CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

FOR PROPOSED REGENERATION WORKS
AT

DUCKING STOOL PUBLIC AMENITY

BELTURBET

CO. CAVAN

Prepared for

Cavan County Council

Prepared by

Traynor Environmental Ltd

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This document is a Construction Environmental Management Plan (CEMP) for the construction of a proposed development at the Ducking Stool Public Amenity, Belturbet, Co. Cavan.

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1.0 INTRODUCTION

1.1. Overview

This Construction, Environmental Management Plan (CEMP) has been prepared by Traynor Environmental to support Cavan County Council (CCC) application for the proposed Ducking Stool Regeneration works, hereinafter referred to as the 'proposed development'. It must be noted that this document is not a Health and Safety Protocol.

1.2 Purpose of CEMP

The purpose of this CEMP is to provide recommended measures to avoid, minimise and control adverse environmental impacts associated with the construction of the proposed development. The CEMP will document the commitment to safeguarding the environment through the identification, avoidance and mitigation of the potential environmental impacts which are associated with the proposed development. Cavan County Council will undertake the works in accordance with the provisions of the CEMP.

The CEMP ensures that environmental impacts identified during previously performed environmental studies i.e. the Environment Impact Assessment (EIA), are properly managed and that controls will be put in place to reduce the impacts of the development on the natural and human environment during construction.

The purpose of the CEMP is to.

- Provide effective, site-specific procedures and mitigation measures to monitor and control environmental impacts throughout the construction phase of the project
- Ensure that construction activities so far as is practical do not adversely impact amenity, traffic or the environment in the surrounding area

1.3 Structure

This CEMP has been structured to provide a comprehensive framework for the environmental management of the proposed development throughout the construction phase. The document outlines the nature and scope of the proposed works, the design considerations that have informed the development, and the criteria used in the selection of construction methods and techniques. It identifies the environmental constraints associated with the site and surrounding area and details the legislative, regulatory, and guidance requirements applicable to the project. The CEMP also defines the roles and responsibilities of personnel involved in the implementation of environmental management measures, establishes the procedures to be followed during construction activities, and sets out the general environmental requirements for the works. In addition, the document details the emergency response procedures to be implemented in the event of an environmental incident and describes the management measures, mitigation controls, monitoring requirements, and best practice procedures that will be adopted to minimise potential environmental impacts and ensure compliance with all relevant environmental obligations throughout the construction period.

1.4 Document Control

Document control procedures will be implemented to ensure all correspondence, drawings and technical data received are recorded, distributed, filed and archived in an efficient and controlled manner. Document control activities shall include:

- Review of documents and drawings prior to release to ensure that requirements are clearly stated and that they are authorised for issue.
- Identification of documents to be controlled
- Review and approval of changes to documents and drawing; and

- Control of documents, including approved changes to preclude inadvertent use of obsolete or superseded documents

Standard methods shall be defined for adding and identifying revisions.

1.5 Report Usage

The information and recommendations contained within this report have been prepared in the specific context stated above and should not be utilised in any other context without prior written permission from Traynor Environmental Ltd

If this report is to be submitted for regulatory approval more than 12 months following the report date, it is recommended that it is referred to Traynor Environmental Ltd for review to ensure that any relevant changes in data, best practice, guidance or legislation in the intervening period are integrated into an updated version of the report.

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2.0 THE PROPOSED DEVELOPMENT

2.1 Site Description

The site in question is approximately 0.407 ha and is located within Belturbet town, approximately 155m north of the town centre. The site is accessed via Lana an Uisce just off the Main Street in Belturbet. The proposed works will take place at the ducking stool and the surrounding lands which is off the southern shore of Lough Erne. The site is zoned as *'Flood Zone A'*& *'Flood Zone B'* in the Cavan County Development Plan 2022-2028. Any developments within each flood zone are subject to the following: 'Undeveloped land in Flood Zone A&B that is the subject of any zoning objective shall only be developed for *water compatible uses* as identified in the Guidelines.' The proposed development at the Ducking Stool would be considered as water compatible in accordance with The Planning System and FLOOD Risk Management Guidelines (DoEHLG, 2009)

The land-use surrounding the application site is mixed. The urban/sub-urban lands of Belturbet town largely surround the wider area around the site to the south. These areas are predominantly residential, industrial and amenity and the dominant habitats associated with these areas include buildings and artificial surfaces, and amenity grasslands and gardens.

In the rural areas beyond Belturbet town, agriculture is the dominant land use and improved / semi-improved agricultural grasslands are the dominant habitats. Habitats immediately surrounding the site include the river habitats which is the transitional area where land and River Erne meet, functioning as an ecosystem that includes the water, the land (banks and shore), and the vegetation along the water's edge. It encompasses features like rocks, soil, aquatic and terrestrial plants, and various animal species. The overall topography of the surrounding area is generally flat, with the proposed marine works development situated at the edge, and within the extents of the ducking stool area.

Figure 1.1 – Site Location Map

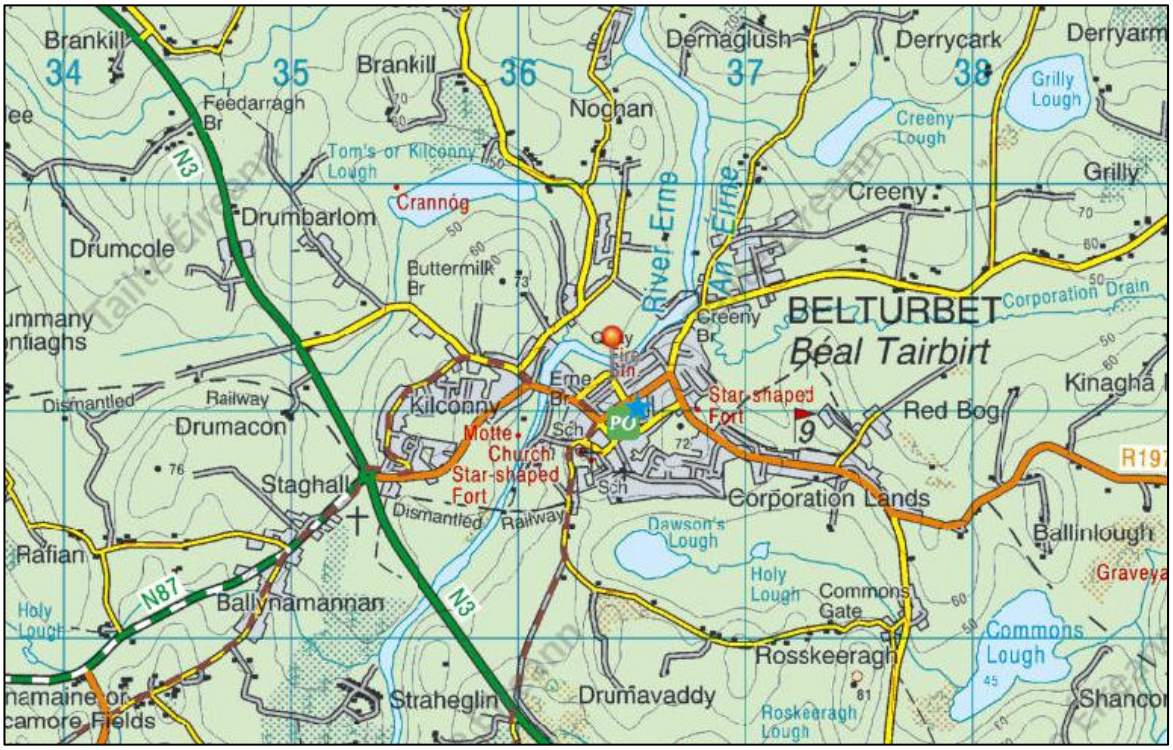


Figure 1.2 – Aerial photo of proposed red line boundary.

2.2 Proposed Development

Cavan County Council propose to undertake the following development at the Ducking Stool Jetty, The Lawn and lands at Willow Avenue, Belturbet, Co.Cavan.

The proposal is for the upgrade and realignment of the existing jetty and slipway at the Ducking Stool Jetty and the creation of a carpark on lands at Willow Avenue

Details of the works include:

- removal of the existing timber jetties,
- realignment and widening of the slipway providing access to the River Erne,
- reconfiguration and extension of the existing pier, including amended levels,
- installation of floating jetties and jetty access ramp,
- construction of hard landscaped, public recreational open space,
- reconfiguration and upgrade of existing gravelled area to create new carpark (7no. spaces),
- installation of public lighting and refuse storage,
- installation of bike stands
- installation of wayfinding signage
- reconfiguration and upgrading of existing drainage and all associated site development works.

The proposed works aim to increase the amenity value of the current Ducking Stool Jetty area.

The key components include:

Slipway & launch zone

A dedicated vehicular slipway is provided to allow safe launching and retrieval of trailered boats. The slipway is defined by kerbed concrete edges and clear road markings, with turning space to accommodate vehicle-and-trailer movements. A low-key, robust edge treatment (vertical timber/board-faced walling) forms the quay edge, designed for durability in a wet environment.

Floating pontoons / water access

Floating jetties are provided adjacent to the quay to facilitate short-stay mooring and easy boarding. Access is via gangways and steps/landings, with safety ladders and life-saving equipment positioned along the waterfront. The arrangement supports a mix of small craft and recreational users while maintaining good visibility and circulation along the waterfront.

Parking & servicing

A car park is provided to serve the facility, including accessible bays and a clearly marked area suitable for launching-related short stops. Trailer set-down/rigging space is accommodated close to the slipway to reduce conflicts and improve operational safety. Lighting columns are positioned to improve night-time safety and wayfinding without over-cluttering the marina.

Landscape & ecological edge treatment

A soft landscape buffer, including trees and native planting, frames the car park and reduces its visual impact from the river. The riverbank is enhanced with stone, marginal planting and naturalised edges where feasible to improve resilience, biodiversity and visual integration with the wider landscape. Planting is integrated into raised planters to bring greenery into the hardscape and create seasonal interest.

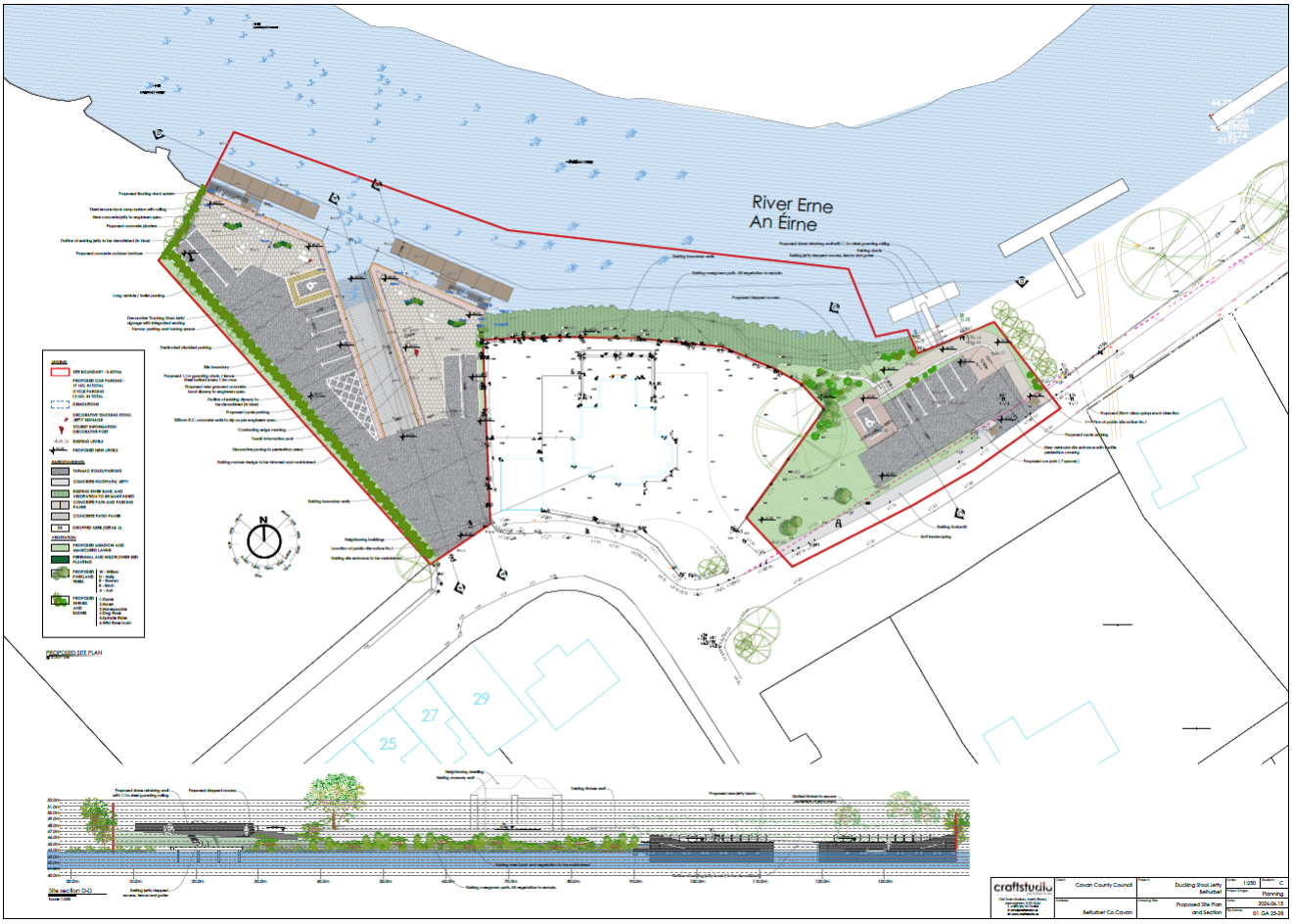
Signage & wayfinding

A feature sign/marker and information board provide identity to the location and help visitors navigate (parking, access points, safety guidance and local information). The signage is positioned as a focal element on the promenade, reinforcing arrival and improving legibility of the space.

