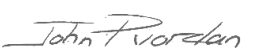


Construction Environmental Management Plan

Mooretown 220 kV Substation
Huntstown Power Company Limited
60641561-REP-740

14 September 2021

Quality information

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1 Introduction

This Outline Construction Environmental Management Plan (CEMP) has been prepared by AECOM on behalf of Huntstown Power Company Limited in support of a planning application to An Bord Pleanála (ABP). The substation development is a new 220kV GIS electrical substation and associated grid connection. The substation development is located on lands adjacent to Huntstown Power Station, North Road, Finglas, Dublin 11.

This Outline CEMP sets out the approach to environmental management, environmental work practices and management responsibilities at the site during the construction phase. The primary aim of a CEMP is to reduce the effects from construction on the environment by avoiding, minimising, or mitigating any construction effects on the environment, and to promote best environmental on-site practices for the duration of the construction phase.

The Outline CEMP would form part of the Contract Documents for the construction stage. In this context, the values and information presented herein is subject to change and refinement through the selection of the contractor and the delivery of the proposed development, and in line with planning conditions and any surveys and reports produced for the proposed development.

This Outline CEMP will be further refined and expanded upon by the appointed contractor (hereafter referred to as the Contractor) into a full Contractor CEMP should the substation development receive planning permission. The elements contained within this Outline CEMP will be included in the Contractor's CEMP, which will be prepared prior to construction by the Contractor and approved by the appropriate planning authority. The Contractor's CEMP should be treated as a live document requiring regular review and revision throughout the lifecycle of the substation development and would be subject to amendment as and when additional content becomes available.

The outline CEMP and the final Contractors CEMP will provide a basis for achieving and implementing construction related mitigation measures as outlined within a number of documents produced for the substation development. Preparation of the Contractors CEMP should comply with the Schedule of Mitigation Measures presented in the Environmental Impact Assessment Report (EIAR) produced for the substation development, any planning conditions that may result following the planning process, any additional mitigation measures outlined within standalone environmental reports produced for the substation development and the adjoining data centre.

In addition to the Contractors CEMP, the Contractor will prepare specific method statements, which should identify perceived risks to the environment and detail mitigation measures to be employed which will negate the risk to the environment.

At the end of the construction phase, the Contractor will prepare a Handover Environmental Management Plan (HEMP) that will contain essential environmental information needed by the bodies responsible for the future maintenance and operation of the asset.

1.1 Scope

The main issues that have been considered within this document include.

- Environmental Management
- Construction Works
- Site Logistics
- Construction Traffic and Site Access
- Safety, Health and Environmental Considerations including:
 - Air Quality and Climate
 - Ecology
 - Noise and Vibration
 - Archaeology and Architectural Heritage
 - Land and Soils
 - Water
 - Waste Management

2 Description of the Project

The development by Huntstown Power Company Limited located at Huntstown, Co. Dublin involves the construction of a new electrical substation and associated grid connection (known as Mooretown Substation), which will serve the site including the proposed data storage facility development once completed, as well as any future development on the wider landholding.

The substation development consists of the following:

- A new 2 story 220 kV Gas Insulated Switchgear (GIS) substation constructed to EirGrid standards, comprising cable pit/entry room, generator room, relay room, battery room, workshop, toilet, storeroom, mess room, hoist space, stair cores and circulation areas.
- The rerouting, of 220 kV feeder cables from Huntstown 1 & 2 to the new 220 kV GIS.
- The rerouting, of 220 kV feeder cables to Finglas 220 kV and Corduff 220 kV.
- The installation of 4 x 220 kV circuits to feed the data centre transformers and the installation of 4 x 220 / 20 or 33 kV transformers, to feed the data centre.
- All associated and ancillary site development and construction works, services provision, drainage works, connections to the substations, all internal road/footpath access routes, landscaping and boundary treatment works, vehicular access onto the private road to the south of the site and provision of car parking spaces in the substation compound.

The compound includes 4 no. 220 kV/mv transformers, 5 no. mv switchgear/control buildings, series coil, 4 no. cable trenches, fire walls, and lightning monopoles. The compound is surrounded by a c. 2.6 m high palisade fence and EirGrid post and rail fence (approximately 1.4m high).

One of the underground cables will follow a route originating at the proposed Mooretown Substation extending south and then west along a private road connecting the North Road with Huntstown Power Station and Huntstown Quarry. The route terminates at a proposed joint bay on the existing Cloghran cable route.

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3 Resources

Several surveys have been carried out for the adjoining data centre which also included the lands upon which the substation will be constructed (should planning permission be granted). These surveys and the mitigation outlined within (where relevant) should be adhered to by the Contractor and incorporated into the Contractors CEMP. Surveys carried out included but were not limited to

- Landscape Works and Maintenance Specification
- Amphibian survey Prepared by Triturus Environmental Ltd.
- Tree Survey Report prepared by Rik Pannett - Arboriculture Consultant
- Bat Survey Report prepared by Eire Ecology
- Geophysical Survey Report prepared by J. M. Leigh Surveys Ltd.
- Archaeological Assessment prepared by IAC

An EIAR has also been produced for the substation development and the mitigation measure outlined within will be included within the Contractors CEMP by the Contractor.

4 Environmental Management

4.1 Roles and Responsibilities

The key contractor team roles and responsibilities common to most sites are outlined in Table 4-1. These roles are indicative only and will be updated by the Contractor in the Contractor CEMP.

Table 4-1 Key Contractor Team Roles and Responsibilities (indicative)

Role	Responsibilities
Contractor's Project Director	▪ Assign specific environmental duties to competent members of the Contractor's Team. ▪ Identify the environmental training needs of personnel under their control and arrange appropriate training programmes and ensure records are being maintained. ▪ Ensure that significant environmental aspects identified for the Project are managed. ▪ Promote the continual improvement of environmental performance
CEMP Coordinator (CEMPC)	▪ Develop, maintain, and audit the CEMP (and supporting documents/plans) to ensure all aspects, impacts and statutory requirements etc. are reflected in the CEMP. ▪ Develop and implement a programme of regular Project environmental inspections, monitoring, recording, and reporting by the Environmental Site Representative(s) in accordance with procedures set out in the CEMP. ▪ Ensure that the works are constructed in line with the CEMP. ▪ Liaise with statutory authorities. ▪ Attend regular construction meetings to ensure environmental issues are discussed and addressed by the Contractor's Team. ▪ Liaise with relevant authorities/environmental bodies and the local community as required. ▪ Comply with duties under relevant legislation and company procedures in relation to environmental incident investigation and reporting. ▪ Provide support and training to the workforce with regard to understanding environmental aspects, impacts, regulatory requirements, best practice, constraints, and methods of working. ▪ Nominate the Environmental Site Representative(s). ▪ Appoint environmental specialists as required.

Role	Responsibilities
	- Ensure identified environmental specialists are in attendance on-site as required by the CEMP. - Review non-conformance reports provided by the Environmental Site Representative(s) to identify any underlying issues or patterns to identify suitable ameliorative measures
Contractor's Project Manager	- Ensure that the CEMP is produced, maintained, implemented, and distributed to all relevant parties. - Provide an on-call 24hr resource as a first point of contact for environmental issues/incidents. - Monitor the completion of corrective actions by the Site Manager and act as required to expedite completion. - Provide regular reports to the GCC on environmental performance, including details of any identified incidents or non-conformances and corrective actions. - Ensure that all personnel for whom they are responsible are aware of the CEMP and implement the relevant requirements. - Evaluate the competence of all subcontractors and suppliers and ensure that they are made aware of and comply with the CEMP and associated procedures. - Establish a consultation and communication system with all relevant stakeholders and interested parties associated with the Project, including employees, partners, sub-contractors, designers and third parties, etc., where relevant.
Site Manager	- Ensure that all personnel undergo suitable and sufficient environmental induction before starting work on the Project, and periodic refresher environmental awareness training throughout the construction. - Ensure staffs attend the appropriate environmental courses that are organised by the Environmental Manager (CEMPC). Ensure the Environmental Manager is maintaining records of training delivered to site staff. - Monitor the performance of personnel and activities under their control and ensure arrangements are in place so that all personnel can work in a manner which minimises risks to them and to the environment. - Undertake a programme of regular environmental inspections in liaison with the Environmental Site Representative(s). - Complete any corrective actions identified by the Environmental Site Representative(s) and provide status reports as required to GCC. - Assist and support the Environmental Manager (CEMPC) and statutory bodies in the investigation of any incidents. - Notify the Environmental Site Representative(s) of all environmental issues or incidents arising over the course of operations.
Environmental Specialists (i.e. Ecological Clerk of Works (ECoW))	- Attend site as required to monitor the protection of asset in accordance with the requirements of relevant legislation, the Environmental Impact Assessment Report (EIAR) mitigation measures or mitigation contained within standalone environmental reports produced for the proposed development, the construction contract and the CEMP. - Identify potential risks to wildlife and develop suitable control measures. - Provide status reports and updates to the Environmental Site Representative(s) in the completion of their activities.

4.2 Complaints

A Complaints Register for internal communication and for receiving, documenting, and responding to environmental complaints from external parties will be established and will be maintained. When a

complaint is received (telephone calls and letters of complaint etc.), the following information must be taken as a minimum:

- Date and time of the complaint are recorded
- Name of complainant (if provided)
- Nature of complaint

A record of and details of the remedial actions carried out will also be documented. All complaints received from external sources and incidents must be reported to the Environmental Co-ordinator and the appropriate site personnel (e.g. Senior Management). Complaints must be dealt with in a timely manner and reported to the client.

