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EAST GALWAY ECO PARK

CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN (CEMP) FOR EAST GALWAY ECO PARK

Prepared for:

Galway County Council



Comhairle Chontae na Gaillimhe
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Abstract: This document comprises the Construction and Environmental Management Plan (CEMP) for the East Galway Eco Park, the purpose of which is to set out the key construction and environmental management issues associated with the proposed works. This plan will be developed further at the construction stage and on the appointment of the Contractor to the project.

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1. INTRODUCTION

This document is the Construction and Environmental Management Plan (CEMP) for the proposed East Galway Eco Park and has been prepared by Fehily Timoney and Company (FT) on behalf of Galway County Council (GCC) on a preliminary basis to accompany a Part 8 planning application being made by Galway County Council.

This document comprehensively sets out the construction and environmental management concerns associated with the proposed works, to ensure that during construction, the environment is protected and impacts on the environment are minimised. This CEMP will be adopted by the contractor who will be responsible for the appropriate execution of the proposed works as set out in this document.

1.1 General Introduction and Purpose

This CEMP sets out the key environmental management issues associated with the proposed works, to ensure that during the construction and operation of the development, the impacts on the environment are minimised.

1.2 The Client

Fehily Timoney & Company (FT) was commissioned by Galway County Council to provide consultancy services in respect of the proposed East Galway Eco Park.

1.3 The Site

The overall site is 58.3 hectares in extent and is located in the townlands of Killagh More, Ballybaun and Ballintober, approximately 2.5km southwest of Kilconnell village off the R348. The site is approximately 3.6 km north of M6 running from Athlone to Galway at its nearest point. The former landfill facility is accessible from the M6 through the L3416 road and the R348 road north from the site.

A list of major settlement situated in the wider region surrounding the site, and the distance and cardinal direction of this settlement from the site is provided below:

- Ballinasloe – 15.5km east of the site
- Aughrim – 10km southeast of the site
- Loughrea – 22km southwest of the site

The site was historically used as agricultural land, with some pockets of the being used for forestry. Greenstar constructed a landfill at the site in 2005. This landfill was operated from 2005 to 2012. GCC took over the operation of the site in 2015 at the request of the Environmental Protection Agency (EPA). GCC subsequently undertook an extensive programme of landfill cell development and remediation works at the site. This included the full capping of the landfill, the planting of approximately 9,000 native trees and the seeding of 20 ha of grassland, all of which were completed by 2019/2020.

The site currently contains the capped landfill, associated landfill infrastructure, extensive open areas and woodland, and a network of tracks that can be readily converted to amenity trails. The former landfill site is undergoing aftercare and is being managed by GCC in accordance with an Industrial Emissions (IE) licence enforced by the EPA (W0178-02).

A GIS Figure showing the Site Location is shown in Figure 1-1.





1.4 Overview Description of the Project

Galway County Council (GCC) seek consent for the development of an amenity and biodiversity park to be known as 'East Galway Eco Park' at the former East Galway landfill site situated at Killagh More, Ballybaun (E.D. Killaan), Ballintober (E.D. Killaan), Ballinasloe, Galway. The footprint of the development site is 58.3 hectares.

The former landfill site is undergoing aftercare and is being managed by GCC in accordance with an Industrial Emissions (IE) licence enforced by the EPA (W0178-02).

The proposed development will consist of:

- The erection of park entrance signage (11.0 m x 2.1 m and 5.0 m x 2.1 m) at the main entrance to the site.
- The development of road-markings, signage and a traffic barrier arrangement at the point the existing site access road enters the main body of the site, to prevent and minimize conflict between amenity park users and occasional landfill maintenance and aftercare related traffic.
- The installation of fencing to restrict access to former landfill maintenance and operation areas (total length of fencing – 3,825 m).
- The development of an on-site parking areas at a central area at the main body of the site, with 88 no. of bicycle parking spaces, 57 no. of car parking spaces including six no. electric vehicle charging spaces, three no. of accessible parking spaces, one no. accessible electric vehicle charging space and 24 no. electric vehicle ready charging spaces.
- The development of a circulation area for a mobile café (335 m² in area), adjacent to the on-site parking area.
- The development of a toilet and changing room facility on-site (principle dimensions – 12.2m x 3.0m x 2.5 m high).
- The development of an amphitheatre on-site to the rear of the parking and circulation areas (principle dimensions – 18.0 m x 20.0 m)
- The development of a dedicated activity zone at a central area on-site for the carrying out of a variety of recreational activities (4,500 m² in area)
- The development of a pump track at a central area on-site (principle dimensions – 60.0 m x 35.0 m, 2,100 m² in area.)
- The development of a fenced off dog park at a central area on-site (2,000 m² in area), with surrounding fencing and gated access 240 m in length
- The conversion of a network of existing tracks on-site to amenity trails. This network of amenity trails to be developed will interlink all of the proposed development components listed above. The following amenity trails will be developed on-site:
 - Adventure trail (Ca. 1.0 km in distance)
 - Picnic trail (Ca. 0.6 km in distance)
 - Small loop (Ca. 0.9 km in distance)
 - Main loop (Ca. 2.0 km in distance)
 - Perimeter loop (Ca. 3.6 km in distance)
 - Dome trail (Ca. 0.5 km in distance). This dome path will traverse the area of the existing landfill cap on-site.
- The development of an adventure/sensory play path with nature play elements on-site.



- The use of the proposed development site as an amenity and biodiversity park to be known as 'East Galway Eco Park.'



2. PROJECT DESCRIPTION

A description of the components of the Proposed Development is presented below.

Main Entrance Signage

Refer to Drawings P22-032-0300-0001 and P22-032-0300-0001.

The main entrance features will comprise 2 no. entrance signs. The primary sign on the west of the entrance measures 11.0m in length by 2.1m high. The secondary sign on the east of the entrance measures 5.0m in length by 2.1m high. The entrance signs shall comprise Corten steel panels with extruded stainless steel lettering attached. The lettering will be backlit by LED lights. The corten panels will be mounted atop gabion stone baskets. The Gabion baskets will be filled using recovered stone.

Site Access

Refer to Drawing P22-032-0400-0003.

The existing site access area comprises the following landfill associated infrastructure:

- Weighbridge
- Administration building
- Wheel wash
- Staff car parking
- Waste quarantine area
- Generator compound
- Maintenance shed
- Leachate storage tank
- Leachate Lagoon

Works are required to the site access area to ensure minimal interaction between the public and landfill maintenance and aftercare related traffic at this intersection.

The works to the site access area at the point the existing site access road enters the main body of the site will comprise line painting and traffic control signage. Lane marking, directional arrows and "no entry" road markings shall be implemented. Cobble strips shall be installed to visually delineate between the public and landfill traffic lanes.

An access control barrier shall be installed to the administration building car park to restrict access to landfill maintenance staff only.

Fencing

Refer to Drawings within the P22-032-0500 series.

Safety infrastructure on-site shall comprise fencing and appropriate safety signage to restrict access to the dedicated exclusion zones on site.



The fencing shall comprise approximately 3,500m of 1.2m high timber post and wire mesh fencing to restrict access to the following areas:

- Landfill maintenance and aftercare areas.
- Steep slopes adjacent to on-site streams.

Additional security fencing shall comprise approximately 325m of 2.4m high V-mesh paladin fencing to restrict access to the following areas:

- Existing derelict dwelling.
- Leachate Storage Tank
- Maintenance Shed

Stock proof fencing on-site will incorporate mammal passes at regular intervals to minimize habitat fragmentation.

On Site Parking Areas

Refer to Drawings P22-032-0400-0001, P22-032-0400-0002 and P22-032-0400-0004.