Existing site to the east. Facing Southeast	Existing site to the east. Facing Southwest
Existing site to the east. Facing West	**Existing site to the east. Facing East**
Facing East	
Existing site to the west. Facing North	**Existing site to the west. Facing West**

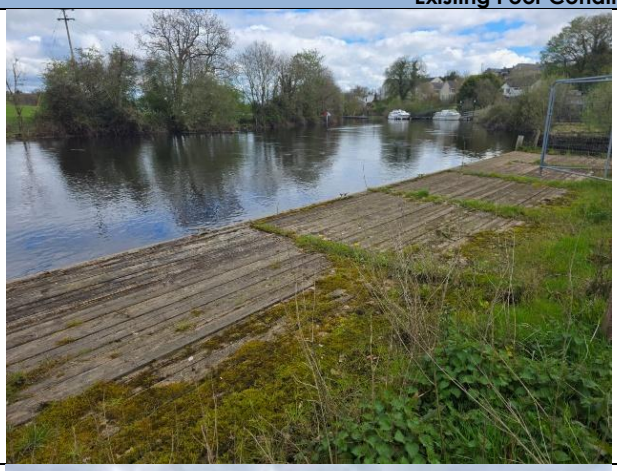
Existing site to the west. Facing Northwest	Existing site to the west. Facing Northeast

Figure 2.2 Proposed Layout



Photomontages of proposed works at the Ducking Stool

Existing Poor Condition of Jetty in Belturbet



2.3 Key Stages

The proposed development will involve the following key work phases:

- Tender Stage.
- Procurement and appointment of successful Tenderer(s) (hereafter referred to as The Contractor).
- Detailed Design Stage.
- Site preparatory works including the preparation of all required Detailed Safety and Health, and Environmental Management documents.
- Piling
- Site mobilisation.
- Construction stage

- Completion.

It is anticipated that the construction phase will take 6 -9 months. The proposed sequence of construction outlined is subject to confirmation once the building contract has been awarded and on completion of the Detailed Construction Environment Management Plan for agreement with Cavan County Council.

2.4 Construction Phase

There will also be earth removal(minimal) and piling works associated with the proposed development. A Resource Waste Management Plan (RWMP) has been prepared in accordance with the EPA (2021) *Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects* and will be implemented throughout the construction phase.

The RWMP will ensure adherence to the waste hierarchy, with the following targets applied where practicable:

- Prevention and minimisation of waste generation at source
- Reuse of excavated materials on-site where suitable
- Recycling of construction and demolition waste streams (target >70%)
- Recovery of materials where reuse/recycling is not feasible
- Disposal only as a last resort at licensed facilities

Construction of the proposed development will initially involve the removal of the existing static jetty, walls and slipway, alongside "core drilling into the bedrock to facilitate the installation of new steel columns / piles. Concrete will be removed to facilitate the new concrete slipway. A method statement was developed by Alan Traynor Consulting Engineers outlines the proposed construction approach for the upgrade of the existing public marina.

Static Jetty Pile Installation

1. Structural Frame Installation
    - Install steel vertical columns
    - Fix steel cross beams and edge beams
2. Precast Decorative Concrete Panels
    - Lift decorative precast panels into position against marina face.
    - Secure panels into steel structure
3. Precast Jetty Deck Slabs
    - Lift and place precast slabs onto jetty framing
    - Construct required finishes as per structural drawings.
    - Install edge protection, bollards, ladders and services.

Floating Jetty Installation

- Floating pontoon constructed in factory conditions and delivered to site via lorry and Hiab crane.
- Pontoons fixed to new steel piles via guide brackets.
- Connection of services such as water and power is completed.
- Mooring cleats and safety ladders installed.

Slipway Construction

- Install formwork and reinforcing steel.

- Precast concrete slipway section to be installed in river basin to reduce site/water excavation and damming works.
- Insitu concrete slipway to be formed and cast into precast concrete unit and extended to carpark level.
- Apply non-slip finishes,

Carpark Works

- Strip existing surfacing where required
- Earthworks and grading
- Install new pavement layers
- Line marking and signage installed
- Landscaping and drainage works completed

2.4.1 Construction Equipment and Fuel Usage

During the construction phase a variety of items of plant will be in use for the purposes of site preparation, construction, and other site works. There will be vehicular movements to and from the site that will make use of existing roads. Due to the nature of these activities, there is potential for generation of noise, air (dust), and surface water emissions arising from construction.

Table 2.1 below contains a non-exhaustive list of the various construction plant and equipment anticipated to be used for the construction phase of the proposed development. It must be noted that this list is indicative and will be refined closer to the commencement of construction. An estimate of the daily fuel consumption of the construction equipment is also provided. The average daily fuel consumption will naturally depend on the intensity of use of each item.

Table 2.1 Anticipated Construction Plant & Equipment

Construction Equipment	Daily (Litres/day)
Excavators (long reach excavator)	120
Diesel Generators	80
Floodlights	10
Materials Handling Plant including: - Dump Trucks - Front End Loaders - Trailer Tractors - Portable Compaction Equipment - Telescopic Handlers	200
Ancillary Small Plant and Tools	35
Portable compaction equipment	20
Telescopic handler	30
Trucks	500
Rock Drilling equipment	300

2.4.2 Construction Personnel

It is anticipated that the construction phase will take 6 months with a daily range of 10-15 personnel.

2.4.3 Contractor Site Compound Services

During construction works, temporary construction facilities will be provided. During construction, power will be supplied via suitably bunded generator(s), maintained by the construction contractor.

Foul waste during construction will be temporarily stored and regularly disposed of using appropriate facilities off-site.

The contractor's site compound layout will include the following:

- Temporary site accommodation incorporating management and engineers' cabins, WC facilities, canteen, and drying room facilities.

- Primary materials storage including containerised units and lock ups for tools and equipment.
- A waste storage and recycling area either within or adjacent to compound.
- Parking for key management and staff.

2.4.4 Construction Quantities

During construction, all construction materials will be sourced from local suppliers, where possible, to minimise the impact of natural resources used in the transportation of materials.

Waste produced during the improvements works at the marina will be managed in accordance with a site-specific Resource Waste Management Plan (RWMP) which will be formulated for the proposed development at design stage. This will ensure high levels of reuse, recovery and recycling of construction wastes arising.

2.4.5 Construction Drainage & Wastewater Management

Foul water during construction will be provided for by temporary welfare facilities which will be emptied on a regular basis and disposed of off-site to a licensed facility by a licensed contractor. Silt Booms will be made available if required to be placed within the river erne.

2.4.6 Construction Security / Fencing

Temporary Heras fencing or hoarding will be provided during the construction phase.

2.4.7 Construction Water Demand

Water supply during the construction phase may be imported to site via bowsers should the need arise (i.e., for dust-control measures).

2.4.8 Resource Waste Management Plan (RWMP)

A RWMP will be submitted at design stage which will comply with the "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" published by the EPA in 2021 and will ensure that all material is disposed of using licensed waste disposal facilities and contractors in accordance with regulatory requirements.

2.4.9 Construction Sequence

Prior to the commencement of construction, a contractor-specific Safety Risk Assessment will be prepared by the construction contractors. The following provides a summary of the scope of works for the proposed development.

- Temporary construction facilities and site set up.
- Site enabling and preparation Infrastructure construction.
- Restoration of the Ducking Stool Jetty Amenity Area.
- Commissioning and handover

2.4.10 Construction Hours

Construction hours are anticipated to be as follows:

- 08:00 – 19:00 Monday to Friday
- 08:00 – 14:00 Saturday
- No work except for exceptional circumstances Sunday or Bank Holidays

2.4.11 Construction Abnormal Loads

There will not be any abnormal loads as a result of the construction of the proposed development.

2.4.12 Removal of the existing Timber Jetty and Slipway demolition

The original Timber Jetty will be safely disconnected and stripped out of all service lines and utilities serving the Jetty. The next step will be to dismantle deck boards, steel beams, and supporting beams. Extract existing steel piles and detached materials. The slipway concrete surfacing will be broken out using hydraulic breakers or saw cutting. Excavations and removal of sub-base material as required. Waste concrete to be removed offsite to an appropriate licensed facility. Exposed surfaces will be prepared for new construction.

3.0 PROPOSED DESIGN

This proposal sets out a high-quality riverside public marina and water-access facility, combining a realigned slipway/launch area with pedestrian amenities, landscaping, and parking to support recreation and local tourism. The design creates a safe, accessible and visually cohesive arrival point at the water's edge, with clear separation between vehicle manoeuvring and pedestrian use.

Overall, the proposal delivers a welcoming, functional and durable riverside facility that balances operational requirements (slipway and launching) with public amenity (seating, planting and views). The materials - concrete edges, paved promenade, timber/vertical marina facing, simple street furniture and native planting - creates a contemporary, low-maintenance finish suited to a riverside environment. The scope of works is as follows

- Removal of existing static timber jetty
- Construction of new static jetty with steel columns, steel beams, and precast concrete panels.
- Installation of steel jetty piles for floating and static jetties
- Construction of new floating jetties
- Demolition of existing concrete slipway
- Construction of new combined precast and in -situ concrete slipway
- Carpark works including earthworks and final surfacing.
- General site reinstatement and commissioning

3.1 Drainage

Foul Drainage

There will be no foul water generated as part of the development as there is no toilet facilities proposed.

Surface Water – Proposed

The proposed development incorporates a surface water drainage system around the jetty and associated parking areas. Surface runoff generated from the paved areas is intercepted by a network of 150 mm diameter perforated pipes laid around the perimeter of the parking bays and hardstanding areas. These pipes act as collector drains and are installed at an approximate depth of 1.2 m below ground level.

The parking bays are constructed using permeable paving, allowing rainfall to infiltrate through the surface and into the underlying granular sub-base. This reduces direct surface runoff and provides temporary storage before water enters the drainage network. The permeable paving forms a key element of the site's Sustainable Drainage System (SuDS).

Collected water is conveyed through the perforated pipe network towards strategically located inspection chambers, which provide access for maintenance and monitoring.

4.0 ENVIRONMENTAL CONSTRAINTS

This section summarises the receiving environment along with key environmental factors that should be considered during the construction phase.

4.1 Noise and Vibration

During the project, best available technology will be employed by the Main Contractor to minimise noise from the construction operations and shall comply with the BS5228:2009 "Noise and Vibration Control on Construction and Open Sites". The main contractor will deal with the immediate dangers to hearing etc. associated with high noise levels and the impact of same on construction operatives, by means of risk assessment and mitigation/precautionary measures and equipment, all pursuant to the current health and safety legislation. Current legislation limits, assessment period of 8 hours of one week. (Noisiest 8 hours likely to experience).

- Lower Action Value (LAV) – 80 dBA LEX,8, 135 dB Peak – Hearing Protection shall be made available, and information shall be provided.
- Upper Action Value (UAV) – 85 dBA LEX,8, 137 dB Peak – Use of Hearing Protection is mandatory, measures to eliminate the noise as much as possible shall be applied.
- Exposure Limit Value (ELV) – 87 dBA LEX,8, 140 dB Peak – Not to be exceeded Protection by ear plugs/muffs given by their Signal-to-Noise Ratio (SRN) or Noise Reduction Rating (NRR) is typically 20 – 30 dB Exposure = LEX,8 – (SNR – 10).

4.2 Air Quality

The greatest potential impact on air quality during the construction phase of the proposed developments is from construction dust emissions and the potential for nuisance dust. While construction dust tends to be deposited within 350m of a construction site, the majority of the deposition occurs within the first 50m which in this case does not contain any sensitive receptors.

Best practice procedures will include a dust minimisation plan to ensure the construction of the proposed development will not result in significant dust impacts upon the environment.

All environmental emissions are controlled according to established best practice, with ongoing monitoring on a regular basis.

