Appendix 5A

Outline Construction Environmental Management Plan

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Tynagh North OCGT Proposed Development

Appendix 5A - Outline Construction Environmental Management Plan

Prepared for: EP Energy Developments Ltd
Project number: 60661667

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Quality Information

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Table of Contents

1. Introduction

AECOM Ltd (AECOM) has been appointed by EP Energy Developments Limited (the Applicant) to prepare an outline Construction Environmental Management Plan (oCEMP). The oCEMP is designed for the following: an Open Cycle Gas Turbine (OCGT) plant , acoustic barriers, secondary fuel storage and unloading facility, distillate fuel gantry, water storage tanks, surface water drainage system and all associated ancillary development, site works and services ('the Proposed Development') on land to the north of Tynagh Power Station in Derryfrench, Loughrea, Co. Galway. (Figure 1.1 of the Environmental Impact Assessment Report (EIAR) Volume III displays the Site Location Plan). The planning application being submitted for the Proposed Development will include the following components (refer to EIAR Volume III for Proposed Development plans):

- Open Cycle Gas Turbine (OCGT) unit, 40m emissions stack and balance of plant;
- Acoustic barriers;
- Secondary fuel storage and unloading facility;
- Distillate fuel gantry;
- Water Storage Tanks; and
- Surface Water Drainage system.

This oCEMP (and relevant supporting information) sets out the procedures, standards, work practices and management responsibilities to address environmental impacts arising from construction of the Proposed Development. It provides a framework for which any specified mitigation measures required by the oCEMP and Planning Conditions will be realised. It will form the basis for outlining the approach to environmental management during the construction phase and beyond, with the primary aim of reducing any adverse impacts from construction on the environment. The oCEMP has been informed by site-specific mitigation outlined in the Proposed Development's EIAR Volume I (2023), as well as the relevant best practice guidelines outlined throughout Section 6.

Subject to planning approval, the oCEMP will be the framework within which the Engineering and Construction (E&C) Contractor ('the Contractor') will develop a Final CEMP, which will provide further detail on what is proposed in this oCEMP. The measures currently proposed in this oCEMP are sufficiently detailed to enable impacts and proposed mitigation to be properly assessed in the EIAR.

The CEMP will be prepared prior to construction by the appointed Contractor with the approval of EP Energy Developments Limited and will be subject to regular review and agreed in writing with the appointed Construction Project Manager and Galway County Council (GCC).

The methods and principles contained herein, as well as within the referenced legislative instruments and published guidance documents (as described in Section 2 of this oCEMP) will be adopted by the Contractor in development of detailed construction Risk Assessments and Method Statements and other plans relating to the environmental management of the Site.

1.1 Outline Construction Environmental Management Plan

The preparation and implementation of an oCEMP is widely considered to be best practice (by statutory and non-statutory bodies) to manage the environmental effects of projects and to demonstrate compliance with environmental legislation. It provides the detailed framework for recording environmental risks, commitments, and other environmental constraints, and clearly identifies the structures and processes that will be used to manage and control these aspects.

The oCEMP also ensures compliance with relevant environmental legislation, government policy objectives and scheme-specific environmental objectives. It also provides the mechanism for monitoring, reviewing, and auditing environmental performance and compliance.

1.1.1 Objectives

The objectives of this oCEMP and subsequent Final CEMP are therefore to:

- Act as a continuous link and main reference document for environmental issues between the design and construction of the Proposed Development;
- Demonstrate how construction activities and supporting design will properly integrate the requirements of environmental legislation, policy, good practice, and those of the environmental regulatory authorities and third parties;
- Record environmental risks and identify how they will be managed during the construction period;
- Record the objectives, commitments and mitigation measures to be implemented, together with programme and date of achievement;
- Identify the key staff structures and responsibilities associated with the delivery of the project and environmental control and communication and training requirements as necessary;
- Describe the Contractor's potential proposals for ensuring that the requirements of the environmental design are achieved, or are in the process of being achieved, during the Contract Period; and
- Provide a review, monitoring, and audit mechanism to determine effectiveness of, and compliance with, environmental control measures and how any necessary corrective action will take place.

1.1.2 Scope

The scope of this oCEMP (and any iterations of it thereafter) will cover the design, construction, and completion of the Proposed Development. As described in Section 3 (Project Description) of this document, the spatial scope of the Works will cover:

- The boundaries of the Site made available by the Applicant for the Works;
- Any additional working areas; and
- Access to and egress from the Site.

This oCEMP considers the following subject areas as appropriate for mitigating likely significant environmental effects:

- Environmental Management (Section 5.1);
- Community Consultation (Section 5.2);
- General Site Management (Section 6.2);
- Noise and Vibration (Section 6.3);
- Air Quality (Section 6.4);
- Cultural Heritage (Section 6.5);
- Ecology (Section 6.6);
- Water Environment (Section 6.7);
- Landscape and Aesthetic Requirements (Section 6.8);
- Population and Human Health (Section 6.9);
- Materials (Section 6.10); and
- Waste Management (Section 6.11).

Specific requirements for the Proposed Development are detailed for each of these subject areas in Section 6 of this oCEMP. Where explicitly stated in the EIAR Volume I (2023), assessments have deemed some mitigation methods unnecessary, and have therefore not been included in this oCEMP. Accordingly, the Contractor will be required to develop the scope of their Final CEMP in light of these to:

- Include all construction elements;

- Implement and manage proposed environmental controls and mitigation measures during the works; and
- Ensure measures identified through the planning phase will be effectively applied.

2. Regulatory & Policy Framework

2.1 Introduction

Throughout the lifecycle of any construction project, environmental management is regarded as an invaluable approach to ensure that all appropriate legislation, policy and construction best practice is complied with, and the environmental impact of a development is minimised within best practicable means.

The environmental legislation, policy and best practice guidance contained within this oCEMP are of relevance at the time of writing. However, it is acknowledged that these can be subject to change. As such, the Contractor will be responsible for complying with current legal, policy and best practice guidance requirements applicable to their scope of works to design and during construction of the Proposed Development.

Through effective implementation of the CEMP, the Contractor will demonstrate how construction activities and supporting design will properly integrate the requirements of environmental legislation, policy, good practice, and those of the environmental regulatory authorities and third parties.

2.2 Legislation

The Environmental Protection Agency (EPA) highlights the key pieces of environmental legislation relevant, including:

- Lists of key current environmental legislation for Ireland. In most cases, links are provided to full versions of the legislation (available at http://www.epa.ie/pubs/legislation/);
- Information on key forthcoming environmental legislation, including EU Directives. Some of the current legislation relevant to this project and must be considered by the Contractor include:
  - The Wildlife Act 1976 to 2018 (as amended); and
  - The Protection of the Environment Act 2003.

The Contractor shall be responsible for ensuring that any developments or changes to regulation and environmental legislation are complied with, even if they are not noted within this oCEMP.

2.3 Policy & Guidance

This oCEMP refers to various industry standard best practice guidance and policy documents which can be used to address significant environmental risks.

The adoption of good practice on site by the Contractor could have a significant effect on construction activities and the ability to meet their legislative and contractual obligations to the environment.

Guidance outlined within includes, for example, Construction Industry Research and Information Association (CIRIA) best practice guidance and British Standards. Advice and Guidance has also been provided by the Environmental Protection Agency (which can be found at http://www.epa.ie/pubs/advice/).

In particular, the fourth edition of CIRIA's '*Environmental good practice on site guide'* (C741) provides practical guidance about managing construction sites to control environmental impacts and how to deliver sustainable construction on site by effectively managing a range of environmental issues. At a minimum, the Contractor shall adhere to this guidance.

3. Project Description

3.1 Proposed Development

3.1.1 The Need for the Proposed Development

Ireland is in the process of transitioning from a centralised, fossil fuel based electrical power generation to distributed renewable based generation. To facilitate the continued expansion of Ireland's renewable generation capacity, modes of supporting the electricity network during periods when there is a gap between renewable power generation and power demand will be needed. The Proposed Development is designed specifically for this purpose, being able to respond quickly to shortfalls in power generation at times of high demand.

As a responsive power generator, the proposed OCGT plant will facilitate the integration of more renewable generation into the electricity network, helping to maintain the security of supply and supporting Ireland in its transition to a low carbon economy.

3.1.2 Proposed Provisional Programme of Works

EP Energy Developments Limited will appoint an Engineering and Construction (E&C) Contractor for the main works. The Contractor may appoint subcontractors to undertake the specific construction works and the civil works. The Applicant is committed to ensure a safe working environment for all employees and contractors.

The construction phase will be 18 – 24 months. The detailed phasing of construction is the responsibility of the Contractor and can vary dependent on facility layout and procurement timescales of key equipment. A final construction programme will be prepared by the Contractor prior to commencement of work.

3.1.3 Proposed Development - Construction

Once the Contractor has been appointed, a site layout map will be prepared and included within the CEMP for the Proposed Development and Overall Project Site. This will outline the following site-specific components of the work area:

- Location of site compound, including temporary offices and welfare facilities;
- Location of contractor's parking area;
- Location of plant storage area;
- Location of materials storage areas;
- Location of proposed services to the site ;
- Location of proposed entrances and exits from the site during the construction process;
- The working area required to construct the development; and
- Details and location of site fencing to ensure that there is minimal impact outside the site.

Whilst the detailed construction sequence would be a matter for the Contractor, certain guiding principles will be stipulated based on commitments outlined in the EIAR (to ensure significant impacts are properly mitigated), consultation with the Applicant, the Construction Project Manager, and likely through a set of planning conditions (subject to approval). The Site will be secured so that it is left in a safe manner at all times (see Section 3.1.4).

The Contractor shall provide an outline of construction activities associated with the Proposed Development and sequence within the CEMP, though an outline of activities is given below.

3.1.4 Preliminary Works

Preliminary works would involve community consultation and liaison, establishing the site (i.e., materials/ plant compounds), site clearance and preparation works, erection of fencing, installation of pollution control measures/ pre-earthworks drainage, and setting-up of traffic management measures.