4.3 Monitoring and Inspections

Environmental focused monitoring and inspection activities will be carried out throughout the lifetime of the project. The frequency of these monitoring and inspection activities will be agreed in advance of construction with the client and would be in line with planning conditions. Additional monitoring and inspection will take place outside of the agreed frequency where an incident occurs or where activities that can have a significant environmental impact are occurring.

Regular site inspections will be undertaken by the Contractor's CEMPC/Environmental Site Representative to monitor compliance with the CEMP and record inspection results. It is anticipated that a daily visual check and a detailed weekly check will be carried out and these records will be available to Fingal County Council (FCC) upon request.

During construction phase the following monitoring measures will be considered:

- Regular inspection of surface water run-off and sediments controls e.g. silt traps will be carried during the construction phase
- Soil sampling to confirm disposal options for excavated soils in order to avoid contaminated run-off
- Regular inspection of construction/mitigation measures will be undertaken e.g. concrete pouring, refuelling etc
- Dust Monitoring and monitoring of dust control measures
- Noise and vibration monitoring and monitoring of noise and vibration control measures
- Surface water monitoring (if required)
- General Housekeeping

4.4 Environmental Auditing

Planned and documented audits (including waste and environmental audits) aimed at evaluating the performance of the project will be carried out. The frequency of the audits will be agreed in advance with the client but would be as a minimum as outlined below:

- Weekly site walkover with results presented at the Contractors' regular meetings with the client
- Quarterly waste audit of all waste types and records would be available for review upon request
- The CEMP will be reviewed and audited every 6 months and updated in line with current guidance and legislation
- Dedicated waste audits shall be carried out at a frequency agreed in advance with the client.

5 Construction Works

Information on the construction programme is to be added by the Contractor to the Contractors CEMP. This information was not available at the time of preparing the Outline CEMP. It is anticipated the construction programme would be approximately 24 months.

A number of construction activities with general information have been included below however these are to be reviewed and updated by the Contractor prior to construction.

5.1 Site Preparation

This section is to be updated by the Contractor once additional information becomes available.

It is proposed that access to the substation development will be from the R135 via a private road into Huntstown Power Station. Fencing and hoarding will be established around the site boundary prior to construction.

The primary activities required during the site preparation phase for the development will be site clearance, excavations, and levelling of the site to the necessary base level for construction, surveying and setting out for structures and any rerouting of services/connections to services.

A combination of excavators, trucks and other soil shifting plant will commence the main site clearance and levelling aspects.

5.2 Building Construction Works

This section is to be updated by the Contractor once additional information becomes available. A number of construction activities with general information have been included below however these are to be reviewed and updated by the Contractor prior to construction.

5.2.1 Foundations and Structure

The preliminary design incorporates reinforced concrete bases for a 110 kV grid layout. The final base requirements will be designed in accordance with EirGrid functional specifications upon completion of the final electrical design. Transformer bases are to be designed in accordance with SSE specifications.

Following the completion of site clearance and levelling, all structures will require foundations to the structural engineers' specifications. Foundations works will require excavations and local minor dewatering may be required during excavation works and groundworks.

5.2.2 Levelling/Cut and Fill

Information on the cut and fill requirements for the Proposed Development are included in Table 5-1. This includes quantities for earthworks such as topsoil strip, quantities for structural infill and quantities for concrete requirements. Importation of fill will only be sourced from suppliers which comply with vetting requirements.

Any temporary storage of spoil will be managed to prevent accidental release of dust and uncontrolled surface water run-off which may contain sediment etc. Further information is contained within Sections 8.6, 8.10 and 8.11

Contractors will be required to submit and adhere to a method statement (including the necessary risk assessments) and indicating the extent of the areas likely to be affected and demonstrating that this is the minimum disturbance necessary to achieve the required works.

Table 5-1. GIS Substation Cut and Fill Requirements (Excluding Customer Compound)

Cut and Fill Information	m3 / Te
Earthworks	
Mound removal to reduced level 77.7 m AD	8780 m3
Topsoil strip (retain 10% for nominal landscape around the site – remainder removed offsite.) average depth 0.3 m	1490 m3
Infill	
Structural Infill former burn imported stone	950 m3
Structural fill formation to underside of roads/slabs	1670 m3
Roads/Hard standings imported black top and concrete surfaces	1487 m3
Concrete for GIS Substation (foundations and other concrete structures)	640 m3
Concrete for Drainage	120 m3
Concrete Roads & hard standings /other	160 m3
Concrete for Tx base	120 m3
Reinforcement in concrete	145 Te
Structural steel Substation buildings (Does not include equipment and support weights)	244 Te
Total	15896 Te (Average loads 20Te = 795)

Source: <Source>

5.2.3 Roads, Services and Landscaping

The internal road system will be completed as per the details on the architects/designer's drawings. A temporary hardstanding road will be provided from the main entrance gates to the construction compound along the same route as the permanent internal access road.

Surveys of the public roads will be required before the commencement of works and at various stages of use. Allowances shall be made for repairs and maintenance during the works and upon completion.

A landscape report was produced for the wider data centre development. Landscaping of the Proposed Development will be implemented upon the completion of construction. This section should be updated by the Contractor when more information on landscaping requirements become available.

6 Site Logistics

Information on site logistics is to be added/updated by the Contractor to the Contractors CEMP. A number of headings with general information have been included below however these are to be reviewed and updated by the Contractor prior to construction.

6.1 Site Establishment and Site Security

The contractors' compound and associated parking will indicatively be located in proximity to the site entrance. The construction compound is likely to include offices and meeting rooms, portable sanitary facilities, equipment storage, changing and drying facilities etc. for contractors and will be used for the duration of the works.

Materials will be stored near their final position on site and the delivery of materials will follow a just in time approach, therefore a dedicated laydown area is not anticipated.

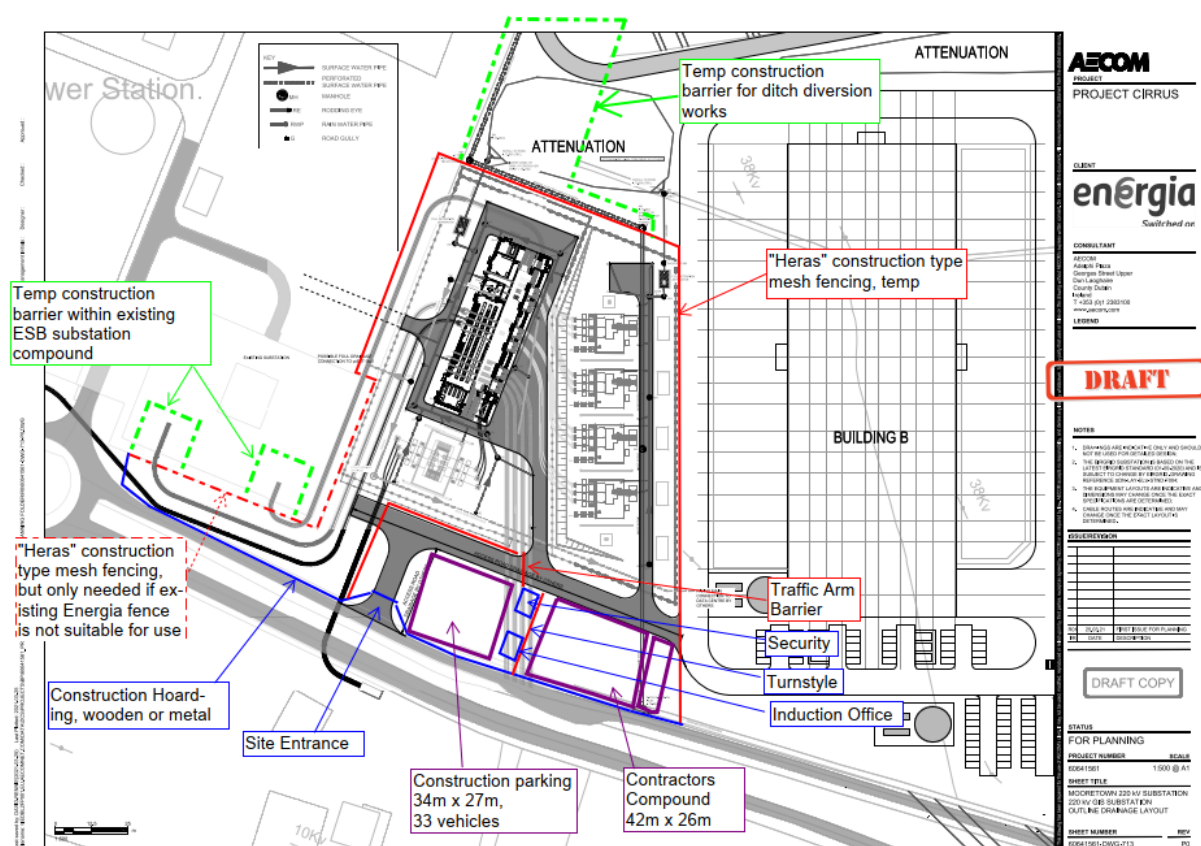


Figure 6-1 Location for the site offices and materials compound (to be added by the contractor)

The Contractor will be responsible for site security for the duration of the works. The main site access area will be manned by security personnel during site opening hours. The need for and nature of out of hours security cover will be determined by the Contractor and its insurer. The need for periodic night-time security patrols or monitored PTZ CCTV will be evaluated by the Contractor.

Contractors responsibilities for site security will include

- ensuring restricted access is maintained to the works
- managing a site induction process/badging for construction staff and visitors
- monitoring and recording all deliveries to site and all materials/waste taken off site
- monitoring the integrity of the temporary construction fencing along the site perimeter boundary

Temporary construction lighting will be provided in the site entrance area, contractors compound and construction vehicle parking area for the purposes of security and safety.