The proposed car park is approximately 1,760m². The car park shall provide 57 no. car parking spaces including 3 no. accessible parking spaces, 6 no. EV charging spaces, 1 no. accessible EV charging space and 24 no. EV ready parking spaces (a landscaping strip can be reutilized for charging connections at these spaces in the future). The proposed car park shall be constructed of geo-grid infilled with decorative gravel atop the existing hardcore.

Bicycle parking is proposed at the main car park, mobile café and pump track. The three bicycle parking areas shall provide parking for 128 no. bicycles. The proposed bike parking shall be constructed of geo-grid infilled with gravel. The total area of bicycle parking is 170m².

A coach set down area and turning area shall be provided adjacent to the car park. The coach set down area provides parking for 3 no. large coaches. The coach set down area shall be constructed with asphalt surfacing. The coach set down area occupies an area of 87m². The coach turning area avails of an existing concrete hardstanding area adjacent to the set down area.

Circulation Area

Refer to Drawings P22-032-0400-0001.

The proposed circulation area adjacent to the parking facilities shall comprise a mobile café, seating, and toilet and changing facilities. The proposed circulation area is approximately 335m². The proposed circulation area shall be constructed of geo-grid infilled with decorative gravel.

Toilet and Changing Facilities

Refer to Drawing P22-032-0400-0006.

The toilet and changing facilities shall comprise a modular toilet block constructed within a modified 40ft container. The toilet block shall include male, female and accessible toilets. Unisex changing facilities will also be provided. The toilet block shall be clad with recovered timber cladding.



Foul water from the toilet facilities shall be discharged to a macerator pump prior to discharge to the on-site leachate system.

The Amphitheatre

Refer to Drawing P22-032-0400-0007.

The amphitheatre shall comprise a main stage measuring approximately 65m² and sloped seating terrace. The main stage shall contain a tensile canopy roof structure mounted to a concrete base. A stepped footpath shall connect the main stage to the seating terrace. The seating to the amphitheatre shall be constructed into the natural slope retained by gabion baskets topped with natural timber seating affixed atop.

A short trail shall connect the amphitheatre to the main car park.

The Trails

Refer to Drawings P22-032-0200-0001, P22-032-0201-0001 and P22-032-0201-0002.

A total of six no. trails are proposed at the site. The trails vary in length and degree of difficulty. The following trails are proposed:

- Adventure trail (1.0 km in distance)
- Picnic trail (0.6 km in distance)
- Small loop (0.9 km in distance)
- Main loop (2.0 km in distance)
- Perimeter loop (3.6 km in distance)
- Dome trail (0.5 km in distance).

The proposed trails overlap in sections, with the total length of developed trails being approximately 5.5 km. The trails shall be surfaced with a quarry dust finish with the exception of a steep section of trail which will be surface with asphalt. Tanalised timber edge support shall be placed to the edges of the trails.

The proposed trails mostly avail of the existing access maintenance tracks on site. The proposed dome trail and sections of the perimeter loop comprise the construction of new trails. The proposed perimeter trail will require the construction of a single stream crossing and pedestrian crossing. The stream crossing shall be a single span structure to minimise disturbance to the watercourse. Refer to Drawing P22-032-0200-0002.

A raised table pedestrian crossing shall be constructed where the perimeter loop crosses the main entrance road. Refer to Drawing P22-032-0200-0003.

The adventure trail shall contain a number of nature and sensory play elements placed adjacent to the trail.

Benches and information boards shall be installed at regular intervals along the proposed trails.

The Activity Zone

The activity zone shall comprise a large grass/reinforced safagrass/bark mulch surface area (approximately 4,500m²). The area shall contain a low-level adventure/obstacle, twin trail course with gently-undulating earth mounding, planting and seeding.



The Pump Track

The pump track shall comprise of approximately 280 linear metres of asphalt cycle tracks over an area of approximately 1,200m². The asphalt cycle tracks shall contain undulating ground to achieve the required profile for the pump track.

The Dog Park

The dog park shall comprise of 2 no. grassed areas (approximately 2,000m²) catering for both large and small dogs. The entire area shall be fenced securely fenced with 1.2m high paladin fencing. A "bell jar" dual gate-system shall be operated to the dog park entrance which allows dog owners to bring their dog into a confined space, on-leash, where the dog can be unleashed before entry to the park.

The park shall contain selected dog agility equipment, hardstanding area with benches, refuse bins and water drinking points.



3. OVERVIEW OF THE CONSTRUCTION WORKS

Construction Duration and Programme

It is estimated that the construction phase of the proposed development will take 40-48 weeks to complete.

Construction Hours

The hours of construction activity will avoid unsociable hours and will be agreed with the planning authority in advance of site start. It is anticipated that this will restrict working hours at the site during the construction phase to between 07:00 to 19:00 Monday to Friday inclusive and to between 07:00 to 13:00 on Saturdays. Work on Sundays or public holidays will only be conducted in exceptional circumstances and subject to prior notification insofar as possible with the local community.

Overview of Proposed Construction Works

An overview of the principal works involved in construction is provided below:

Main Entrance Features

The construction on the main entrance feature will comprise the following:

- General clearance of shrub.
- Stripping of topsoil.
- Laying of base material – Clause 804 or similar.
- Installation of gabion baskets.
- Filling of gabion baskets with selected recovered stone.
- Mounting of Corten Panels and recovered timber atop gabion baskets.
- Trenching of electrical cabling from signs to existing power supply.

Site Access and Safety Infrastructure

The construction of the cobble strip lane delineators will comprise the following:

- Breaking out of existing asphalt surface.
- Excavation to formation level.
- Placement of concrete bedding.
- Installation of cobbles.
- Reinstatement of asphalt surfacing to tie into cobbles.



The installation of the access control barrier will comprise the following:

- Breaking out of existing asphalt surface.
- Trenching of electrical cabling from access control barrier to administration building.
- Reinstatement of asphalt surfacing.
- Placement of concrete foundation to access control barrier tower.
- Installation of access control barrier system.

The construction of the 3,500m of 1.2m timber post and tension wire mesh fencing will comprise the following:

- Driving of timber stakes.
- Installation of tension wire mesh.

The construction of the 2.4m high V-mesh paladin fencing will comprise the following:

- Excavation of ground for post foundations (300mm x 300mm x 600mm).
- Placement of paladin fence posts in concrete.
- Erection of 325m of paladin V-mesh panels.

Parking and Set Down Infrastructure

The construction of the car park will comprise the following:

- Excavation of existing gravel hardstanding to a depth of approximately 100mm.
- Installation of timber edging.
- Placement of bedding sand material.
- Placement of geo-grid.
- Infilling of geo-grid with gravel.
- Landscaping areas including shrubs, hedges, trees, and grasses.

The construction of the bike parking will comprise the following:

- Excavation of ground to a depth of approximately 200mm.
- Placement of sub-base material - Clause 804 or similar.
- Placement of bedding sand material.
- Placement of geo-grid.
- Infilling of geo-grid with gravel.



The construction of the coach set down area will comprise the following:

- Excavation of existing gravel hardstanding to a depth of approximately 100mm.
- Placement of base material – Clause 804 or similar.
- Placement of asphalt surfacing (base course and wearing course).

Sanitary Facilities

The construction of the sanitary facilities will comprise the following:

- Excavation of ground to a depth of approximately 300mm.
- Trenching for foul water and water supply.
- Placement of base material – Clause 804 or similar.
- Craneage of pre-fabricated toilet block.
- Reprofilng works to provide access to toilet block.

Amphitheatre

The construction of the amphitheatre will comprise the following:

- Excavation of ground to a depth of approximately 300mm.
- Slope reprofiling works to achieve required grade.
- Placement of geotextile separation membrane
- Placement of sub-base material - Clause 804 or similar.
- Placement of concrete stage and steps.
- Placement of concrete foundation to seating.
- Installation of gabion baskets.
- Filling of gabion baskets with decorative stone.
- Mounting of natural timber atop gabion baskets.
- Installation of handrails.
- Installation of tensile canopy structure.
- Placement of topsoil and grass seeding.



