and records of staff are available for emergencies. The Principal Contractor(s) will be responsible for establishing and monitoring dedicated entry and exit points to construction sites for security and health and safety purposes.

5.8.1.2 Visitors to the construction site will be subject to a visitor protocol and will be required to report to the construction reception office. Visitors will only be permitted to the Proposed Development (Onshore) site following completion of a site induction and while accompanied by an authorised representative.

5.9 Storage of Plant and Materials

5.9.1.1 Fuel, equipment, and construction materials will be stored appropriately so as to minimise the risk of pollution. Measures to prevent pollution and the spillage of hazardous materials may include but are not limited to:

- Development of a spill response plan;
- Storage of hazardous materials away from watercourses / drainage features;
- Control of Substances Hazardous to Health (COSHH) assessment to be completed and a COSHH register to be developed to document materials and storage requirements;
- Staff training on the use of spill kits; and
- Inspection of construction plant and machinery to check for fuel and oil leaks.

5.10 Decommissioning and Reinstatement

5.10.1.1 After the main construction activities have been finalised, permanent fencing will be installed as required (for example, at TJBs), temporary infrastructure will be removed, and the ONEC and temporary compounds will be fully restored to previous land use.

6 Environmental Management Plans

6.1 Introduction

6.1.1.1 Outline or expanded essay plans of EMPs are provided in Appendix D to this document and detailed below. These establish a structure to facilitate further development of management plans as the detailed design of the Proposed Development (Onshore) is developed. They also set out any specific requirements for the content of those plans. Each management plan is to be produced in substantial accordance with the outline plans.

6.2 Peat Management

6.2.1.1 An Outline Peat Management Plan has been produced in support of this PPP application (see Application Document 7: Outline Peat Management Plan). The Peat Management Plan will be finalised prior to construction and provided in the detailed CEMP in Appendix D.

6.3 Materials Management

6.3.1.1 A Materials Management Plan will be produced post consent, prior to construction and included within the detailed CEMP in Appendix D. The MMP will detail how soil resources will be protected during construction.

6.4 Construction Traffic

6.4.1.1 An Outline CTMP has been produced in support of this PPP application and can be found in Volume 7E, Appendix 9-2: Outline Construction Traffic Management Plan. The CTMP will be finalised as designs progress and a Principal Contractor is appointed and will be approved in consultation with relevant stakeholders as a separate standalone document to the detailed CEMP.

6.5 Construction Noise

6.5.1.1 A Noise and Vibration Management Plan (NVMP) will be produced post consent, prior to construction and included within the detailed CEMP in Appendix D. The NVMP will detail the construction noise measures to be adhered to and consulted on with relevant stakeholders and approved as a separate standalone document. The NVMP will take cognisance of and align with the CTMP as it evolves.

6.6 Air Quality and Construction Dust

6.6.1.1 A Dust and Air Quality Management Plan (DAQMP) will be produced post consent, prior to construction and included within the detailed CEMP in Appendix D. The DAQMP will detail how construction dust will be managed throughout construction and air quality impacts avoided and minimised.

6.7 Pollution Prevention and Control

6.7.1.1 The Pollution Prevention and Control measures within the Water Environment Management Plan will be updated post consent, prior to construction and included within the final CEMP in Appendix D. These measures will detail the pollution prevention and control methods required to be adhered to throughout construction.

6.8 Habitat Management

6.8.1.1 An Outline Habitat Management Plan has been produced in support of this PPP application (see Application Document 8: Outline Habitat Management Plan) which outlines the requirements for the establishment, management and monitoring of proposed biodiversity enhancement elements associated with the Proposed Development (Onshore) that are detailed within Volume 7E, Appendix 3-1: Biodiversity Enhancement Report. A Habitat Management Plan (HMP) will be produced post consent and prior to construction. The HMP will be consulted on with the relevant stakeholders and statutory bodies (NatureScot) and approved as separate standalone documents. This document does not cover those landscape elements which do not form part of the biodiversity enhancement calculations.

6.9 Waste Management

6.9.1.1 A Site Waste Management Plan (SWMP) will be developed in order to appropriately manage and dispose of construction waste. This will be produced post consent, prior to construction and included within the detailed CEMP in Appendix D.

6.9.1.2 Contamination may be encountered during the ONEC crossing of surfaced roads. Contaminated land management will be carried out in accordance with the Environmental protection Act 1990 (UK Parliament, 1990[2]) and alongside best practices in sediment and water management, waste separation and staff awareness.

6.9.1.3 Contaminated land can also occur from the incorrect disposal of waste peat that may be excavated from the site. As a result, the handling, storage, and disposal of peat will be in line with the Environment Protection Act 1990[2] and the Waste Management Licensing (Scotland) Regulations 2011 (Scottish Parliament, 2011[3]). Further information will be included in the SWMP.

6.10 Biosecurity and Invasive Species

6.10.1.1 The CEMP will include measures to appropriately identify, manage and treat Invasive Non-Native Species (INNS) that may be encountered during construction. This will include control and management of any contaminated soil as well as biosecurity measures to control the potential introduction and/ or spread of INNS. These measures will be included within any inductions and toolbox talks.

6.11 Water Quality

6.11.1.1 A Water Environment Management Plan will be produced post consent, prior to construction and included within the detailed CEMP in Appendix D. This will detail measures specifically related to water pollution from particulates and sediments in run-off.

7 References

[1] UK Parliament (2015) 'The Construction (Design and Management) Regulations 2015'. Available at: https://www.legislation.gov.uk/uksi/2015/51/contents (Accessed 01/10/2024).