The currently the air quality for County Cavan is recorded as 'good' with an air quality index of '2' (EPA Maps, 2025)

4.3 Soils, Geology and Hydrogeology

The soil underlying the Ducking Stools Jetty area comprise a mixture of clay, silt, sand, gravel and cobbles. Marine sediments are not, in themselves polluting substances. However, they can be a sink for contaminants that end up in our water amenity areas, mainly from anthropogenic sources such as sewage discharges, marine traffic, industrial wastewater and historically poor environmental management. The bedrock underlying the at the Ducking Stool Jetty is predominantly underlain by Drumgesh Shale Formation described as 'Dark shale, fine-grained limestone" as illustrated in the GSI Bedrock Geology of Ireland Map (100K). The bedrock aquifers underlying the Ducking stool are defined as Locally Important Aquifer (Lm) according to the GSI National Bedrock Aquifer Classification Map. This Aquifer is described as bedrock which is generally moderately productive.

General construction activities will require temporary storage of cement and concrete materials, oils, fuels paints etc. which have the potential to cause localised pollution.

All excavated soils will be classified appropriately prior to being disposed off-site to a licenced facility by a licenced contractor. All excavated materials will be visually assessed for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of possible contaminants in order to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be disposed of by a licensed waste disposal contractor.

Considering the above measures, the construction of the proposed development will not produce any significant impacts to soils, geology, or hydrogeology, and due to the highly localised extent of their impact (designated places within the site boundary) present no potential to interact with other cumulative developments.

4.4 Landscape and Visual Amenity

4.4.1 General Design Principle

The boundary treatment will be designed to integrate the existing marina with the local context.

4.4.2 Boundary Landscape

The boundary landscape will be an additional hard and soft landscaped public recreational open space.

4.5 Water Resources

The application site is located within the Erne Hydrometric Area (36), Catchment (36), Sub-Catchment (030) and the Erne Sub-Basin (100). Instream works will take place within the River Erne.

The EPA has classified the ecological status of the River Erne at points immediately upstream of the Erne Bridge as poor, and status downstream of the Erne Bridge and at the application site is moderate. Moderate status remains in the River Erne until it flows into the Upper Lough Erne. Under the requirements of the Water Framework Directive, this is unsatisfactory and all water bodies are obliged to meet good status within a specified time frame. The next target date for meeting the objectives is 2027. The EPA have not cited the main pressure on the River Erne at points downstream of Belturbet, however upstream of Belturbet the main pressure is cited as agriculture.

The site is within the Clones Groundwater Body and the current status of this waterbody is noted to be good. However, it is considered to be At Risk of not maintaining its good status. Within the application site itself, groundwater vulnerability is noted to be extreme. The EPA cite the main pressures on groundwater in this area as being agriculture, anthropogenic pressures and domestic wastewater pressures.

4.6 Population and Human Health

The subject site is located on the outskirts of Belturbet town. The latest census data (2022) indicates that the population of Belturbet was 1,610.

The primary potential impacts of the proposed development on human health would be increased air pollution, noise, or pollution of groundwater/watercourses as a result of the proposed development, and these potential impacts have been assessed below. Visual impact and traffic are also potential but less significant impacts (based on the nature of the development).

4.6.1 Noise Impact on Human Health

A variety of items of plant will be in use for the purposes of site preparation, installation of infrastructure, construction, installation, and other site works. There will be vehicular movements to and from the site that will make use of existing roads. Due to the nature of these activities, there is potential for generation of significant levels of noise, however, considering the distances between most construction activities and sensitive locations, the risk of significant impacts is considered low.

There is no item of plant that would be expected to give rise to noise levels that would be considered out of the ordinary or in exceedance of the levels in "Noise and Vibration Control on Construction and Open Sites".

It is concluded that there will be no significant noise impacts associated with the proposed construction works and therefore no specific mitigation measures will be required. Good practice measures are however outlined in *BS 5228 Code of Practice for Noise and Vibration Control on Construction and Open Sites* should be implemented on site as a matter of good practice.

The NPWS (2014) "Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters" should also be reviewed.

4.6.2 Air Impact on Human Health

There is the potential for dust emissions during the construction phase to impact nearby receptors. Using the UK Institute of Air Quality Management (IAQM) methodology it was determined that the surrounding area was of low sensitivity to dust soiling, human health, and ecological dust related impacts. Based on the scale and magnitude of the proposed development there is an overall low risk of dust impacts from the proposed works. No mitigation other than standard best practice measures are proposed for the construction phase. Impacts to air quality because of construction dust emissions are predicted to be short-term, localised, and imperceptible.

4.6.3 Soils, Hydrology and Geological Impact on Human Health

Excavation operations will cause temporary suspension and release of sediments at the loading sites. Marine works loading operations have been designed to minimise the disturbance and escape of material at the riverbed and during the removal through the water column. Proposed individual loading operations are of relatively short duration and intermittent in nature. It is envisaged that disposal operations will occur at the licenced facility.

5.0 LEGISLATION AND GUIDANCE

All parties, contractors and consultants working on this project shall be subject to the laws of Ireland and the various international/regional protocols and agreements to which Ireland is a party. If legislation is updated the latest version shall be followed. All relevant new legislation will be followed as appropriate. This document outlines most current legislation at the date of issue. It is the responsibility of the Contractor to ensure that they are up to date with the details of the latest iterations of legislation relevant to the project throughout the duration of the contract.

The Designer should be aware of all key environmental risks and associated measures set out within this CEMP, and the final detailed design should take due cognisance of these where relevant. The Contractor should set out the CEMP in a clear format and must address all key environmental risks and associated measures.

The Contractor must be aware of and comply with the legislation and guidance set out in this document, any specific planning conditions which may be associated with the proposed development, and other relevant documentation as prescribed by the Employer and planning authority.

5.1 Legislation

It should be noted that the appointed Contractor will be required to be aware of their obligations under legislation. Such legislation, includes, but is not restricted, to:

- Planning and Development Act, 2000, as amended 2017 (S.I. No. 20 of 2017), 2018 (S.I. No. 16 of 2018), 2020 (S.I. No. 92 of 2020), 2021 (S.I. No. 18 of 2021) and 2022 (S.I. No. 75 of 2022).
- Planning and Development Regulations 2001 to 2022.
- The European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. 477 of 2011), as amended, 2015 (S.I. No. 355 of 2015) and 2021 (S.I. No. 388 of 2021.
- Water Framework Directive (WFD): Directive 2000/60/EC of the European Parliament and Council establishing a framework for Community Action in the field of water policy, as amended.
- European Communities Environmental Objectives (Surface Waters) Regulations, 2009, S.I. No. 272 of 2009, as amended, 2012 (S.I. No. 327 of 2012), 2015 (S.I. No. 386 of 2015), 2019 (S.I. No. 77 of 2019).
- European Communities Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9 of 2010, as amended, 2016 (S.I. No. 366 of 2016).
- Waste Management Acts as amended.
- The Water Pollution Acts of 1977.
- The Wildlife Acts 1976 to 2021.
- Water Policy Regulations 2003, S.I. No. 722 of 2003, as amended, 2005 (S.I No. 413 of 2005), 2008 (S.I No. 219 of 2008), 2010 (S.I. No. 93 of 2010) and Amendment (No. 2) Regulations, (S.I. 326 of 2010) & EU Water Policy Regulations 2014 (S.I 350 of 2014) and 2018 (S.I. No. 261 of 2018).
- European Communities (Drinking Water) Regulations 2014, S.I. No. 122 of 2014, as amended 2017 (S.I No. 464 of 2017) and 2020 (S.I. No. 2184 of 2020).
- Guidelines on protection of fisheries during construction works in and adjacent to waters (IFI, 2016).
- Litter Pollution Act of 1997, as amended, 2017 (Bill 58 of 2017).
- Litter Pollution Regulations 1999, S.I. No. 359 of 1999).
- European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014), as amended 2019 (S.I. No. 233 of 2019).
- Waste Management (Facility Permit and Registration) Regulations 2007, S.I. No. 821 of 2007, as amended, 2008 (S.I. No. 86 of 2008), 2015 (S.I. No. 198 of 2015), 2019 (S.I. No. 250 of 2019).
- Waste Management (Collection Permit) Regulations 2007, S.I. No. 820 of 2007), as amended, 2015 (S.I. No. 197 of 2015), 2016 (S.I. No. 24 of 2016).

- Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended 2010 (S.I. No. 350 of 2010).
- Environment (Miscellaneous Provisions) Act 2011, as amended 2015.
- Waste Management (Hazardous Waste) Regulations, 1998, as amended, 2000 (S.I. No. 73 of 2000).
- Waste Management (Shipment of Waste) Regulations 2007, S.I. No. 419 of 2007.
- Waste Management (Movement of Hazardous Waste) Regulations, 1998 (S.I. No. 147 of 1998).
- European Communities (Shipments of Hazardous Waste Exclusively within Ireland) Regulations 2011, S.I. No 324 of 2011.
- European Communities (Transfrontier Shipment of Waste) Regulations 1994 (S.I. No. 121 of 1994); ● Waste Management (Transfrontier Shipment of Waste) Regulations 1998, as amended, 2014 (S.I. No. 861 of 2014).
- Waste Management (Registration of Brokers and Dealers) Regulations 2008, SI No. 113 of 2008.
- Waste Management (Prohibition of Material Disposal by burning) Regulations 2009, S.I No. 286 of 2009, as amended 2013 (S.I. No. 504 of 2013), 2017 (S.I. No. 599 of 2017), 2019 (S.I. No. 684 of 2019) and (S.I. No. 51 of 2022).
- European Communities (Waste Directive) Regulations 2011, S.I. No. 126 of 2011, as amended 2016 (S.I. No. 315 of 2016) and (S.I. No. 323 of 2020).
- European Waste Catalogue (EWC) and Hazardous Waste List 2002, 2015 and 2018.
- Waste Management (Food Waste) Regulations 2009, S.I. No 508 of 2009, as amended, 2015 (S.I. No. 430 of 2015).
- Protection of the Environment Act 2003.
- European Union (Properties of Waste Which Render It Hazardous) Regulations 2015, S.I. No. 233 of 2015, as amended, 2018 (S.I. No. 383 of 2018).
- Air Pollution Act, 1987 (Air Quality Standards) Regulations, 1987, as amended, 2002 (S.I. No. 271 of 2002), 2011 (S.I. No. 180 of 2011), 2016 (S.I. No. 659 of 2016).
- Air Pollution Act, 1987 (Emission Limit Values for use of Asbestos) Regulations, 1990, S.I. No. 28 of 1990).
- EC (Control of Emissions of Gaseous & Particulate Pollutants from Non-Road Mobile Machinery) Regulations 2007, S.I. No.147 of 2007, as amended, 2011 (S.I. No. 263 of 2011), 2012 (S.I. No. 407 of 2012), 2013 (S.I No. 417 of 2013), 2016 (S.I. No. 2016/1628).
- EU F Gas Regulations 2006, as amended, 2014, S.I. No. 517 of 2014, 2019 (S.I. No. 367 or 2019).
- Environmental Protection Agency Act 1992 (Noise) Regulations, 1994 S.I. 174 of 1994.
- Environmental Noise Regulations 2006, S.I. No. 140 of 2006.
- European Communities (Environmental Noise) Regulations 2018 (S.I. No. 549 of 2018.
- European Communities (Noise Emission by Equipment for use Outdoors) Regulations, 2001, S.I No. 632 of 2001, as amended, 2006 (S.I No. 241 of 2006).
- European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Amendment Regulations 1996, S.I No. 359 of 1996 and 2001, S.I No. 632 of 2001).
- Local Government (Planning and Development) Act 1963 (S.I. No. 28 of 1963), as amended 1993 (S.I. No. 12 of 1993).
- Noxious Weed Act, 1936, S.I. No. 38 of 1936.
- Noxious Weed Order, 1937, S.I. No. 103 of 1937.
- Flora (Protection) Order, 2015, S.I. No 356 of 2015.
- The Forestry Act, 1946, S.I. No. 13 of 1946, as amended, 2009 (S.I. No. 40 of 2009) & Forestry Act, 2014, S.I. No. 31 of 2014.
- Forestry Regulations, S.I. No. 191 of 2017, as amended 2020 (S.I. No. 32 of 2020).
- The National Monuments Act 1930, S.I. No. 2 of 1930, as amended, 2004 (S.I. No. 22 of 2004).
- European Union (Environmental Impact Assessment and Habitats) (Section 181 of the Planning and Development Act 2000) Regulations, 2013 (S.I. No. 403 of 2013), 2015 (S.I. No. 301 of 2015), 2019 (S.I. No. 418 of 2019); and,
- European Union (Environmental Impact Assessment and Habitats) (Environmental Impact Assessment) Regulations, 2018, S.I. No. 296 of 2018.

5.2 Industry Guidance

The Contractor should take due consideration of, and incorporate best practice guidance, including but not limited to the following:

- CIRIA (2001). C532. Control of water pollution from construction sites. Guidance for consultants and contractors.
- CIRIA (2006). C648. Control of water pollution from linear construction projects. Technical Guidance.
- CIRIA (2015). C741. Environmental Good Practice on Site.
- CIRIA (2015). C753. The SuDS Manual.
- Environmental Protection Agency (2021). 'Best Practice Guidelines for the preparation of resources & waste management plans for construction & demolition projects.