Community Communication and Liaison

The Contractor will be required to establish and maintain effective liaison with the local community during construction of the Proposed Development. This will include information about ongoing activities and provision of contact details to report incidents or for further information. The strategy for interacting with the local community is detailed within Section 5.2 of this oCEMP.

Site Compounds (Materials/ Plant)

At the outset, the Site will be secured with temporary fencing where required (as the majority of the Site is currently fenced) and the Contractor will prepare the temporary compound and laydown area and set up the initial site accommodation and welfare facilities, including connection to on site services in a suitable location adjacent to the Site. To ensure site security there will be a single point of entry to the site for all construction personnel.

Compounds will not be for long-term storage of materials and storage will be for the duration of the construction phase only.

At the end of the shift, mobile plant will be returned to a secure overnight plant storage area within one of the proposed construction compounds where drip trays will be utilised under the various types of plant.

Storage areas for flammable/ toxic/ corrosive materials will be located in a separate, locked, impermeable bunded and fenced off area. Material data sheets will be available for all these materials and the COSHH (Control of Substances Hazardous to Health) assessments kept within the relevant Risk Assessment for the task, all subject to the Applicant's approval.

Construction Lighting

Construction temporary site lighting is proposed to enable safe working on the construction site in hours of darkness.

Lighting for night time working will be designed so as not to cause a nuisance outside of the Site in relation to views from residential receptors or light disturbance to ecological receptors. This will be done by directing lighting units towards working areas and using a lux level that allows for the work activities to be completed safely. The lighting set up will comply with the guidance outlined in *Guidance Note 01/21 The Reduction of Obtrusive Light* (Institution of Lighting Professionals, 2021).

Construction Site Access

The existing site access off the LP4310 Gurtymadden to Tynagh Road will be used for construction personnel, traffic and existing CCGT Power Station staff. Security fencing, CCTV and other security measures including external lighting will be installed within the Site, for health, safety and security purposes.

The number of construction vehicles used will be dependent upon the number of crews employed and the nature of the works being undertaken at the particular stage of the project.

It is expected that the extent of HGV movements will vary at different stages of the construction works in response to the activities taking place at any given time. During the construction phase it is not expected that HGV movements will exceed the DMRB screening criteria (of 200 HGV movements per day) (Table 14.11 Chapter 14 of EIAR).

Levels of employment will vary throughout the construction period however it is likely that at least 30 construction personnel would be on site at any one time. Peak levels of employment are likely to be associated with building modifications and internal works which could peak at approximately 200.

3.1.5 Main Works

The Proposed Development will comprise the following main components:

- Open Cycle Gas Turbine (OCGT) unit, 40m emissions stack and balance of plant;
- Acoustic barriers;
- Secondary fuel storage and unloading facility;
- Distillate fuel gantry;
- Water Storage Tanks; and
- Surface Water Drainage system.
-

The construction phase of the Proposed Development will comprise:

- Temporary construction and laydown areas on the Overall Project Site comprising hardstanding, laydown and open storage areas;
- Temporary facilities and stores;
- Materials and plant storage;
- Contractor compounds and construction staff office and welfare facilities;
- Temporary vehicle parking facilities;
- Security fencing and gates;
- External lighting; and
- Signage.

In connection with and in addition to the above, the following infrastructure will be included:

- Internal roads;
- External lighting, including lighting columns;
- Security fencing and gates;
- Utilities, pipes, cables and connection to existing surface water drainage systems, oil-water separators, including channelling, culverting, crossings and works to existing drainage ditches and systems.

The Proposed Development elements are described in detail in Chapter 5 of the EIAR Volume I.

4. Existing Conditions

4.1 Site Conditions

The Site is situated in Derryfrench, Loughrea, Co. Galway, Ireland (Irish Grid Reference X: 174450; Y: 213165). The Site is bordered to the east by the former Tynagh Mine complex and to the immediate south by the existing CCGT Tynagh Power Station. Sperrin Galvanisers Ltd., an Integrated Pollution Prevention Control (IPPC) licensed facility, is located adjacent to the south-western boundary of the Site. The Site is located within the administrative area of Galway County Council (GCC).

Tynagh mines opened in the 1960s and were an important source of lead and zinc concentrates. From 1965 to 1981 the mines were managed by the Northgate Group subsidiary Irish Base Metals Ltd. For almost twenty years Irish Base Metals Ltd was a major source of employment for east Galway and the mines were worked on an opencast and underground basis until closure in the early 1980's after which a period of partial restoration and site rehabilitation was undertaken.

In 2003 planning consent (Ref: 03/2943) was granted (following submission of an Environmental Impact Statement – April 2003) for a 400MW Combined Cycle Gas Turbine (CCGT) at the power station site to be located on the western portion of the former mine site (west of the tailing pond and north of the mine lagoon). A number of amendments and additions to the permitted development were approved in 2004, under planning Ref. 04/2511, including the construction of a gate house, a gas cylinder storage shed, feed pump building, emergency generator and liquid fuel unloading station. In addition to the CCGT generating plant, consent was also secured in 2004 for a 220kV overhead line to connect the power station to the National Grid at Oldstreet, 8km to the south-east of the Site.

In November 2021, a planning application and EIAR were submitted to GCC for a separate development project, a 299MW OCGT plant on the western portion of the existing Tynagh Power Station site. Submitted Development Ref: 21/2192 proposes to demolish the existing Tynagh Power Station site workshop, administration building and car park, relocate these items to the brownfield lands to the immediate north of the Tynagh Power Station facility and develop a separate OCGT plant on the western part of the Power Station Site. Submitted Development Ref: 21/2192 is currently awaiting determination by An Bord Pleanála (PL 07.313538) following a Third Party appeal against Galway County Council's decision to grant permission. Subject to planning approval being obtained for the Submitted Development Ref: 21/2192, the Applicant intends to build out and operate both Submitted Development Ref: 21/2192 and the Tynagh North OCGT. While there is likely to be an overlap with the construction of the Proposed Development and that of the Submitted Development, this will be limited to the latter 3 months of the Submitted Development construction phase where site works on the Proposed Development will be minimal in terms of vehicle movements and staffing.

4.2 Surrounding Area

The location of the Site is shown in Figure 4.1 and the general surroundings on Figure 4.2. Within the wider area the Site is surrounded by the following features:

- Within– Former mine brownfield, disused galvanised shed, electricity pylon and existing woodland;
- North-west – Existing woodland (0m) and residential properties with outbuildings (440m);
- North-east – Milchem Equestrian Centre (330m);
- East – Mine tailing pond (40m);
- West – LP4310 Gurtymadden (note - some public documents refer to this road as Gortymadden) to Tynagh Road (300m) and residential property west of LP4310 (330m);
- South-west – Industrial buildings of Sperrin Galvanisers (100m) and residential properties at Derryfench (420m);and
- South – Tynagh Power Station (0m), Submitted Development Ref: 21/2192 (0m), Mine lagoon (280m), residential property (700m), industrial buildings (1.4km), and village of Tynagh (1.8km).
-

Lands surrounding the Site are typically rural in nature, principally historic mining brownfield land, agricultural pastureland with hedgerows, stone walls and undulating terrain. The existing Tynagh Power Station buildings, workshop and staff facilities, electrical substation, Gas Above Ground Installation (AGI), internal roads, car parking and fencing are located to the south of the Site. A tailing pond associated with the historic mine is located to the east and the flooded mine pit/lagoon is positioned south-east of the Site. Sperrin Galvanisers Ltd. (IPPC) licensed facility are located to the south-west.

4.3 Residential Receptors

A number of rural residential properties are located within 500m of the Site (refer to Figure 4.3 in EIAR Volume III). The measurements are taken from the closest section of the Site boundary to the perimeter of the receptor (i.e. fence/ hedgerow). These properties include:

- Dwelling located on LP4310 approximately 330m west of the Site boundary;
- Dwelling with outbuildings at Derryfrench approximately 420m south-west of the Site boundary;
- Dwelling with outbuildings (note: only outbuildings within 500m buffer) located on LP4310 approximately 420m to the north-west of the Site boundary.

There are a number of small villages and hamlets located in the wider rural area of the Site:

- Barnaculla (approximately 260m to the north-east);
- Cré Na Cille (approximately 1.5km to the south);
- Tynagh village (approximately 1.8km to the south); and
- Derrywilliam (approximately 2.2km to the south-east).

There are no areas of community land zoned within 100m of the Site

4.4 Designated Nature Conservation Sites

There are 13 international nature conservation designations located within 15km of the Site:

- Slieve Aughty Mountains SPA (4168) 6.1km south-west;
- Ardgraigue Bog SAC (2356) 8.3km east;
- Barroughter Bog SAC (0231) 10.1km south-east and downstream of Cloonprask / Barnacullia Stream and Lisduff Stream;
- Pollnaknockaun Wood Nature Reserve SAC (0319) 11km south;
- Rosturra Wood SAC (1313) 11.1km south;
- Lough Derg, North-east Shore SAC (2241) 11.1km south-east and downstream of Clooprask/ Barnacullia Stream and Lisduff Stream;
- Lough Derg (Shannon) SPA 11.1km south-east, and downstream of Cloonprask / Barnacullia Stream and Lisduff Stream;
- Lough Rea SPA (4134) 11.5km west;
- Lough Rea SAC (0304) 11.5km west;
- Cloonmovlan Bog SAC (0248) 11.7km south;
- Derrycrag Wood Nature Reserve SAC (0261) 13.3km south;
- River Shannon Callows SAC (0216) 14.4km east; and
- Middle Shannon Callows SPA (4096) 14.4km east.