[2] UK Parliament (1990) 'The Environmental Protection Act Environmental Protection Act 1990'. Available at: https://www.legislation.gov.uk/ukpga/1990/43/contents (Accessed 01/10/2024).

[3] Scottish Parliament (2011) 'The Waste Management Licensing (Scotland) Regulations 2011'. Available at: https://www.legislation.gov.uk/ssi/2011/228/contents (Accessed 01/10/2024).

Appendix A: Legislation, Policy and Guidance

Table 1-3 provides the legislation, policy and guidance used when formulating this Outline CEMP. This list will be developed within the final CEMP.

Table 1-3: Legislation, Policy and Guidance

Document	Relevance
Legislation	
The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (Scottish Parliament, 2011[4])	Pollution Prevention Controls engineering works in the vicinity of inland surface waters as well as point source discharges, abstractions, and impoundments, supporting implementation of the Water Framework Directive (WFD) (2006/60/EC).
The Waste Management Licensing (Scotland) Regulations 2011 (Scottish Parliament, 2011[3])	Contaminated Land These regulations provide a system for the licensing and control of waste management in Scotland, to ensure that waste does not cause pollution of the environment, harm to human health or become detrimental to the amenities of the local area.
The Environmental Protection Act 1990 (UK Parliament, 1990[5])	Contaminated Land and Noise Sets the framework for waste management and control of emissions to the environment.
Policy and Guidance	
The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended): A Practical Guide (Scottish Environmental Protection Agency (SEPA), 2023[6])	Pollution Prevention
Engineering in the water environment: good practice guide – River crossings. 2nd edition. (SEPA and Natural Scotland, 2010[7])	Pollution Prevention

Document	Relevance
SEPA, Natural Scotland (2009[8]) Groundwater protection policy for Scotland. Version 3.	Pollution Prevention
Engineering in the Water Environment Good Practice Guide – Temporary Construction Methods. 1st edition (SEPA, 2009[9])	Pollution Prevention
Supporting Guidance (WAT-SG-53) – Environmental Quality Standards and Standards for Discharges to Surface Waters. v7.1. (SEPA, 2020[10])	Pollution Prevention
Land Use planning System SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependant Terrestrial Ecosystems. Version 3. (SEPA, 2017[11])	Pollution Prevention
Flood Risk and Land Use Vulnerability Guidance. 4th edition. (SEPA, 2017[12])	Flood Risk Management
Guidance for Pollution Prevention – Working at construction and demolition sites. Version 1. (SEPA, NRW and NIEA, 2023[13])	Pollution Prevention
Guidance for Pollution Prevention - Works and maintenance in or near water: GPP 5. Version 1.2. (SEPA, NRW and NIEA, 2018[14])	Pollution Prevention
Guidance for Pollution Prevention – Pollution incident response planning: GPP 21. Version 1.1. (SEPA, NRW and NIEA, 2021[15])	Pollution Prevention

Appendix B: Schedule of Mitigation and Monitoring

This appendix of the CEMP, once finalised, will include a completed Schedule of Mitigation and Monitoring for construction of the Proposed Development (Onshore) as they are finalised in accordance with PPP and conditions and through detailed design. All CMS and EMPs will take account of the Schedule of Mitigation and Monitoring presented here.

Appendix C: Construction Method Statements

All approved Principal Contactor CMSs will be detailed within this appendix post consent and prior to construction. CMSs will be finalised on appointment of the Principal Contractor and completion of the Proposed Development (Onshore) detailed design.

Appendix D: Environmental Management Plans

This Appendix D of the CEMP includes the environmental management plans to be followed throughout construction. These plans will be developed and finalised post consent and prior to construction. All construction personnel and employees must adhere to the environmental management plans throughout construction. The following management plans will be provided in this appendix once the CEMP is finalised post consent as the design is developed and Principal Contractor(s) appointed:

- Annex 1: Peat Management Plan;
- Annex 2: Material Management Plan;
- Annex 3: Noise and Vibration Management Plan;
- Annex 4: Dust and Air Quality Management Plan;
- Annex 5: Site Waste Management Plan; and
- Annex 6: Water Environment Management Plan.

Other management plans will be developed as standalone documents separate to the detailed CEMP due to anticipated planning condition requirements. These plans will also be adhered to by all construction personnel and employees throughout construction. The management plans include:

- Construction Traffic Management Plan;
- Access Management Plan; and
- Habitat Management Plan.

1 Peat Management Plan

1.1.1.1 Refer to Application Document 7: Outline Peat Management Plan for principles.

2 Materials Management Plan

2.1.1.1 To be developed post consent and to include detail how soil resources will be protected during construction.

3 Noise and Vibration Management Plan

3.1.1.1 To be developed post consent and to include details on how noise and vibration will be managed during construction. Measures will include consideration of:

- Selecting quieter construction methods and equipment, using noise barriers or enclosures and/or establishing exclusion zones to limit impacts on sensitive receptors;
- Planning construction activities and working hours to minimise potential disruption. This could involve scheduling noisy activities during permissible hours and avoiding sensitive periods; and
- Monitoring: Developing a program of monitoring to assess the effectiveness of noise and vibration mitigation measures and ensure compliance with regulatory limits.

4 Dust and Air Quality Management Plan

4.1.1.1 The Dust and Air Quality Management Plan within the CEMP will include best practice measures in accordance with the Institute of Air Quality Management (IAQM) recommended guidance proportionate to the likely impacts. The main measures for dust management to be included are summarised below:

4.2 Proposed Mitigation for Communications

4.2.1.1 As part of a wider Proposed Development (Onshore) communication plan the contractor will be required to:

- Undertake targeted community engagement before work commences on the Onshore Transmission Infrastructure (OnTI). This may include signage and mail drops as appropriate to provide advance notice of works and learn of any concerns affected parties may have with the programme of work;
- Display the name and contact details of person(s) accountable for air quality and dust issues on the OnTI RLB; and
- Display the head or regional office contact information.