Trails

The construction of the trails will comprise the following:

- Clearance of existing shrub along existing tracks.
- Excavation of existing track to a depth of approximately 100mm.
- Placement of sub-base material - Clause 804 or similar.
- Placement of tanalised timber edge supports.
- Placement of surfacing (Quarry dust or asphalt).

The construction of the stream crossing will comprise the following:

- Excavation of ground.
- Placement of precast reinforced concrete foundations and abutments.
- Placement of pre-cast concrete slab.
- Backfilling with structural infill.

Activity Zone

The construction of the activity zone will comprise the following:

- Earthworks to achieve the required profile.
- Installation of obstacle course equipment.
- Grass seeding.

Pump Track

The construction of the pump track will comprise the following:

- Earthworks to achieve the required profile, including compacting, trimming and surface preparation.
- Placement of sub-base material - Clause 804 or similar.
- Placement of asphalt surfacing.
- Grass seeding.

Dog Park

The construction of the dog park track will comprise the following:

- Earthworks to achieve the required profile.
- Excavation of ground for post foundations (300mm x 300mm x 600mm).
- Placement of paladin fence posts in concrete.
- Placement of paladin V-mesh panels.



- Placement of sub-base material - Clause 804 or similar.
- Placement of quarry dust surfacing.
- Grass seeding.
- Installation of ancillary elements (benches, bins, water points).

Environmental Management during Construction

A Construction Environmental Management Plan (CEMP) has been developed in order to manage, prevent and control potential environmental impacts associated with Construction Phase activities. This document accompanies the planning application. This document defines the environmental control and mitigation measures to be adopted during construction works to prevent adverse impacts on the environment due to these construction activities.



4. ENVIRONMENTAL MANAGEMENT PLAN

4.1 Introduction

This Environmental Management Plan (EMP) defines the project obligations, Environmental Management System (EMS) and environment mitigation measures relating primarily to the construction phase of the proposed works.

This EMP describes how the Contractor for the construction works will implement a site Environmental Management System (EMS) on this project to meet the specified contractual, regulatory and statutory requirements and mitigation measures. This plan will be further developed and expanded following the grant of planning permission and appointment of the Contractor for the construction works. Please note that some items in this plan can only be finalised with appropriate input from the Contractor who will carry out the construction works and once the planning conditions attached to any grant of planning are known. It will be the Contractor's contractual responsibility to implement an effective environmental management system to ensure environmental requirements for the construction of this project are achieved.

All site personnel will be required to be familiar with the environmental management plan's requirements as related to their role on site. The plan describes the project, sets out the environmental procedures that will be adopted on site and outlines the key performance indicators for the site.

- The EMP is a controlled document and will be reviewed and revised as necessary.
- A copy of the EMP will be located at the proposed temporary contractors compound.
- All employees, suppliers and Contractors whose work activities cause/could cause impacts on the environment will be made aware of the EMP and its contents.

4.2 Project Obligations

During the construction phase of the proposed development several environmental management obligations must be implemented and achieved by Galway County Council and the Contractor. When development consent is granted, there is also likely to be planning conditions, with which Galway County Council must comply. At the outset however, this CEMP has been prepared for the purpose of ensuring no adverse environmental impacts occur as a consequence of the proposed development. The Contractor and all of its sub-Contractors will be made fully aware of and be contractually required to adhere to all environmental obligations.

4.2.1 Planning Permission Obligations

Should the construction works be consented, the planning conditions will be complied with and should be read in conjunction with the project CEMP and other related reports prepared by and on behalf of Galway County Council.

4.2.2 Other Obligations

The Contractor will liaise directly with Galway County Council and An Garda Síochána in relation to securing any necessary permits to allow the works to take place including for example (non-exhaustive list):

1. Commencement notice;
2. Special Permits in relation to oversized vehicles on public roads, if required.



Galway County Council will continue to liaise closely with the local residents, especially near neighbours and landowners in relation to works and all reasonable steps will be taken to minimise the impact of the development.

4.3 Environmental Management System

The Environmental Management System (EMS), is outlined in the sections below.

4.3.1 Environmental Policy

The Contractor is responsible for preparing and maintaining an Environmental Policy for the site. The policy should be appropriate to the project, commit to continuous improvement and compliance with legal requirements and provide a framework for objectives and targets. This will be communicated to all site personnel and will be available on-site notice boards.

4.3.2 Training, Awareness and Competency

All site personnel will receive environmental awareness information as part of their initial site induction and briefing. The detail of the information should be tailored to the scope of their work on site. The Contractor for the construction works may decide to conduct the environmental awareness training at the same time as health and safety training (often referred to as Site Inductions).

This will ensure that personnel are familiar with the environmental aspects and impacts associated with their activities, the procedures in place to control these impacts and the consequences of departure from these procedures.

The CEMP will be retained in the site management office during the project. The environmental performance at the site will be on the agenda of the monthly project management meetings for the project.

Elements of the CEMP will be discussed at these meetings including objectives and targets, the effectiveness of environmental procedures, etc. Two-way communication will be encouraged by inviting all personnel to offer their comments on environmental performance at the site.

4.3.3 Register of Environmental Aspects

The Contractor is responsible for preparing and maintaining a Register of Environmental Aspects pertaining to the site. This register will identify the environmental aspects associated with activities onsite and determine which aspects have or can have a significant impact on the environment. Risks and Opportunities associated with environmental aspects will be identified. Life-cycle impacts (i.e. upstream and downstream impacts) will be identified if present.

4.3.4 Register of Legislation

The Contractor is responsible for preparing and maintaining a register of key environmental legislation pertaining to the site. This register will reference all current environmental legislation and will be inspected, reviewed and updated regularly to ensure compliance.



4.3.5 Objectives and Targets

Objectives and targets are required to be set to ensure that the project can be constructed and operated in full accordance with the NIS, planning conditions and legislative requirements, with minimal impact on the environment.

Environmental objectives are the broad goals that the Contractor must set in order to improve environmental performance. Environmental targets are set performance measurements (key performance indicators or KPI's) that must be met in order to realise a given objective.

The Contractor will set objectives based on each significant environmental impact. Key objectives are likely to include the following:

- To ensure that nearby rivers and streams are not negatively impacted by construction works.
- To ensure that humans are not negatively impacted by dust generated by construction works.
- To ensure that humans are not negatively impacted by noise generated by construction works.
- To ensure that impacts to habitats and wildlife are minimised during works.
- To ensure that a waste management plan for this site will be fully implemented.
- To ensure that the visual impact during the construction work is minimised.
- To ensure that the proposed development is constructed in compliance with the EIA Screening Report.
- To prevent adverse environmental impacts due to noise, vibration or dust.

Performance in relation to each of these objectives will be reviewed on a regular basis by means of inspections, audits, monitoring programmes, etc.

4.3.6 Non-Conformance, Corrective and Preventative Actions

Non-conformance notices will be issued in the following cases:

- Where site activities do not conform with the requirements of the EMS.
- Where environmental monitoring shows that there is a breach of an emission limit value or Environmental Quality Standard on-site.
- Where there is a breach of an EPA condition imposed under the EPA's Waste Licence for the site.
- Where there is a complaint relating to site activities.

Non-conformance is the situation where essential components of the EMS are absent or dysfunctional, or where there is insufficient control of the activities and processes to the extent that the functionality of the EMS in terms of the policy, objectives and management programmes, is compromised. A non-conformance register should be controlled by the Contractor.

In the event of non-conformance with any of the above, the following must be undertaken:

- Investigate cause of the non-compliance.
- Develop a plan for correction of the non-compliance.