Site security will be located adjacent to the site entrance.

6.2 Consents and Licences

All statutory consents and licences required to commence on-site construction activities will be obtained ahead of works commencing, allowing for the appropriate notice period. It will be the responsibility of the Contractor to ensure all consents and licences required are in place prior to the start of construction.

These will include, but are not limited to:

- Site notices
- Construction commencement notices
- Licence to connect to existing utilities and mains sewers, where required
- Abstraction and/or discharge licenses
- Road opening/closure licences.

6.3 Service and Utilities

Welfare facilities (canteens, toilets etc.) will be available within the construction compound on site.

The Contractor will require a water source for the duration of the construction works. A temporary connection for water supply from Irish Water will not be requested. Instead a combination of tankered water and bottled water will be used. Water will be required for Contractor welfare facilities and construction activities.

Wastewater generated at the welfare facilities in the construction compound will be managed by means of a temporary sealed storage tank, with all wastewater being tankered off-site to an appropriately licensed facility for disposal.

6.4 Material Handling and Storage

A 'Just in Time' delivery system will operate to minimise storage of materials, the quantities of which are unknown at this stage. Where possible it is proposed to source general construction materials from the surrounding area to minimise transportation distances.

Aggregate materials such as sands and gravels will be stored in clearly marked receptacles in a secure compound area within the contractors' compound on site. Liquid materials will be stored within temporary bunded areas, double skinned tanks or bunded containers (all bunds will conform to standard bunding specifications - BS EN 1992-3:2006) to prevent spillage.

Construction materials will be brought to site by road. Construction materials will be transported in clean vehicles. Lorries/trucks will be properly enclosed or covered during transportation of friable construction materials and spoil to prevent the escape material along the public roadway.

6.5 Visitor Management

Visitors will be required to attend a site-specific induction to allow access to the site unless they are attending a site meeting in which case, they will be accompanied by an inducted member of the construction management team who will guide them.

6.6 Site Working Hours

Site working hours are to be updated by the Contractor in line with the EIAR and planning conditions.

On-site construction works shall be permitted to take place between 08:00hrs and 18:00hrs Monday to Friday and between 08:00hrs and 13:00hrs on Saturdays or as directed by FCC.

Working outside these hours will only take place in exceptional circumstances and under prior agreement with FCC.

No works shall take place on Sundays or Bank Holidays. In exceptional cases, FCC may permit works to proceed outside the above times/days. This will be subject to the written agreement of the Council prior to such works proceeding. Locations of works that are anticipated to be outside normal working hours will be defined and confirmed.

6.7 Employment and Management Workforce

Construction traffic would likely consist of the following:

- Private vehicles belonging to site construction and security staff
- Occasional private vehicles belonging to professional staff (i.e. design team, utility companies)
- Construction material delivery
- Excavation plant and dumper trucks used for site development works

All employees working on the site will be required to have a Safe Pass Card (or similar approved Construction Health & Safety card), manual handling training and the necessary certificates to operate machinery, as required. The details of training required, records maintained, and induction procedures will be outlined in the Contractor's Health and Safety Plan(s) and will be communicated to all site personnel.

All construction personnel will undergo a site safety induction upon their arrival on site. Once the induction is complete, construction personnel will be issued with a swipe card that will allow them to access the main compound and the site. All construction personnel will also be issued with a helmet sticker identifying that they have been inducted on the site and a name sticker will be required to be displayed on safety helmets so staff or security can identify workers by name.

Arrival of personnel to site on foot or bicycle is not planned for due to absence of footpaths, bus routes and cycle lanes in this industrial location.

7 Construction Traffic and Site Access

Information on traffic and site access is to be added by the Contractor to the Contractors CEMP. A number of headings are included below however these are to be reviewed and updated by the Contractor when additional information on the substation development becomes available.

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measure outlined within the traffic chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractor CEMP.

A Construction Site Traffic Management Plan (CSTMP) will be developed by the Contractor to identify hazards and to ensure appropriate controls are applied so that the movement of construction vehicles and pedestrians within the construction site itself are managed and coordinated.

7.1 Site Access

During construction of the substation development, construction traffic will travel to and from the site via the construction site access located off the R135.

Site access will be restricted by dedicated security personnel who will check all incoming and outgoing vehicles and workers. Site security will indicatively be located adjacent to the site entrance. Pedestrian access to the site will be via a turn-style located in the construction vehicle parking area that will be controlled by magnetic lock activated by the swipe card issued after induction.

Arrival of personnel to site on foot or bicycle is not planned for due to absence of footpaths, bus routes and cycle lanes in this industrial location.

The Contractor will be responsible to ensure that in particular emergency response services can identify the substation development site entrance as quickly as possible, without confusing the construction entrance with that of the data centre project.

The following measures will be put in place during the construction works:

- The Contractor will be required to provide a method of wheel cleaning prior to trucks etc. leaving site, and regular cleaning of the main access road
- Temporary car parking facilities for the construction workforce will be provided within the site and the surface of the car park will be prepared and finished to a standard sufficient to avoid mud spillage onto adjoining roads
- Monitoring and control of construction traffic will be ongoing during construction works. Construction Traffic Management will minimise movements during peak hours
- Construction Traffic routes minimising traffic impact on surrounding residential development will be used by construction vehicles.

7.2 Traffic Queueing

Material deliveries and collections from site will be planned, scheduled, and staggered to avoid any unnecessary build-up of construction works related traffic. Materials will be stored near their final position on site and the delivery of materials will follow a just in time approach, therefore a dedicated laydown area is not anticipated.

7.3 Site Hoarding and Security Fencing

Temporary construction and security fencing will be established. Temporary hoarding 2.4 m high will be erected along the southern boundary of the substation development site. Hoarding materials of construction and foundation type will be selected by the Contractor.

The hoarding will include the stepped back main site entrance gate. Hoarding, if timber, will be painted in Contractors company colour scheme and be fitted with header and kicker trimming panels. Hoarding will include site safety signage and should be kept in good condition at all times.

Temporary “Heras” type fencing 2.0 m high will be erected along the data centre construction site boundary to the east and north. Tarpaulin/netting should be fitted to the fence line where required for screening purposes. Approximately half of the existing fence along the site’s western boundary will be removed to facilitate HV cable work and replaced with temporary “Heras” type fencing 2.0 m high. The remainder of the existing fence along the site’s western boundary will be utilized as a construction boundary where possible.

All fence lines should be inspected regularly, maintained and if required remedial works carried out.

8 Safety, Health and Environmental Considerations During Construction Works

The Contractor will comply with the mitigation measures outlined within the EIAR produced for the substation development, will take account of any planning conditions upon grant of permission for the substation development, will comply with any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre and any other reports carried out throughout the construction phase. It is always the responsibility of the Contractor to demonstrate full compliance with all of the environmental controls/mitigation associated with the substation development.

The appointed Contractor will be required to prepare a Construction Health & Safety Plan which will be put in place prior to commencement of the works. At a minimum, this plan will include:

- Construction Health & Safety training requirements
 - Induction procedures
- Emergency protocols
- Details of welfare facilities

8.1 Emergency Response and Environmental Training

All personnel working on the project will attend a site induction. Personnel attending such an induction will complete the site Induction Record acknowledging attendance and confirming that they understand and agree to comply with the requirements of the site. Copies of all certificates of competency, licences and other qualifications as deemed necessary by the Contractor will be copied and documented. The environmental induction will run concurrently with safety awareness training.

Induction will include:

- Overview of the goals and objectives of the Environmental Policy and CEMP
- Awareness in relation to the environmental risk associated with the substation development and methods of avoiding environmental risks as identified within the schedule of mitigation measures of the EIAR, mitigation measures as outlined with the individual chapters of the EIAR, mitigation as identified within standalone environmental reports for the substation development, and the planning conditions
- Awareness of roles and individual responsibilities and environmental constraints to specific jobs
- Location of and sensitivity of Special Area of Conservations, Special Protection Areas, protected monuments, structures etc.
- Location of habitats and species to be protected during construction, how activities may affect them and methods necessary to avoid impacts, controls to minimise noise and the importance of pollution prevention measures to protect nearby watercourses and sensitive receptors including residential properties

8.2 Daily Pre-Work Briefings

All supervisors are required to carry out daily briefings at the commencement of each shift to ensure environmental issues specific to the work being performed are being addressed. All personnel involved with site works must be briefed and sign onto the daily briefing form prior to commencing activities.

8.3 Toolbox Training

Toolbox talks may be conducted prior to the start of specific work elements where there is a substantial environmental risk or when required to reinforce ongoing environmental issues. Any tool box talk training conducted will ensure that relevant information is communicated to the workforce and that feedback can be provided on issues of interest or concern.

8.4 Project Management Meetings

Meetings will be held to discuss the program and any ongoing environmental and safety concerns or issues which may have arisen in the upcoming works. Minutes of these meetings will be documented.

Personnel and sub-contractors working on environmentally sensitive sites will be provided with environmental training to achieve a level of awareness and competence appropriate to their assigned activities. Targeted environmental awareness training may be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

This training will generally be prepared and delivered by the CEMPC or delegate prior to undertaking the works. Environmental Training will be recorded, and the records will be available for inspection upon request.

The below table summarises the environmental training that will likely be required to be undertaken as a minimum as part of the project.