4.3 Proposed Mitigation for Site Management:

4.3.1.1 In relation to management of the OnTI RLB, the contractor will be required to:

- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken;
- Make the complaints log available to Aberdeenshire Council when asked;
- Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook; and
- Hold regular liaison meetings with any other high-risk construction sites within 500m of the OnTI RLB to ensure plans are coordinated and dust and particulate emissions are minimised with particular attention to off-site transport/deliveries which may use the same strategic road network routes.

4.4 Proposed Mitigation for Preparing and Maintaining the Site

4.4.1.1 In relation to preparing and maintaining the site the contractor will be required to:

- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible;
- Propose measures to limit dust such as erecting solid screens or barriers as appropriate around dusty activities or the site boundary that are at least as high as any stockpiles on site;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period, e.g., fine screen fencing or temporary construction tent;
- Avoid site runoff of water or mud;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on the OnTI Site; and
- Cover, seed or fence stockpiles to prevent wind whipping.

4.5 Proposed Mitigation for Construction Site Operations

4.5.1.1 In relation to construction site operations the contractor will be required to:

- Ensure all Non-Road Mobile Machinery is compliant with the engine emission regulations in place at the time of use on site;
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems;
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate;
- Use enclosed chutes and conveyors and covered skips;
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate;
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event, using wet cleaning methods; and
- Prohibit bonfires and burning of waste materials.

4.6 Proposed Mitigation Specific to Earthworks

4.6.1.1 In relation to earthworks the contractor will be required to:

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

4.7 Proposed Mitigation Specific to Construction Activities

4.7.1.1 In relation to construction activities the contractor will be required to

- Avoid scabbling (roughening of concrete surfaces) if possible;
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate control measures are in place;
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery; and
- For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust.

4.8 Proposed Mitigation Specific to Track-out

4.8.1.1 In relation to track-out the contractor will be required to:

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require a sweeper being continuously in use;
- Avoid dry sweeping of large areas;
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport;
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable;
- Record all inspections of haul routes and any subsequent action in a site logbook; and
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

4.9 Proposed Mitigation for Monitoring

4.9.1.1 In relation to monitoring the contractor will be required to:

- Carry out regular site inspections to monitor compliance with the Dust and Air Quality Management Plan, record inspection results, and make an inspection log available to Aberdeenshire Council when asked;
- Increase frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions; and
- Where possible commence baseline monitoring at least three months before work.

5 Site Waste Management Plan

This section of the CEMP once finalised will include the Site Waste Management Plan(s) for the Proposed Development (Onshore).

6 Water Environment Management Plan

6.1.1.1 The Water Environment Management Plan within the CEMP will include best practice measures in accordance with the SEPA and Construction Industry Research and Information Association (CIRIA) guidance proportionate to the likely impacts. The Water Environment Management Plan seeks to minimise risks to the following receptor categories over the construction phase of the Proposed Development (Onshore):

- Surface water quality and quantity;
- Groundwater quality and quantity (including measures for Groundwater Dependent Terrestrial Ecosystems (GWDTEs)); and
- Flood risk.

6.1.1.2 Risks to surface and groundwater quality over the construction phase, to be managed through measures specified in this Water Environment Management Plan include pollutants such as sediment-laden water, chemicals including hydrocarbons and exposed earth. Activities that may be sources or pathways for these pollutants include movement of plant and machinery around the site, earthworks, concrete pouring and refuelling of plant and machinery.

6.1.1.3 The main measures for managing water are summarised in the following sections.

6.1.1.4 All relevant measures will be subject to abiding by The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended): A Practical Guide (SEPA, 2023[6]). This guidance sets out practical advice on CAR and which activities are regulated by SEPA.

6.1.1.5 The following SEPA position statements, guidance notes, and best practice guidance will be consulted and adhered to:

- Engineering in the water environment: good practice guide - river crossings (SEPA and Natural Scotland, 2010[7]);
- Culverting of Watercourses (SEPA, 2015[16]);
- Groundwater Protection Policy for Scotland (SEPA and Natural Scotland, 2009[8]);
- Engineering in the Water Environment Good Practice Guide, Temporary Construction Methods (SEPA, 2009[9]);
- Environmental Quality Standards and Standards for Discharges to Surface Waters (SEPA, 2020[10]);
- SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems (SEPA, 2017[11]); and
- SEPA Flood Risk and Land Use Vulnerability Guidance (SEPA, 2017b[12]).

6.1.1.6 SEPA guidance for preventing pollution (SEPA, NRW and NIEA, 2023[13]), working on or near water (SEPA, NRW and NIEA, 2018[14]), and for managing pollution incidents (SEPA, NRW and NIEA, 2021[15]) will also be followed.

6.2 Pollution prevention

6.2.1.1 This section details control measures to be adhered to minimise the risk of pollution of the ground or controlled water taking into account the PPGs outlined below:

- PPG1 General Guide to the Prevention of Pollution;
- PPG3 Use and design of oil separators in surface water drainage systems;
- PPG 4 Treatment and disposal of sewage where no foul sewer is available;
- PPG5 Works and maintenance in or near water;
- PPG6 Working at construction and demolition sites;
- PPG7 Refuelling facilities;
- PPG8 Safe storage and disposal of used oils;
- PPG13 Vehicle washing and cleaning;
- PPG18 Managing fire-water and major spillages;
- PPG20 Dewatering underground ducts and chambers;
- PPG21 Pollution Incident Response Planning; and
- PPG26 Storage and handling of drums and intermediate bulk containers.