- Determine preventive measures and ensure they are effective.
- Verify the effectiveness of the correction of the non-compliance.
- Ensure that any procedures affected by the corrective action taken are revised accordingly.

Responsibility must be designated for the investigation, correction, mitigation and prevention of non-conformance.

Internal Audits

Periodic internal audits will be carried out under the EMS to ensure that all site activities conform to the requirements of the EMS. Non-conformances identified during Internal Audits will be addressed by way of the Non-conformance management process detailed above. Opportunities for Improvement identified during internal audits will be communicated to the relevant responsible personnel.

4.3.7 EMS Documentation

The Contractor is required to keep the following documentation in relation to the environmental management of the project (as a minimum):

- Construction Environmental Management Plan for the proposed development
- Register of Environmental Aspects/Impacts
- Register of Planning Conditions
- Monitoring Records
- Minutes of Meetings
- Training Records
- Audit and Review Records

All of these documents and records are to be available for inspection in the site office. The documentation shall be up to date and shall be reviewed on a regular basis with revisions controlled in accordance with the site quality plan.

4.3.8 Control of Documents

The Contractor will establish, implement and maintain a procedure to control CEMP documents and records so they are clearly identifiable, organised, current, easily located and revised when necessary.

4.4 Ecological Management Plan

FT was commissioned on behalf of Galway County Council to undertake an Appropriate Assessment Screening which accompany the application for the proposed eco park.

The ecology appraisal involved a desktop review of relevant data available for the study site and locality.



4.4.1 Designated Sites

Potential impacts on European sites are considered in the Appropriate Assessment Screening Report accompanying the Planning Application.

4.4.2 Construction/Operational Stage Mitigation Measures

Mitigation by Avoidance and Design

The following measures are incorporated into the proposed design to reduce impacts on local biodiversity, flora and fauna through avoidance and design:

- Proposed development components are situated away from sensitive ecological receptors on-site.
- Fencing (with mammal passes) will be installed around a derelict structure to make it safe, rather than boarding up the structure - due to the potential for the structure to house bat roosts.

Further mitigation measures prescribed to avoid or reduce potential for the proposed development to have an adverse effect on ecology are presented below.

4.4.3 General Mitigation Measures

The following general mitigation measures will be adopted and implemented on-site to minimize potential impact on ecological receptors.

A suitably qualified person will be appointed to ensure the effective operation and maintenance of mitigation measures during the construction process.

- Stockpiles will be limited in size given that minimal excavation works will be carried out as part of the proposed development.
- Stockpiles will be compacted appropriately to prevent silt run-off.
- Weather forecasts will be reviewed daily, and earthworks will not be undertaken during periods of heavy rainfall.
- Where necessary, channels will be utilised to direct run-off away from stockpiles
- Temporary silt fences will be installed around soil stockpiles.
- Refuelling of plant during construction will only be carried out at a designated refuelling area.
- Appropriate spill control equipment, such as oil soakage pads, will be kept within the construction area and in each item of plant to deal with any accidental spillage.
- Portaloos and/or containerised toilets and welfare units will be used to provide toilet facilities for site personnel. Sanitary waste will be removed from site by a licensed waste disposal contractor.
- The Contractor carrying out the works will be required to provide temporary works to prevent soil being carried out onto the local road. In addition the Contractor will be required to provide backup provision by way of a road sweeper to clean up fines as may be present.
- Raising awareness to site workers via toolbox talks given by a suitably qualified person as part of site introduction; informing workers what to look out for and what procedure to follow if they observe an invasive species.



4.5 Noise, Vibration, Dust and Air Quality Management Plan

4.5.1 Potential Impacts During the Construction Phase

Noise from the construction phase would arise from deliveries and/or removal of material to and from site, mobile plant operational trail surfacing.

Dust emissions arise when particulate matter becomes airborne making it available to be carried downwind from the source. Dust emissions can lead to elevated PM10 and PM2.5 concentrations and may also cause dust soiling.

The amount of dust generated and emitted from a working site and the potential impact on surrounding areas varies according to:

- The type and quantity of material and working methods;
- Distance between site activities and sensitive receptors;
- Climate/local meteorology and topography.

The principal sources of potential air emissions during the construction of the proposed development include:

- Dust arising from earthworks (limited in nature)
- Dust arising from the movement of construction vehicles over land as well as the transporting of materials to the site of the proposed development.
- Dust arising from the temporary storage of any materials and wind blowing over unprotected, unconsolidated soils.
- Dust arising from uncovered truckloads, the movement of material around the site and the loading and unloading of aggregates and of materials within the site.
- Pollutants arising from temporary diesel generators.

4.5.2 Construction Stage Mitigation Measures

During the construction phase there is potential for increased ambient noise levels and potential temporary impacts on residential dwellings in the surrounding area of the site during the proposed works. If noise emissions from these activities are an issue, the scheduling of construction activity will be addressed such that durations of construction activity likely to exceed the 65 dB LAeq,1hr noise limit do not occur simultaneously with other construction activity.

Generally, construction works will be carried out in accordance with best practice and in line with recommendations contained within BS 5228-1:2009+A1:2014.

To mitigate against the impacts of noise on the local community during construction, the following specific measures are proposed:

- A pre-construction commitment to managing noise levels will be agreed through notification and consultation with affected parties, if deemed necessary.
- Working hours at the site during the installation phase will be limited to 07:00 to 19:00 Monday to Saturday inclusive. Work on Sundays or public holidays will only be conducted in exceptional circumstances and subject to prior notification insofar as possible with the local community.



- Construction contractors will be required to comply with the requirements of the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations, 1988 as amended in 1990 and 1996 (S.I. No. 320 of 1988, S.I. No. 297 of 1990 and S.I. No. 359 of 1996), and the Safety, Health and Welfare at Work (Control of Noise at Work) Regulations, 2006 (S.I. No. 371 of 2006).

The main control measures will involve control of noise at source measures using the following methods in line with Clause 8 'Control of noise' of BS 5228-1:2009+A1:2014:

- Operators of all mobile equipment will be instructed to avoid unnecessary revving of machinery (Clause 8.2.1 General).
- Use of appropriate plant and equipment where possible with low noise level generation where possible (Clause 8.2.2 Specification and substitution).
- All construction plant to be used on site should have effective well-maintained silencers (Clause 8.2.3 Modification of existing plant and equipment).
- Noise generating equipment will be located as far as possible away from local noise sensitive areas identified (Clause 8.2.5 Use and siting of equipment); and
- Regular and effective maintenance of site machinery including a full maintenance schedule to ensure that all pieces of equipment are in good working order. With efficient use of well-maintained mobile equipment, considerably lower noise levels than those predicted can be attained (clause 8.2.6 Maintenance).

In addition, the following best practice measures are proposed:

- Training of site staff in the proper use and maintenance of tools and equipment.
- Avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment.
- Machines that could be in intermittent use will be shut down between work periods or will be throttled down to a minimum.
- Plant start-up will be sequential rather than all together.
- Internal access tracks to be well maintained.
- Plant known to emit noise strongly in one direction will, when possible, be orientated so that the noise is directed away from noise-sensitive locations.

Mitigation measures to reduce dust nuisance and to minimise impact on air quality will be employed during the construction phase of the project. These mitigation measures will include the following:

- The Contractor or equivalent must monitor the contractors' performance to ensure that the proposed mitigation measures are implemented, and that dust impacts and nuisance are minimised.
- The drop height of materials will be minimised to a practicable level, to limit fugitive dust generation.
- Gravel will be used at site exit points to remove possible caked on dirt from tyres and tracks before travelling along public roads. Periodic road sweeping, as necessary, shall be put in place at the site entry/exit points.
- The site supervisor will undertake daily visual inspections to examine dust generation.