Table 8-1 Summary of Training Requirements

Training	Target	Frequency	Record
Site Induction	All site personnel	Prior to working on-site	Induction Record Form
Daily Pre-working Briefings	All site personnel	Prior to commencing daily works	
Toolbox Talk	Personnel relevant to the topic	As required	Toolbox Record Form
Project Management meeting	Project Managers, Engineers and Site Supervisor	Monthly	Meeting Minutes Record
Environmental Training	Personnel relevant to the activity	Quarterly or more frequently as required	Training Attendance Form
Environmental Bulletin	All company and Project personnel	As required	Environmental Bulletin Form

8.5 Concrete works

No on-site concrete batching will be carried out at the site. Only ready-mixed concrete will be used during the construction phase, with all concrete being delivered from local batching plants in sealed concrete delivery trucks. When concrete is delivered to site, only the chute of the delivery truck will be cleaned before leaving the site. Concrete trucks will be washed out fully at the batching plant.

To limit potential impacts of concrete and lime:

- Ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated water/storm water to the underlying subsoil, groundwater, or surrounding ditches etc.
- The pouring of concrete will take place within a designated area using a geosynthetic material protected to prevent concrete runoff into the soil/groundwater media
- Only the chute of the delivery truck will be cleaned before leaving the site. This will be carried out in a carefully managed designated onsite wash out area. Washout should occur into a lined skip to be in good condition (or similar). The container should not overflow or leak and should be easily accessible to vehicles. The containers must be checked and emptied at a frequency equivalent to the volume of concrete being used and no runoff should leave the washout location. The area must be clearly marked and must be located away from storm drain inlets, open drainage facilities & watercourses.
- No wash-down of chutes during the construction works will be carried out at the site within 10 meters of an existing surface water drainage point. Washouts will only be allowed to take place in designated areas with an impervious surface.

8.6 Accidental Spills and Leaks

- No bulk chemicals will be stored within the active construction areas. Temporary oil and fuel storage tanks will be kept in the material storage area in suitable containers and will be appropriately bunded as required. Refuelling of vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in designated areas of the site, where possible, which will be kept away from surface water drains.
- Spill protection equipment such as absorbent mats, socks and sand will be available to be used in the event of an accidental release during refuelling. Training will be given to appropriate site workers in how to manage a spill event.
- The following mitigation measures will be taken at the construction site in order to prevent any spillages to ground of fuels during machinery activities and prevent any resulting soil and/or groundwater quality impacts:
 - Refuelling will be undertaken off site where possible
 - Where mobile fuel bowsers are used the following measures will be taken
 - Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use
 - The pump or valve will be fitted with a lock and will be secured when not in use
 - All bowsers must carry a spill kit
 - Operatives must have spill response training
 - Portable generators or similar fuel containing equipment will be placed on suitable drip trays

8.7 Air Quality and Climate

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measure outlined within the air quality and climate chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractors CEMP.

All site activities will be carried out with due consideration of air quality at the surrounding environment and sensitive receptors. There will be a Duty of Care on the Contractor to ensure that dust-raising activities are located away from sensitive receptors wherever possible, such as ditches, watercourses, residential dwellings, pedestrians, and nesting birds as much as feasibly possible and duration kept to a minimum when in proximity to a receptor/activity.

The Contractor will be required to implement measures to minimise the amount of dust and emissions (including odour) produced during the construction of the substation development. Several general and specific mitigation measures will be implemented during the construction phase. These are discussed in the below sections.

It is the responsibility of the contractor at all times to demonstrate full compliance with the dust control conditions and mitigation measures herein.

8.7.1 General Measures

The following general measures will be implemented during the construction phase:

- The Contractor will pro-actively control fugitive dust to ensure the prevention of significant emissions.
- The name and contact details of a person to contact regarding air quality and dust issues will be displayed on the site boundary, this notice board will also include head/regional office contact details.
- Works will be planned to consider the location of sensitive receptors, sensitive core activities associated with operation of other businesses, local topography, wind direction and any potential sources of pollution.
- Details of air quality complaints and remediation will be added to the Complaint Registers that will be kept by the Contractor throughout the duration of the construction phase
- Equipment and vehicles used on site will be in good condition such that emissions from diesel engines etc. are not excessive.
- Pre-start checks will be carried out on equipment to ensure they are operating efficiently and that emission controls installed as part of the equipment are functional.
- Dust deposition levels will be monitored on a regular basis in order to assess the impact that site activities may have on the local ambient air quality. A limit value of 350 mg/m²/day will be used in comparison with recorded values.
- Community engagement shall be undertaken before works commence on site explaining the nature and duration of the works to local residents and businesses.
- The Contractors will produce specification of a site policy on dust and will identify the site management responsibilities for dust issues, this will include the development of a documented system for managing site practices with regard to dust control and the regular monitoring and assessment of the performance of the site in terms of dust management and suppression.
- At all times, the procedures put in place will be strictly monitored and assessed.

8.7.2 Dust Control Measures

Good design, planning and effective control strategies should be implemented across the site to reduce dust becoming airborne at source. All construction activities will take note of the location of sensitive receptors and prevailing wind directions to minimise the potential for significant dust nuisance. As the prevailing wind is predominantly westerly to south-westerly, locating construction compounds and storage piles downwind (to the east or north-east) of sensitive receptors will minimise the potential for dust nuisance to occur at sensitive receptors. Stockpiling will be limited on site.

Good site management practices will be implemented on site and will include the ability to respond to adverse weather conditions by either restricting operations on-site or using effective control measures in a timely and effective manner before the potential for nuisance occurs. The following measures will be taken to avoid dust nuisance occurring under unfavourable meteorological conditions:

- The Principal Contractor or equivalent will monitor the contractors' performance to ensure that all proposed mitigation measures relating to the substation development and the wider site are implemented and adhered to, to ensure dust impacts and nuisance are minimised
- During working hours, dust control methods will be monitored as appropriate, depending on the prevailing meteorological conditions
- Visual inspections will be undertaken regularly by the Contractor when dust-raising activities are occurring. Inspections should consider prevailing meteorological conditions, and results will be recorded and maintained
- Measures to minimise the amount of dust produced might include, dampening haul roads and stockpiles, keeping roads clean and using covers to minimise dust blow from haulage vehicles. Appropriate measures should reflect the nature of the construction activity as well as ameliorating conditions. Possible methods of reducing and controlling dust emissions during construction are listed in Table 8-2 and detailed further in sub-sections below.
- The dust minimisation measures will be reviewed at regular intervals and monitoring conducted and recorded by the principal contractor during the works to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practice and procedures. In the event of dust nuisance occurring outside the site boundary, site activities will be reviewed, and satisfactory procedures implemented to rectify the problem.

Table 8-2 Possible Dust Control Measures

Operation	Dust Control Measure
Drilling	▪ Use dust-extraction equipment such as filters, on exhaust air emissions from drill rigs
Loading/Unloading	▪ Reduce drop heights wherever practicable ▪ Protect activities from wind
Material storage	▪ Dampen material. ▪ Protect from wind and store under cover. ▪ Screen material to remove dusty fractions prior to external storage.
Overburden handling	▪ Protect exposed material from wind (by keeping material within voids or protecting them by topographical features) ▪ Spray exposed surfaces of mounds regularly to maintain surface moisture unless mound surface has formed a crust after rainfall or is grassed ▪ Minimise handling.
Soil handling and storage	▪ Restrict the duration of the activity. Seal and seed storage mound surfaces as soon as is practical. ▪ Protect surfaces from winds until disturbed areas are sealed and stable. ▪ Materials stockpiles on site shall be designed so as to minimise dust generation by wind erosion (i.e. no steep-sided stockpiles or mounds or those that have sharp changes in shape), covered securely, or damped down or suitably treated to prevent the emission of dust.

Operation	Dust Control Measure
	- Stockpiles and mounds shall be located away from the site boundary, sensitive receptors, watercourses and surface drains, ditches and sited to consider the predominant wind direction. - Avoid double handling of material
Transport by vehicle within and off-site	- Restrict vehicle speed. - Water unsurfaced roads and paved roads. - Wheel or body wash at an appropriate distance from site entrance. This should always be within the site, and the roadway from the washing facility to the road shall be hard-surfaced. - Load and unload in areas protected from wind. - Minimise drop heights. - Sheet or cover loaded vehicles. - Use water sprays/spray curtains to moisten material. - Sweep/wash paved roads. - Use paved roads where practicable.

The key features with respect to control of dust will be:

- The specification of a site policy on dust and the identification of the site management responsibilities for dust issues;
- The development of a documented system for managing site practices with regard to dust control;
- The development of a means by which the performance of the dust minimisation plan can be regularly monitored and assessed; and
- The specification of effective measures to deal with any complaints received.

8.7.3 Land Clearing/Earthworks

Land clearing/earthworks during periods of high winds and dry weather conditions can be a significant source of dust.

- During dry and windy periods, and when there is a likelihood of dust nuisance, watering will be conducted to ensure moisture content of materials being moved is high enough to increase the stability of the soil and thus suppress dust
- During periods of very high winds (gales), activities likely to generate significant dust emissions should be postponed until the gale has subsided
- The movement of truck containing materials with a potential for dust generation to an off-site location will be enclosed or covered.
- Exposed earthworks will be kept damp to prevent airborne dust emissions. Should this not be possible, windbreaks will be used to minimise the potential for dust generated by wind erosion
- Dust generation will be minimised from earthworks by sealing or seeding of surfaces to stabilise them as soon as possible

8.7.4 Stockpiling

The location and moisture content of stockpiles are important factors which determine their potential for dust emissions. The following measures will be put in place:

- Stockpiles/overburden material will be protected from exposure to wind by storing the material in sheltered regions of the site, and designed to minimise dust generation by wind.
- Stockpiles, mounds, and construction materials will be located away from the site boundary, sensitive receptors, watercourses, surface drains and ditches, sited to consider the predominant wind direction, and maintained at suitable heights.