6.0 PROJECT ROLES & RESPONSIBILITIES

For the purposes of clarity, the roles, and responsibilities of the project team for the proposed development should be determined at the very outset of the Construction Stage of this project. These are typically performed by the Client, Engineer and Contractor as presented below. Specific details will be determined upon the Detailed Design and Contract stage.

6.1 The Client/Employer

Cavan County Council will be responsible for ensuring that competent parties are appointed to undertake the construction and that sufficient resources are made available to facilitate the appropriate management of risks to the environment.

6.2 Site Foreman

A Site Foreman will be appointed by the Contractor to ensure that the CEMP is effectively implemented. The Site Foreman will be a suitably qualified, competent, and experienced professional that would perform the necessary tasks, review environmental procedures, and consult with the members of the construction team and stakeholders as required. The Site Foreman will be responsible for:

- Ensuring that the CEMP and all relevant documents such as environmental control plans is developed, implemented, and maintained on site.
- Ensuring compliance with the Conditions of the Planning Permission.
- Ensuring the mitigation measure set out in the CEMP are implemented.
- Ensuring that construction occurs in accordance with the relevant environmental requirements and that such compliance is adequately recorded and documented.
- Conducting regular environmental inspections and compiling an environmental compliance report monthly; Attending site and stakeholder meetings as required.
- Keeping up to date with relevant environmental best practice and legislative changes.
- Ensuring all staff have undertaken adequate environmental inductions, awareness briefings and training.
- Dealing with environmental complaints; and
- Managing and responding to environmental incidents and ensuring that all incidents are recorded and reported in an appropriate manner.

6.3 Construction Director

The Construction Director will be responsible for the overall execution and organisation of all environmental related activities, as appropriate. Some responsibilities of the Construction Director will comprise the following:

- Overall responsibility for the implementation of the CEMP.
- Allocating the correct resources to ensure the successful implementation of the CEMP; and,
- Assisting in the management review of the CEMP for suitability and effectiveness.

6.4 Construction Manager

The Construction Manager is directly responsible to the Construction Director in assisting with the successful execution of the Proposed Development. The responsibilities of the construction manager in respect of the CEMP comprise the following:

- To report to the Construction Director on the on-going performance and development of the CEMP.
- To discharge his/her responsibilities as per the CEMP; and,
- To support and augment the Construction Management Team (CMT) through the provision of adequate resources and facilities for the duration of the implementation of the CEMP.

7.0 ENVIRONMENTAL MANAGEMENT PROCEDURES

7.1 General

The Contractor will be required to have a recognised environmental management system such as ISO 14001:2015 or be able to demonstrate that they are actively working towards implementing such a system.

The works Contractor will undertake the works in accordance with the provisions of the CEMP. The CEMP will be updated by the Contractor to address any subsequent planning conditions relevant to the proposed development and will be reviewed by the Employer and/or the Employer's Representative. The Contractor will review and add to the CEMP as appropriate and shall issue the updated CEMP. A record of the review and any recommendations will also provide (for review and approval by the Employer and/or the Employer's Representative) Environmental Control Plans (ECPs), which will be maintained and updated in accordance with the CEMP. ECPs will include (if applicable), but will not be restricted to:

- Air Quality Control Plan.
- Construction Noise and Vibration Control Plan.
- Pollution Prevention Control Plan.
- Traffic Management Control Plan; and,
- Soil Erosion and Sedimentation Control Plan.

7.2. Environmental Policy

Contractors shall have an environmental policy dated and signed by the most senior person in the company. The policy shall:

- Be appropriate to the nature, scale and environmental impacts of the organisation's activities, products, and services.
- Include a commitment to continual improvement in environmental performance.
- Include a commitment to comply with all applicable legislation and with other requirements to which the organisation subscribes which relate to its environmental aspects.
- Provide a framework for setting and reviewing objectives and targets.
- Be documented, implemented, and maintained.
- Be communicated to all persons working for or on behalf of the organisation; and be available to the public.

7.3. Environmental Aspects

Contractors are expected to use a qualitative approach to identify and evaluate potential environmental aspects along with any controls to prevent or mitigate environmental damage. A Control Measures Register for the Proposed Development has been provided in Appendix A.

7.4 Training, Awareness and Competence

The Contractor (and their sub-contractors) will be selected with due consideration of relevant qualifications and experience. The Contractor will be required to employ construction staff with appropriate skills, qualifications, and experience appropriate to the needs of the works to be carried out during construction.

A site induction will be provided to all construction staff before they commence work on site. Where appropriate, the Contractor will identify specific training needs for the construction workforce and will ensure that appropriate training requirements are fulfilled. A baseline level of environmental awareness will be established though the site induction programme. Site inductions will cover the following as a minimum:

- Introduction to the Environmental Manager.
- The requirements of the CEMP and consequences of non-compliance.
- The requirements of due diligence and duty of care.
- Identification of environmental constraints and potential impacts of the work.

- Procedures associated with incident notification and reporting including procedures for dealing with damage to the environment; and,
- The benefits of improved environmental and sustainability performance; and the potential consequences of departure from specified procedures, work instructions and method statements.

7.5 Meetings

Meetings will be held regularly to review the CEMP and all other Environmental considerations.

7.6 Monitoring and Inspections

For the duration of the contract, the environmental performance of the Contractor will be monitored through site inspections and audits. The programme for monitoring, inspections and audits shall be specified in the contract. The Contractor shall develop, implement, and maintain an Environmental Inspections and Monitoring Plan. Records of all inspections carried out should be maintained and all actions should be closed out in a reasonable time. If additional monitoring and inspections are required due to any subsequent planning conditions, these will be added to the CEMP.

7.6.1 Monitoring

A structured environmental monitoring programme will be implemented for the duration of the construction phase. Suitable monitoring programmes will need to be developed, implemented, documented, and assessed in accordance with the specification outlined in the CEMP.

The results of all environmental monitoring activities will be reviewed by the Environmental Manager on an ongoing basis to enable trends or exceedance of criteria to be identified and corrective actions to be implemented as necessary.

7.6.2 Inspections

Inspections of construction activities will be carried out by the Environmental Manager daily to ensure all necessary environmental measures relevant to the construction activities are being effectively implanted by construction staff, ensuring legal and contractual conformity.

7.6.2.1 Daily Inspections:

The daily inspections should include, but not be limited to, checking that:

- The site boundary is marked out and respected.
- All waste is appropriately stored and segregated.
- Waste skips are covered to prevent wind-blown litter.
- Drip trays are in place for all stored equipment and plant.
- All chemicals/fuels are stored with appropriate containment/bunds/cover.
- Construction noise is within permitted limits and does not create a nuisance.
- Dust does not create a nuisance; and
- Fencing/hoarding is secure.

7.6.2.2 Weekly Inspections

The inspections should include, but not be limited to confirming that:

- Daily checklists have been completed.
- Waste storage areas have been checked and there is no build-up of waste materials.
- Spill kits have been checked and contain all relevant materials.
- The performance of all pollution control equipment has been checked, and the equipment is working effectively.
- Noise reduction/monitoring equipment has been checked and is operating effectively.
- Control measures identified in Planning Conditions and the CEMP are adhered to.

7.7 Nonconformity and Corrective and Preventative Action

The Contractor shall establish, implement, and maintain procedures to deal with actual and potential non-conformities and for taking corrective and preventative action. Non-conformities may be identified through:

- Internal contractor audits.
- Audits by the Employer and/or the Employer's Representative.
- Audits undertaken by external certification bodies.
- Audits undertaken by regulatory authorities (Cavan County Council); and
- General observations.

The Contractor procedures shall define the requirements for:

- Identifying and correcting non-conformities.
- Mitigating the environmental impacts of non-conformities.
- Investigating non-conformities including identify root causes and implementing appropriate actions to avoid their reoccurrence.
- Evaluating the need for actions to prevent non-conformities and implementing appropriate actions designed to avoid their reoccurrence.
- Setting realistic timeframes for undertaking effective corrective and preventative actions.
- Recording the results of corrective and preventative actions taken; and
- Reviewing the effectiveness of corrective and preventative actions.

All actions identified should be appropriate to the nature and magnitude of the issue and the environmental impacts encountered.

7.8 Reporting

The Contractor will be required to submit a report, the frequency to be agreed with the Contractor and Employer and/or the Employer's Representative to the Employer and/or the Employer's Representative for review and approval. The report shall address the following as minimum:

- Summary of compliance with the CEMP including identification of any non-conformances.
- Interpretation of the results of ongoing monitoring.
- Detailed description of any issues and/or non-conformances identified during inspections and/or audits.
- Record of incidents and corrective actions (including Corrective Actions Reports as appropriate).
- Synopsis of environmental complaints received/queries raised by stakeholders; and
- Records of environmental training undertaken (as appropriate).

7.9 Environmental Records

The Contractor shall maintain records of all environmental documentation including monitoring, environmental compliance, test results, method statements and plans. All records will be kept up-to-date and be made available for audits, inspections, and periodical reporting. The Contractor will maintain the following environmental records (as a minimum) that will be made available for inspection to the Employer and/or the Employer's Representative and the relevant authorities if required:

- Management plans.
- Records of environmental incidents.
- Environmental reports.
- Records of environmental training.
- Register of environmental complaints.
- Corrective Action Reports.
- Environmental inspection and audit reports.
- All monitoring data.
- Waste and chemical inventories; and
- Health and Safety records.

8.0 GENERAL REQUIREMENTS

It is the responsibility of the Contractor to ensure compliance and to avoid and/or reduce significant adverse effects that have been identified at this preliminary juncture where practicable. Where the Contractor diverts from the methodologies and working areas outlined herein and/or defined in the granted planning consent and associated conditions that may be granted, it would be the responsibility of the Contractor to obtain the relevant licenses, permits and consents for any such changes.

8.1 Good Housekeeping

The Contractor will always employ a 'good housekeeping' policy. This will include, but not be restricted, to the following:

- General maintenance of working areas and cleanliness of welfare facilities and storage areas.
- Provision of site layout map showing key areas such as first aid posts, material storage, spill kits, material and waste storage, welfare facilities etc.
- Maintain all plant, material and equipment required to complete the construction work in good order, clean and tidy.
- Keep construction compounds, access routes and designated parking areas free and clear of excess dirt, rubbish piles, scrap wood, etc. at all times.
- Details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) will be provided at the boundaries of the working areas.
- Provision of adequate welfare facilities for site personnel.
- Installation of appropriate security, lighting, fencing, and hoarding.
- Effective prevention of oil, grease or other objectionable matter being discharged from the working area.
- Provision of appropriate waste management at each working area and regular collections to be arranged.
- Excavated material generated during construction will be reused on site as far as practicable and surplus materials/soils shall be recovered or disposed of to a suitably authorised waste facility site.

8.2 Site Compound

All Construction waste materials will be segregated onsite into the various waste streams, via. labelled dedicated skips and storage areas. Waste will be removed from site by a suitably permitted waste haulage contractor. Each waste haulage contractor must hold a current valid waste collection permit issued by the National Waste Collection Permit Office (NWCPO).

To support the construction phase, a temporary construction compound is proposed to be located at the entrance of the site. The contractor's site compound layout will include the following:

- Temporary site accommodation incorporating management and engineers' cabins, WC facilities, canteen, and drying room facilities.
- Primary materials storage including containerised units and lock ups for tools and equipment.
- Waste storage and recycling area either within or adjacent to compound.
- Parking for key management and staff.

8.3 Hours of Working

8.3.1 Core Working Hours

Construction hours are expected to be as follows:

- 08:00 – 19:00 Monday to Friday
- 08:00 – 14:00 Saturday
- No work except for exceptional circumstances Sunday or Bank Holidays

8.3.2 Start-up and shutdown

The Contractor may require a period of up to one hour before and one hour after core working hours for start-up and shutdown

activities in working areas. Activities permitted may include deliveries and unloading of materials, movement of staff to their place of work, maintenance and general preparation works. The use of plant machinery likely to cause disturbance, will not be permitted outside of the core working hours.

8.3.3 Additional working hours

It may be necessary in exceptional circumstances to undertake certain activities outside of the construction core working hours. Any construction outside of the construction core working hours will be agreed by the Contractor in advance with Cavan County Council and scheduling of such works shall have regard to nearby sensitive receptors.

In the case of work required in an emergency or which if not completed would be unsafe or harmful to workers, the public or local environment, Cavan County Council will be informed as soon as reasonably practicable of the reasons and likely duration and timing (outside of the core working hours).

8.4 Security

Security will be the responsibility of the Contractor- who will provide adequate security to prevent unauthorised entry to or from the site. The following measures may be used to prevent unauthorised access:

- Install CCTV and security systems where required.
- Consult with neighbouring properties and local crime prevention officers including Cavan County Council and A Garda Siochana on site security matters where required.
- Prevent access to restricted areas and neighbouring properties by securing equipment on site such as ladders
- When there is no site activity, close and lock site gates and set appropriate site security provisions as required.