- The working area will be kept as small as possible so as to minimise potential dust generation.
- To suppress the migration of dust from site, a water bowser will be available to spray work areas and access roads, especially during periods where excavation works coincide with dry periods of weather or existing activities.
- All loads with potential to cause dust nuisance will be covered using strong, waterproof sheets such as tarpaulin sheets and will not be overloaded. This will minimise the potential for fugitive emissions during transport.
- All other stockpiles will be kept damp and covered to prevent windblown dust emissions.
- Construction vehicles and plant will be routinely serviced to minimise the exhaust emissions during construction. Vehicles will not be left running unnecessarily and low emission fuels will be used where possible.

4.6 Surface Water Management Plan

4.6.1 Adjacent Watercourses

The proposed development site is primarily located within the Galway Bay South East catchment (Catchment ID 29) and Raford_SC_010 sub-catchment (Sub-catchment ID 29_5), with an area within the southeast area of the site located within the Upper Shannon Catchment (Catchment ID 26D) and Suck_SC_080 sub-catchment (Sub-catchment ID 26D_2).

Raford 29 (River Waterbody Code IE_WE_29R010100; Segment Code 29_21), a first order water body arises adjacent to the northeast corner of the site. This is locally known as the Ballintober Stream. The water body flows in a northly direction adjacent to the access road and merges with Clooncallis, discussed below, approximately 1.2km north-northwest of the site.

Clooncallis (River Waterbody Code IE_WE_29R010100; Segment Code 29_522), a first order water body arises within the proposed development site. This is locally known as the Killaghmore Stream.

4.6.2 Construction Stage Impact and Mitigation

The impact of the construction works during the construction phase is not significant for hydrology and water quality. However, the following mitigation measures to reduce potential impacts during the construction stage are outlined below:

- Weather forecasts will be reviewed on a daily basis and surfacing/earthworks will not be undertaken during periods of heavy rainfall.
- The contractor will be responsible to ensure the effective operation and maintenance of drainage and other mitigation measures during the construction process. The operations management of the subject development will include regular monitoring of the drainage system and maintenance as required.
- Silt fencing shall be located adjacent to all water courses, wherever necessary.
- Emergency drip trays and spill kits will be kept available on site, to ensure that any spills from vehicles are contained and removed off site.
- Portaloos and/or containerised toilets and welfare units will be used to provide toilet facilities for site personnel. Sanitary waste will be removed from site via a licenced waste disposal contractor.



4.7 Soil Management Plan

Only minor earthworks will be carried out during construction. Only minor off-site disposal of soil will be required from the site and no spoil stockpiles will be left on site after construction is completed.

In addition to the above, lubricants and hydraulic fluids for equipment will be stored within an appropriately bunded storage unit in the proposed temporary contractors compound. Refuelling will be carried out directly from delivery vehicles at designated refuelling areas. Specific mitigation measures relating to the management of hydrocarbons spills are outlined below:

- Fuels, lubricants and hydraulic fluids for equipment used on the construction site will be carefully handled to avoid spillage.
- Any spillage of fuels, lubricants or hydraulic oils will be immediately contained and the contaminated soil removed from the site and properly disposed of.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or re-cycling.
- Appropriate spill control equipment, such as oil soakage pads, will be kept within the proposed temporary contractors compound and in each item of plant to deal with any accidental spillage.
- Drip trays and spill kits will be kept available on site, to ensure that any spills from vehicles are contained and removed off site.

4.8 Waste Management Plan

It will be the objective of Galway County Council in conjunction with the appointed contractor to prevent, reduce, reuse and recover as much of the waste generated on site as practicable (in accordance with Waste Hierarchy Principles) and to ensure the appropriate transport and disposal of residual waste off site. This is in line with the relevant National Waste Management Guidelines and the European Waste Management Hierarchy, as enshrined in the Waste Management Act 1996, as amended.

4.8.1 Assignment of Responsible Personnel

It will be the responsibility of the contractor for the construction works (when appointed) to nominate a suitable site representative such as a Project Manager, Site Manager or Site Engineer as Waste Manager who will have overall responsibility for the management of waste. The waste manager will have responsibility to instruct all site personnel including sub-contractors to comply with on-site requirements.

4.8.2 Waste Generated

It is envisaged that all excavated materials on-site will be reutilized on-site during reprofiling of the site.

Any waste materials generated on-site during the construction of the proposed development will be handled and managed in accordance with the requirements of the Waste Management Act 1996, as amended, and associated Regulations. All waste will be stored in segregated waste containers at the temporary construction compound and collected separately by appropriately licensed waste contractors. All waste materials transferred off-site for disposal or recovery will be taken only to suitably permitted/licensed waste facilities.



4.8.3 Waste Management During the Construction Phase

Any waste generated during the development construction phase will be collected, source separated and stored in dedicated receptacles at the temporary compounds during construction.

Typical categories of waste generated during the construction of this type of project:

- Municipal solid waste from the office and canteen
- Food waste
- Construction and demolition waste
- Waste oil/hydrocarbons
- Paper/cardboard/plastic wrapping
- Timber
- Sanitary waste

As above-noted, it will be the responsibility of the contractor for the main construction works (when appointed) to nominate a suitable site representative such as a Project Manager, Site Manager or Site Engineer as Waste Manager who will have overall responsibility for the management of waste. The waste manager will have responsibility to instruct all site personnel including sub-contractors to comply with on-site requirements.

Where waste is generated, every effort will be made to separate and segregate the different waste streams.

4.8.4 Installation Stage Waste Reduction

The appointed contractor will make all reasonable effort to minimise the creation of waste throughout the installation stage. This will be achieved through the following measures:

- The ordering of material will be optimised to ensure that only the necessary levels are delivered to site.
- All plant will be serviced before arriving on site. This will reduce the risk of breakdown and the possible generation of water oil on site.
- All operators will be instructed in measures to cut back on the amount of wastage for trimming of materials etc.
- Prefabrication of design elements will be used where suitable to eliminate waste generation on site, and;
- Where materials such as concrete are being ordered, care will be taken when calculating required quantities to reduce wastage.

4.8.5 Construction Material Re-use

Where possible, materials will be re-used onsite for other suitable purposes.

4.8.6 Construction Waste Recycling

Where waste is generated, every effort will be made to recycle it. In order to optimally recycle, waste source segregation of recyclable materials will be undertaken.



Suitable containers will be provided for the storage and collection of source segregated materials. These containers will be clearly labelled and signposted.

The following sourced segregated materials containers will be made available on site at a suitable location:

- Timber;
- Dry mixed recyclables; and
- Packaging waste.

4.8.7 Construction Waste Disposal

Where waste disposal is unavoidable, waste will be disposed of in a manner not likely to cause environmental damage:

- All waste materials will be stored in suitable locations and enclosed containers where suitable to avoid pollution and generation of wind-blown debris.
- All waste will be collected by a suitably competent and permitted waste collection contractor;
- All waste will be dispatched to an appropriate authorized waste facility
- Dispatch to a waste recovery/recycling facility will be preferred over dispatch to a waste facility involved in waste disposal or energy recovery, and;
- No material will be burned on site under any circumstances.

4.8.8 Training

Copies of the Waste Management Plan will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the Project Waste Management Plan and informed of the responsibilities that fall upon them as a consequence of its provisions.

It will be the responsibility of the Contractors' appointed Waste Manager to ensure that all personnel are made aware of their responsibilities under the plan via a toolbox talk or otherwise.

4.9 **Traffic Management**

As with any construction development project, the transport of materials onto the site will give rise to increased traffic and associated impacts. However, due to the very nature of construction these impacts will be temporary.

Materials arising on-site will be reused on-site where possible to minimize traffic movements off-site.