- Regular watering of stockpiles/overburden material will take place to ensure the moisture content is high enough to increase the stability of the soil and thus suppress dust. The regular watering of stockpiles has been found to have an 80% control efficiency.
- Stockpiled materials that are likely to remain undisturbed for a significant duration will be vegetated or covered while long-term stockpiles can be seeded, re-vegetated or turfed to stabilise surfaces.
- Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be minimised. Where drop heights are greater than 2 m, suitable dust suppression measures will be utilised to control dust emissions.
- Where feasible, hoarding will be erected around site boundaries to prevent larger particles from impacting on nearby sensitive receptors.
- Double handling of material will be avoided wherever reasonably practicable.
- The site will be regularly inspected by the Contractor for spillages of dusty or potentially dusty materials and procedures will be in place for prompt clearance of any such spillage. The frequency of site inspections will be increased when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions

8.7.5 Site Traffic on Public Roads

Site access routes and movement of construction trucks along site roads (particularly unpaved routes) can be a significant source of fugitive dust from construction sites if control measures are not in place. Spillage and blow-off of debris, aggregates and fine material onto public roads can occur during the construction phase of project. This will be reduced to a minimum by employing the following measures:

- Haul routes and plant will be situated and operated away from sensitive receptors and sensitive core activities associated with operation of other businesses (where possible).
- A speed restriction of 20 km/hr (or as set out within the EIAR) will be applied as an effective control measure for dust for on-site vehicles. Any unsurfaced roads will be restricted to essential site traffic only.
- Bowsers or suitable watering equipment will be available during periods of dry weather throughout the construction period.
- Haul roads will be dampened down using water, spraying will be repeated regularly and frequently during warm and sunny weather/sustained dry periods throughout the construction period to ensure that unpaved areas are kept moist. The required application frequency will vary according to soil type, weather conditions and vehicular use. Access gates to the site will be located at least 10 m from sensitive receptors where possible.
- All trucks will be inspected prior to leaving site and excess mud removed where required.
- Public roads outside the site will be regularly inspected for cleanliness as a minimum on a daily basis and cleaned as necessary.
- A road sweeper will be present onsite to clean the site's hard standing areas and the public roads in the vicinity of the site to remove mud and aggregate materials from their surface. Following sweeping of road network material will be disposed of to a licensed waste facility.
- Vehicles delivering or collecting material with potential for dust emissions will be enclosed or covered with tarpaulin at all times to restrict the escape of dust.
- At the main site traffic exits, a wheel wash facility will be installed. All trucks leaving the site must pass through the wheel wash.

The following should be adhered to by all vehicles and plant on site:

- The engines of all vehicles and plant on-site should not be left running unnecessarily (i.e. idling) to minimise exhaust emissions (and noise).
- Vehicles and plant will adhere to applicable emissions standards.

- Plant, equipment, and emission control apparatus will be selected to minimise the engine exhaust emissions, taking into consideration economic constraints and practicability.
- Vehicles and plant will be in good working order and certified where applicable, with servicing completed in line with manufacturer's recommendations. Records of servicing will be maintained, and visual checks carried out to ensure that black smoke is not emitted at times other than at ignition.
- The use of diesel or petrol-powered generators will be minimised, with mains electricity or battery powered equipment used as an alternative (where feasible).
- Exhausts will be directed away from the ground to minimise risk of re-suspension of ground dust.

8.8 Ecology

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measure outlined within the biodiversity/ecology chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractor CEMP.

8.8.1 General Measures

General mitigation measure to be adhered to during the construction phase include:

- The Contractor will implement, comply with and include within the Contractors CEMP, ecological mitigation measures described in standalone environmental reports included with the planning package, mitigation as set out within the EIAR for the substation and wider site, any mitigation identified within ecological pre-construction reports, any measures required as a condition of planning consent, and any updated or new supplementary environmental reports made available to the Contractor throughout the life of the construction phase of the substation development.
- Works should be planned to take account of the location of identified sensitive ecological receptors and any seasonal restrictions and/or surveys that are required prior to construction works commencing. It is the responsibility of the Contractor to ensure these are carried out and in a timely manner.
- Any external lighting installed to facilitate night-time working or security lighting on the site should be kept to a minimum of that required for security, health and safety purposes and should be positioned and directed in such a manner as to minimise impacts on adjacent areas outside the site boundary and areas where sensitive ecological receptors occur.
- Any temporary construction lighting should be reviewed by an ecologist to determine its potential to disturb nesting birds or roosting bats.
- As birds and bats are mobile, additional nests or roosts could become established within the construction site during construction works. A 'watching brief' must be maintained by the Contractor throughout the construction period. If any nesting birds or roosting bats are encountered during works or if it is suspected that protected fauna may be utilising the construction site, the Contractor will cease works in the area immediately and consult an appropriately qualified Ecologist.
- All site clearance works will comply with current legislative requirements and best practice
- All fuels, chemicals, liquid and solid waste will be stored at the construction compound in areas bunded in accordance with established best practice guidelines and an adequate number of spill kits will be available at all time in key works areas and within compounds
- The Contractor will produce a water and sediment management plan, providing for means to ensure that surface water run-off is controlled such that no silt or other pollutants enter local water courses or drains

8.8.2 Fauna

8.8.2.1 Badger

This section is to be completed by the Contractor within the CEMP in line with recommendations made as part of any pre-construction surveys (should they occur), any mitigation measures outlined within the EIAR for the substation and wider site, and in line with any conditions upon grant of permission for the substation development. As badgers are mobile species and could establish in the area further surveys may be required where earthworks or construction starts more than 12 months after the badger surveys for the Proposed Development occurred.

8.8.2.2 Bats

All trees will be monitored for bats and breeding birds by a suitably qualified ecologists prior to felling or delimbing.

8.8.2.2.1 Trees

- Potential impacts on birds will be avoided by cutting of vegetation outside the bird nesting season March 1st to August 31st. If this cannot be enforced, then the site will be surveyed for the presence of nesting birds and/or nests prior to cutting and if none are recorded the vegetation may be removed within 48 hours of the survey.
- Mature trees, which are to be removed, shall be felled in the period early September to late October, in order to avoid the disturbance of any roosting bats as per Transport Infrastructure Ireland (TII and formerly the National Roads Authority) guidelines. Tree felling shall be completed by Mid-November at the latest because bats roosting in trees are vulnerable to disturbance during their hibernation period (November – April). Ivy-covered trees, once felled, shall be left intact on-site for 24 hours prior to disposal to allow any bats beneath the foliage to escape overnight.
- Any mature trees that are to be removed, should, due to the passage of time, again be surveyed for bat presence by a suitably experienced specialist on the day of felling. If several bats are found within any one tree, that specific tree should be left in-situ while an application for a derogation licence is made to the National Parks and Wildlife Service to allow its legal removal.
- The trees identified as having potential for use by bats should be felled carefully to avoid hard shocks which may injure any bats within. Large mature trees with bat roosting potential such as those onsite should essentially be felled by gradual dismantling by tree surgeons. Care should be taken when removing larger branches as removal of loads may cause cracks or crevices to close, crushing any animals within. Such cracks should be wedged open prior to load removal. If single bats are found during tree felling operations, they should be transferred to previously erected bat boxes onsite.
- Following the precautionary approach all category 3 trees to be felled within the site will follow the procedure set out within the bat survey carried out for the wider development site
 - Tree-felling to be undertaken using heavy plant and chainsaw equipment. Normally trees are pushed over, with a need to excavate and sever roots in some cases. To ensure the optimum warning for any roosting bats that may still be present, the tree should be pushed lightly two to three times, with a pause of approximately 30 seconds between each nudge to allow bats to become active. The tree should then be pushed to the ground slowly. A period of at least 24 hours, and preferably 48 hours, should elapse prior to such operations to allow bats to escape. Felling works be overseen by an ecological clerk of works.
 - All category ranked category 4 can be felled and removed.
 - Felling of trees will be supervised by an ecological clerk of works.

Table 8-3 Category Description

Tree Category	Description
Category 1	<i>Trees with multiple, high suitability features capable of supporting larger roosts</i>
Category 2	<i>Trees with definite bat potential but supporting features suitable for use by singleton bats</i>
Category 3	<i>Trees have no obvious potential although the tree is of a size and age that elevated surveys may result in cracks or crevices being found or the tree supports some features which may have limited potential to support bats. Also included within this category are trees with thick ivy however the ivy root is not thick enough to form mats, thus it is possible but unlikely a single bat may be roosting here</i>
Category 4	<i>Trees have no potential</i>

Source: < Table 7-1 Bat Survey Report for the site produced by Eire Ecology dated October 30 2019>

8.8.2.2.2 Lighting

There is a risk of indirect impacts on foraging bats, and on potential roost features in the surrounding area should any new lighting be directed towards the boundaries of the site.

Any temporary construction lighting shall be reviewed by an ecologist to determine its potential to disturb fauna such as nesting birds or roosting bats.

Construction lighting will be designed so as to be sensitive to the potential presence of bats and should adhere to the following guidance:

- Bats & Lighting: Guidance Notes for Planners, engineers, architects, and developers (Bat Conservation Trust, 2010);
- Guidance Notes for the Reduction of Obtrusive Light GN01 (Institute of Lighting Professionals, 2011);
- Bats and Lighting in the UK - Bats and the Built Environment Series (Bat Conservation Trust UK, January 2008).