6.2.1.2 Relevant CIRIA publications for consideration include:

- Control of Water Pollution from Construction Sites – Guide to Good Practice (SP156);
- Control of Water Pollution from Construction Sites – Guidance for Consultants and Contractors (C532);
- Control of Water Pollution from Linear Construction Projects – Technical Guidance (C648);
- Control of Water Pollution from Linear Construction Projects – Site guide (C649);
- Environmental good practice on site (C692);
- Groundwater control: design and practice (second edition) (C750);
- The SuDS Manual (C753); and
- Guidance on the construction of SuDS (C768).

6.3 Fuel handling and COSHH materials

6.3.1.1 Fuel and oil (including mould oil) will be stored in accordance with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (Scottish Parliament, 2011[4]) and fuels and oil will be handled in such a way that risk of pollution is minimised, specifically:

- Fuel and/or oil storage tanks will comply with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (Scottish Parliament, 2011[4]) and will be locked when not in use i.e. outside working hours;
- Storage areas will not be located within 50m of a spring, well or borehole, 20m of site drainage or within Flood Zones or on a gradient Refuelling of mobile plant will not be permitted within 50m of a spring, well or borehole 20m of a watercourse, within 20m of a highway drainage gully or within a Flood Zone;
- Mobile bowsers will be bunded/double skinned and will comply with the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (Scottish Parliament, 2011[4]) and will be secured when not in use i.e. outside working hours;
- Refuelling of vehicles and equipment to take place in designated refuelling areas only;
- All refuelling, oiling and greasing of construction plant and equipment, would take place above drip trays and away from drains as far as is reasonably practicable;
- Vehicles and plant will not be left unattended during refuelling;
- Spill kits should be located within the designated refuelling areas;
- Trained operatives will carry out refuelling of plant and equipment;
- Plant nappies will be used during refuelling;
- Drums will be stored in bunded areas with a minimum capacity of 25% of the total volume contained within the bund, or 110% of the largest container, whichever is the greater. Where possible these bunds will be fitted with roofs to prevent the collection of rainwater. Individual drums in use will be stored on a drip tray sufficient to contain 25% of the full capacity of the drum;
- Drums will be maintained in a good condition, fitted with lids and labelled to indicate the contents;
- Static combustion engine plant (e.g. compressors, lighting sets) will be integrally bunded or placed on plant nappies;
- Plant will be regularly checked for leaks and will be regularly maintained, and a log kept and available for inspection;
- Spill kits will be provided:
  - within close proximity to fuel and oil storage areas;

- with plant that is operating in isolated areas;
- welfare facilities;

- In accordance with the Control of Substances Hazardous to Health Regulations 2002, including:
  - Storage of COSHH Materials and waste should be in secure, bunded and sheltered area. Waste should be segregated;
  - COSHH liquids will not be stored in Flood Zone areas 2 and 3;
  - Areas must be supervised and records of materials and waste stored and removed from the area recorded; and
  - Handling, storage and disposal should be undertaken as described in the Material Safety Data Sheets.

6.4 Location of site compound facilities (including car parks)

6.4.1.1 Site compounds will be located away from all surface water features and watercourses and outside of the flood plain.

6.4.1.2 A site drainage plan will be prepared in advance of construction works, identifying the location of all watercourses and drains/drainage paths and showing mitigation measures to protect the receiving water environment from pollutants from the scheme's construction.

6.4.1.3 All drainage on site will be identified and mapped, with colour coding used to distinguish between surface water, foul sewer and combined drainage. This would ensure that all those working on site are aware of the type of drain in the event of a pollution incident. Pollution control measures such as the use of oil interceptors, the placement of bunds or sediment traps would be used to prevent sediment run-off entering drains.

6.5 Sediment management

6.5.1.1 Contamination by sediment from site run off into receiving watercourses is a key risk if not properly controlled throughout the construction of the Proposed Development.

6.5.1.2 Site run off is made up of two components and are the direct results of heavy rain.

6.5.1.3 The first component is run off from adjoining land that is not affected by the works. Run off from adjoining land will be intercepted by early construction of pre-earthwork drained ditches. Any water entering this ditch would not require treatment.

6.5.1.4 The second component is run off across the works once topsoil has been stripped.

6.5.1.5 A surface water and groundwater monitoring plan will be developed for any works that could affect quality or quantity of surface waters, groundwater aquifers or groundwater dependent waterbodies or habitats. This will be agreed with SEPA and be implemented pre, during, and post construction.

6.5.1.6 Measures to minimise risks to water quality of surface water and groundwater receptors in the vicinity of the site should be implemented prior to commencement of construction. Prior to commencement of construction, the contractor will:

- Prepare a Water Management Plan for the site, including:
  - Details of any water abstraction and discharge points related to the works;
  - Details of any dewatering that would be likely and where construction activities will be taking place in relation to water environment receptors;
  - Locations of spill kits;
  - Locations of designated re-fuelling areas and fuel storage areas (at least 10m away from any watercourses);
  - Requirements for management of construction drainage on the site e.g. design of settlement lagoons or other treatment systems; and
  - Monitoring and maintenance regime for water management on site e.g. monitoring and maintenance of settlement lagoons.