Public perception of the construction phase will be influenced primarily from the impact of traffic movements. The degree of traffic disturbance caused by the construction phase depends on the volume of material imported/exported, the associated civil engineering requirements and the length of the construction period.

Construction traffic will require regular access to the site at varying times throughout the construction phase.

Traffic management procedures to manage traffic effectively on site and in the immediate vicinity of the development, to ensure the continued movement of traffic on the public roads and to minimise disturbance during the transportation of materials.



The site is accessed from the R348. The surrounding routes are considered to be acceptable for the level of traffic generated during construction with some mitigation proposed. Similar traffic is currently using these roads to service the farmland and agriculture practices in the area. Previously, these roads were used by landfill related traffic. There should be ample capacity to carry the deliveries associated with the temporary short-term and relatively limited construction activities associated the Eco Park.

The construction phase for the proposed works will result in additional traffic on the roads in the vicinity of the development, in particular the R348.

This additional traffic will include:

- Construction worker vehicles;
- Delivery vehicles carrying conventional construction materials e.g. aggregate;
- Delivery vehicles carrying machinery and equipment.

It should be noted however that final selection of construction plant and vehicles may vary depending on suitability, availability, contractor's choice, etc. Plant operators will be responsible for the upkeep and maintenance of construction plant and vehicles, ensuring good working order prior to use. Should emergency maintenance need to be carried out on site, this will be carried out at a designated area away from sensitive receptors and it will be ensured that a spill kit is nearby.

Parking for all site staff vehicles during the Construction phase will be provided at a dedicated compound. Parking of construction related vehicles (or queuing) will not be permitted outside the facility gate. This will be achieved using a combination of signage, suitable bollards (if required) and enforcement by site management.

HGVs entering the site shall do so via the existing site entrance access, which was developed to allow adequate visibility sightlines in accordance with TII Standard DN-GEO-03031: Road Link Design, 2012, and in accordance with Galway County Development Plan.

Public roads shall be kept free of mud, dust, spillages and debris from the construction site, construction plant or haulage vehicles. Periodic road sweeping, as necessary, shall be put in place at the site entry/exit points.

The roadway on site from the public road entrance, shall be kept free of dust, spillages and debris. Regular watering of the access road will take place and Galway County Council will liaise with adjacent residences to avoid undue or unnecessary truck movements during un-social hours. .

4.9.1 Consultation and Notification

Traffic Management Co-ordinator

The Contractor will appoint a dedicated competent Traffic Management Coordinator for the duration of this project and this person will be the main point of contact for all matters relating to traffic management on the project.

Induction

Prior to the works commencing, the Traffic Management Coordinator will carry out an induction for the materials haulage contractor staff to inform them of the traffic requirements in relation to vehicle movements. Traffic consideration shall form part of the induction process for all site staff also.



An Garda Síochána

Following the appointment of the successful Contractor for the main construction works for this project, the CTMP shall be finalised. The Traffic Management Coordinator will liaise directly with An Garda Síochána in relation to the plan and any concerns/requirements they have will be incorporated in to the plan. The necessary permits (including approved route permits) will be applied for and obtained from An Garda Síochána, if required.

Galway County Council

The Contractor will liaise directly with Galway County Council Roads Department in relation to the plan and any necessary permits (including standard permits) will be applied for and obtained from the Roads Department.



5. SAFETY & HEALTH MANAGEMENT PLAN

5.1 Induction

This Safety and Health Management Plan (SHMP) defines the work practices, procedures and management responsibilities relating to the management of health and safety during the design, construction and operation of the proposed development and shall be read in conjunction with the Preliminary Safety & Health Plan prepared for the project by the Project Supervisor for the Design Process. The Safety and Health Management Plan shall be finalised in accordance with this plan following the appointment of the contractor for the construction works.

The SHMP describes how the contractor for the construction works will implement a site safety management system (SMS) on this project to meet the specified contractual, regulatory and statutory requirements, environmental impact statement mitigation measures and planning conditions. It is the contractor's responsibility to implement an effective safety management system to ensure that the Council's safety requirements for the construction of this project are met. Any SMS will incorporate and develop upon any preliminary plans prepared for the project by the Project Supervisor for the Design Process.

All site personnel will be required to be familiar with the requirements of the safety management plan as related to their role on site. The plan describes the project organisation and sets out the health and safety procedures that will be adopted on site:

- The Safety and Health Plan is a controlled document and will be reviewed and revised as necessary.
- A copy of the Safety and Health Plan will be located on/near the site H&S notice board.
- All employees, suppliers and contractors whose work activities cause/could cause impacts on the environment will be made aware of the SHMP and its contents.

The selection criteria for the Contractor for the works will be based on the ability to construct the works in a manner that will not endanger the safety, health and welfare of any parties and competence to fulfil the role of PSCS.

All site personnel will be required to be familiar with the requirements of the Safety and Health Management Plan for the construction phase of the project as related to their role on site. The plan will describe the project organisation and sets out the health and safety procedures that will be adopted on site.

The Safety and Health Plan is a controlled document and will be reviewed and revised as necessary. A copy of the Safety and Health Plan will be located on/near the site H&S notice board. All employees, suppliers and contractors whose work activities cause/could cause impacts on the environment will be made aware of the SHMP and its contents.

Solas Safe Pass registration cards are required for all construction, delivery and security staff. Construction operatives will hold a valid Construction Skills Certificate Scheme card where required. Public safety will be addressed by restricting site access during construction. Appropriate warning signs will be posted, directing all visitors to the site office.

All personnel on site will wear adequate personal protective equipment (PPE), appropriate for their activity while on site.



In relation to working near overhead electric lines, the contractor will comply with ESB Networks Code of Practice for Avoiding Danger from Overhead Electricity Lines, 2008. Prior to site start, hazard exclusion zones will be established by the main contractor and overhead goalposts will be set up at designated crossing points where plant must pass directly under overhead electricity lines in accordance with ESNB requirements. A minimum 3m exclusion zone for 10kV, 20kV and 38kV overhead lines will be maintained at all times.

5.2 Project Obligations with Respect to Health and Safety

The construction of the proposed development will impose numerous safety management obligations on the Council, designer and contractor. These obligations are set out below. The contractor for the construction works and all of its sub-contractors are to ensure that they are fully aware of and in compliance with these safety obligations.

5.2.1 Statutory Obligations

The Safety, Health and Welfare at Work Act 2005 and the Safety, Health and Welfare at Work (Construction) Regulations 2013 place a responsibility on Galway County Council as the “Client”, the Designer, the Project Supervisors and the Contractor.

The Council must:

- Appoint a competent and adequately resourced Supervisor for the Construction Stage (PSCS)
- Be satisfied that the contractor appointed has adequate training, knowledge, experience and resources for the work to be performed.
- Co-operate with the project supervisor and supply necessary information.
- Keep and make available the safety file for the completed structure.
- Provide a copy of the safety and health plan prepared by the PSDP to every person tendering for the project.

The Designers must:

- Identify any hazards that their design may present during construction and subsequent maintenance.
- Eliminate the hazards or reduce the risk.
- Communicate necessary control measures, design assumptions or remaining risks to the PSDP so they can be dealt with in the safety and health plan.
- Co-operate with other designers and the PSDP or PSCP.
- Take account of any existing safety and health plan or safety file.
- Comply with directions issued by the PSDP or PSCS.



The PSDP must:

- Identify hazards arising from the design or from the technical, organisational, planning or time related aspects of the project.
- Where possible, eliminate the hazards or reduce the risks.
- Communicate necessary control measure, design assumptions or remaining risks to the PSCS so they can be dealt with in the safety and health plan.
- Ensure that the work of designers is coordinated to ensure safety.
- Organise co-operation between designers.
- Prepare a written safety and health plan for any project and deliver it to the client prior to tender.
- Prepare a safety file for the completed structure and give it to the client.