8.5 Silt Fence

It is proposed to install Silt Fence for the duration of the construction works on land. Silt fencing consists of two basic components, the geotextile fabric and the support posts. The fabric must be trenched-in and backfilled, and the soil compacted around it. Then the posts are sunk. Posts can be either steel or wood. The Silt fence is designed to intercept and detain stormwater run-off, trapping harmful silt through settlement and filtration before it leaves the site.

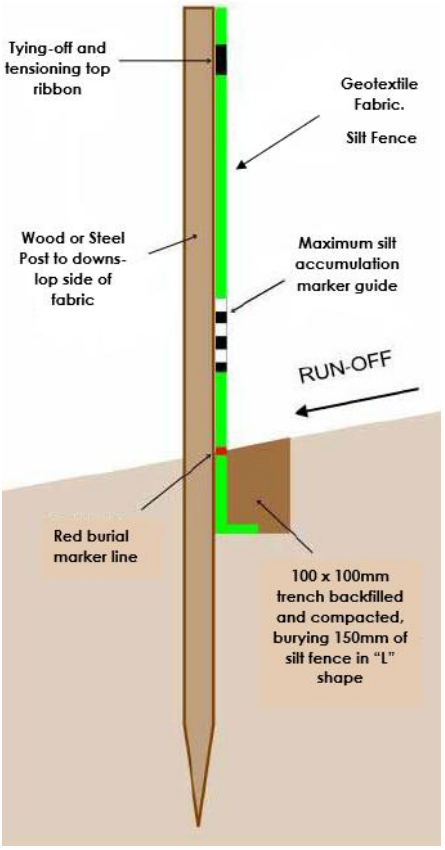
The Contractor will install the silt fence as per the below specification and diagram.

8.6 Silt Curtain

If necessary, a Silt Curtain will be installed to manage sediment, preventing its spread from the restoration works into the local watercourse, in this case River Erne. The Silt Curtain will hang vertically in the water, creating a physical barrier to capture silt and allow it to settle, with a floating component to keep the barrier upright and a weighted bottom to keep it in place.

Silt Fence Specification.

1. Silt fences sections should be continuous and transverse to the expected flow. The silt fences should follow the contours of the site as closely as possible. Place the fence such that the water cannot runoff around the end of the fence, extending the ends upslope enough to allow the water to pond behind the fence.
2. A trench shall be excavated approximately 100mm wide and 100mm deep on the upslope side of the proposed silt fence location.
3. Bury bottom 150mm of the silt fence to the red burial marker in a "L" configuration in the trench so that no flow can pass under the silt fence. Backfill the trench and compact soil over the geotextile so that the compacted soil fills the trench.
4. Compaction prior to installing posts is generally recommended. Compact the back-fill soil immediately next to the silt fence geotextile. Compact the upslope side first, and then the downslope side. The soil adjacent to the buried silt fence geotextile shall be compacted to achieve no less than 50% of its original insitu strength, unless otherwise specified.
5. When joints are unavoidable, the fabric shall be spliced together only at a support post, with a min. 300mm overlap, and securely sealed so that there are no gaps, voids or other loss of integrity of the barrier, ideally by wrapping the overlap around the post.
6. Place the posts tight to the downslope side of the silt fence at 1.50m spacing. Drive posts a minimum of 500mm into the ground. Increase depth to 600mm if fence is placed on a slope of 3:1 or greater. Note 2 - Where 500mm depth is impossible to attain, posts should be adequately secured/braced to stop overturning of the fence due to sediment loading.
7. Fasten the filter fabric securely and taut to the upslope side of the posts using top ribbon, wire/cable ties threaded through the silt fence, or 30mm long extra wide head galvanised clout nails (the fabric shall not be stapled to existing tress). Where required, tighten top edge of fabric by looping top ribbon over posts, and stain/brace posts to maintain fence tension and stability.



8.6.1 Silt Fence Maintenance

The following measures should be carried out to maintain the silt fence.

- The contractor shall inspect all temporary silt fences immediately after each rainfall, and at least daily during prolonged rainfall. The contractor shall immediately correct any deficiencies.
- The contractor shall also make a daily review of the location of silt fences in areas where construction activities have altered the natural contour and drainage runoff to ensure that the silt fences are properly located for effectiveness. Where deficiencies exist, as determined by the engineer, additional silt fence shall be installed as directed by the engineer.
- Repair damaged or otherwise ineffective silt fences or replace promptly.
- Either remove sediment deposits when the accumulation reaches one third the height of the exposed fence or install a second silt fence as directed by the engineer.
- The silt fence shall remain in place until the engineer directs in to be removed. Upon removal, the contractor shall remove and dispose of any excess sediment accumulations, dress the area to give it a pleasing appearance, and

vegetate all bare areas in accordance with contact requirements.

- Removed silt fence may be used at other locations provided the geotextile and other material requirements continue to be met to the satisfaction of the engineer.

Note 1 - Poor compaction is one of the main causes of silt fence failure. Installed posts may interfere with compaction by large equipment adjacent to the silt fence. Compaction is commonly accomplished with the front wheel of the tractor, skid steer, roller or other device, as well as with manual tamping or other manual means, taking care not to damage the silt fence.

Note 2 - If a silt fence is to be constructed across a ditch line or swale, the fence length must be sufficient to eliminate end flow, the plan configuration shall resemble an arc or horseshow with the ends orientated upslope and post spacing a maximum of 1.0m.

8.7 Hoarding and Fencing

Existing boundary fencing will be maintained throughout. Hoarding or fencing will be established around each of the working areas before any significant construction activities commence in that working area.

8.8 Water Quality and Monitoring

During the construction works there will be ongoing visual inspection monitoring of the River Erne for any visible signs of pollution (suspended solids, silt, hydrocarbon sheen and or other products). If any evidence of pollution is evident then immediate corrective action will be taken to eliminate the source of the pollution.

8.9 Services and Utility

Site services shall be installed as part of the works. Working areas will be powered by mains supplies or diesel generators where an electrical supply is not available. The Contractor will be responsible for undertaking their own service to establish the full extent of underground services prior to the commencement of construction to support any surveys already undertaken as part of early design work and statutory consent applications.

8.10 Lighting

The following lighting measures have been recommended. These measures will protect both otters and the seven species of bats that were recorded commuting and foraging within the vicinity of the application site.

It is recommended that outdoor lighting is limited in the car parking area and where lighting is required, luminaire design will be extremely important to achieve an appropriate lighting regime. Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires. This is taken from the most recent BCT Lighting Guidelines (BCT, 2023). It is important that the client checks that any outdoor lighting meets the following guidelines:

- Consideration of a Smart Lighting System where lighting only comes when human activity is detected in the car park, thereby reducing unnecessary lighting particularly during the later hours of the night when there is little or no human activity.
- No lighting should be erected within 25m of the River Erne.
- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp-cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component of luminaires. A 2200 - 2700 Kelvin luminaire appears as a warm yellow due to the reduction in the stark blue light associated with higher Kelvin values (e.g. 4000 Kelvins).
- The "warmer" the light, the less of an impact on nocturnal wildlife. The progression of LED technology means that the majority of luminaires are available at 2700 Kelvins and 2200. Therefore, it is recommended that such luminaires (i.e. 2200 Kelvin) are standard for "biodiversity areas". The lower the Kelvin level the more Yellow the light appears.

- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats.
- Waymarking inground markers (low output with cowls or similar to minimised upward light spill) to delineate path edges, if required, for pedestrian zones within the proposed development area should be used.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ration, and with good optical control, should be considered.
- Luminaires should always be mounted horizontally, with no light output above 90o and/or no upward tilt.
- Where appropriate, external security light should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow (e.g. 1-2 minute timer).
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

Any external lighting for the proposed development should strictly follow the above guidelines and these should be strictly implemented during construction and operation phase of the proposed development. It is also recommended that this system is motion sensor to ensure that it is off when there is no human activity in vicinity of the proposed development site.
If lighting is deemed necessary, then the final lighting design is required to be review and signed off by a bat specialist.

8.11 Reinstatement of Working Areas on Completion

The Contractor will reinstate all working areas as work proceeds during construction. All plant, equipment, materials, temporary infrastructure, and vehicles will be removed at the earliest opportunity and the surface of the ground restored as near as practicable to its original condition.

On completion of construction works the Contractor will ensure that all waste and potentially polluting material is removed from the site and is disposed/recovered of using appropriately authorised contractors as per the RWMP (The Contractor shall, as appropriate, undertake rehabilitation of site compound and other areas no longer to be used by the Contractor. Following site clearance and rehabilitation Cavan County Council or Cavan County Council Representative will undertake a final inspection of the site. Any environmental issues identified during the final inspection will be raised with the Contractor. Mitigation measures and timeframes for completion will be agreed between the Contractor and the Employer's Representative in line with agreed procedures prior to final sign off.

8.12 Health and Safety

The Contractor would be required to ensure all relevant health and safety, fire safety and security requirements are in place prior to the commencement of construction and in accordance with the relevant legislation requirements in addition to the specifications of Cavan County Council. Relevant Irish and EU health and safety legislation will be complied with at all times by all construction staff and personnel during construction. Further, the Contractors would also have to ensure that all aspects of their works comply with good industry practice and all necessary consents, licenses and authorisations have been put in place for the proposed development.

8.13 Integrated Pest Management (IPM)

An Integrated Pest Management (IPM) to be established in accordance with best practice within the guidelines for the campaign for responsible rodenticide use (CRRU Ireland – Wildlife Aware). Rodent pest control technicians will have completed their training and have been included on the register of 'pest management trained professional users' (PMUs) maintained by the Department of Agriculture Food and the Marine are fully equipped to implement best practice in the delivery of rodent pest management services, based upon consideration of the risk hierarchy and implementation of an Integrated Pest Management (IPM) approach. Records of the conclusions and decisions reached by PMUs and by professional users on site will be maintained for management purposes and to facilitate auditing and compliance inspections by regulatory authorities.

8.13.1 Building Site

Rats may be living in hedges, on the banks of a nearby river, in old drains etc. In the first instance it should be ascertained if the land is infested, and if so, the land should be disinfested before building operations commence. The following should be carried out: (a) All refuse should be removed from site. (b) Old drains and other disused pipes should either be filled with concrete or alternatively dug out and the junctions with working drains sealed. (c) Old foundations, cesspits, cavities, etc., should be backfilled with suitable hardcore, well consolidated and covered with a layer of concrete.

8.13.2 Drains

Surface water pipes discharging into a watercourse should be fitted with an anti-flood flap valve at the outlet.

8.13.3 Hygiene

It is essential that a good standard of hygiene be maintained on site during the course of construction if rodents are not to be attracted to it. (a)Waste food, empty food tins, and other waste which might attract rodents should be stored in bins with tight fitting lids. (b)Accumulations of old timber, brick sand debris, provide harbourage for rodents and should be cleared away as quickly as is possible. (c)Stocks of building material should be neatly stored.

9.0 EMERGENCY RESPONSE PLAN

The contractor shall establish, implement, and maintain procedures to identify and manage potential environmental emergency situations and potential accidents. The contractor shall respond to actual emergency situations and prevent and mitigate adverse environmental impacts.

The contractor should periodically test, review and update emergency preparedness and response procedures.

9.1 Key Requirements

During construction accidents, incidents and emergencies that have an environmental impact may occur. In the event of an emergency, the first response is to locate the source of that which is giving rise to the environmental impact where appropriate and stop continuation of the situation, followed by the containment, control and mitigation of the situation. The Emergency Response Procedure will be displayed within the Site Office / compound. A copy of the Material Safety Data Sheets for all the chemicals used on the project site will also be kept at the site office. The main objectives of the Emergency Response Plan are to:

- Ensure that all means are available to contain the consequences of an accidental spill, fire, or release of oil/fuel.
- Ensure that employees are suitably trained to respond to fire and spill.
- Ensure that proper reporting takes place; and
- Ensure that proper investigation is undertaken.

All contractor personnel and sub-contractors will be instructed and rehearsed, as appropriate, in the requirements of the emergency response procedure. Following control of an incident or emergency, an investigation will be conducted, and corrective actions identified and addressed. The Contractor's Environmental Manager will verify the close out of environmental related actions and notify the Employer and/or the Employer's Representative of any emergency.

9.2 Emergency Incidents

Emergency incidents are those occurring that rise to significant negative environmental effects including but not limited to the following:

- Any malfunction of any mitigation measure and/or environmental protection system.
- Any emission that does not comply with requirements of the contract.
- Any circumstance with potential environmental pollution; or
- Any emergency that may give rise to environmental effects (e.g., significant spillages or fire outbreak).

9.3 Spill Contingency Plan

The main causes of contamination can occur through:

- Spillage of hazardous material including fuel oils, waste materials or chemicals.
- Spillage of wastewater sewage and other liquid effluents; and
- Spillage of contaminated wash down water with oils, chemicals etc from vehicles, equipment, and machinery.