There are a further 15 Nationally designated sites (some underpinning the above European sites) occurring within 15km. These are:

- Eskerboy Bog NHA (1264) 4.6km north-east;
- Cloonoolish Bog NHA (0249) 7.3km north-east;

- Ardgraigue Bog pNHA (1224) 8.3km east;
- Barroughter Bog pNHA (0231) 10.1km south east;
- Capira/Derrew Bog NHA (1240) 10.3km south-east;
- Moorfield Bog NHA (1303) 10.7km north-east;
- Pollnaknockaun Wood Nature Reserve pNHA (0319) 11km south;
- Slieve Aughty Bog NHA (1229) 11.1km south-west;
- Lough Derg pNHA (0011) 11.1km south-east;
- Rosturra Wood pNHA (1313) 11.2km south;
- Lough Rea pNHA (0304) 11.5km west;
- Cloonmoylan Bog pNHA (0248) 11.7km south;
- Derrycrag Wood Nature Reserve pNHA (0261) 13.3km south;
- Meeneen Bog NHA (0310) 14.3km east; and
- River Shannon Callows pNHA (0216) 14.5km south-east.

There are no sites within non-statutory designations for nature conservation located within 2km of the Site.

5. Environmental Management

5.1 Environmental Management System

The Contractor will operate an accredited Environmental Management System (EMS) certified by a third party throughout the duration of the construction contract period. Current certificates of registration/ accreditation will be included as an appendix within the Final CEMP. The Construction Project Manager will approve and accept third party certification of an EMS provided that:

- It is based on a recognised standard - for example, ISO 14001 or equivalent;
- It is construction-focused, incorporating site inspections; and
- The third-party certification body is accredited or recognised.

The EMS third-party certification:

- Will be obtained/ renewed within three years of the main contract award date (where appropriate); and
- Will include an annual verification audit undertaken in the intervening years.

The Contractor will initiate and maintain an EMS during the works, which will define the responsibilities, practices and procedures provided for environmental management. It will be developed to avoid wherever possible environmental accidents and pollution, to encourage reduced consumption of resources, to restrict the production of waste, and to promote good relationships with the relevant authorities/ environmental bodies. Commitments made regarding mitigation, their implementation and subsequent monitoring will be recorded. Notwithstanding any other requirements of the Contract, the EMS shall:

- Include **site-specific Method Statements** for all operations where there is a risk of environmental damage. These will show how the proposed methods of construction will minimise impacts on the environment and how contingency plans and emergency procedures will limit damage caused by accidents, spillage, or any other unforeseen events. The Method Statements will include notification procedures to the relevant authorities/ environmental bodies where necessary;
- Ensure that the Contractor submits to the Construction Project Manager details of the EMS and Method Statements for **approval in advance of undertaking the Works.** The Works will not be commenced without such approval having been obtained in writing; and
- The Contractor will **liaise with the local community** during the Contract as necessary. This will include providing information about activities likely to give rise to nuisance (for example potential noise nuisances will be mitigated by control measures outlined in Section 6.3), and a telephone number for complaints to be registered. A log of all complaints and follow-up actions will be kept and made available for inspection by the Construction Project Manager.

The procedure/ methodology for internal and external auditing of the environmental performance of the Works will also be documented by the Contractor within the CEMP.

5.2 Communication and Community Relations Strategy

As stated in Section 5 of the EIAR (AECOM, 2023), EP Energy Developments Limited have an ongoing commitment to maintain community consultation and liaison throughout the construction period. Developing an effective communication and consultation strategy with the local community is important to minimise the likelihood of causing a nuisance (i.e., noise, dust, waste). During the works, if the community is aware of what is happening, it is likely that complaints will be reduced. The Contractor will therefore be prepared to explain the Proposed Development in a non-technical manner to members of the community and to answer questions if asked.

Public communication is particularly important when operations that cause disturbance are being carried out for a significant period of time. The Contractor will explain the efforts that are being made to limit the impact of operations by phasing activities and other control measures.

As outlined in the fourth edition of CIRIA's '*Environmental good practice on site guide*' (C741), when considering how to liaise with the local community, the following steps will be adhered to:

- Identify and keep informed key local community representatives, such as Councillors and residents' representatives;
- Visit occupants of sensitive buildings (such as schools, nursing homes and hospitals) and keep them informed of progress;
- Prepare a leaflet and distribute it to nearby residents or occupiers. Provide updates or regular contributions to existing community newsletters;
- Engage with the local community by working with schools, including visits and charities;
- Write articles about the progress on site for the local media;
- Display a 'contact board' at the Site perimeter so that the public know who to contact if they have a complaint or a comment. Use this board to display information on project phasing and other relevant matters;
- Join the Considerate Constructors Scheme (CCS);
- Establish a complaint line and call it to ensure that it works;
- Deal quickly with any complaints that arise and in accordance with a defined complaints procedure. Create a log of complaints. Make sure all complaints are properly followed-up and resolved, and the responses to them are recorded;
- Issue site-based staff with contact cards to give to the public if approached to ensure complaints/ queries are dealt with effectively; and
- Install observatory panels in the site hoardings.

5.3 Considerate Constructors Scheme

The Contractor will register the project with the CCS and comply with the scheme's Code of Considerate Practice. The Scheme's expectations include:

- Caring about the appearance of the site;
- Respecting the community around the site;
- Protecting the environment;
- Securing everyone's safety; and
- Valuing their workforce.

The minimum compliance level of the Contractor will be '*Performance Beyond Compliance*', which indicates a higher level of consideration, beyond statutory requirements, to the neighbour, the workforce, and the environment. This will be determined by an audit by the CCS.

5.4 Construction Environmental Management Plan (CEMP)

The CEMP will be prepared by the Contractor within the parameters set by this oCEMP and submitted to the Construction Project Manager and GCC. The oCEMP contains sufficient detail to properly assess impacts in the EIAR. The CEMP will also be prepared in sufficient detail to describe the detailed proposals of the Contractor's management, control and mitigation strategy for each environmental aspect based upon the principals set out in detail in this oCEMP. The CEMP will include (where required) Method Statements for specific works (e.g., working in or near watercourses).

The CEMP will be developed/ updated as necessary during the course of the design and construction phase and will be reviewed on a regular basis with the Construction Project Manager. Any updates to the CEMP will be approved by the Planning Authority.

5.4.1 Construction Site Layout

The construction site layout (which will be provided in the CEMP) will indicate the final locations of the laydown and welfare access, laydown area, pedestrian access and parking and laydown overflow (if required).

5.4.2 Roles & Responsibilities

The Contractor will appoint a suitably experienced Environmental Site Representative(s) (ESR) to undertake co-ordination of monitoring of the works' impacts and implementation of the Contractor's proposals, in respect of all environmental requirements.

The ESR will be contactable whenever work is in progress and will be the point of contact for dealing with environmental issues for the Construction Project Manager, the Contractor's employees, Sub-contractors, relevant authorities/ environmental bodies, and members of the public. They will also be available to contact during their working hours and will be aware at all times of activities being undertaken on site. They will maintain a daily log, recording all environmental issues, events, and dealings with third parties. An Incident Response Team shall be made available 24h a day at all times during period of the works and shall include experienced and named personnel.

The ESR will prepare, implement, manage, review and revise the CEMP in accordance with this oCEMP and subject to the approval of the planning authority with the purpose of ensuring that the environment is safeguarded at all times from anticipated or unexpected adverse impacts during construction. The ESR will notify the Construction Project Manager of any transgressions in respect of the CEMP so that necessary sanctions can be imposed. The duties of the ESR are:

- Implementation of the CEMP procedures;
- Routine environmental monitoring, recording and reporting;
- Maintaining and auditing the CEMP and documents which underpin it;
- Environmental training, including daily toolbox talks to site staff and design staff;
- Liaison with the Applicants environmental advisors as required; and
- Assist the Applicant in liaison with the relevant authorities/ environmental bodies and local community.

As listed in Table 5.1, the CEMP will place the following environmental responsibilities on the indicative key roles. In light of the scale, size, and requirements of the Proposed Development, it is accepted that not all roles may be required or that some roles and responsibilities may be amalgamated or assigned to a lesser number of individuals. In preparation of the CEMP, the Contractor will provide the details of the environmental management structure for all staff with environmental responsibilities. This will describe the name of each team member, their role, and their responsibility.

Table 5.1: 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 in the EIAR Volume I (2023) are managed. • Promote the continual improvement of environmental performance.
Environmental Site Representative(s)	• Develop, maintain, and audit the CEMP (and supporting documents/ plans) to ensure all aspects, impacts and statutory requirements are reflected in the Plan. • 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, in liaison as necessary with the Construction Project Manager, Site Manager and the Environmental Advisors. • Attend construction meetings to ensure environmental issues are discussed and addressed by the Contractor's Team. • Liaise with Environmental Advisors, 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.

Role	Responsibilities
	• Provide support and training to the workforce with regard to understanding environmental aspects, impacts, regulatory requirements, best practice, constraints and methods of working. • Appoint environmental specialists as required. • Ensure identified environmental specialists are in attendance on-site as required by the CEMP. • Review non-conformance reports from the Construction Project Manager/ Environmental Advisors to identify any underlying issues or patterns. • Provide an on-call 24hr resource as a first point of contact for environmental issues/ incidents. • Provide advice with regard to corrective action to be taken by the Site Manager in response to identified non-conformances. • Maintain daily records of environmental issues, events, and consultations with third parties. • Maintain records of environmental awareness training/ inductions delivered to site staff. • Report all identified non-conformances to the Construction Project Manager.
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 phase of the project. • Ensure staff attend the appropriate environmental courses that are organised by the ESR. • Ensure the ESR is maintaining records of training delivered to site staff. • Monitor the performance of personnel and activities under their control and ensure arrangements (as outlined in Section 6 of this oCEMP) are in place so that all personnel will work in a manner which minimises risks to them and to the environment. • Undertake a programme of weekly project 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 the Construction Project Manager. • Assist and support the ESR 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 – if required (i.e. Ecological Clerk of Works (ECoW)	• Attend site as required to monitor the protection of the asset in accordance with the requirements of relevant legislation, the construction contract and the CEMP. • Identify potential risks from construction activities to wildlife and develop suitable control measures outlined within the CEMP. • Provide status reports and updates to the Environmental Site Representative(s) in the completion of their activities. • Liaise with the Environmental Site Representative(s) as required to provide specific training to site staff.