8.8.2.3 Birds

This section is to be completed by the Contractor within the CEMP in line with recommendations made as part of any pre-construction surveys, any mitigation measures outlined within the EIAR for the substation and wider site, and in line with any conditions upon grant of permission for the substation development.

Potential impacts on birds will be avoided by cutting of vegetation outside the bird nesting season March 1st to August 31st. If this cannot be enforced, then the site will be surveyed for the presence of nesting birds and/or nests prior to cutting and if none are recorded the vegetation may be removed within 48 hours.

Disturbance impacts are to be minimised insofar as possible. This will be achieved by limiting areas of clearance, limiting working times in sensitive areas, and avoiding the use of noisy plant or equipment such as pumps, generators, or chainsaws.

8.8.3 Trees and Shrub

It will be necessary to complete the tree works as detailed in the tree survey schedule conducted by Rik Pannett (2019), Arboriculture Consultant. All tree work must comply with BS 3998:2010 'Recommendations for Tree Work' or other appropriate current industry standards.

Based on the outcome of the tree survey carried out at the site by Rik Pannett (2019), three areas of hedgerow containing a number of trees are recommended for protection during any proposed development works. The Tree Protection Plan (TPP: appendix 4 of Rik Pannett (2019)) shows the indicative position of the Root Protection Area (RPA) for trees and hedgerows with a retention priority.

The RPA (as described in BS5837: 2012 sec. 3.7) represents the minimum area around each tree in which the ground should remain largely undisturbed and is shown as orange dashed lines on the TPP.

The RPA will require physical protection with fencing which should be constructed on site before any access to the site or development work begins.

Where any construction works need to take place within the RPA of retained trees, special care must be taken to minimise compaction and to prevent root damage to these trees. Temporary ground protection such as track matting should be installed close to the RPAs of retained trees.

Where roads, parking bays and pathways are constructed within the RPAs of retained trees, it should be possible to utilise alternative construction methods using no dig construction in the root protection area of these trees. It is recommended that a porous surfacing is utilised for roadways for soil gases to exchange.

Recommendations for tree protection and details of tree related operations should be sought following the drawing of detailed plans by using a site specific Arboricultural Method Statement (AMS).

8.8.4 Invasive Species

Should any recommendations relating to invasive species be included with the EIAR for the substation this section should be updated by the contractor to reflect the findings of the EIAR.

No invasive species have been identified on site however should any invasive species be identified on site, the area should be cordoned off, no access to the area allowed, and an invasive species contractor should be contacted immediately to advise on treatment, containment and removal. If an invasive species is identified on site an invasive species management plan and biosecurity measures would likely be required.

All site personnel should be aware of the potential to find invasive species on site and should be aware of what procedures to follow should an invasive species be identified on site.

8.9 Noise and Vibration

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measure outlined within the noise and vibration chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractor CEMP.

Noise impacts arising from earthworks and construction activities have the potential to cause annoyance or nuisance to local residents in the area.

The earthworks will generate typical noise and vibration sources from use of a variety of plant and machinery such as rock breakers (where required), excavators, lifting equipment, dumper trucks, compressors, and generators.

8.9.1 General Measures

- The Contractor will be responsible compliance with any prescribed noise and vibration levels and for the implementation of noise and vibration mitigation onsite related to construction activities
- A site representative and designated noise liaison responsible for matters relating to noise and vibration will be appointed prior to construction on site. Any complaints should be logged, investigated, and followed up in a prompt fashion and, where required, measures taken to ameliorate the source of the noise complaint. In addition, prior to particularly noisy construction activity, e.g. excavation close to a property, etc., the site contact should inform the nearest noise sensitive locations of the time and expected duration of the works

- The site representative and designated noise liaison will also liaise with environmental advisors, relevant authorities/environmental bodies and the local community as required with respect to noise and vibration impacts during the construction phase
- The Contractor will highlight through method statements and/or risk assessment specific activities that will create significant noise and vibration levels. Contractors will demonstrate how they will mitigate/manage these emissions
- Stationary noise sources will be located as far away as possible from residential noise sensitive receptors
- Site staff will be informed about the need to minimise noise and will be supervised to ensure compliance with the noise control measures adopted
- All works on site will comply with BS 5228 2009+ A1 2014 (Parts 1 & 2) which gives detailed guidance on the control of noise and vibration from construction activities. In general, the Contractor will implement the following mitigation measures during the proposed infrastructure works:
 - Avoid unnecessary revving of engines and switch off equipment when not required
 - Keep internal haul roads well maintained and avoid steep gradients
 - Minimise drop height of materials
 - Start-up plant sequentially rather than all together
- More specifically the Contractor will ensure that:
 - In accordance with "Best Practicable Means", plant and activities to be employed on site are reviewed to ensure that they are the quietest available for the required purpose
 - Where required, improved sound reduction methods are used e.g. enclosures
 - Site equipment is located away from noise sensitive areas, as much as physically possible
 - Regular and effective maintenance by trained personnel is carried out to reduce noise and/or vibration from plant and machinery
 - Hours are limited during which site activities likely to create high levels of noise and vibration are carried out

8.9.2 Noise Limits

The noise limits to be applied for the duration of the infrastructure works will be those specified either within the EIA, those outlined within any planning conditions upon grant of permission for the substation development or if not identified within the EIA or planning conditions those identified in agreement with the planning authority. The Contractor will include details of the noise limits within the Contractors CEMP. An example of possible noise limits are set out below:

- Noise limits as specified in the B Category of BS 5228, which would be applied at the nearest sensitive receptor.
 - Night (23:00-07:00) = 50dB
 - Evening (19:00-23:00) = 60dB
 - Day (07:00-19:00) = 70dB
 - At the commercial property = 75dB

The total noise (LAeq) which should not be exceeded during daytime is therefore 70dB. Vibration limits likely to be applied for the infrastructure works are those specified in the TII document Guidelines for the Treatment of Noise and Vibration in National Road Schemes (TII, Revision 1, 2004). These limits are outlined below:

- Allowable Vibration (in terms of peak particle velocity) at the closest part of sensitive property to the source of vibration, at a frequency of;

- Less than 10Hz - 8mm/s
- 10 to 50 Hz – 12.5mm/s
- 50 to 100 Hz (and above) - 20mm/s

8.9.3 Noise Monitoring

External noise and vibration monitoring will be undertaken at locations on the site boundary closest to sensitive locations. It is considered that it will be appropriate to amend the monitoring program as the works progress. Accordingly, monitors may be added, removed, or relocated as necessary.

- The noise monitoring terminals should provide the following at minimum:
 - Logging at hourly intervals
 - Daily CIC automated calibrations

Vibration monitoring terminals should continually log vibration levels using the Peak Particle Velocity parameter (PPV, mm/s) in the X, Y and Z directions, in accordance with BS ISO 4866: 2010: Mechanical vibration and shock – Vibration of fixed structures – Guidelines for the measurement of vibrations and evaluation of their effects on structures.

The mounting of the transducer to the vibrating structure, by way of resin fixings only, will need to comply with BS EN ISO 5348: 1998: Mechanical vibration and shock – Mechanical mounting of accelerometers. In summary, the following ideal mounting conditions apply:

- The transducer and its mountings should be as rigid as possible
- The mounting surfaces should be as clean and flat as possible
- Simple symmetric mountings are best
- The mass of the mounting should be small in comparison to that of the structure under test

8.10 Archaeological and Architectural Heritage

An archaeo-geophysical survey followed by a preliminary programme of archaeological testing has been undertaken for the site. These studies identified the probable remains of an oval enclosure with a possible entranceway to the south. Within the enclosure are numerous responses and trends, most likely representing the remains of pits and ditches. These features are outside of the boundary of the proposed development currently being assessed.

A further, more detailed programme of pre-development archaeological testing and the subsequent excavation of features, deposits or structures identified (under license to the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht) is currently being undertaken by AMS Ltd to fully assess the potential for archaeological remains across the development site.

Archaeological excavation and preservation by record of features, deposits or structured identified is recommended, under license to the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht. This covers the archaeological features encountered to date and potential further archaeological features encountered during the programme of further testing. Further detail is provided within Chapter 12 of the Environmental Impact Assessment Report (EIAR) submitted with this application.

8.10.1 General Measures

This section is to be completed by the Contractor within the CEMP in line with recommendations made as part of any surveys carried out for the substation development and the wider site, any mitigation measures outlined within the EIAR for the substation and wider site, and in line with any conditions upon grant of permission for the substation development. A Precautionary Working Method Statement should be prepared for the site to identify the procedure to be followed should unexpected finds occur during construction

8.11 Land and Soils

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measure outlined within the land and soils chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractor CEMP.