Prior to commencing activities on site, Contractors should develop, implement, and maintain a Spill Contingency Management Plan.

9.4 Emergency Incident Response Plan

The Contractor will be required to develop an Emergency Incident Response Plan. The Plan will contain emergency phone numbers and method of notifying local authorities, statutory authorities, and stakeholders. The Plan will include contact numbers for key personnel. The Contractor will ensure that all staff and personnel on site are familiar with the emergency requirements.

In the case of work required in an emergency, or which if not completed would be harmful or unsafe to workers, the public or to the local environment, Cavan County Council will be informed as soon as reasonably practicable of the reasons and likely duration. Examples may include where the ground needs stabilising if unexpected ground conditions are encountered or equipment failure. In the event of an emergency incident occurring, the Contractor will be required to investigate and provide a report to include the following, as a minimum:

- A description of the incident, including location, type of incident and the likely receptor.
- Contributory causes.
- Negative effects.
- Measures implemented to mitigate adverse effects; and
- Any recommendations to reduce the risk of similar incidents occurring. Further, if any sensitive receptor is impacted, the appropriate environmental specialists will be informed and consulted with accordingly. Any response measures will be incorporated into an updated Emergency Incident Response Plan.

9.5 Emergency Access

The Contractor will be required to maintain emergency access routes throughout construction and identify site access points for the working area.

9.6 Extreme Weather Events

The Contractor will consider the impacts of extreme weather events and related conditions during construction. The CEMP should consider all measures deemed necessary and appropriate to manage extreme weather events and should specifically cover training of personnel and prevention and monitoring arrangements for staff. As appropriate, method statements should also consider extreme weather events where risks have been identified.

10.0 ENVIRONMENTAL MANAGEMENT AND CONTROLS

The Contractor will be required to have due regard to and incorporate any additional requirements where relevant from any planning conditions which may apply. The Natura Impact Assessment undertaken for this site has outlined a number of mitigation measures for the application site and should be read in conjugation with this report.

10.1 Construction Phase Mitigation

Pre-Construction and Construction

- Prior to the commencement of any site works, the applicant and the contactors must be made aware of the overall sensitivity of this site. They must be made familiar with the overall content of this NIS and they must be made aware of the mitigation measures contained in this NIS.
- Site preparation and construction must be confined to the development site only and should adhere to all the mitigation measures outlined in this NIS.
- Work areas must be kept to the minimum area required to carry out the proposed works and the area must be clearly marked out in advance of the proposed works.
- Any construction waste must be removed by a licensed contractor to a registered facility. Records of waste movement and disposal should be retained and provided to the Local Authority upon request. There must be no disposal or deposition of soil or excavated material along with riverbank, elsewhere in the SAC or in any other designated area.
- Site preparation and construction must conform to the Inland Fisheries Ireland Requirements for the Protection of Fisheries Habitats during Construction and Development Works at River Sites (www.fisheriesireland.ie) and The Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (IFI, 2016).
- Consultation with IFI regarding timing of works must be undertaken. Works must not take place in the closed season for salmonids, i.e., October to May unless otherwise approved by IFI. IFI must be notified prior to the commencement of works and regular inspections by IFI during all instream works must be undertaken.
- It is vital that no deterioration of water quality occurs in the River Erne or the watercourses that connect to it. To protect sensitive habitats and species, strict controls must be applied to erosion, sediment, and pollutant generation. This includes attenuation measures such as silt traps and geotextile curtains. The following best practice documents should be followed:
    - CIRIA (2005): Environmental Good Practice on Site (C692)
    - CIRIA (2001): Control of Water Pollution from Construction Sites (C532)
    - CIRIA (2000): Environmental Handbook for Building and Civil Engineering Projects (C512)
    - EPA (2015): List of Waste and Determining if Waste is Hazardous or Non-Hazardous
    - Environment Agency (2015): Technical Guidance WM3 – Waste Classification

Management of Fuel/Oil

Site management must include routine inspection of equipment, material storage areas and drainage features to ensure all protective measures are functioning correctly. The objective is to prevent accidental leaks and to ensure containment.

Appropriate fuel management for the construction of the project must include:

- Tanks and drums must be stored in secure, impermeable areas on flat ground and located at least 50 metres from the River Erne or any other watercourse, drain or gully.
- Fuel containers must be stored within secondary containment such as bunds for static tanks or drip trays for mobile stores. Chemicals must be bunded or stored in double-skinned containers capable of holding 110% of contents.
- All ancillary equipment, including hoses and pipes, must be retained within the bunded area.
- Taps, nozzles and valves must be fitted with locking mechanisms and inspected regularly for leaks or damage. Tanks and drums will be subject to the same checks.
- Where refuelling of plant is required, it must be undertaken only within a designated area of the temporary construction compound using a delivery fuel truck operated by trained personnel. Only authorised trained operators

will refuel plant.

- Rigid and articulated vehicles and all site vehicles (jeeps, cars and vans) must be refuelled off-site.
- Only mechanically sound plant must be permitted on site.
- All control and containment measures must be inspected and maintained. Bunds, gullies, pipework and oil interceptors must be cleaned and serviced regularly to ensure optimal performance.
- Emergency procedures and contingency plans must be in place prior to commencement of works. Spill kits containing booms and absorbent materials must be kept on site, checked regularly and replenished as required. All crews must be trained in spill response.
- For major spills, contact details for an appropriate emergency response service must be kept in the site office.

Management of Concrete

Concrete works will be required during construction of the mainland components. Wet concrete is silty and highly alkaline; preventing accidental release to surface or groundwater is essential.

The following mitigation measures will apply:

- A trained operator experienced in concrete handling must be present during pours. Works must be supervised by the Construction Manager, a suitably qualified engineer and the Environmental Manager/ECoW.
- Pour areas must be fully drained before works begin. No concrete shall be poured during prolonged or heavy rainfall or during periods of forecasted intense rain.
- Small volumes of washwater generated by cleaning hand tools, mixers or other plant must be retained on site, allowed to settle and neutralise, and only then released to ground. Settled solids must be removed and disposed of off-site.
- Concrete truck washout must not take place on site.

Excavations

All excavations must be supervised by a suitably qualified and experienced engineer. Method statements will be reviewed and approved before works commence.

- Bulk excavations will be undertaken during dry weather to minimise runoff. No excavation shall take place during heavy or severe rainfall
- Temporary cuts and excavations must be stabilised or supported as required. Where necessary, cut-off drains must be used to prevent water ingress or erosion.
- Temporary works must be designed to avoid interference with existing drainage regimes
- Plant and materials will be stored only within designated compounds and not positioned in a way that could surcharge existing or newly formed slopes.
- All excavated soils will be retained on site for reuse in bunding, landscaping and reinstatement. If soils or excavated material must be removed, it should be removed by a registered contractor to a registered site.
- Stockpiling of soil should be avoided as far as possible. No permanent stockpiles must remain after construction.
- Silt control measures must be in place before excavations begin. Temporary stockpiles will be placed on level ground at least 50 metres from the River Erne and any other waterbody or drain, with silt fences or similar measures installed on downgradient sides.

10.1 Dust and Dirt Control

Nuisance dust emissions from construction activities are a common and well recognised problem. Fine particles from these sources are recognised as a potential significant cause of pollution. The Main Contractor will monitor the air quality for the purposes of demonstrating that both nuisance dust and fine particle emissions from the site is adequately controlled and are within acceptable limits. The total dust emission arising from on-site operations associated with the proposed development shall, when measured at the site boundaries, not exceed 350 milligrams per square metre per day, averaged over 30 days. The necessary number and locations of the monitoring and recording stations for dust deposition shall be in accordance with the requirements of Cavan County Council (CCC) will be afforded access at all reasonable times in order to inspect, examine

and check apparatus and equipment used or required to carry out monitoring of dust. Dust and fine particle generation from construction activities on the site can be substantially reduced through carefully selected mitigation techniques and effective management.

10.1.1 Dust Mitigation Measures

The following are techniques and methods which are widely used currently throughout the construction industry to control dust and dirt emitting from the site, and which may be used in the development and will be detailed as part of the pre commencement Construction Management Plan:

- Hard surface roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads will be restricted to essential site traffic.
- Public roads outside the site will be regularly inspected for cleanliness and cleaned, as necessary.
- A regime of 'wet' road sweeping can be set up to ensure the roads around the immediate site are as clean and free from dirt / dust arising from the site, as is reasonably practicable. This cleaning will be carried out by approved mechanical sweepers.
- High level walkways and surfaces such as scaffolding can be cleaned regularly using safe 'wet' methods, as opposed to dry methods.
- Vehicle and wheel washing facilities can be provided at site exit where practicable. If necessary, vehicles can be washed down before exiting the site.
- Vehicles within the site will have their speed restricted, and this speed restriction must be enforced rigidly.
- Netting will be provided to enclose scaffolding to mitigate escape of air borne dust.
- Engines and exhaust systems should be maintained so that exhaust emissions do not breach stationary emission limits set for the vehicle / equipment type and mode of operation.
- Internal combustion plant should not be left running unnecessarily.
- Where possible fixed plant such as generators should be located away from residential receptors.
- The number of handling operations for materials will be kept to a minimum to ensure that dusty material is not moved or handled unnecessarily.
- The transport of dusty materials and aggregates should be carried out using covered / sheeted lorries.
- Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions.
- Material handling areas should be clean, tidy, and free from dust.
- Vehicle loading should be dampened down and drop heights for material to be kept to a minimum.
- Drop heights for chutes / skips should be kept to a minimum.
- Dust dispersal over the site boundary should be minimised using static sprinklers or other watering methods, as necessary.
- Methods and equipment should be in place for immediate clean-up of spillages of dusty material.
- No burning of materials will be permitted on site.
- Earthwork's excavations should be kept damp where necessary and where reasonably practicable.
- Cutting on site should be avoided where possible by using pre-fabrication methods.
- Equipment and techniques for cutting / grinding / drilling / sawing / sanding etc., which minimise dust emissions and which have the best available dust suppression measures, should be employed.
- Wet processes should be used to clean building facades if possible. If dry grit blasting is unavoidable then ensure areas of work are sealed off and dust extraction systems used.
- Prior to commencement, the Main Contractor should identify the construction operations which are likely to generate dust and to draw up action plans to minimise emissions. Furthermore, the Main Contractor should prepare environmental risk assessments for all dust generating processes, which are envisaged.
- The Main Contractor should allocate suitably qualified personnel to be responsible for ensuring the generation of dust is minimised and effectively controlled.
- At all times, these procedures will be strictly monitored and assessed. In the event of dust nuisance occurring outside the site boundary, movements of materials likely to raise dust would be curtailed and satisfactory procedures implemented to rectify the problem before the resumption of construction operations.

10.2 Surface Water & Groundwater Controls

The following mitigation measures will be adopted to protect the River Erne which runes adjacent to the north of the Site Boundary. These measures will be adopted during construction and in particular during the construction of the carpark area:

- The Silt fence will be placed close to waterbody to minimise silt loss. These should be inspected and cleaned regularly.
- Weather conditions will be considered when planning infilling and agricultural operational activities to minimise the risk of run off from the site.
- Plant wholly operated within the development site may only be refuelled on-site. Mobile plant shall be refuelled on a hardstanding.
- Re-fuelling of all other plant and equipment and the addition of hydraulic oil or lubricants to vehicles/ equipment will take place off site.
- Emergency repairs of plant will be carried out by mechanics who will use appropriate drip trays and oil catcher tanks to drain hydraulic, or oil lubrication, systems.
- All fuel, lubricants and other chemical storage tanks will be adequately bunded to protect against spillage. Bunding will be impermeable and capable of retaining a volume equal to 1.5 times the capacity of the largest tank. All necessary precautions will be taken to ensure that oils and fuels used in the operations are stored in a secure place. All waste oil will be removed from the site and disposed of to the satisfaction of the planning authority.
- All hydrocarbons, chemicals, oils, etc. shall be stored in a dedicated bunded area at least 30m from watercourses and capable of storing 110% of the container/tank capacity.
- A drip tray will be used beneath the fill point during refuelling operations to contain any spillages that may occur. The vehicles and equipment will not be left unattended during refuelling. Spill kits and hydrocarbon absorbent packs will be stored in the cab of each vehicle and operators will be fully trained in the use of this equipment.
- No hydrocarbons will enter surface waters from vehicle refuelling, maintenance, waiting or parking.
- Sufficient oil absorbent material will be available to cope with oil or hydraulic fluid loss equal to the total content of the largest item of plant.
- The generation of runoff from stockpiles of soils, excavated during construction, will be prevented from entering watercourses by buffer distances and the silt fence.
- The site will operate under an Environmental Management System
- All required pollution prevention measures will be implemented at the site.
- All plant and machinery will be serviced before being mobilised to site, and regular leak inspections will be completed during the infilling works.
- No plant maintenance will be completed on site, any broken-down plant will be removed from site to be fixed.
- Site operatives will be trained in the correct use of the spill kits.
- The operator will complete environmental monitoring, including local groundwater and surface water monitoring.