5.4.3 Awareness and Training

For effective implementation of mitigation measures it is important that all staff working on Site, are fully aware of why particular working practices are in place. This is especially important where the measures may deviate from usual site working practice.

All staff will be given a briefing by the Contractor about the importance and sensitivity of any environment and residential areas, the notified interest features, and special measures to be adopted to avoid impacts upon them. The briefing will be provided in the site induction. All staff will be expected to sign a register to confirm that they have received this briefing prior to entering or working on site. A fact sheet that outlines key measures, e.g., procedure to be followed in the case of an accidental fuel spill, will be prepared by the ESR (and approved by the Construction Project Manager), and copies provided in all vehicles working on site.

All Site staff will be briefed regularly by the ESR on the overall environmental sensitivities of the site through 'toolbox talks' and will be provided with clear information about protected species, restricted areas and activities, and what to do if protected species are encountered. Toolbox talks provide a

convenient and effective method of communicating and reinforcing the safety and environment messages throughout the workforce on a regular basis. All staff will receive regular updated talks and briefings.

5.5 Noise and Vibration Management Plan

The Contractor will prepare a Noise & Vibration Management Plan (NVMP) which will outline, where possible, methods of best available techniques to minimise emissions of noise and vibration from the site works. The NVMP will be included as part of the CEMP (i.e., as a sub-plan), with the measures included in any Risk Assessment and Method Statements (RAMS) where necessary (i.e. for noisy works). The Plan will include the measures outlined in Section 6.3 of the oCEMP. As a minimum, the contractor will:

- Identify any periods of works that will likely emit noise and vibration, such as driven piling;
- Outline and implement mitigation measures during these periods of works;
- It should be highlighted that communication to local receptors is key before and during activities that are likely to give rise to noise and vibration emissions. The Contractor will highlight the receptors to be notified in advance of the works in the NVMP, as well as detailing the works to be undertaken on the Site, and the measures currently put in place to reduce nuisance.

5.6 Dust Management Plan

The Contractor will be required to implement measures to minimise the amount of dust produced during the construction phase. There will be a Duty of Care on the Contractor to ensure that dust-raising activities are located away from sensitive receptors as much as feasibly possible, and duration kept to a minimum when in proximity to a receptor.

The Contractor will prepare a Dust Management Plan (DMP) and incorporate the relevant mitigation measures within (such as those outlined in Section 6.4); reflecting the requirements of best practicable means and level of risk, such as those included in the *Guidance on the assessment of dust from demolition and construction* (February 2014). This will be included as part of the CEMP.

The most important aspect of the DMP is:

- The assignment of responsibility for dust management to an individual member of the Contractor's staff (i.e., Environmental Site Representative);
- Training staff to understand the importance of the issue;
- Implementing the relevant mitigation measures where required (as per Section 6.4); and
- Communicating with the local community.

Weekly site inspections will be undertaken by the Contractor's ESR to monitor compliance with the DMP, record inspection results, and make an inspection log available to GCC and the Employer's Project Manager if requested.

5.7 Water Management Plan (including a Water Monitoring Plan)

The Contractor will prepare a Water Management Plan (WMP) and include it as part of the CEMP. The first aim of this plan will be to minimise erosion by reducing disturbance and stabilising any exposed materials. The plan will then consider control measures to minimise the release of mobilised sediment. Measures to prevent erosion are more effective than controlling sediment once mobilised. The WMP will also include methods of handling and storing chemicals and fuels, followed by an Emergency Response Plan to be implemented in the event of a spill or leak. The drains in the site are a potential pathway of silt and contaminants to ecological receptors which will be identified and addressed in the plan.

The plan will include, without limitation, the following:

- Identification and categorisation of surface waters and storm water drains (within a Site Drainage Plan) vulnerable to site works and an assessment as to whether the site area is likely to give rise to sediment-laden run-off, the routes this is likely to take, and the methods to prevent sediment entering any watercourses (the Source-Pathway-Receptor model);

- Working areas being clearly defined, to prevent access to waterways or damage to existing drains;
- Site compound will be located more than 50m from streams and 20m from minor drains. If the compounds include re-fuelling areas/ oil/ fuel/ chemical storage areas, these will be impermeable and bunded to eliminate a pathway to groundwater and storm drainage from these areas;
- On-site storage of chemical, fuel or construction materials will be limited to those needed for immediate works. All surplus materials will be removed from the Site as soon as their immediate purpose has been concluded. Any fuel or chemical stores will be secure from vandalism and appropriately bunded to at least 110% capacity. These stores will be kept at a safe distance (refer to relevant guidance at time of construction) away from surface waters;
- All potentially polluting liquids and solids associated with vehicles, equipment and machinery need to be identified to site staff so that spillages and wash waters will be prevented from entering watercourses;
- Stockpiles of earth will not be kept within 20m of stream channels (there are no streams within 200m of the Site). Where possible, earth stockpiles will be covered to prevent run-off of sediment-laden water into watercourses, with a silt curtain placed at the toe;
- Pollution contingency plans (i.e., incident notification procedures) to be developed and agreed. These will include designated members of staff to deal with emergencies if they arise. The GCC and EPA contact email and telephone number will be identified and contacted in the event of a polluted watercourse;
- Procedures for investigating environmental incidents and devising ideas to improve environmental performance;
- Performance standards for site run-off by implementing Water Monitoring Plan (see Section 6.7.5). This will include monitoring of potentially impacted watercourses and will be undertaken to ensure that pollution events can be detected against baseline conditions and can be dealt with effectively;
- Materials and equipment to implement the pollution spill contingency plans will be available adjacent to all watercourses (e.g., spill kits, booms). These will be in clearly marked response points, which can be accessed by all staff. They will be checked on a daily basis to ensure that all required materials are in place. All staff on site will be aware of these items and be trained on procedures to implement in the case of a spill;
- Details of how mud and dust will be controlled including dust suppression requirements for all weather conditions; note the use of road cleaning sweepers will be considered as a last resort with prevention being the main objective;
- The Contractor will not wash tools and equipment in any watercourse. Wash water will not be discharged into any watercourse or into road drains or disposed of in any way that could result in a discharge to controlled water; and
- The measures to be taken to protect watercourses and associated wildlife from, for example, chemical spillages or the introduction of sediment-laden run-off.

5.8 Construction Traffic Management Plan

The Site is located adjacent to an existing road network (including the requirement for components to be delivered) and the Contractor will produce a Construction Traffic Management Plan (CTMP) which will set out objectives and targets for minimising journeys to and from the Site by the workforce, the route of deliveries to be taken, sub-contractors, suppliers, and anyone else who is likely to visit the site regularly. An outline CTMP has been provided in Appendix 14E of the EIAR Volume II. This will ensure the safety of staff and motorised/ non-motorised road users, limit congestion and reduce the carbon footprint of vehicle movements where possible. The CTMP will be included as part of the CEMP.

5.9 Site Waste Management Plan

The Contractor will prepare a Site Waste Management Plan (SWMP) to implement where possible cost-effective methods of good practice waste minimisation during the design of the project and thereafter

during construction (such as those outlined in Section 6.10 and 6.11). This will be included as part of the CEMP. As a minimum, the Contractor will:

- Identify methods of waste minimisation as outlined in *Achieving Good Practice Waste Minimisation and Management* (Waste and Resources Action Programme, 2008) in design before detailed design commences and report to the Project Manager on the economic and practical implications of adopting these methods, during the development of the design;
- Agree with the Project Manager which methods of waste minimisation to implement at the appropriate design stage and demonstrate how the methods have been incorporated into the design;
- Include a list of measures within the SWMP to minimise waste from on-site operations (for example, damage, theft etc.) And demonstrate how these measures have been implemented;
- Implement the SWMP in all construction site activities in line with good practice published by Waste & Resources Action Programme (WRAP). The Plan is required to set a target for waste reduction and recovery. It is expected that this target will be set to better the current waste benchmark for the project type, as published in: http://www.smartwaste.co.uk unless otherwise agreed.

6. Environmental Control Measures

6.1 Working Hours/Periods

Typical hours of construction are expected to be 07:00hrs to 19:00hrs Monday to Friday and 07:00hrs to 13:00hrs Saturday, with the exception of commissioning and specific engineering works (e.g., concrete pours) which could take place outside these hours and may require 24-hour working. Should working be required during evening, night, or Sunday, GCC will be notified prior to commencement on the Site.

6.2 Site Housekeeping

Good housekeeping is an important part of environmental best practice and helps to maintain a more efficient and safer site. The Site will 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 and complaints.

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

- Adequately plan the Site with designated areas of materials and waste storage;
- Segregate 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;
- Ensure that material and plant storage areas are properly managed. Cover lightweight materials with sheeting if necessary; and
- Ensure the Site is secure.

The *Environmental good practice on site pocket book* (C762) will also be adhered to. This guide is a user-friendly reference tool and training aid that provides practical advice about managing construction on site to minimise environmental impacts. It is relevant to all concerned within the construction process.

6.3 Noise and Vibration

This section prescribes the mitigation measures necessary for the Contractor to prevent noise and vibration impacts and effects associated with constructing the Proposed Development. The nearest receptors of noise and vibration during the construction phase are the properties in the vicinity of the Site as per Figure 11.1. Residents must also be included during any community communication to reduce the likelihood of complaints due to noise and vibration.

6.3.1 General Measures

- It will be necessary for the Contractor to liaise with GCC to ensure that noise and vibration during construction is effectively managed. This will include communicating details of the various phases of work, demonstrating how good site practices will be adopted in order to mitigate construction noise and vibration impacts. This will include details of noise reduction/ management methods to be employed during piling activities (if required). All plant must bear the European Economic Community (EEC) mark (as defined in '*European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations*,' (1998)) to minimise noise and vibration resulting from the works.
- The Contractor shall designate an Environmental Manager/ Responsible Person who, amongst a range of other responsibilities, will liaise with environmental advisors, statutory bodies and the local community as required with respect to noise and vibration impacts during the construction phase.