8.11.1 General Measures

- The Contractor will develop a Soil Management Plan (SMP) outlining its proposal for the management and reuse of excavated materials from the site, where permitted in accordance with the relevant legislation, and provided that the reuse meets the engineering requirements for material used within the works. In addition, where the Contractor proposes to maximise the reuse of excavated soil in order to minimise the generation of waste, it will set out how it proposes to manage and document this reuse to the satisfaction of the relevant authority or its representatives
- Where dewatering is required to facilitate excavations, a risk assessment should be undertaken to determine the risk to sensitive receptors. Where an unacceptable risk is identified, suitable mitigation will be put in place, such as sheet piling of excavations and monitoring of groundwater levels

In order to prevent spillages to ground of fuels, and to prevent any consequent soil quality impacts, it will be necessary to adopt mitigation measures during the construction phase, which include:

- Designating a bunded storage area at the contractor's compound for all oils, solvents and chemicals used during construction. Oil and fuel storage tank design will be bunded to a volume of not less than the greater of 110% of the capacity of the largest tank or drum within the bunded area, or 25% of the total volume of the substance which could be stored within the bunded area, with impermeable bases within each contractor's storage area as required. Drainage from the bunded area will be diverted for collection and safe disposal
- All containers within storage areas will be clearly labelled so that appropriate remedial action can be taken in the event of a spillage. When moving drums from the bunded storage area to locations within the site a suitably sized spill pallet will be used for containing any spillages during transit
- Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles, will take place in designated areas which will be away from surface water gullies or drains. Spill kit facilities will be provided at the fuelling areas in order to provide for accidental releases or spillages in and around the area. Any used spill kit materials will be disposed of using a licenced hazardous waste contractor in accordance with relevant legalisation
- Where mobile fuel bowzers are used on site, in the event of a machine requiring refuelling outside of the designated area, fuel will be transported in a mobile double skinned tank. Any flexible pipe tap or valve will be fitted with a lock where it leaves the container and locked shut when not in use. The pump or valve will be locked shut when not in use. Each bowser will carry a spill kit and each bowser operator will have spill response training
- The Contractor will develop procedures and contingency plans to deal with emergency accidental spills and leaks

To limit potential impacts associated with the use of natural resources throughout the course of the substation development the following will apply:

- The source of backfill material will be vetted for environmental management status, regulatory and legal compliance status
- Backfill material will only be sourced from suppliers which comply with vetting requirements
- Periodic reviews of the backfill supplier's license will be undertaken
- In the event recycled aggregate is used as backfill, chemical testing will be undertaken to confirm that it is 'clean'

8.11.2 Ground Conditions

This section is to be completed by the Contractor within the CEMP in line with recommendations made as part of any pre-construction surveys, any mitigation measures outlined within the EIAR for the substation and wider site, and in line with any conditions upon grant of permission for the substation development.

Ground works will be required to clear the site and to facilitate construction of building foundations, access roads, the installation of utilities and landscaping.

Any surplus material that requires removal from site for offsite reuse, recovery and/or disposal and any potentially contaminated material if encountered on site, should be segregated, tested and classified as either non-hazardous or hazardous in accordance with the EPA publication entitled 'Waste Classification: List of Waste & Determining if Waste is Hazardous or Non-Hazardous' using the HazWasteOnline application (or similar approved classification method). If the material is to be disposed of to landfill, it will then need to be classified as clean, inert, non-hazardous, or hazardous in accordance with the EC Council Decision 2003/33/EC and landfill specific criteria. This legislation sets limit values on landfills for acceptance of waste material based on properties of the waste including potential pollutant concentrations and leachability.

Surplus soils and stones may be suitable for acceptance at either inert or non-hazardous soil recovery facilities/landfills in Ireland or, in the event of hazardous material being encountered, be transported for treatment/recovery, or exported abroad for disposal in suitable facilities.

This section should be read in conjunction with Section 8.5 Cultural Heritage as it contains additional important information relating to excavations.

8.11.3 Stockpiles

Stockpiles will be kept as low as possible and will not exceed 1.5 metres in height. The running of machinery over stockpiles should be minimised and stockpiles should not be compacted. Soil should be loosely dumped and shaped to shed water. Stockpiles will be located on dry, free draining ground, not subject to temporary standing water. If water ponds against the stockpile, temporary drains will be put in place to relieve it.

Topsoil stockpiles will not be covered or contaminated by subsoil, rock, rubble, remains of trees, site debris, fuel, or chemical pollution. Any contaminated soil stripped from the site will be stockpiled separately and labelled, contaminated soil will not be incorporated into 'clean' stockpiles. Where space is short, or where there is any risk of contamination or of topsoil and subsoil stockpiles intermingling, the topsoil stockpile will be surrounded with a temporary fence.

Temporary yards or hardstanding's, or any area where fuel or chemicals are stored will not drain towards topsoil stockpiles.

Also see Section 8.11 water for further information on stockpiles.

8.12 Water

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measures outlined within the water chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractor CEMP.

A large drainage ditch occurs along the boundary of the site. The drainage ditch is hydrologically connected to the Ward River and the Malahide Estuary SAC and SPA. Where ditches are being diverted as part of the substation development mitigation measures will be required to ensure there are no impacts to streams or downstream European sites. Any licences required for the works should be sought by the Contractor prior to construction.

8.12.1 General Measures

The following mitigation and general control measures should be followed as a minimum to ensure no significant adverse direct and indirect effects on the environment arise from the substation development.

- The Contractor will develop an emergency response plan including a spill response procedure to be followed in the event of spills and leaks
- Materials and equipment to implement the Contractors spill response and control plan must be available adjacent to all ditches where works are occurring (for example, spill kits, booms). These should be in clearly marked response points, which can be accessed by all staff. They must be checked on a daily basis to ensure that all required materials are in place. All staff on site must be aware of these items and be trained on procedures to implement in the case of a spill. Any used spill kits will be disposed of using a hazardous waste disposal contractor and in accordance with all relevant EU and Irish waste management legislation
- All water runoff from designated refuelling areas will be channelled to an oil interceptor or an alternative treatment system prior to discharge
- Drip trays will be used under mobile plant and machinery
- Refuelling operations should not occur near ditches
- Refuelling of vehicles will only to be carried out at designated refuelling areas using appropriate funnels or fuel nozzles and in adequately bunded areas
- Leaking or empty fuel drums will be removed from site immediately and disposed of via an appropriately licensed waste disposal contractor

8.12.1.1 Managing Runoff and Silty Water

The following mitigation measures should be followed as a minimum to ensure no significant adverse direct and indirect effects on the environment arise from runoff associated with the substation development:

- Run-off into excavations/earthworks cannot be prevented entirely and is largely a function of prevailing weather conditions. Earthwork operations will be carried out such that surfaces, as they are being raised, will be designed with adequate drainage, falls and profile to control run-off and prevent ponding and flowing. Correct management will ensure that there will be minimal inflow of shallow/perched groundwater into any excavation
- Care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts. All run-off will be prevented from directly entering any water courses as no construction will be undertaken directly adjacent to open water.
- No significant dewatering will be required during the construction phase which would result in the localised lowering of the water table. There may be localised pumping of surface run-off from the excavations during and after heavy rainfall events to ensure that the excavation is kept relatively dry.
- Surface water discharge from the site will be managed and controlled for the duration of the construction works until the permanently attenuated surface water drainage system of the proposed site is complete. A temporary drainage system shall be installed prior to the commencement of the construction works to collect surface water runoff by the site during construction.
- Excavations will only remain open for limited time periods to reduce groundwater and surface water ingress and water containing silt will be passed through a settlement tank or adequate filtration system prior to discharge. A discharge consent will be obtained as necessary for disposal of water arising from pumping (if any) or such water may be disposed of as construction site run off where appropriate.
- Ditches and watercourses (if applicable) will be clearly identified on site and shown on method statements and site plans. Construction compounds will be located away from these areas

- Any temporary storage of spoil, hardcore, crushed concrete or similar material will be stored as far as possible from any surface water drains and also stored in receptacles where possible. In order to minimise the risk of contamination, the stockpiled material will be removed off-site as soon as possible. Surface water drain gratings in areas near or close to where stockpiles are located will be covered by appropriate durable polyurethane covers or similar.
- There will be no direct pumping of silty water from the works to any watercourse. Sediment entrapment facilities will be installed to reduce sediment discharges to downstream properties and receiving waters. All run-off leaving a disturbed area should pass through a sediment entrapment facility before it exits the site and flows downstream for example straw bales, silt fencing, silt barriers and diversion dams. It will be the Contractors responsibility to ensure all the necessary consents are in place prior to construction and complied with throughout construction

A range of measures will be implemented to reduce runoff from stockpiles. The measures will differ based on the location and constituents of stockpiles, but will include the following

- Stockpiling of excavated material will be managed such that the potential contamination of down slope natural drainage systems is mitigated and minimised
- Stockpiles will be kept to a minimum, to control erosion areas of exposed ground. Stockpiles will be minimised to reduce silty runoff and located well away from, ditches, drains, watercourses (if applicable) and dewatering points
- Consideration will be given to groundwater level and ground saturation to prevent excessive overland flow and associated scouring and mobilisation of suspended solids. Areas to be stripped will be kept to a minimum and phased during the construction phase to reduce the amount of land exposed
- Creation of bunded stockpile areas, silt fences, cut-off ditches and silt traps will be implemented as required.

CIRIA guidance documents detailing control measures include:

- CIRIA, (2001), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors, (C532) Construction Industry Research and Information Association
- CIRIA (2002) Control of water pollution from construction sites: guidance for consultants and contractors (SPI56) Construction Industry Research and Information Association
- CIRIA (2005), Environmental Good Practice on Site (C650); Construction Industry Research and Information Association
- BPGCS005, Oil Storage Guidelines
- CIRIA 697 (2007), The SUDS Manual
- UK Pollution Prevention Guidelines, (PPG) UK Environment Agency, 2004

8.13 House Keeping

Good housekeeping is an important part of good environmental practice and helps to maintain a more efficient and safer site. The site should be tidy, secure, and have clear access routes that are well signposted. The appearance of a tidy, well-managed site can reduce the likelihood of theft, vandalism, complaints and/or specific hazards that could affect the safe operation of the other businesses in the area, such as bird hazards and wind-blown litter.