6.5.1.7 The following control measures will be implemented, where practicable, prior to works to minimise silt laden runoff entering the surface water systems:

- Silt fencing, cut-off ditches and soil bunds will be constructed downslope of excavations, to retain and convey water to adequately sized treatment areas to prevent the ingress of sediment contaminated water;
- In accordance with BS6031:1981 Code of Practice for Earthworks, land disturbance will be kept to a minimum and disturbed areas will be stabilised as soon as possible. Soil handling will be undertaken with reference to best practice guidelines;
- All roads used by construction traffic will be kept free from dust and mud deposits;
- The amount of exposed ground will be kept to a minimum. Where practical stripped areas will be reseeded as soon as possible;
- Earthworks ditches will be dug, where required, to channel any surface water into settlement ponds. These will be graded and, where required, contain straw bales or clean stone will be installed to act as check dams;
- Settlement ponds will be constructed, where practicable, to allow solids to settle;

- Cut-off drains will be installed around the working areas to intercept uncontaminated surface run off and divert it around and away from the works;
- Earthworks will be programmed to take place during the spring/summer periods, where practicable; particularly in the vicinity of watercourses;
- Run off from excavations will not be pumped directly into watercourses. The Project Permit to Pump system will be adhered to and silt mitigation measures, if required, will be implemented;
- Every effort will be made to prevent water from entering excavations;
- Stockpiling of materials will be minimised and essential stockpiles will be located as far away as possible from watercourses;
- No stockpiles should be within floodplains or 10m of watercourses;
- Stockpiles of soil and vegetation should be covered to reduce risk of sediment being washed into surrounding watercourses;
- Surface water management mitigation measures, such as ditches with check dams and silt fencing should be installed at appropriate locations around stockpiles;
- Short term stockpiles will be sealed; further measures will be implemented if necessary;
- Any stockpile in place for an extended period of time will be allowed to re-vegetate naturally;
- Cut off trenches will be installed uphill of soil management areas to divert flows away from potential sources of silt pollution;
- Silt fencing, cut-off ditches and soil bunds will be constructed downslope of excavations, to retain and convey water to adequately sized treatment areas to prevent the ingress of sediment contaminated water;
- All stockpiles of excavated material shall be covered to prevent entrainment and mobilization of sediment;
- Silt fences shall be provided at all locations where the works (including temporary works and haul roads) are within 10m of a watercourse;
- Silt fences/swales shall be provided at all locations where surface water runoff may enter/leave the working areas;
- The short-term storage and removal / recovery or disposal of excavated material shall be considered and planned such that risk of pollution from these activities is minimised; and
- Flocculants may be used in conjunction with other mitigation measures. SEPA will be consulted prior to their use.

6.5.1.8 Following commencement of construction, the contractor is required to implement the following proposed mitigation to manage risks arising from construction activities.

6.5.1.9 In relation to earthworks the contractor will be required to:

- Phase earthworks such that the area stripped of vegetation is minimized, to reduce the area of exposed earth as far as is practicable;
- Re-vegetate earthworks and exposed areas/soils stockpiles to stabilise surfaces as soon as practicable and reduce surface area of bare earth at risk of mobilisation;
- Where it is not possible to re-vegetate, cover stockpiles of excavated material as soon as practicable to reduce surface area of exposed earth to minimise risk of mobilized sediment entering receiving watercourses; and
- In-filling of trench should be undertaken as earthworks progress.

6.6 Concrete washout

6.6.1.1 The Contractor will instruct concrete suppliers that where practicable, concrete washout activities should be undertaken off site.

6.6.1.2 If required, in emergency circumstances, designated areas will be provided for washing out concrete delivery lorries, concrete pumps and grout lines. These will be located at least 20m away from any ditch or watercourse and will consist of a small skip lined with an impermeable membrane. Concrete will be allowed to harden in the skip before being removed for recycling.

6.6.1.3 The washout liquid will be treated to allow safe reuse or discharge.

6.6.1.4 Loose cement and/or concrete will be cleared as quickly as possible.

6.6.1.5 Work involving concrete and cement will be carried out in accordance with *PPG5: Works in, near or liable to affect a watercourse*. Controls will be implemented to ensure that wet cement does not come into contact with controlled waters.

6.6.1.6 Adequately sized and fully lined designated concrete washout areas will be developed and maintained.

6.6.1.7 Investigate concrete supplier's use of concrete socks, which will help reduce the need for washout areas.

6.6.1.8 Waters outside of designated concrete washout areas that have come into contact with wet concrete/cement will be captured and treated accordingly (e.g. using a Siltbuster Roadside Concrete Washout facility and/or pH control).

6.6.1.9 Any waste material recovered following the drying of concrete washout areas or following treatment, should be re-used onsite, if possible, or should be removed from site by a licensed waste carrier for disposal to an appropriately licensed facility.

6.6.1.10 Detailed response plan, linked to regular monitoring of wash water and wash water vessels will be compiled and adhered to.

6.7 Vehicle/plant movements and cleaning

6.7.1.1 Haul routes will be regularly inspected and maintained to minimise sediment laden run-off.

6.7.1.2 During the earthworks mass haul operation, damping down of the haul roads to minimise dust being generated by plant movements would be required. This would minimise dust pollution causing nuisance to neighbouring properties and businesses along the route of the scheme.

6.7.1.3 All vehicles, plant and equipment will be regularly inspected and maintained in accordance with manufacturers' recommendations. Records of inspections will be maintained on site.

6.7.1.4 Areas of hard standing will be provided at site access and egress points, where practicable. The areas will be regularly inspected and cleaned. Road sweepers/cleaners will be employed on existing highways near the construction area.