- In all cases, the best practicable means of minimising noise on the site will be adopted. In this respect, guidance is given in BS 5228-1:2009+A1:2014 '*Code of practice for noise and vibration control on construction and open sites*' (the Association of Acoustic Consultants of Ireland consider the British Standards for noise functional and available for use and reference in Ireland). The following mitigation measures, as suggested in BS 5228, will be employed by the Contractor to lessen the noise impacts from the construction phase:
  - The establishment and maintenance of good community relations will be a priority. This may include informing local residents on progress of the site by way of leaflet drops and/ or public meetings and ensuring measures are put in place to minimise noise impacts. A telephone "hot line" and agreed procedure for the Contractor to investigate and report on complaints will be set-up.
  - Operatives will be trained to employ techniques to keep site noise to a minimum and will be supervised to ensure that best working practice in respect of noise reduction is followed.
  - The hours of working will be planned and prevent effects of noise upon persons in areas surrounding site operations and upon persons working on site, detailing the nature of land use in the areas concerned, the duration of work and the likely consequence of any lengthening of work periods.
  - Positioning of static plant as far as possible from residential properties, and utilising available screening by temporary structures, stockpiles, etc.
  - For any particular job, the quietest available plant and/ or machinery will be used. Where appropriate, it will be constructed to meet the requirements of EC Directives. Electrical plant will be used where possible as opposed to diesel powered plant.
  - All equipment will be maintained in good mechanical order and fitted with the appropriate silencers, mufflers, or acoustic covers where applicable. All plant and vehicles used on the Site will have exhaust silencers in good working order and any diesel plant will be fitted with effective air intake silencers. All ancillary pneumatic percussive tools will be fitted with mufflers or silencers as recommended by the manufacturer.
  - Construction methods and programme will be produced to prevent noise and vibration at sensitive receptors. Quiet working methods will be employed, including use of the most suitable plant, reasonable hours of working for operations, and economy and speed of operations.
  - It may be necessary for some construction works to take place outside normal hours. Moreover, there may be items of static plant (e.g., dewatering pumps and similar) in use during night-time hours.
  - Stationary noise sources will be sited as far away as possible from Noise Sensitive Receptors (NSR), and acoustic barriers will be used to shield them. The spread of noise will be limited, i.e. by distance between source and receiver and/ or screening.
  - Temporary screening using sandbags, 20mm plywood sheeting or similar dense boarding will be required to reduce impact of static machinery or extensive works close to noise sensitive locations.
  - Noise will be controlled at source, by modification of existing plant/ equipment, its use and location and ensuring maintenance of all noise-generating equipment;
  - On those parts of the Site where high levels of noise are likely to be a hazard to persons working on the site, prominent warning notices will be displayed and, where necessary, ear protectors will be provided; and
  - Any machinery which is in intermittent use will be shut down in intervening periods of non-use or where this is impracticable, it will be throttled back to a minimum.
- Site staff will be informed about the need to minimise noise and will be supervised to ensure compliance with the noise control measures adopted.
- Construction site traffic will be managed on the public road network by the Contractor, so as to prevent queuing or parking of vehicles outside of the site compound.

- Programme and route for the transportation of construction materials, spoil and personnel will be selected to minimise noise and vibration at sensitive receptors. The loading and unloading of materials will take place away from residential properties, ideally in locations which are acoustically screened from nearby noise sensitive receptors.
- Materials shall be handled with care and placed rather than dropped where possible. Drop heights of materials from lorries and other plant should be kept to a minimum.
- The noise and vibration levels during the construction are to be kept within acceptable levels in accordance with the current codes of practice, approved as being suitable for giving guidance on appropriate methods for minimising noise.

6.3.2 Local Authority Information/ Requirements

GCC may require the submission of a updated CEMP for any changes in relation to noise and vibration control, and the Contractor will carry out all works in accordance with this and the recommendations in British Standards Institution BS 5228: (2009+A1: 2014), '*Code of practice for noise and vibration control on construction and open sites'* and other relevant British Standards, as necessary. As well as standards outlined in '*European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations*,' (1998). The Contractor should note the following:

- GCC has the power to serve a legal notice under the Section 107 of the Environmental Protection Agency Act, 1992. This notice is served on the person carrying out, or about to carry out the site, including relevant sub-contractors and it also may be served on those having responsibility and control for the site.
- Notices may prohibit the use of certain equipment such as breaking tools, specify the hours during which the site may be carried out, and/ or stipulate noise and vibration limits. The Council will also require the adoption of best practicable means to reach the targets for noise and vibration as defined in relevant codes of practice.

6.3.3 Noise Limits

- With regards to Noise Limits (unless agreed otherwise with GCC), Method 2 (Local Authority Noise Limit) will be used for noise restrictions associated with the Site. This is also known as 'the ABC Method' and is one of two main methods to determine potential significance based on noise change.
- The following noise limits will be applicable in certain circumstances for residential areas:
    1. Not exceed 75 dB L_{Aeq}, 12-hour between 07:00 and 19:00hrs on Mondays to Fridays, or 75dB L_{Aeq}, 5-hour between 07:00 and 13:00hrs on Saturdays, when measured at any point, 1 metre from any façade of any residential accommodation;
    2. Not exceed 65dB L_{Aeq}, 1-hour between 19:00 and 22;00hrs on Mondays to Fridays, or between 13.00 and 22.00hrs on Saturdays, when measured at any point 1 metre from any façade of any residential accommodation; and
    3. Not be audible between 22:00 and 07:00hrs on Mondays to Fridays, or between 22:00 and 07:00hrs on Saturdays, or at any time on Sundays, at the boundary of any residential accommodation. (As a guide, the total level (ambient plus construction) will not exceed the pre-construction ambient level by more than 3dB A). This will not allow substantial noise producing construction activities, but other "quiet" activities will be possible).
- Under this Method, if the ambient noise level exceeds the above threshold values (i.e., the ambient noise level is higher than the above values), then a potential significant effect is indicated if the total LAeq, T noise level for the period increases by more than 3dB due to site noise.
- If access cannot be obtained to enable measurements to be taken at the facade, measurement will be taken at the nearest accessible point and facade levels calculated, by a suitably qualified acoustician, using methods to be approved by GCC.

6.4 Air Quality

Negative air quality impacts can come from many sources during construction, and as such there are a number of ways in which air quality effects will be minimised by the Contractor to avoid creating nuisance. Works will be planned to take into account the location of sensitive receptors (such as local residents in the vicinity of the Site and non-motorised road users around the Site), local topography, wind direction, and any potential sources of pollution.

Mitigation measures (as described below) will be undertaken so that construction works are carried out in such a manner that emissions of dust and other pollutants are limited, and that best practicable means are employed to minimise disruption, risks to human health, and to avoid unnecessary impacts on ecological habitats. The location of human and ecological receptors to air quality are displayed in Figure 7.1 and 7.2 respectively of the EIAR Volume III. These control measures will be reflected within the Contractor's DMP, as well as relevant guidance from Section 8.2 of the *Guidance on the assessment of dust from demolition and construction* (February 2014) for 'Medium Risk' sites.

6.4.1 Control of Dust

Generation of Dust

Dust is generated in many ways during a construction project and is particularly relevant to this Site due to the work required to existing buildings and hardstanding, subsequent stockpiling required and haulage routes, in which dust particles could be mobilised and inhaled by sensitive receptors such as site workers, local residents and non-motorised road users. The Contractor will implement measures to prevent disturbance caused by dust, during preparation of the temporary construction laydown area, construction and site clearance (including the removal of existing hardstanding). Excavation and earthworks can be potential sources of dust if they are not properly controlled, especially in dry and windy weather. These measures are:

- Activities which have the potential to generate dust will be subject to a risk assessment, taking into account their proximity to sensitive receptors and duration. This allows mitigation and management techniques outlined below to be implemented before works commence;
- Visual inspections will be undertaken when dust-raising activities are occurring. Inspections will take into account prevailing meteorological conditions, and results will be recorded and maintained. These inspections will take place at least daily during these activities, and will determine the effectiveness of the applied mitigation and management techniques as identified during the risk assessment; and
- Activities will be temporarily suspended if unacceptable levels of dust cannot be avoided.

Mitigation measures will be incorporated into the DMP reflecting the requirements of best practicable means. Measures to minimise the amount of dust produced are: dampening haul roads and stockpiles; keeping roads clean; and using covers to minimise dust blow from lorries. Conversely, wet weather creates potential for mud being carried onto the public road network by vehicles entering or exiting the Site. The Site is mostly hardstanding and traffic will be required to use the designated access point on the LP4310, thus increasing control over construction vehicles exiting Site. Measures implemented to control dust will reflect the nature of the construction activity (type, dust source points, construction operation periods and time of year) as well as ameliorating conditions (such as prevailing wind directions and speeds, typical precipitation and the dampening effect of retained soil moisture). The methods of reducing and controlling dust emissions during construction are listed in Table 6.1 and detailed further in the sub-sections below.

Table 6.1: Typical Dust Control Measures

Activity	Dust Control Methods
Soil handling and storage	• Restrict the duration of the activity by planning soil movements and prevent double-handling. Seal and seed storage mound surfaces as soon as the mounds are complete. • Protect surfaces from winds using geotextiles, dampening or hoarding until disturbed areas are sealed and stable to the satisfaction of the ESR.
Overburden handling	• Protect exposed material from wind (by keeping material within voids or protecting them by topographical features). • Spray exposed surfaces of mounds if deemed necessary by visual inspection to maintain surface moisture unless mound surface has formed a crust after rainfall or is grassed.