The PSCS must:

- Co-ordinate the identification of hazards, the elimination of the hazards or the reduction of risks during construction
- Develop the Safety and Health Plan initially prepared by the PSDP before construction commences.
- Co-ordinate the implementation of the construction regulations by contractors
- Organise cooperation between contractors and the provision of information.
- Co-ordinate the reporting of accidents to the Authority
- Notify the Authority before construction commences.
- Provide information to the site safety representative.
- Co-ordinate the checking of stage working procedures.
- Co-ordinate measures to restrict entry on to the site.
- Co-ordinate the provision and maintenance of welfare facilities
- Co-ordinate arrangements to ensure that craft, general construction workers and security workers have a Safety Awareness card, e.g. Safe Pass and a Construction Skills card where required.
- Co-ordinate the appointment of a site safety representative where there are more than 20 persons on site.
- Appoint a safety adviser where there are more than 100 on site.
- Provide all necessary safety file information to the PSDP.
- Monitor the compliance of contractors and others and take corrective action where necessary.
- Notify the Authority and the client of non-compliance with any written directions issued.



The Contractor must:

- Co-operate with the PSCS.
- Promptly provide the PSCS with information required for the safety file,
- Comply with directions of the project supervisors.
- Report accidents to the Authority and to the PSCS where an employee cannot perform their normal work for more than 3 days.
- Comply with site rules and the safety and health plan and ensure that your employees comply.
- Identify hazards, eliminate the hazards or reduce risks during construction.
- Facilitate the site safety representative.
- Ensure that relevant workers have a safety awareness card and a construction skills card where required.
- Provide workers with site specific induction.
- Appoint a safety officer where there are more than 20 on site or 30 employed.
- Consult workers with site specific induction.
- Monitor compliance and take corrective action.

Consequently, at all stages of the project there are statutory requirements for the management of safety, health and welfare of all involved in or affected by the development. As previously outlined, this CEMP and specifically the Safety and Health Management Plan addresses key construction management issues associated with the proposed development. This plan will be developed further at the construction stage, on the appointment of the Contractor for the main construction works.

5.2.2 The Preliminary Safety and Health Plan

In accordance with the requirements of the Safety, Health & Welfare at Work (Construction) Regulations 2013, a Preliminary Safety & Health Plan will be required as part of the design process. This plan will be further developed by the PSCS on appointment and maintained as a live document during construction and commissioning of the proposed development.

The safety and health plan is required to include the following information:

- A general description of the project;
- Details of other work activities taking place on site;
- Works involving particular risks;
- The timescale for the project and the basis on which the time frame was established; and
- Conclusions drawn by designers and the PSDP having taken into account the General Principles of Prevention and any relevant Safety and Health Plan or Safety File.



In accordance with the PSDP's procedures, the Preliminary Safety & Health Plan for the proposed development should include the following sections and subsections to ensure that the PSCS is aware of the health and safety issues at tender stage and enable them to price accordingly:

Preamble:

- 1 General Project Information:
 - 1.1 Title
 - 1.2 Description of Project
 - 1.3 Employer
 - 1.4 Designers/Other Consultants
 - 1.5 Project Supervisor Design Process
 - 1.6 Drawings, Specifications and Other Documents
 - 1.7 Intended Contract Commencement Date
 - 1.8 Intended Contract Completion Date
 - 1.9 Basis for Contract Duration
 - 1.10 Restrictions on Working Hours
 - 1.11 Notification of Project
 - 1.12 Termination of the PSCS Appointment
- 2 The Existing Environment:
 - 2.1 Site Location
 - 2.2 Relevant Adjoining Land Uses
 - 2.3 Site Restrictions
 - 2.4 Restrictions on Access
 - 2.5 Hazardous Area Classification
 - 2.6 Existing Services
 - 2.7 Ground Conditions
 - 2.8 Existing Hazards
 - 2.9 Liaison with Statutory Bodies
- 3 Other Work Activities:
 - 3.1 Other Contracts Which May Affect Work
 - 3.2 Occupation of Site
 - 3.3 Building Activities
 - 3.4 Other Work Activities
 - 3.5 Emergency Procedures in Place on Site
- 4 Particular and Residual Risks:
 - 4.1 Works Which Puts Persons at Work at Risk
 - 4.2 Work Which Puts Persons at Risk from Chemical or Biological Substances
 - 4.3 Work with Ionising Radiation
 - 4.4 Work near High Voltage Power Lines
 - 4.5 Work Exposing Persons at Work to the Risk of Drowning
 - 4.6 Work on Wells, Underground Earthworks and Tunnels
 - 4.7 Work Carried Out by Divers at Work Having a System of Air Supply
 - 4.8 Work Carried Out in a Caisson with a Compressed Air Atmosphere
 - 4.9 Work Involving the Use of Explosives



- 4.10 Work Involving the Assembly or Dismantling of Heavy Prefabricated Components
- 4.11 Work Involving Hazardous Material
- 4.12 Residual Risks

5 Additional Information:

- 5.1 Existing Documents
- 5.2 Site Possession
- 5.3 Site Rules
- 5.4 Site Specific Safety Objectives
- 5.5 Phasing of Works
- 5.6 Permits/Authorisation Required
- 5.7 Maintenance
- 5.8 Continuing Liaison
- 5.9 Specific Recommendations

6 Information Required for Safety File:

- 6.1 Information Required for Safety File from PSCS

5.2.3 The Management of Health and Safety during the Construction Phase

The selection criteria for the Contractor for the works will be based on the ability to construct the works in a manner that will not endanger the safety, health and welfare of any parties and competence to fulfil the role of PSCS.

The contract will be awarded on the basis of assessment of the candidates against relevant health and safety criteria including experience of similar projects, knowledge of the construction processes involved and training of their management and staff who will be involved in carrying out the works.

5.2.4 The Construction Stage Safety and Health Plan

In accordance with the requirements of the Safety, Health & Welfare at Work (Construction) Regulations 2013, the preliminary Safety & Health Plan prepared by the PSDP will be further developed by the PSCS before the commencement of the construction work and updated on a regular basis during the construction phase of the project.

The document will include the following sections and subsections to ensure the management of health and safety during the construction phase of the project:

1. Description of Project:
 - project description and programme details
 - details of client, PSDP and PSCS, designers
 - contractor and other consultants
 - extent and location of existing records and plans
 - arrangements for communicating with Contractors, PSDP and others as appropriate.
2. Communication and Management of the Work:



- management structure and responsibilities
- safety and health goals for the project and arrangements for monitoring and review of safety and health performance
- arrangements for:
 - regular liaison between parties on site
 - consultation with the workforce
 - the exchange of design information between the Client, Designers, Project Supervisor for the Design Process, Project Supervisor Construction Stage and Contractors on site
 - handling design changes during the project
 - the selection and control of contractors
 - the exchange of safety and health information between contractors
 - security, site induction, and on-site training
 - welfare facilities and first aid
 - the production and approval of risk assessments and method statements
 - the reporting and investigation of accidents and other incidents (including near misses)
- site rules
- fire and emergency procedures

3. Arrangements for Controlling Significant Site Risks:

- Safety risks
 - services, including temporary electrical installations
 - preventing falls
 - work with or near fragile materials
 - control of lifting operations
 - dealing with services (water, electricity and gas)
 - the maintenance of plant and equipment
 - poor ground conditions
 - traffic routes and segregation of vehicles and pedestrians
 - storage of hazardous materials
 - accommodating adjacent land use
 - other significant safety risks
- Health risks:
 - dealing with contaminated land
 - manual handling
 - use of hazardous substances
 - reducing noise and vibration
 - other significant health risks



The construction stage safety and health plan will be maintained on site by the PSCS and will be communicated to all relevant parties on an ongoing basis through inductions, site safety meetings and tool box talks etc. as required.