As outlined in the fourth edition of CIRIA's 'Environmental good practice on site guide' (C741), when considering good housekeeping, the Contractor will implement the following steps:

- Adequately plan the site with designated areas of materials and waste storage
- Segregate and label different types of waste as it is produced and arrange frequent removal
- Keep the site tidy and clean
- Ensure that no wind-blown litter or debris leaves the site, use covered skips to prevent wind-blown litter
- Keep hoarding tidy – repair and repaint when necessary, removing any fly posting or graffiti
- Keep haul routes clean from site derived materials
- Keep roads free from mud by using a road sweeper
- Ensure site is secure.

8.14 Waste Management

All mitigation measures outlined within this Outline CEMP are to be updated by the Contractor to include all mitigation measure outlined within the waste chapter of the EIAR produced for the substation development and to take account of any planning conditions upon grant of permission for the substation development. In addition, any further mitigation measures outlined within standalone environmental reports produced for the substation or adjoint data centre should also be detailed within the Contractor CEMP.

This section outlines the measures that will be undertaken to minimise the quantity of waste produced at the site and the measures to handle the waste in such a manner as to minimise the effects on the environment. A site-specific Construction and Demolition Waste Management Plan has been prepared for the substation development and will be employed to ensure sustainable and effective waste management throughout the excavation and construction phases of the project.

Adherence to the C&D WMP prepared for the construction works will ensure that the management of waste arising is dealt with in compliance with the provisions of the Waste Management Acts 1996 – 2011 as amended, associated Regulations, the Litter Pollution Act of 1997-2009 as amended and the Eastern-Midlands Region Waste Management Plan 2015 – 2021, and that it will achieve optimum levels of waste reduction, re-use and recycling. Draft Best Practice Guidelines for the Preparation of Resource Management Plans for Construction & Demolition Projects have been produced by the EPA and are currently open for public consultation.

A site-specific Construction and Demolition Waste Management Plan (WMP) is included as Appendix 15.1 of the EIAR for the Substation.

8.14.1 General Measures

- The C&D WMP will be refined and updated throughout the lifetime of the works to ensure best practice is followed in the management of waste from the substation development. The WMP will apply to all works carried out by the Contractor and any subcontractors under its control. In preparing the plan, the Contractor will consider any measures set out in any planning consent document, the relevant legislation, and industry best practice. In developing the plan, the Contractor will also consider the requirements of FCC.
- The Contractor will establish a system for the management of wastes in accordance with the Waste Management Hierarchy. This hierarchy outlines that waste prevention and minimisation are the first priority in managing wastes, followed by waste reuse and recycling. Disposal of waste will only be considered as a last resort. The hierarchy is:
 - Prevention
 - Minimisation
 - Reuse
 - Recycling
 - Disposal

Typical waste materials that will be generated from the construction works will include:

- Soil and stones
- Concrete, bricks, tiles, and ceramics
- Wood, glass, and plastics
- Metals
- Gypsum-based construction material
- Paper and cardboard
- Mixed C&D waste
- Chemicals (solvents, paints, adhesives, detergents etc.)

The management of all hazardous waste materials, if they occur, will be coordinated in liaison with Health and Safety Management.

8.14.2 Waste Minimisation

Waste minimisation measures proposed are summarised as follows (and are described in more detail in the C&D WMP):

- Materials will be ordered on an 'as needed' basis to prevent over supply
- Materials will be correctly stored and handled to minimise the generation of damaged materials
- Materials will be ordered in appropriate sequence to minimise materials stored on site
- A waste tracking log will be established
- Sub-contractors will be responsible for similarly managing their wastes
- All wood waste generated by site works will be inspected and examined and will be segregated as re-useable wood and scrap wood waste

8.14.3 Waste Storage

A dedicated and secure area will be located within the site compound. The area will contain bins, and/or skips, and storage areas, into which all waste materials generated by construction site activities are to be stored.

Waste materials generated will be segregated at the site compound, where it is practical. Where the on-site segregation of certain wastes types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at source. All waste receptacles leaving site will be covered or enclosed. The appointed waste contractor will collect and transfer the wastes as receptacles are filled.

The site construction manager will ensure that all staff are informed of the requirements for segregation of waste materials by means of clear signage and verbal instruction. Appointed employees will be made responsible for ensuring good site housekeeping.

8.14.4 Waste Identification and Classification

- The Contractor will establish a procedure to identify and classify all waste arising at the site in accordance with the List of Waste (LoW) Code.
- The Contractor will ensure that the waste materials generated during the works are clearly identified as either hazardous or non-hazardous wastes, with reference to the guidance from the Environmental Protection Agency where required and will establish designated waste storage areas for the different types of waste that may arise.
- For each waste stream identified by the Contractor, and for each additional waste stream that may arise during the works, the Contractor will identify the following:
 - The appropriate LoW Code
 - A suitable waste collection contractor in possession of a valid Waste Collection Permit for the collection of the particular waste within Dublin
 - The waste recovery or disposal site, including the transfer station where the waste may be transferred to upon leaving the site in possession of a valid Waste Facility Permit or Waste License, as appropriate
 - The recovery or disposal method for the waste
- Only contractors in possession of a valid Waste Collection Permit will collect wastes from the site. The contractor responsible for the waste will ensure that the Waste Collection Contractor:
 - Is permitted to collect the particular waste
 - Is permitted to collect waste within Dublin
 - Uses a waste collection vehicle identified on the Waste Collection Permit
 - Transfers the waste to a licenced waste facility identified on the Waste Collection Permit
- The Contractor will ensure the following information is available upon request:
 - Transfer notes for controlled waste and consignment notes for hazardous waste must include an accurate description of the type, quantity, and containment of waste; Standard Industrial Classification; the LoW Code; and details of the waste carrier, who must be licensed
 - Sufficient information must be provided to ensure that the waste disposal operator is aware of the potential hazards of the substance
 - The Trade Contractor should also ensure that returns for consignment notes are collected and retained
 - All documentation must be retained for a minimum of two years for transfer notes and three years for consignment notes and be available for inspection
- The logistics contractor and all trade contractors removing waste directly from site must provide the following documentation:

- Waste forecast
- Licence documentation for all waste carriers removing waste and for all waste destinations receiving waste (to be approved before use)
- Recycling rates from facilities being used
- Waste consignment notes (for a minimum of three years) for all hazardous waste. These must include the following:
 - Consignment note code
 - Details of the site that the hazardous waste is removed from
 - Details of waste disposal site
 - Waste producer details if different to site details
 - Description of the waste (written description, LoW code and SIC number)
 - Details of process that has generated this waste
 - Specific details of the waste- quantity, chemical/biological components, physical form, and hazardous properties Any special handling requirements
 - Signature of consignor once completed
- Waste transfer notes (for a minimum of two years) for all non-hazardous waste. These must include the following and should be reported:
 - Accurate description of the waste type (written description, LoW code and SIC number)
 - Quantity and containment of waste
 - Location, time, and date of the waste transfer
 - Names of both persons involved in the waste transfer
 - Details of the waste carrier and facility, both must be licensed
 - Waste carrier's registration number

The Contractor will advise the local county council or its representatives in advance if it proposes to act as the Waste Collection Contractor, subject to agreement. In the event that the Contractor acts as the Waste Collection Contractor, it will ensure that it has the relevant Waste Collection Permit(s) in place prior to commencement of the Project.

8.14.4.1 Waste Documentation

The Contractor will develop a Waste Documentation System within the overall documentation system for the works. The documentation to be maintained in relation to wastes includes the following (where applicable):

- The names of the agent(s) and the transporter(s) of the wastes
- The name(s) of the person(s) responsible for the ultimate recovery or disposal of the wastes
- The ultimate destination(s) of the wastes
- Written confirmation of the acceptance and recovery or disposal of any hazardous waste consignments
- The tonnages and LoW Code for the waste materials
- Details of any rejected consignments
- The Waste Transfer Forms for hazardous wastes transferred from the site
- The Transfrontier Shipment of Waste forms for hazardous wastes transferred abroad
- The Certificates of Recycling, Reuse or Disposal for all wastes transferred from the site
- The results of any analysis conducted on wastes

- The results of any analysis conducted on excavated soil

The Contractor will provide a report of all waste arising at the site to include the information set out above. Information on the management of waste at the site will be made available to the Client or its representatives upon request. The original documentation relating to the management of waste will be maintained at the site.

Waste audits and monitoring will be carried out at regular intervals through the construction phase of the substation development.

8.14.5 Responsibility

It will be the responsibility of the construction manager to ensure that a written record of all quantities and natures of wastes removed from the site are maintained on-site in a waste file (in hardcopy or electronically).

It is the responsibility of the project manager or his/her delegate that all contracted waste haulage drivers hold an appropriate waste collection permit for the transport of waste loads and that all waste materials are delivered to an appropriately licenced or permitted waste facility in compliance with the relevant Regulations.

The Contractor, as part of regular site inspection audits, will determine the effectiveness of the waste management strategy and will assist the project manager in determining the best methods for waste minimisation, reduction, re-use, recycling and disposal as the construction phase progresses and waste materials are generated.

Prior to commencement of the excavation and construction activity and removal of any waste off-site, details of the proposed destination of each waste material will be provided to FCC, along with waste collection permit numbers.

9 Summary

This Outline CEMP sets out the overall management strategy for construction works for the substation development.

The Outline CEMP aims to ensure the management of construction activity is carried out in a planned, structured, and considerate manner which minimises the impacts of the works on the local environment, residents, and commercial activities in the vicinity of the site. Due to the nature of construction works, there may be unforeseen events which occur at the site and the project team will actively manage any changes and discuss with the relevant authorities, where required.

The project team are committed to ensuring that the construction activities to be carried out are pro-actively managed to minimise potential impacts.