6.7.1.5 Site wheel washing facilities will be established at designated locations, away from watercourses and the floodplain. Cleaning will be carried out in a bunded area and wastewater would either be recycled or discharged to foul sewer (under permit from the sewerage undertaker). If unable to be discharged, waste would be removed from site by a licensed waste carrier for disposal to an appropriately licensed facility.

6.7.1.6 Guidance from PPG13 will be used to put in place good practice for vehicle washing and cleaning.

6.8 Topsoil stripping and storage

6.8.1.1 Wherever possible, vegetation and topsoil will be left in place to minimise the amount of unprotected ground exposed to runoff. Where topsoil removal is required it would take place as late as possible prior to other works in the area. Topsoil will be stored outside of the floodplain areas on level ground.

6.8.1.2 In advance of vegetation clearance and soil stripping operations commencing, appropriate control measures would be implemented to prevent contamination.

6.8.1.3 Topsoil stockpiles will be created and managed in accordance with best practice guidance (PPG6). The sides of stockpiles would be graded to prevent ponding and to help shed rainwater. Exposed stockpiles that are to remain for long periods will be seeded with a standard Rye Grass seed mix immediately upon completion and in suitable weather conditions. This would minimise soil erosion during the soil storage period and to help reduce colonisation of nuisance weeds.

6.8.1.4 Silt fencing would be installed around the margins of topsoil mounds to minimise the risk of sediment-laden runoff reaching watercourses.

6.9 Aquatic protection

6.9.1.1 Any instream works or works close to watercourses may result in a change of aquatic conditions downstream. Such works would take into account best practice mitigation measures.

6.9.1.2 Advice on aquatic protection and constraints will be sought from all specialists involved in the scheme and will be entered into method statements and issued through to the workforce and management ahead of works affecting watercourses.

6.9.1.3 Appropriate precautions will be taken when working within, or adjacent to, watercourses to appropriately manage the potential for deposition of sediment or release of other forms of suspended material or pollution into the watercourse.

6.9.1.4 Instream prevention and control measures to reduce or avoid sediment ingress into the watercourse, would include (but not exclusively):

- Avoiding instream activity during wet weather;
- Check dams or cofferdams;
- Sediment absorbent matting; and
- Bank reinstatement/stabilisation.

6.9.1.5 The use of construction materials on site will be free from contaminated material to avoid potential contamination of the watercourse.

6.9.1.6 Water monitoring will be conducted across the scheme at appropriate locations to detect any changes in the water environment during the construction phase, and to determine locations for additional new mitigation or maintenance of existing mitigation measures.

6.9.1.7 Activities will be overseen and audited by an appropriately qualified ECoW (or team of). They will provide details of non-compliance in reports provided to the contractor to use to design and implement measures to address non-compliance and exceedances in water quality parameters.

6.10 Maintenance of plant

6.10.1.1 Maintenance of plant, vehicles and equipment will be carried out at least 20m from a watercourse or a drain. Spill kits will be available during all plant maintenance operations and a drip tray will be used to contain any leakage of oil. Where emergency repair is necessary within 10m of a drain, a drain seal will be used to ensure that no contamination enters the drainage system.

6.10.1.2 Any plant, equipment or other vehicle considered a pollution risk will be either repaired or removed from site.

6.10.1.3 The wash down of tools and plant is not permitted within or 20m from a watercourse or drainage cover.

6.10.1.4 Plant will be regularly inspected, serviced and maintained to minimise the risk of leaks/spills. At the end of each working day, driveable plant will be removed from any areas of floodplain.

6.11 Pumping works

6.11.1.1 Pumping works will be controlled to prevent pollution of drainage systems and surface watercourses. In general, small volumes of localised pumping to dewater excavations will be discharged to an area of vegetated ground close to the excavation under the permit to pump system (with appropriate permits/consents obtained, as required) or to surface water (via silt mitigation measures). Measures for prevention of pollution during larger dewatering activities will be agreed with the SEPA.

6.11.1.2 Water with a higher risk of contamination which requires discharge, including groundwater pumped out of pilings during concrete pouring, would be contained and treated using appropriate measures such as coagulation of sediments, dewatering and pH neutralisation prior to discharge.

6.11.1.3 The project will operate a permit to pump system for temporary discharge of water collected to ensure compliance with SEPA Pollution Prevention Guidelines (PPGs).

6.12 Emergency measures

6.12.1.1 An emergency response plan will be developed in accordance with PPG 21: Pollution Incidence Response Planning in relation to construction works, for example, HDD bentonite break out contingency plans. That plan would be communicated to all personnel. Emergency spill control equipment such as spill kits, oil booms and absorbent materials, would be held at appropriate locations on site and within site compounds.

6.13 In channel working

6.13.1.1 Temporary works to trench through watercourses either by gravity flumes or over pumping will include suitable provisions to pass high flows.

6.13.1.2 Appropriate sequencing and domaining of works within the channel, to reduce impacts to surface and groundwater flows to be temporarily diverted downstream of the works area will be sought.

6.13.1.3 Species translocation and appropriate mitigation to avoid the injury or death of aquatic species during temporary watercourse diversion will be required. Works should be supervised by an appropriately qualified ECoW and be timed to avoid fish migration and spawning periods.

6.14 Construction flood risk management

6.14.1.1 To minimise the effect of the construction phase, the following flood management measures will be developed prior to construction and implemented during construction.

6.14.1.2 The construction areas designated Flood Zones will have signage prominently displayed. Information on the signage will include a general arrangement drawing demarcating the extent of the flood zone.