Incidents of surface or groundwater pollution, or incidents that may result in surface or groundwater pollution, shall be notified to the Cavan County Council without delay.

In the event that any analyses or observations made on the quality or appearance of the surface water during inspection, should indicate that contamination has taken place the following procedure will take place:

- An immediate investigation to identify and isolate the source of the contamination.
- Put in place measures to prevent further contamination and to minimise the effects of any contamination to the environment.
- Notify Cavan County Council within 24 hours of site manager becoming aware that contamination has occurred.

Surface Water & Groundwater Protection Strategy

A hierarchical approach will be applied to the protection of surface water and groundwater during the construction phase, following the principles of:

Avoid → Control → Monitor → Respond

1. Avoid (Prevention of Risk at Source)

The primary objective is to avoid the generation of pollutants and minimise the risk of contamination at source.
The following measures will be implemented:

- All works will be planned to minimise disturbance to soils and sediments, particularly in proximity to the River Erne
- Instream works will be limited in duration and extent where practicable
- Construction activities will be scheduled to avoid periods of heavy rainfall where feasible
- Plant and machinery will be inspected prior to mobilisation to ensure they are free from leaks and in good working condition
- No storage of fuels, oils or chemicals will occur within 50m of the River Erne
- Refuelling will only take place in designated areas within the site compound on impermeable surfaces
- Concrete works will be carefully managed to prevent discharge of alkaline materials to the water environment

2. Control (Containment and Mitigation Measures)

Where risks cannot be avoided, appropriate control measures will be implemented to contain potential pollutants.
These will include:

- Installation of silt fences and, where required, silt curtains to prevent sediment migration to the River Erne
- Use of bunded storage areas for fuels, oils and chemicals (minimum 110% capacity)
- Installation of a Class I petrol interceptor for surface water drainage
- Use of drip trays beneath stationary plant and during refuelling operations
- Storage of materials and stockpiles at least 50m from watercourses, with appropriate runoff controls
- Immediate availability of spill kits, absorbent materials and containment booms on-site
- Designated washout and cleaning procedures to prevent contaminated water discharge

3. Monitor (Inspection and Verification)

A structured monitoring regime will be implemented to ensure that control measures remain effective.
This will include:

- Daily visual inspections of the River Erne during active construction works
- Monitoring for:
    - Increased turbidity
    - Suspended solids
    - Hydrocarbon sheen
    - Any visible discolouration or contamination
- Daily inspection of fuel storage areas, bunds and refuelling locations
- Weekly inspection of all drainage infrastructure, silt control measures and pollution prevention systems
- Increased monitoring frequency during:
    - Heavy rainfall events
    - High-risk construction activities (e.g. piling, excavation, concrete works)

All monitoring activities will be recorded and maintained on-site.

4. Respond (Incident Management and Corrective Action)

In the event of an environmental incident or evidence of pollution, works in the affected area will be stopped immediately and the source of contamination will be identified and isolated. Appropriate containment measures, such as spill kits, booms or temporary bunding, will be deployed to prevent further impact. Corrective actions will be implemented prior to the resumption of works, and the incident will be recorded and fully investigated. Cavan County Council will be notified as required, and all relevant procedures will be reviewed and updated to prevent recurrence.

10.3 Instream and waterside Works

- All works shall be undertaken in accordance with Inland Fisheries Ireland (IFI) guidance and relevant Irish environmental legislation.
- No instream works shall be carried out during the closed season for instream works. (October 1st to June 30th). IFI will be notified prior to works taking place. Instream works shall be minimised and restricted to the shortest practicable duration.
- Works shall be programmed, where possible, outside sensitive fish spawning and migration periods, in consultation with IFI.
- A suitably qualified Environmental Clerk of Works (ECoW) shall oversee works adjacent to and within the River Erne.
- Areas of instream work shall be isolated, where practicable, using appropriate containment measures such as silt curtains and fences.
- Silt and sediment control measures shall be installed prior to commencement of works and maintained throughout the construction phase.
- Any dewatering effluent shall be treated as necessary prior to discharge to prevent sediment release to the river.
- No concrete, cement washings, fuels, oils or other deleterious substances shall be permitted to enter the watercourse.
- Refuelling, plant maintenance and chemical storage shall be undertaken in designated areas away from the river and surface water drainage systems.
- Spill kits shall be available on site at all times, and all personnel shall be trained in spill response procedures.
- All plant and machinery operating near the river shall be regularly inspected for leaks and maintained in good working order.
- Excavated material, construction waste and stockpiles shall be stored away from the river and protected from erosion and runoff.
- Existing drainage systems shall be protected during construction, and all new drainage infrastructure shall incorporate appropriate sediment and pollution control measures.
- Vegetation clearance shall be minimised and undertaken in accordance with ecological recommendations and seasonal restrictions.
- Measures shall be implemented to prevent the introduction or spread of invasive species, including adherence to Check-Clean-Dry biosecurity procedures.
- Lighting associated with the development shall be designed to minimise light spill onto the river corridor and adjacent habitats.
- Water quality shall be monitored during high-risk construction activities, and works shall cease if significant pollution or excessive turbidity is observed.

11.0 CONCLUSION

This Construction Environmental Management Plan (CEMP) outlines the environmental management measures that will be implemented during the construction phase of the proposed development to protect the surrounding environment, with particular emphasis on safeguarding the River Erne and associated ecological receptors. The measures described herein are designed to prevent pollution, minimise disturbance to habitats and species, control sediment and runoff, and ensure compliance with all relevant environmental legislation, planning conditions and best practice guidance.

Through the implementation of the specified mitigation measures, environmental monitoring procedures, and emergency response protocols, the construction works can be undertaken in a manner that avoids significant adverse effects on water quality, fisheries, biodiversity, and the wider receiving environment. Responsibility for the implementation of this CEMP rests with the Contractor, under the supervision of the Environmental Clerk of Works (ECoW) and the Project Team.

The CEMP shall remain a live document throughout the construction phase and shall be reviewed and updated as necessary to reflect changes in site conditions, construction methodologies, or regulatory requirements. Subject to the full implementation of the measures set out in this plan, the proposed works can be completed with no significant residual environmental impacts.

APPENDIX A

CONTROL MEASURES REGISTER FOR THE PROPOSED DEVELOPMENT

Document Type : Register For Proposed Development at the Ducking Stool, Belturbet Co.Cavan

Document Title: Environmental Controls Register

Responsible Department: Cavan County Council - The Ducking Stool

Document Number: EMS 001 January 2026

Area of Activity	Aspect	Probability	Severity	Significance	Description of impact	Control Measures	With Controls			Site Specific Controls
							Probability	Severity	Significance	
The Ducking Stool										
Construction										
Works compound / Laydown areas / Site stores	Storage of waste materials	4	5	20	Run off (leachate), failure and windborne material from waste stockpiles affects land, water, air and causes nuisance.	All waste produced as part of the works will be segregated, secured and fully labelled with waste codes and description. General waste skips will be enclosed. Stockpiles of soils will be covered with plastic sheeting to prevent rainwater runoff where practical and safe to do so. Any contaminated waste is segregated and placed on plastic sheeting and covered to prevent leachate. All works associated with the development should be confined to the proposed development site and be done in full accordance with the plans and information submitted.	2	5	10	No additional measures. Skips will be located within the site compound area.
Works compound / Laydown areas / Site stores	Storage of materials	4	5	20	Run off (leachate), failure and windborne material from stockpiles and storage of material affects land, water, air and causes nuisance.	Material stockpiles will be covered with plastic sheeting to prevent rainwater runoff. Where possible, materials will be delivered to site in quantities required for a particular phase of works.	2	5	10	No additional measures.
Works compound / Laydown areas / Site stores	Storage of Chemicals/Oils	4	4	16	Incorrect storage of Chemicals/Oils affects land, water and air, by spillages, leakages.	Areas for Chemicals/Oils storage and Chemicals/Oils waste are to be located on bunded areas or in secure containers on hard-standing. All waste produced as part of the development will be segregated, secured and fully labelled with waste codes and description. Waste Chemicals/Oils packaging will be segregated and stored securely. All Chemicals/Oils Items are accompanied by a Safety Data Sheet. All SDS are to be held on site. Chemicals/Oils Assessments are kept on file, environmental impacts understood, communicated and attached to RAMS. Chemicals/Oils materials which can react are kept separated. All Chemicals/Oils storage areas will be well ventilated. Items which may be affected by water and weather are to be sheltered. Items are to be kept out of access routes to avoid damage.	3	3	9	No additional measures.
Works compound / Laydown areas / Site stores	Storage of fuels	4	5	20	Incorrect storage of fuels affects land, water and air, by spillages, leakages	All oils/ fuels will be stored in accordance with the EPA Guidance Note on Storage and Transfer of Materials (110% or double skinned and protected). Spill kits should be present in all plant machinery. Oil booms and oil soakage pads should be kept on site to deal with any accidental spillage.	2	5	10	No additional measures.
Works compound / Laydown areas / Site stores	Storage of plant and tools	4	4	16	Poor storage of plant leads to higher potential for leaks and spills to ground or watercourses.	Areas for plant storage are to be located on bunded areas or in secure containers on hard-standing. Plant and tools will be stored securely in stores or in locked compounds with appropriate bunding and/or drip trays employed.	3	3	9	No additional measures.
Offices / Welfare	Location of areas for site office and welfare	3	4	12	Poor management/ operation of toilet/ welfare and waste facilities (including septic waste collection) can result in vermin and nuisance from odour, visual impact and potential issues	Where possible site offices are connected to the mains via the permanent site supplies for water, sewage and electricity. Where this is not possible the foul waste will be removed regularly by competent waste contractors. Food waste will be placed in organic wheelie bins which will be enclosed and in good condition. They will be regularly emptied.	2	4	8	No additional measures.
Material use	Identification of materials to be re-used on site	3	5	15	Improper use of materials on site can potentially cause pollution of land and water.	All excavations proposed to be tested for suitability for re-use.	2	5	10	No additional measures.
Site works, excavations, land clearance construction, demolition	Contaminated land on site (if discovered)	3	5	15	Mismanagement of contaminated land can potentially damage surrounding environment (in particular ground contamination as well as potential risk to controlled waters). Incorrectly managed contaminated land causes potential pollutant pathways to be introduced. Failure to identify or to correctly classify contaminated land leads to impacts in the environment either on site or off.	Awareness training will be provided to the site team on what to do if suspected contamination is encountered. Any discovery is immediately highlighted to the site management team. Any material suspected to be contaminated is segregated and stored on plastic sheeting or within an appropriate impervious container and clearly labelled. Where possible the material is covered to prevent any leachate run off or airborne movements of contaminants.	2	5	10	No additional measures.
Site works, excavations, land clearance construction, demolition	Contaminated water on site (if discovered)	3	4	12	Mismanagement of contaminated water on site can lead to pollution of water courses. Contamination includes non-hazardous substances such as silt and substances which suppress oxygen content in water.	No excavation waters to be discharged to any watercourses. Awareness training given to the site team on what to do if suspected contamination is encountered. Any discovery is immediately highlighted to the site management team. Pollution prevention methods and appropriate movement / disposal of water will be put in place. Silt management will be put in place for any movements of water, this is in the form of silt fences, silt bags. If any trace of contaminants are identified the water will be sampled and if required removed as waste.	2	4	8	No additional measures.
Site works, excavations, construction, demolition	Waste generated on site	4	4	16	Impacts associated with the release of waste to the surrounding surface or ground water. Inappropriate removal of waste impacts the wider environment.	All road sweeping, excavations, and washing out of concrete containers activities are to be carried out in line with current best practice guidance. No silty water is to be discharged to drains, surface water or ground. Collection and disposal of liquid and solid waste is to be carried out via an authorised waste management company.	2	4	8	No additional measures.
Excavation works for the drainage works	Contamination of Surface water	4	4	16	Impacts associated with the release of silt to the surrounding surface.	The timing of excavations should be completed during dry weather. No works should be carried out during heavy rain. Works should be only be carried out after the silt fencing has been installed.	2	4	8	