Activity	Dust Control Methods
	• Minimise handling by planning movements and preventing double-handling.
Drilling	• Use dust-extraction equipment such as filters, on exhaust air emissions from drill rigs. • Remove the dusty material collected from the area of prior to drilling.
Laying granular materials	• Use water sprays or mobile bowsers while laying granular materials.
Loading/ unloading	• Use the smallest drop height wherever practicable. • Protect activities from wind by covering surfaces with geotextiles.
Minerals processing	• Varies depending on type of equipment used but generally complete enclosure is best with use of air extraction and filter equipment as appropriate. • Use water sprays.
Material Storage	• Dampen material. • Protect from wind with geotextiles. and store under cover. • Screen material to remove dusty fractions prior to external storage.
Transport by conveyor within site	• Protect by use of wind and roof boards. • Shelter transfer points from wind using hoarding or site compounds. • Use scrapers to clean belts, with collection of scrapings for disposal. • Use the smallest drop height possible and protect from wind. • Use water sprays.
Transport by vehicle within and offsite	• Restrict vehicle speed to 15mph. • Water unsurfaced roads and paved roads. • Wheel or body wash within 20m from site entrances. This will always be within the Site and the roadway from the washing facility to the highway will be hard-surfaced. • Load and unload in areas protected from wind using hoarding or site compounds. • 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. • Demolition and construction vehicles conform to at least Euro III standards.

Source: Adapted from Minerals Policy Statement 2: 'Controlling and mitigating the environmental effects of mineral extraction in England Annex 1: Dust'

Vehicle and Plant Dust

- Speed limits of 15mph will be imposed throughout the Site and adjacent to public areas within the Site boundaries to avoid excessive dust emissions.
- Care will be taken to ensure that machinery or dust-causing activities will be sited away from sensitive receptors as defined in Chapter 7 of the EIAR Volume I. Human and ecological receptors have been outlined in Figure 7.1 and 7.2 respectively in the EIAR Volume III.
- The production of dust will be taken into account when selecting plant and equipment, with apparatus with emission controls being chosen, as far as economically practical.
- Vehicles will not be overloaded (excessive strain on vehicle tyres and makes the vehicle less stable, difficult to steer and take longer to stop), and all loads entering and leaving the construction Site and carrying waste and other dusty materials will be adequately sheeted to prevent the spillage of material during transport.
- Restrict the use of unmade road access, where practicable. If not, the control measures in Table 6.1 will be implemented as required. Access for construction vehicles and Non-Road Mobile Machinery (NRMM) to unmade surfaces would be on an 'as needed' basis.
- Any cutting and grinding operations to be carried out will use equipment and techniques which incorporate dust suppression measures and reduce emissions.
- If required, facilities for vehicle washing/ wheel washing will be provided at site exits, as well as procedures for effective cleaning and inspection of vehicles, to keep dust and mud off the public road network.

Earthwork Dust

- Exposed earthworks will be kept when required 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.

Site Fires

- No open fires are permitted on Site. Any accidental fires will be dealt with according to the Contractor's Health and Safety Management Systems.

Dust arising from Compounds and Works Areas

- Haul roads will be damped down using water. Spraying will be repeated regularly and frequently during warm and sunny weather to ensure the road is kept damp and prevents dust mobilisation (including treatment and/ or management for any run-off containing suspended solids).
- Hard standing surfaces used for access to and from the construction site and haul roads within it, will be regularly maintained and kept clean to ensure no dust is mobilised.
- An approved mechanical road cleaner will be employed as necessary to clean the Site hard standing and the public highway in the vicinity of the Site, to prevent an accumulation of dust and dirt.

Dust arising from Materials Handling and Storage

- Stockpiles will be designed so as to prevent 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.
- Stockpiles will be maintained at suitable heights as agreed with the Construction Project Manager.
- Double-handling (moving material more than once due to misplacement) of material will be prevented by planning movements of material on the Site.
- Drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment will be as low as possible, with fine water sprays used on such equipment.
- If required, fences of similar height and size to stockpiles will be erected by the Contractor to act as wind barriers and these will be kept clean using wet methods.
- Where drop heights are greater than 2m, water dampening and sheltering will be utilised to control dust emissions.
- Stockpiled materials which are likely to remain undisturbed for more than 4 weeks will be seeded to allow to vegetate. This can also be sprayed with a chemical dust suppressant (although this may require approval by GCC and/ or the EPA). This will be decided by the Site Manager.
- Ensure spoil stored during construction is not allowed to dry out during windy meteorological conditions when they could represent a source of windblown dust. Fine or powdery material (under 3mm in diameter) will be stored inside enclosures such as storage containers within the extents of the Site compound.
- The Site will be weekly inspected by the Contractor's ESR for spillages of dusty or potentially dusty materials and will designate site staff to promptly clear any such spillage.
- The frequency of site inspections will be increased to daily when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. The ESR will decide whether these parameters are met and whether the frequency of inspections will be increased to daily.

Concrete Work

- Mixing of concrete will be carried out in an enclosed/ shielded area by using sheltered areas where necessary to prevent the escape of dust.
- Before concrete pours, the pour structure will be cleaned, and fine non-ferrous debris will be sucked out from the pour area. Further measures regarding the management of washout are outlined in Section 6.7.

6.4.2 Control of Emissions

Good working practice measures will also be employed for the siting and operation of non-road mobile machinery to control associated emissions, including where possible:

- Prohibiting vehicle and plant idling; and
- Locating static plant as far from sensitive boundaries or receptors as possible for a given task.

6.5 Cultural Heritage

6.5.1 Previous Unrecorded Archaeological Remains

The Proposed Development is located within a Brownfield site and industrial setting which has been previously disturbed by the construction of the existing CCGT Power Station and the historic and now closed Tynagh Mines site on which the Proposed Development will be constructed. Any archaeological remains which may have been present will have been destroyed during these historic works.

If unexpected archaeological remains or artefacts are discovered during construction work, work in that area will cease and the area will be protected. The Archaeological Consultant and National Monuments Service (NMS) will be notified, and an unexpected find protocol will be implemented as outlined below:

- All archaeological works (which will be agreed by the Archaeological Consultant and NMS) will be carried out in compliance with the National Monuments Acts 1930 – 2004 (and *Policy and Guidelines on Archaeological Excavation* (Department of Arts, Heritage Gaeltacht and the Islands, 1999);
- A suitably qualified and licensed Archaeological contractor will be appointed to carry out the archaeological fieldwork;
- Relevant licenses will be acquired from the NMS for all archaeological works, which will be carried out in accordance with an over-arching Method Statement for Archaeological Works prepared by the Archaeological Consultant and agreed with the NMS.

6.6 Ecology

This section prescribes the mitigation measures necessary for the Contractor to implement in order to prevent or reduce adverse impacts upon ecological receptors. It also takes into account the legal requirements associated with statutory protected sites and species and the mitigation measures outlined in the EIAR.

6.6.1 General Measures

- The Contractor will consult and comply with the requirements of National Parks and Wildlife Service (NPWS) with respect to any sites or species protected by law, which are likely to be affected by the construction, establishment, and maintenance of the Site.
- The Contractor will comply with and implement any mitigation measures which may be determined as a result of any updated and/ or ongoing ecological surveys. This information will be provided once available and may result in additional mitigation measures, or render redundant mitigation measures planned as part of the design.
- The Contractor will comply with requirements of *The Wildlife Acts of 1976 and 2000 ("The Wildlife Act") and the Flora (Protection) Order, 2015* by giving protection to a wider range of plants, animals and birds, and providing additional enforcement powers and increased penalties for wildlife-related offences) when undertaking any works which will affect protected species.
- In accordance with the requirements of The Wildlife Act, no works will be undertaken to any habitat (including buildings) in which any birds may be nesting.
- The Contractor will be expected to provide more detailed method statements (including programming of activities) within the parameters set by the outline statements approved by NPWS. These will be prepared by the Contractor's ECoW in association with other contractor staff. The method statements will be approved by the Project Ecologist prior to works commencing. Works will not start without agreed method statements in place.
- The Contractor will be responsible for obtaining any relevant licences.
- The Contractor will be responsible for ensuring all site workers are briefed on the ecological sensitivities of the Site and its environs through 'toolbox talks' and provision of clear information

about protected species and restricted areas and activities if required. All staff (including sub-contractors) will receive regular updated talks and briefings.

- The Contractor will implement measures to protect the smooth newt population found in the pond within the Site boundary. These will include but are not limited to:
  - silt fencing around the pond to prevent sediment runoff into the pond; and
  - a buffer of at least 10m between the pond and construction works and refuelling of machinery and plant.

6.6.2 Fencing/ Buffer Zones, Compounds and Storage of Materials

- During the works, the contractor will provide a fence between the Site including the temporary construction area, and the adjacent areas. This will limit construction works within the confines of the Site.

6.6.3 Protection of Birds

The Site is predominantly covered by hardstanding associated with existing CCGT Power Station. Where the Contractor is required to remove building structures, they will adhere to the following:

- In accordance with the requirements of The Wildlife Act, no works will be undertaken to any building in which any birds may be nesting.
- Any necessary site clearance (of buildings as no vegetation on site) will occur outside the bird-breeding/ nesting season (i.e., undertaken between September [October for house martins] and February inclusive) and will be preceded by a check by an ornithologist, especially for the potential presence of early or late nesting species.
- If clearance cannot be undertaken outside of the breeding bird season, then all buildings will be checked for breeding birds by the ECoW immediately before the clearance commences, and buildings with active nests will be left until the hatchlings have fledged.
- For reference, the breeding bird season is generally taken as the 1st March until 31st August inclusive. However, it is also noted that birds can nest at any time of the year and are therefore protected when they do.
- All cleared material of bird nesting potential will be moved and stored off-site to ensure that birds do not use the cleared material for nesting during the bird breeding season. Similarly, stockpiles of earth (particularly sandy material) will be left without vertical faces during the spring and summer period. This will avoid potential nesting by sand martins which bury into the earth.
- The Contractor's programme will clearly indicate any areas of existing buildings to be removed and their programmed schedule for removal.