5.3 Control of Documents

The Contractor will establish, implement and maintain a procedure to control project documents and records so they are clearly identifiable, organised, current, easily located and revised when necessary.



6. EMERGENCY RESPONSE

6.1 Introduction

This chapter of the CEMP presents an Emergency Response Plan for the proposed development. The Emergency Response Plan shall be finalised in accordance with this outline plan following the appointment of the contractor for the construction works and following detailed design development.

This Emergency Response Plan contains predetermined guidelines and procedures to ensure the safety, health and welfare of everybody involved in the project and to protect the environment during the construction phase of the proposed development. This plan outlines the immediate response to an emergency or disaster situation and will be developed by the construction works contractor and PSCS as part of their construction stage Safety and Health Plan.

An emergency is any disruptive or harmful event that endangers people, environment, property or assets. Emergencies can be small, as in a fire contained by employees using firefighting equipment or large, as in a disaster resulting from a storm.

In the context of the proposed development, examples of Emergency Response Plan emergency events are:

- Medical emergency
- Explosion (due to landfill gas present on-site)
- Overheated equipment
- Chemical, fuel or leachate spill
- Fire (at the landfill cap area)
- Loss of power
- Vehicle incidents.

Example sources of emergency or disaster events are:

- Faulty or incorrect use of equipment
- Falls from height
- Smoking
- Storm/adverse weather
- Power failure
- Electrocution
- Fuel or leachate spill
- Road failure
- Serious vehicle collisions or overturning.
- Not using appropriate ATEX rated tools



6.2 Emergency Response Plan

An emergency response plan deals with the immediate physical effects of a disaster and outlines the initial response.

6.2.1 Emergency Response Liaison

The contractor/PSCS will designate an individual to serve as the Emergency Response Liaison for this project. The emergency response liaison will coordinate the emergency response for the duration of any emergency at or nearby the project site.

Galway County Council, An Garda Síochána and the HSE Ambulance Co-ordinator will be provided with the construction programme and the onsite contact information from the Emergency Response Liaison prior to construction.

The Emergency Response Liaison will be immediately reachable at all times during project construction. The Liaison will coordinate with the above agencies to establish emergency procedures for access to and within the site in the event of an emergency.

6.2.2 Reporting Emergencies

In the event of fire, storm, flood, serious injury or other emergency, contact:

ALL ON SITE EMERGENCIES DIAL 112 or 999

6.2.3 Designated Responder

A map depicting the location with the emergency meeting point will be furnished to Galway County Council Fire Department and HSE ambulance co-ordinators.

Upon arrival on the scene, the senior EMS Officer will set up the incident command structure. The Emergency Response Liaison and all contractor's personnel will cooperate with directions of the incident commander and assist as directed.

The nearest emergency services, ambulance and Accident & Emergency (A&E) facilities are:

Service:	Contact Details:	
Accident & Emergency (A&E)	Portiuncula University Hospital	09096 48200
Ambulance Service	Dial 112 or 999	
Fire Services	Dial 112 or 999	
Garda Station	Ballinasloe Garda Station	09096 31890

Each member of the contractor's site team who are First-Aid and Cardiopulmonary Resuscitation (CPR) trained personnel will be identifiable with a hard hat sticker indicating their training.



6.2.4 Emergency Alarm

The emergency alarm will be raised on site as soon as an emergency situation is detected, the alarm will be identified (contractor to check those that apply):

Air Horn		Radio		Voice		Hand Signals		Siren	
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6.2.5 Emergency Reporting

In the event of an emergency, the nearest supervisor with radio equipment/mobile phone will be notified. The degree of emergency will be reported to the Emergency Response Liaison who will contact the Emergency Services and request the appropriate emergency service.

6.2.6 Medical Protocol

In the event of a major medical emergency, the emergency centre (999) will be notified and an ambulance and emergency medical team will respond to the scene. All major medical cases require professional (ambulance) transportation. In the event of a minor medical case, the affected employee can be transported via company vehicle in the escort of a foreman or site engineer (with first aid training).

6.2.7 Emergency Response

Upon notification, the Emergency Response Liaison will respond to the emergency scene and manage emergency operations:

1. Assess hazards and make the area safe – If you cannot enter the area without risking your safety, don't do it, call the Emergency Services immediately and wait for them. If you think you can safely enter the area, look around the emergency scene for anything that can be dangerous or hazardous to you, the casualty, or anyone else at the scene. Bystanders can help with making the area safe. First aid kits will be available on site. Operators that have been first aid/CPR/AED trained will be listed on site and easily identifiable by a hard hat sticker.

2. Take charge of the situation – if you are the first-aid provider on the scene act fast. If someone is already in charge, briefly introduce yourself and see if that person needs any help. If there is any chance the casualty could have a head or spinal injury, tell them not to move.

3. Get Consent – always identify yourself as a first-aid provider and offer to help. Always ask for consent before touching a conscious adult casualty and always ask for consent from a parent or guardian before touching an unconscious or conscious child or infant. With an unconscious adult casualty consent is implied as it is generally accepted that most people want to live. Remember to protect yourself first by wearing gloves and eye protection.

4. Assess Responsiveness – is the casualty conscious or unconscious? Note their response while you are asking them for their consent. If they respond, continue with the primary survey, and if they don't respond, be aware that an unconscious casualty is or has the potential of being a breathing emergency.

5. Call out for help – this will attract bystanders. Help is always useful in an emergency situation. Someone can be called over the phone for medical help. Others can bring blankets if needed, get water, etc.



A bystander can help with any of the following:

- Make the area safe.
- Find all the casualties.
- Find the first aid kit, or any useful medical supplies.
- Control the crowd.
- Call for medical help.
- Help give first aid, under your direction.
- Gather and protect the casualty's belongings.
- Take notes, gather information, be a witness.
- Reassure the casualty's relatives.
- Lead the ambulance attendants to the scene of the emergency.
- Notify Emergency Services as soon as you can. Either send a bystander or call yourself.

In the event of a major medical emergency, the Emergency Response Liaison, as the person-in-charge of the emergency scene, will dispatch someone to the site access point nearest the emergency scene to direct and lead arriving outside responders to the emergency scene. The designated meeting point will be agreed prior to the commencement of construction. Emergency personnel will be met at this meeting point which has been communicated by management during the 999 call. The emergency personnel escort will use the hazard lights on their vehicle so they are easily identified.

6.2.8 Escape and Evacuation Procedure

Dependent upon the degree of the emergency and if safe to do so, employees will evacuate to the designated assembly area where the designated wardens shall account for all employees and determine if anyone still remains within the emergency scene.

Should a wild land fire or peat slippage occur, and the designated assembly area is compromised, other locations will be designated as secondary assembly areas.

6.2.9 Prevention of Illness/Injury due to Weather/Elements

1. All employees will have access to shelter and heat in the event of inclement weather.
2. Employees will have access to at least a litre of water at all times.
3. Weather forecast will be discussed every morning with the crews. Weather conditions and forecast will be monitored regularly by management.
4. No Employee will work alone. A buddy system will be used so employees can contact a supervisor in case of an emergency.

6.2.10 Environmental Emergency Procedure

An emergency preparedness and response procedure is required to prevent environmental pollution incidents. Emergency Silt Control and Spillage Response Procedures are included in Section 4.4.5 of this CEMP.



Suitable spill kits and absorbent material for dealing with oil spills will be maintained on site. In the event of pollution or potential risk of pollution, the Local Authority should be informed immediately.

6.2.11 Emergency Response Plan – Haul Routes

Emergency Response Procedure relating to transportation of plant, equipment and materials to the site will be developed by the contractor during the construction phase of the development.



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