Site works & plant usage	Dust / air borne substances / pollutants generated	4	4	16	Dust and emissions to air potentially contribute to degradation of local air quality.	Plant is turned off when not in use. Maintenance regime - Daily and Weekly inspections. Any problems are reported and actioned with the plant withdrawn from use during this time. Appropriate machinery is used for the task (i.e. appropriate size) Dust suppression will be employed when required. Hard surface roads will be swept to remove mud and aggregate materials from their surface while any un-surfaced roads will be restricted to essential site traffic. Any road that has the potential to give rise to fugitive dust will be regularly watered, as appropriate, during dry and/or windy conditions. Vehicles exiting the site shall make use of a wheel wash facility where appropriate, prior to entering onto public roads. Vehicles using site roads will have their speed restricted, and this speed restriction must be enforced rigidly. On any un-surfaced site road, this will be 20 kph, and on hard surfaced roads as site management dictates. Public roads outside the site will be regularly inspected for cleanliness and cleaned as necessary. Material handling systems and site stockpiling of materials will be designed and laid out to minimise exposure to wind. Water misting or sprays will be used as required if particularly dusty activities are necessary during dry or windy periods. During movement of materials both on and off-site, trucks will be stringently covered with tarpaulin at all times. Before entrance onto public roads, trucks will be adequately inspected to ensure no potential for dust emissions. At all times, these procedures must be strictly monitored and assessed. In the event of dust nuisance occurring outside the site boundary, movements of materials likely to raise dust must be curtailed and satisfactory procedures implemented to rectify the problem before the resumption of construction operations.	2	4	8	No additional measures.
Site works & plant usage	Noise generated	4	5	20	Noise emanating from activities onsite may result in nuisance (local residential/commercial) and/or breaches of conditions of local noise limits.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays 8am to 7pm Monday to Friday and 8am to 2pm on Saturdays. Plant and generators will not be left running when not in use. Any generators needed for prolonged periods of time are located away from residential and commercial properties wherever possible.	1	5	5	Continuous Noise Monitoring to be carried out
Site works & plant usage	Permitted working hours	3	5	15	Works outside permitted working hours cause nuisance to local population. Failure to abide by local authority regulations may result in interventions from regulators.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays 8am to 7pm Monday to Friday and 8am to 2pm on Saturdays. Noisy activities do not take place at weekends and construction activities do not take place outside the constructions site hours as stipulated by the Local Authority. Any complaints received are dealt with by the site team.	2	4	8	Continuous Noise Monitoring to be carried out
Site works, plant usage.	Vibration generated	3	4	12	Movement of heavy plant, deliveries, multiple vehicles and excavation activities cause the disturbance of local or migratory ecology and residential/business receptors due to excessive vibration levels.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays 8am to 7pm Monday to Friday and 8am to 2pm on Saturdays. Plant and generators are not left running when not in use. Any generators needed for prolonged periods of time are located away from residential and commercial properties wherever possible.	2	4	8	Continuous Noise Monitoring to be carried out
Excavations	Vibration generated - Earthworks	3	3	9	Earthwork activities cause the disturbance of residential/business receptors due to excessive vibration levels.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays 8am to 7pm Monday to Friday and 8am to 2pm on Saturdays. Plant and generators are not left running when not in use. Any generators needed for prolonged periods of time are located away from residential and commercial properties wherever possible.	2	6	6	Continuous Noise Monitoring to be carried out
Site works / plant usage / welfare areas	Light generated	3	3	9	Light emanating from activities onsite may result in nuisance (local residential/commercial) and/or breaches of conditions of local agreements.	Standard working hours during weekdays, limited hours on Saturdays and no works on Sundays or Bank Holidays 8am to 7pm Monday to Friday and 8am to 2pm on Saturdays. Any areas required to be lit during darkness hours are located away from residential and commercial properties. All lighting used is task based and diverted from areas of residential or commercial activities.	3	2	6	Continuous Noise Monitoring to be carried out
Site works, excavations, construction, demolition.	Increase in hardstanding / changes in permeability of surfaces	3	4	12	Drainage system/ surface water capacity could be overloaded which could result subsequent pollution.	Surface drainage prepared by the Engineers is incorporated in to the design. Drainage plans are available. Additional control measures include silt fences. During the construction works there will be ongoing monitoring of the local water courses for any visible signs of pollution (suspended solids, silt, hydrocarbon sheen and or other products). If any evidence of pollution is seen then immediate corrective action will be taken to eliminate the source of the pollution.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - site office	4	5	20	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Removal of office waste from site will be completed using authorised carriers approved by the NWCPO http://www.nwcpo.ie/permitsearch.aspx and disposal/recovery sites approved on the NWCPO Register http://facilityregister.nwcpo.ie/. Only approved persons can sign documentation. A copy is held on site in hard copy. A copy of the carrier's licence, broker's licence (if applicable) and the disposal site permit, licence or exemption is also held in hard copy on site. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - soil and stone	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste is segregated on site and tested where appropriate. Any spoil or material suspected of being contaminated would be quarantined and clearly signed. No soil and stone is to leave sites without accompanying lab test data. All disposal site permits are checked to ensure the facility is licenced/permitted to receive the relevant EWC code assigned to the soil and stone load. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - inert waste and non-hazardous	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Streams are recorded by the Contractor. Copies of waste collection permits are obtained and checked for validity on the NWCPO Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are kept in the site files. Copies of disposal site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/. The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. Any waste identified as inert (brick, concrete, glass, etc.) can be managed in the onward waste chain and re-used under waste codes of practice.	2	4	8	No additional measures.
Generation of waste	Waste streams generated on site - hazardous waste	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Copies of waste collection permits are obtained and checked for validity on the NWCPO Register http://www.nwcpo.ie/permitsearch.aspx . Hard copies are kept in the site files. Copies of recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register http://facilityregister.nwcpo.ie/. The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. No hazardous waste is mixed with non-hazardous waste or inert. The waste streams will be recorded by the main contract.	2	4	8	No additional measures.

Generation of waste	Waste streams generated on site - foul wastewater from construction workers.	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully within the Duty of Care chain have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste streams are identified prior to works commencing and during site works as appropriate. Streams are recorded by the contractor. Copies of carrier waste collection permits are obtained and checked for validity on the NWCPO Register **http://www.nwcpo.ie/permitsearch.aspx.** Hard copies are kept in the site files. Copies of disposal/recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register **http://facilityregister.nwcpo.ie/**. The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. No hazardous waste is mixed with non-hazardous waste or inert. All wastes will be segregated in line with the Waste Hierarchy. Hazardous waste is stored on bunds, in ventilated areas or on drip trays as appropriate. The waste streams will be recorded by the main contractor.	2	5	10	No additional measures.
Generation of waste	Waste Duty of Care requirements	4	4	16	Failure to follow the Waste Regulations results in environmental harm. Waste materials not managed carefully have the potential to cause short and long term environmental damage. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Waste will be stored in skips / containers of good condition. Skips / containers delivered to site which are in poor condition will be rejected. Waste will be stored securely within the site compounds. Waste will be managed in line with the Waste Hierarchy. Copies of waste collection permits are obtained and checked for validity on the NWCPO Register **http://www.nwcpo.ie/permitsearch.aspx..** Hard copies are to be kept in the site files. Copies of disposal/recovery site licences, permits or exemptions are obtained and checked for validity on the NWCPO Register **http://facilityregister.nwcpo.ie/**. The relevant EWC code is also checked on the permit. Hard copies are kept in the site files. The waste streams will be recorded by the main contractor.	2	4	8	No additional measures.
Concrete	Concrete use	4	5	20	Concrete and concrete water are high in pH which causes pollution of ground and groundwater, surface water and harms ecology. Mismanaged wet concrete has the potential to harm the environment.	Concrete and cement mixing activities will take place as far as possible from a watercourse or surface water drain, to reduce the risk of runoff entering a watercourse. Surplus dry concrete, cement and grout is collected and stored correctly within secure containment. Excess made up concrete will be sent back to the batching plant in the first instance.	2	5	10	No additional measures.

Concrete	Concrete washout process	4	4	16	Run off and arisings from concrete washout activities contains high pH pollutants which cause harm to ground and surface water.	Concrete mixing and delivery lorries should return to the batching plant for washout. Where this is not possible equipment, such as chutes, portable mixers, barrows, pump lines, shovels, etc. are washed out in a designated area that has been specifically designed to contain wet concrete/wash water Washout activities are not located near watercourses, boreholes or sensitive receptors. Effluent from washout is collected in a sealed system or container and not allowed to discharge to ground. Concrete washout is performed in an impermeable container such as a skip, plastic trough or specially constructed and lined washout pit. Evaporation or settlement methods are acceptable. In periods of heavy rainfall concrete washout skips/containers are covered to prevent excessive volumes or overflowing. The concrete washout area is inspected prior to use, lined, inspected during use and placed on hardstanding or impermeable protection which also includes provision to safeguard against run-off. Concrete washout water is then removed from site by certified waste collectors to approved disposal sites.	2	5	10	No additional measures.
Concrete	Use of shuttering (washing down)	3	3	9	Concrete and concrete water are high in pH which causes pollution of ground and groundwater, surface water.	Prefabricated or reusable shuttering required to be washed is managed on site. This run off has the potential to contain dilute amounts of shuttering lubricant and concrete residue. Any run-off from the washout process is captured either in a bunded area and removed by a waste collector approved by the NWCPO.	2	3	6	No additional measures.
Plant / vehicle use on roads	Mud, dust generated on shared access routes	3	3	9	Dust and mud create nuisance on local roads. Impact on local receptors.	Activities which produce dust and mud to be controlled on site as much as possible. Dampening down is employed at point source and for any stockpiles. Road sweeping to be employed where necessary to reduce dust and mud impacts. Silt fencing or ground profiling may be employed to prevent migration of silt which may form mud on roads.	2	3	6	No additional measures.
Plant / vehicle use on roads	Road sweeping	3	4	12	Incorrect management of road sweeping activities leads to environmental harm and a breach of legislation. Poorly executed road sweeping activities causes nuisance with regards to dust and mud on roads.	Ensure road sweeping activities are conducted by competent contractors with a clear scope of works. Coordination and consideration of local road-users is given where possible, for example, no road sweeping occurs on public roads during rush hours, school collection times, specifics applicable to the road and the site are accounted for.	2	4	8	No additional measures.
Foundations	Generation of arisings	4	4	16	Potential damage to surrounding environment (ground, groundwater and watercourses).	Arisings from foundation activities are stored securely and assessed prior to removal from the works area. If the nature of the material is wet containment or silt prevention methods are employed such as silt fencing, skips.	2	4	8	No additional measures.
Plant and tool usage	Spills and leaks from tools and plant	4	4	16	Poor maintenance of plant leads to higher potential for leaks and failures. Maintenance tasks increases risk of leaks and spills to ground or watercourse. Lack of preparation in spill response causes additional clean up and potential pollution events.	All plant delivered to site is inspected prior to first use by a competent person. Only modern, serviced plant is allowed on to site. Plant inspection checklists are carried out in. Daily and Weekly inspections are carried out. Plant maintenance regime is maintained. Any problems identified are reported and actioned (the plant is withdrawn from use). Any maintenance activities are undertaken off site where possible or in controlled areas where potential leaks and spills are contained and controlled. All works areas have a spill kit and plant is located near to spill kits at all times. Spill kits will be maintained, kept free from debris and dirt and water ingress. Spill response training and regular drills.	2	4	8	No additional measures.
Plant and tool usage	Storage of plant and tools	4	4	16	Poor storage of plant leads to higher potential for leaks and spills to ground or watercourse.	Areas for plant storage are located on bunded areas or in secure containers on hard-standing. Plant and tools are stored securely either in stores or in locked compounds with appropriate bunding, drip trays employed.	2	4	8	No additional measures.
Generators	Use and containment of fuel in mobile and static generators.	4	5	20	Poor storage and maintenance of generators leads to higher potential for leaks and failures. Maintenance tasks and refuelling increases risk of leaks and spills to ground or watercourse.	All generators delivered to site are inspected prior to first use by a competent person. Only modern, serviced plant is allowed on to site. Generators are located on hard-standing, within a bund or within their own secondary containment. Mobile generators located on drip trays. Inspections are carried out and generators are maintained by competent contractors. Any problems identified are reported and actioned (the plant is withdrawn from use). Spill kit located next to generator. Spill kits are to be maintained, kept free from debris and dirt and water ingress. Spill response training and regular drills.	2	4	8	No additional measures.
Fuel	Use of fuel (including refuelling of items).	4	4	16	Potential damage to surrounding environment in particular watercourse, groundwater or ground contamination.	Any diesel bowsers on site are controlled by authorised personnel and are kept closed and locked when not in use. When refuelling takes place on site either via the bowser, tanker deliveries or handheld fuel cans the operations are located within a controlled area and with the use of containment or drip tray/plant nappies. Spill kits made available and easily accessible to the working parties. Drip trays to be used under all static plant and fuel powered items in the works areas. Induction includes refuelling operations. All handheld fuel containers are returned to stores when not in use.	2	4	8	No additional measures.
Emergency conditions	Fire	3	5	15	Storage of combustible materials and mismanagement of hot works results in a major event and/ or result in a significant pollution event in the event of a fire.	No fires are permitted on site. All hot works are subject to Hot Work Permits. Fire extinguishers and fire marshals are present on site.	2	4	8	No additional measures.
Emergency conditions	Uncontrolled release of oil or other hazardous chemicals	3	5	15	Normal spill control measures overloaded resulting in pollution of controlled waters or ground.	All activities involving significant volumes of oil or hazardous chemicals are subject to RAMS.	2	5	10	No additional measures.