6.7 Water Environment

This section prescribes the mitigation measures necessary for the Contractor to minimise impacts and monitor effects upon the water environment during construction.

During the construction phase water pollution may occur directly from spillages of polluting substances into waterbodies, or indirectly by being conveyed in runoff from hard standing, other sealed surfaces or from construction machinery. Fine sediment may also wash off working areas and hard standing (including approach roads) into waterbodies indirectly via existing drainage systems or overland flow. Due to past industrial activity of the Site, this sediment may not be inert and may potentially contain contamination that could be harmful to the aquatic environment.

The Contractor should be aware that it is an offence under the Local Government (Water Pollution Act) 1977 to cause or permit any polluting matter to enter waters. The Contractor shall outline to all sub-contractors their responsibilities under the Local Government (Water Pollution Act) 1977 and the legal implications of causing a pollution event.

For clarification, 'waters' relevant to the site location includes: '*any (or any part of any) river, stream, lake, canal, reservoir, aquifer, pond, watercourse or other inland waters, whether natural or artificial.'*

'Polluting matter' is also defined under the Act as: '*any poisonous or noxious matter, and any substance (including any explosive, liquid or gas) the entry or discharge of which into any waters is liable to render those or any other waters poisonous or injurious to fish, spawning grounds or the food of any fish, or to injure fish in their value as human food, or to impair the usefulness of the bed and soil of any waters as spawning grounds or their capacity to produce the food of fish or to render such waters harmful or detrimental to public health or to domestic, commercial, industrial, agricultural or recreational uses'.*

6.7.1 General Measures

Measures to protect the water environment will be formulated in accordance with best practice guidance. The best practice guidelines are as follows:

- CIRIA guidance documentation *C648 'Control of Water Pollution from Linear Construction Projects'*, C532 *'Control of water pollution from construction sites: guidance for consultants and contractors'*; C741 (2015) *Environmental good practice on site guide* (fourth edition); C609 (2004) *Sustainable Drainage Systems, hydraulic, structural and water quality advice*.
- British Standards Institute (2009) *BS6031:2009 Code of Practice for Earth Works*.
- British Standards Institute (2013) *BS8582 Code of Practice for Surface Water Management of Development Sites*.
- Sustainable Drainage Systems ("SuDS") constructed on the Site will be in accordance with *The SuDS Manual* (C753) (CIRIA, 2015) and the *Site handbook for the construction of SuDS* (C698) (CIRIA, 2007).

6.7.2 Sedimentation (Suspended Solids)

This section prescribes the mitigation measures necessary for the Contractor to minimise impacts and monitor effects upon the water environment from suspended solids during construction. Control measures will be installed to prevent the mobilisation of sediment to the watercourse during storm events. A discharge licence under Section 4 of the Local Government (Water Pollution Act) 1977 will be required for any treated water discharged from the Site. The following control measures will be implemented by the Contractor to manage silt-laden runoff into waterways:

- The first step towards preventing silt pollution from the Proposed Development will be to minimise the generation of silt-laden runoff. This will be achieved by the Contractor carefully planning the site works so that activities likely to generate silt-laden runoff are carried out during drier months, and erosion of surface soils is controlled. Seasonal weather patterns will determine when programming and planning construction activities take place.
- To control erosion, areas of exposed ground and stockpiles will only be created when the area of the site is to be worked upon. Stockpiles will be located 20m away from drains and watercourses where there is no sloped gradient. This distance will be increased if the stockpile is situated near a slope. Stockpiles will be stabilised as soon as they are completed (e.g., seeded or geotextile mats), and bunded by earth or silt fences at the toe of the stockpile to intercept silt-laden runoff during rainfall events. Stockpiles will not be located where there is a steep slope towards a drain.

Sources

As mentioned in the relevant guidance outlined above, activities and areas that could potentially cause silt pollution will be mitigated by the following measures:

Exposed ground and stockpiles

- Reducing the amount of time soil is exposed by only removing surface material when necessary to facilitate construction;
- Covering of stockpiles;
- Using geotextile silt fencing to reduce movement of silt on the site; and
- Diverting clean water away from working areas to reduce volume of contaminated water (e.g., cut-off ditches).

Plant and wheel washing

- Carried out in a designated area 20m from any surface water drain or watercourse;

- All runoff from wash area collected and reused where possible;
- Settled sediment will be removed from the designated area regularly;
- Treat water before discharge to any waterway (with consent); and
- Wash water with oils or chemicals will not enter any waterway by containing the wash water within a bunded and impermeable designated site and will be tankered off-site for authorised disposal.

Disposal of water from excavations, dewatering and pumping

- Use cut-off ditches to prevent water (especially clean water) from entering excavations;
- Use pump sumps in excavation;
- Ensure settled sediment is not disturbed by raising pump inlet to only remove water from just below the water's surface; and
- Protect pump inlet to prevent debris entering pump and waterway.

Treatment Measures

If deemed to be required by the Contractor to effectively manage runoff from the construction site, treatment measures which can be implemented on site include:

- Sustainable Drainage Systems (including infiltration trenches, infiltration basins, filter drains);
- Filter strips;
- Settlement Lagoons;
- Tanker off-site for authorised disposal.

If the above measures are to be implemented, it will be in accordance with the relevant and up to date documents in Section 6.7.1.

6.7.3 Accidental Spillage, Flooding or Other Emergencies

The Contractor will prepare a Water Management Plan (WMP) which will prescribe measures and procedures to be undertaken to minimise the risk of adverse impacts upon surface waters and groundwater as a result of accidental spillage incidents, flooding or other emergencies. The WMP will include the following:

- Storage of oils and diesel, along with the general maintenance and refuelling of plant, will be restricted to impermeable bunded areas with a minimum 110% storage capacity and away from surface waters or areas where any spillages could easily reach surface water (50m from streams and 20m from minor drains);
- Leaking or empty oil drums will be removed from site immediately and disposed of via an appropriately licensed waste disposal contractor;
- All hazardous substances on-site will be controlled within a storage compounds that will be fenced-off and locked when not in use to prevent theft and vandalism;
- Re-fuelling of plant and machinery will take place at least 20m away from watercourses using a mobile fuel bowser and restricted to impermeable designated areas. Only fuel bowsers that are bunded to 110% capacity will be used. Vehicles will not be left unattended during re-fuelling operations. Fixed plant shall be self-bunded. Mobile plant will be in good working order, kept clean and fitted with drip trays where appropriate. All water runoff from designated re-fuelling areas shall be channelled to an oil separator prior to discharge;
- Spill kits and oil absorbent material will be carried by mobile plant and located at vulnerable locations (e.g. near oil filled equipment). Booms will be held on-site for works near watercourses/ drains. Spill kits will contain a breakable tie to show use and indicates whether it needs to be replenished. The Site Manager and ESR will be responsible for replenishing spill kits;
- As part of the Water Management Plan, an Emergency Response Plan will be prepared by the appointed Contractor and included in the CEMP and construction workers trained to respond to spillages. The plan will be tested via desktop and mock exercises. The plan will be reviewed after any significant change to the Site or management structure;

- A copy of the Emergency Response Plan will be kept in the Site Emergency Information File (along with other safety emergency preparedness plans) together with the results of any test of the plan;
- Concrete mixing will be undertaken in designated impermeable areas, at least 10m away from a watercourse or surface water drain to reduce the risk of runoff entering a watercourse, or the sub-surface, or groundwater environment;
- Equipment, batching and ready-mix lorry washing, and cleaning will be washed-out on-site into a designated area that will be impermeable, bunded, signposted and maintained so that it will not overtop the bunds in order to contain wet concrete/ wash waters;
- Oil interceptors will be required for refuelling areas; runoff from washing areas that contains detergents which may prevent oil interceptors from working correctly will be prevented from entering oil separators by providing separate designated areas for washing and refuelling;
- Discharge with oils and chemicals from vehicle washing areas will be considered as trade effluent and therefore will be disposed off-site;
- The installation of protective bunds along all watercourses and drains, during construction will filter contaminants and prevent adverse runoff;
- Any plant, machinery or vehicles will be regularly inspected and maintained to ensure they are in good working order and clean for use;
- As far as reasonably practicable, only biodegradable hydraulic oils will be used in equipment working in or over watercourses;
- Any site welfare facilities will be appropriately managed, and all foul waste disposed of by a licenced contractor to a suitably permitted facility;

Spill Response

Although the measures outlined above will reduce the possibility of a spill occurring, the Contractor will implement the following measures in the event of an accidental spill. It is most important that if spill cannot be safely contained or if it is causing a threat to life to the first responder(s), the area will be evacuated, and the emergency services will be contacted from a safe location. The steps below summarise the procedure that will be taken by the Contractor:

1. Stop;
2. Notify;
3. Contain; and
4. Clean-up.

Where spills can be safely managed by containment by the first responders, the steps outlined in the Pollution Control Hierarchy (with 1 being the most preferred response, and 5 being the least preferred response) will be used. They are:

1. Contain at source (containment options include (dependant on the type of container) sealing damaged containers or pipework, turning over a container, bunding a leaking container, and closing valves on pipework);
2. Contain close to the source (containment options include transfer leaking material into a new container, soak up the spill using sorbents, portable drip trays to contain the spill);
3. Contain on the surface (containment options include using booms to prevent movement of pollutant and drain mats);
4. Contain in the drainage system (containment options include closing oil separators, and pipe blockers); and
5. Contain on/ within the watercourse (containment options include river booms, and damming of small watercourses).

The spill will be cleaned-up immediately after the liquid has been contained. This will be done by mechanical recovery of the contaminated material, followed by the use of absorbents. The Emergency Response Plan produced by contractor will identify who will be responsible for the clean-up operation, and any areas that will contain the contaminated material from clean-up.