6.14.1.3 Mandatory conditions for working within the Flood Zones will include:

- Inductions and toolbox talks for construction teams in areas identified as being at risk of flooding will be mandatory;
- The Contractor shall set up appropriate communications and procedures with SEPA to obtain prior warning of potential flooding from sources outside of the site;
- The Contractor shall ensure that all construction teams are aware of the source, nature, onset and duration of potential flooding;
- Construction workers and site personnel to undertake flood risk response training;
- Where practicable, works will cease during flood flows; and
- The Contractor will distribute suitable weather forecasts to the construction team.

6.14.1.4 The Contractor will also utilise SEPAs flood risk forecast and river level data and implement the following mitigation:

- Where practicable, there shall be no storage of materials, plant or hazardous materials within the Flood Zones;
- Ensuring no materials stockpiles are set up within 10m of any watercourses;
- No refuelling or scheduled servicing of plant will take place within the Flood Zones;
- Concrete washout facilities will be contained and sited outside the Flood Zones;
- All construction debris will be removed from any watercourse immediately;
- Construction equipment that can be removed, will be removed from the Flood Zones at the end of the working day;

- All plant will be checked for leakages, at least once a day;
- All minor plant must be placed on plant nappies;
- Spill kits will be sited adjacent to work areas and on designated site vehicles; and
- Locating construction compounds outside of the floodplain.

6.14.1.5 Any works impacting the floodplain (areas of Flood Zones 2 and 3) will be accompanied by a suitable floodplain compensation strategy, where necessary subject to consultation with SEPA and Aberdeenshire Council Flooding team, to include measures to manage the impacts of loss of floodplain storage or conveyance.

6.15 Protection of Private Water Supplies

6.15.1.1 Control measures will be implemented to protect licensed and unlicensed abstractions within the study area of the scheme from water quality or quantity impacts. Exact control measures will be determined based on the geology and hydrogeology in different areas but will include task specific risk assessments and more intensive monitoring (pre, during and post construction).

6.15.1.2 Monitoring of private water supplies (PWS) that are likely to be impacted prior to construction commencing to establish baseline conditions and during construction. Monitoring will commence a minimum of six months before construction starts in the catchment of each PWS.

6.15.1.3 Required mitigation will be developed at detailed design, based on the outcomes of the assessment of impact. Where a licensed or unlicensed supply, has the potential to be impacted, a protection plan shall be developed for that source and any associated infrastructure.

6.15.1.4 For temporary impacts during construction mitigation may include a pollution response plan for PWS incidents and, in the event of a loss of PWS, the creation of a suitable alternative source of water for the duration of construction works (such as via tanker or providing an upgrade to the supply) where agreed with the relevant landowner(s) and PWS user(s). A PWS monitoring programme may also be undertaken for those where source(s) or infrastructure is within 250m of excavations deeper than 1m or where within 100m of excavations less than 1m.

6.15.1.5 For permanent impacts, if protection and repairs are not possible, a new network connection, alternative water supply or replacement source (designed to current guidance) shall be provided where agreed with the relevant landowner(s) and PWS user(s).

6.15.1.6 Use of best practice and pollution prevention measures will minimise the risk of an incident that could lead to contamination of supplies.

6.15.1.7 Construction works have the potential to impact private water supplies, for example if drainage patterns are disturbed or there is an impact on water quality. In relation to private water supplies, the contractor will be required to:

- Identify all PWS within 250m of the proposed works, where excavations are more than 1m deep;
- Write a site specific PWS Protection Plan to be discussed and agreed with the PWS owner, including monitoring;
- Develop and implement PWS monitoring plan and agree with SEPA and Aberdeenshire Council EHO;
- In the event of a spill, an assessment of the likelihood of groundwater contamination supplying identified PWS would be undertaken and all landowners/tenants within 250m of the spill to be contacted within 24 hours;
- In the event of a landowner or tenant complaining that construction activities have affected their PWS, an initial response would be provided within 24 hours; and
- Consider the need to deliver an alternative water supply on a temporary or permanent basis, should an unforeseen problem arise with the existing supply due to construction impacts.

6.16 Protection of GWDTEs

6.16.1.1 Prior to commencement of construction, the following measures will be put in place to minimise the risks to groundwater quality and quantity of potential GWDTEs:

- In areas of wet or marshy ground, and where the OnTI crosses up or down notable slopes, placement of clay bunds or alternative impermeable material will be included for every 0.5m change in elevation along the length of the cable trench, to minimise in-trench groundwater flow.

6.16.1.2 During construction, the following measures will be put in place to minimise the risks to groundwater quality and quantity, including potential impacts to GWDTEs:

- In areas of potential GWDTE, rewetting of these areas should be undertaken (under supervision of an Ecological Clerk of Works (ECoW) during prolonged dry spells and decreased water table as a result of the proposed works;
- Monitoring of groundwater levels for works in close proximity to potential GWDTEs should be undertaken by an ECoW, including any excavation north of Area 1 and 3 (Figure 6-3: Potential Ground Water Dependent Terrestrial Ecosystems (GWDTEs) within Volume 7E, Appendix 6-6: Hydrology and Hydrogeology Figures), to prevent

disconnection from its groundwater source in the slope above. Monitoring of levels should take into account baseline and post construction levels to ensure the water table has recovered;

- Removing protective layers of soil and superficial deposits makes groundwater vulnerable to pollution from leaks or spills from vehicles or equipment used during construction. In addition to best practice and adherence to GPP such as 'GPP22: Dealing with spills', earthworks will be kept to a practical minimum within these areas to reduce the area of sensitive habitats such as GWDTE and wetland affected by the construction works;
- Water collecting in excavations for the Onshore Export Cable Route and Onshore Substation will be removed into settlement ponds or an equivalent alternative to allow for the removal of suspended sediment. Treated water will not be discharged directly upslope of, or within, identified sensitive habitat areas, such as GWDTE, to minimise the potential for water and nutrient flushing in these areas; and
- Fuel storage and refuelling to be limited to designated areas only, which should be at least 10m from any potential GWDTEs identified on site.

6.17 Monitoring

6.17.1.1 At detailed design, a surface water and groundwater monitoring plan developed for any works could affect quality or quantity of surface waters, groundwater aquifers or groundwater dependent waterbodies or habitats. This will be agreed with SEPA and be implemented pre, during, and post construction.

6.17.1.2 In relation to monitoring of surface water and groundwater/GWDTEs the contractor will:

- Undertake daily visual inspections of all watercourses in the vicinity of construction activities;
- Agree a suitable water monitoring protocol including sampling locations and parameters with SEPA prior to commencement of construction for surface and groundwater to ensure that discharges from site are compliant with environmental permits. Baseline characterization of the site may need to be undertaken subject to agreement with SEPA;
- Monitoring of groundwater levels for works in close proximity to potential GWDTEs should be undertaken by an ECoW, including any excavation north of potential GWDTE Area 1 and 3, to prevent disconnection from its groundwater source in the slope above. Monitoring of levels should take into account baseline and post construction levels to ensure the water table has recovered; and
- Develop and implement PWS monitoring plan and agree with SEPA and Aberdeenshire Council EHO.

6.17.1.3 The Contractor is responsible for ensuring that checks are carried out during the construction phase to ensure works are carried out in accordance with requirements of the environmental good practice, legislation and the requirements of this Outline EMP.

6.17.1.4 Visual inspections may be supplemented with quantitative monitoring at sensitive locations. Onsite in-situ monitoring may include the following using visual observation or field measurement devices and should be carried out by a suitably qualified ECoW:

- Oil/fuel;
- pH; and
- Turbidity/suspended solids.

6.17.1.5 When required water samples will be sent to an accredited testing laboratory for more detailed analysis.

6.17.1.6 All monitoring records will be managed in accordance with the control of records requirements of Environmental Management System.

6.17.1.7 Monitoring data collected during construction will be compared to the baseline/control data set and results plotted against appropriate trigger values, based upon (WFD) status, Environmental Quality Standards and baseline monitoring results in consultation with SEPA. These will help to identify any impacts of the development on the surface water environment and to identify any requirement for further remedial measures.

6.18 Maintenance, inspection and management

6.18.1.1 A maintenance, inspection and management plan for ground and surface water would be prepared by the contractor prior to construction and adhered to throughout construction.

6.18.1.2 Incident response plans for potential pollution events and potential impacts to water environment receptors should be prepared and regularly updated to reflect current construction risks detailing as a minimum:

- Responsible persons from the Contractor;
- An inventory of all substances stored on site, along with the storage locations and details of the maximum quantity held;
- A full list of the pollution prevention equipment available, details of storage and locations, and Personal Protective Equipment required to be used following a pollution incident; and
- Rapid response actions to be taken following a pollution incident, including contact details in the event of a pollution event.

6.18.1.3 Long-term drainage infrastructure around Onshore Substations and permanent access tracks will have a monitoring and maintenance programme established, to include regular visual inspection of drainage infrastructure to check for blockages, debris or damage that may impede flow.

6.19 Recording and incident reporting

6.19.1.1 In relation to management of the OnTI RLB, the Contractor will be required to:

- Record all water management complaints, identify cause(s), take appropriate measures to reduce discharges in a timely manner, and record the measures taken;
- Make the complaints log available to Aberdeenshire Council and SEPA;
- Record any exceptional incidents that cause a water pollution incident either on- or off-site, and the action taken to resolve the situation in the logbook; and
- Provide monthly water management reports detailing, as a minimum, outputs of monitoring, any water management or pollution incidents and their corrective measures.

6.20 Water minimisation measures

6.20.1.1 Water minimisation is to be implemented by utilising the water hierarchy approach to the management of water on site as set in order of preference; the highest options will be adopted where reasonably practicable, but usually a combination of options will be appropriate.

- Eliminate - eliminate water use by identifying if the water-using process or activity is really necessary and/or if there is a cost-effective alternative to using water;
- Substitute – identify and use alternative 'non-potable' sources and eliminate inappropriate use of drinking (potable) water. Assess whether rainwater or grey water can be used for the activity/process;
- Reduce - explore options that improves efficiency, e.g. by regular maintenance of water using equipment (to ensure they are working to maximum efficiency), metering and monitoring supplies, updating fittings and/or processes;
- Reuse – identify whether water (including grey water) can be treated/filtered for reuse in a process or activity, e.g. wheel washing;
- Recycle – identify if and where water can be recycled for use offsite; and
- Disposal - dispose of excess water legally and responsibly to ensure there is no flooding, pollution or inconvenience to stakeholders.

6.20.1.2 Examples of water conservation measures that will be implemented include:

- Connections to mains water to be metered;
- Construction of attenuation ponds as early as possible to capture run off for re-use;
- Utilise groundwater that is dewatered from excavations (with appropriate licences obtained);
- Utilise non-potable water where practicable, i.e. dust suppression;
- Circulate and treat water used for tunnelling and drilling operations;
- Utilise push taps within all welfare facilities; and
- Capture and reuse rainwater.

6.20.1.3 The aim of the measures it to minimise potable water use and increase non-potable water use where practical.

6.21 References

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