6.7.4 Concrete, cement and grout

These materials can be very toxic to the any local waterways, and care will be taken to prevent concrete, cement or grout entering drains and waterways. The following measures will be implemented for any concrete batching or mixing:

- To be sited on an impermeable designated area;
- Be sited at least 10 metres from any waterway, surface water drain, or rock outcrop (hard rock at surface) to prevent run off entering the water environment;
- Have settlement and re-circulation systems for water reuse, to minimise the risk of pollution and reduce water usage;
- Have a contained area for washing out and cleaning of concrete batching plant or ready-mix lorries. The contained areas will be impermeable, bunded, signposted and maintained so that it will not overtop the bunds in order to contain wet concrete/ wash waters; and
- Collect wash waters that are no longer effective at cleaning and that cannot be reused will be contained for authorised disposal off site.

6.7.5 Water Monitoring

Water quality monitoring of potentially impacted watercourses will be undertaken to ensure that pollution events can be detected against baseline conditions and can be dealt with effectively. The locations of the water monitoring were located upstream and downstream of the site on the Kilcrow River and Mill Stream (Figure 12.1). The WMP will include details of pre-, during and post-construction water quality monitoring. This will be based on a combination of visual observations, frequent in situ testing using handheld water quality probes, and periodic sampling for laboratory analysis.

6.8 Landscape and Aesthetic Requirements

The Contractor will ensure the locations of site compounds, plant and material stockpiles which may have a significant landscape and visual effect during the construction phase will be suitably screened from external views. The movement and activity of plant, which has a notable visual presence due to size/ scale and hazard lighting, will remain a transient issue.

The lighting measures outlined below will also be applied:

- Temporary lighting will be minimised in terms of number of lights and the power of the lights (lux level) during construction.
- Directional lighting, facing and located away from the site's boundary will be used; and,
- Lighting will be turned off when not in use except to meet the minimum requirements for Health and Safety.

6.9 Traffic

This section prescribes the mitigation measures necessary for the Contractor to minimise impacts upon the local community, residents and landowners directly affected by the Site or traffic management.

6.9.1 Traffic Management

The access point to the Site is located on the LP4310 Gortymadden to Tynagh Road. In order to minimise disruption to local traffic and maintain the safety of road users, the Contractor will be required to establish a traffic management system. This will account for:

- Planning and controlling the movement of vehicles, plant and non-motorised users that are present within the Site, access to and egress from the Site and on the adjacent road network; and
- Ensure that safety of construction operatives, motorised and non-motorised users are not compromised.

This will be achieved by effective implementation of a Construction Traffic Management Plan (CTMP) to be prepared and initiated by the Contractor. An outline CTMP is included within Appendix 14E of the EIAR Volume II and will ensure the construction site is organised so that vehicles and pedestrians using site routes can move around safely. The CTMP shall be included as part of the Contractor's CEMP. The objective of this plan will be to:

- Limit journeys to and from the Site by the workforce, sub-contractors, suppliers and anyone else who is likely to visit the site regularly;
- Provide protection from traffic hazards that may arise as a result of the construction activities and journeys to and from the Site;
- Installation of convex mirrors and construction traffic warning signs at site entrance junction;
- Manage potential adverse impacts on the public road network and ensure network performance is maintained at an acceptable level;
- Minimise adverse impacts on users (motorised and non-motorised) of the public road network and adjacent properties and community facilities;
- Plan deliveries to the Site;
- Ensure adequate signage is in place at Site access points before use; and
- Ensure that the roads and footways at the site access are kept clear of debris, runoff, soil, and other material (complimenting the Site Drainage Plan and site wheel wash facilities if required).

The Contractor will include measures to restrict construction traffic to designated local roads. Traffic management will be closely monitored on-site, and ensure the safety of local road users, pedestrians, equestrians and cyclists is maintained.

Traffic management will be in operation to facilitate safe passage for pedestrians and others, including barriers defining the footpaths and safety zones to prevent construction vehicles encroaching on pedestrian areas. Where appropriate, segregated pedestrian routes will be provided. Temporary warning signs will be erected as necessary to highlight particular hazards, including site accesses and temporary traffic management measures.

6.9.2 Complaints, Comments and Queries

- Complying with the requirements of the Data Protection Act, and other relevant legislation, the Contractor will record all Complaints, Comments and Queries (correspondence) received during construction. Stored data will be secured against theft, intrusion, or modification by malicious third parties in-line with current best practice.
- The Contractor will record any actions, including further correspondence, taken in respect of any Complaint, Comment or Query.
- The following timescales will apply in the Contractor's management of correspondence following submission:
  - Within 8 working hours from receiving the complaint, an acknowledgement will be sent to the correspondent; and
  - Within 72 hours, the Contractor will issue a response to any correspondence detailing further actions to be undertaken.
- The Contractor will aim to have completed and implemented their actions within seven working days of receiving correspondence.
- The Contractor will have a means by which to explore the Complaints, Comments and Queries interface within the reception area of the site offices, to allow access to the records during normal working hours.

6.9.3 Access to the Site

- In all cases, the Contractor will prepare a condition report showing condition of lands and road surfaces prior to commencement of use of the accesses.

- The Contractor will prepare and submit a haulage route plan showing the internal routes proposed for all materials and equipment deliveries to the site. This plan will be approved by the Construction Project Manager prior to implementation. Details of any systems and signage to ensure correct routing of vehicles will also be included. The haulage route plan will also include the inspection and maintenance strategy for these routes.
- The Contractor will erect appropriate signs to show any accesses and restricted routes.

6.9.4 Public & Private Roads, Accesses and Rights of Way

- Although unlikely to be required due to the site being covered in hardstanding, a mobile road sweeper will be used to remove any site vehicle-tracked mud and dirt from the public highways (LP4310) and the construction Site access.

6.10 Materials

6.10.1 General Measures

The following measures will be implemented during the construction phase:

- Construction works will be carried out in such a way as to prevent, contain, or limit, as far as reasonably practicable, any adverse effects arising from the presence of contaminated land or materials (if encountered).
- 'Clean' and 'dirty' (contaminated) work areas will be divided by internal fencing where any contamination is encountered.
- Appropriate Personal Protective Equipment (PPE) will be worn by ground workers and other staff.
- Those potentially at risk will be made aware of potential hazards via site safety induction procedures.
- Leaks and spills will be prevented, and control measures (outlined in Section 6.7.3) used to prevent contaminants entering the sub-surface or groundwater environment.
- Material removed as part of the construction will be re-used elsewhere in the project where practicable and possible.
- Any soil/ overburden encountered will be separated where removal is required and will be conserved and stored in a designated area and appropriately protected, ready for re-use as fill for the project.
- Contaminated materials will be assessed as either: solids; liquids; gas; and leachate to allow for appropriate management.
- The measures outlined in Section 6.7.3 will be implemented to prevent the contamination of ground and surface watercourses and aquifers during the works.
- Hazardous dust emissions will be prevented during excavation, or from stockpiles by implementing the measures outlined in Section 6.4.
- The Contractor has a duty under the Safety, Health and Welfare at Work (Construction) Regulations 2013 to protect their employees against hazardous substances encountered at work. To that end and in accordance with CIRIA guidance (R132*) A guide for safe working on contaminated sites* (1996), the Contractor will be required to undertake a risk assessment before any work is carried out at the site which is likely to expose staff to substances hazardous to health. Should hazards be identified during additional site investigation, the Contractor will be required to ensure that all employees (construction workers) are issued with PPE appropriate to the hazards identified. PPE could consist of hazard specific gloves, eye protection and respiratory protective equipment (RPE).

6.11 Waste Management

The Contractor will be responsible for developing a Site Waste Management Plan (SWMP) related to their construction activities. The SWMP will apply to all works carried-out by the Contractor and any sub-contractors under its control.

In preparing the plan, the Contractor will take into account:

- NetReg's '*Site Waste Management Plan – A Simple Guide'*;
- *Best Practice Guidelines for The Preparation of Resource Management Plans for Construction & Demolition Projects* (EPA, 2021); and
- CIRIA's '*Environmental good practice on site guide'* (C741).

The works will not involve any 'cut' earthworks; materials excavated from the site during the works may be re-used in the works, and therefore will not require disposal/ recovery as waste. In developing the SWMP, the Contractor will re-use materials where practicable, where permitted under the relevant waste legislation, and where the material meets engineering requirements. The methods outlined in *Construction Code of Practice for the Sustainable Use of Soils on Construction Sites* (September 2009) will be adhered to in order to maintain the quality of moved and stored soils. Vermin control will also be implemented by the Contractor.

6.11.1 Waste Management Strategy

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 re-use and recycling. Disposal of waste will only be considered as a last resort.

- Prevention;
- Minimisation;
- Re-use;
- Recycling; and
- Disposal.

Management of Excavated Materials

The works will not involve any 'cut' earthworks. The Contractor will set out within the SWMP, their proposal for the management and re-use of any excavated materials on or off site, where permitted in accordance with the relevant legislation.

Where the Contractor proposes to maximise the re-use of any excavated material in order to minimise the generation of waste, it will set out how it proposes to manage and document this re-use.

The Contractor will establish the controls necessary to manage the generation, handling, and storage of waste at the Site.

These controls may rely on the other Plans within the CEMP, for example the protection of stockpiles against rainwater ingress and leachate runoff, the bunding of hazardous waste storage areas containing liquids (e.g. oils, paints), and the management of waste collection vehicles both within the Site and when leaving the Site (dust and noise).

Documentation of Waste

The Contractor will develop a Waste Documentation System within the overall documentation system for the works in accordance with the *Best Practice Guidelines for The Preparation of Resource Management Plans for Construction & Demolition Projects* (EPA, 2021). 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 EWC (European Waste Catalogue) code for the waste materials;
- Details of any rejected consignments;
- The Waste Transfer Forms for hazardous wastes transferred from the Site; and

- The Certificates of Recycling, Re-use or Disposal for all wastes transferred from the Site.

7. References

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