

CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

FOR PROPOSED LARGE SCALE RESIDENTIAL DEVELOPMENT

AT

LISDARAN

CAVAN

CO. CAVAN



Prepared for

Lisdaran Developments Ltd

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 for Lisdaran Developments Ltd at Lisdaran, Cavan, Co. Cavan.

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1.0 INTRODUCTION

1.1. Overview

This document outlines the Construction, Environmental Management Plan (CEMP) for the proposed Large Scale Residential development at Lisdaran, Cavan, Co. Cavan.

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.

The appointed contractor will undertake the works in accordance with the provisions of the CEMP. This may be further added to, to address other detailed construction matters. The CEMP will be updated by the Contractor to address any subsequent planning conditions relevant to the proposed development.

1.3 Structure

This CEMP has been structured as follows:

- **Section 1** outlines the purpose of the CEMP and introduces the proposed development.
- **Section 2** describes in detail the proposed development.
- **Section 3** describes the Drainage for the proposed development.
- **Section 4** identifies the Environmental Constraints for the proposed development.
- **Section 5** outlines the minimum standards, legislation and guidance required of the Contractor during the development of the CEMP.
- **Section 6** identifies the relevant roles and responsibilities for developing, implementing, maintaining, and monitoring environmental management.
- **Section 7** sets out the mechanisms through which environmental requirements would be managed.
- **Section 8** sets out the general requirements to of the CEMP.
- **Section 9** provides a summary of control measures to be implemented by the Contractor; and
- **Section 10** sets out the procedures for the Emergency Response Plan.

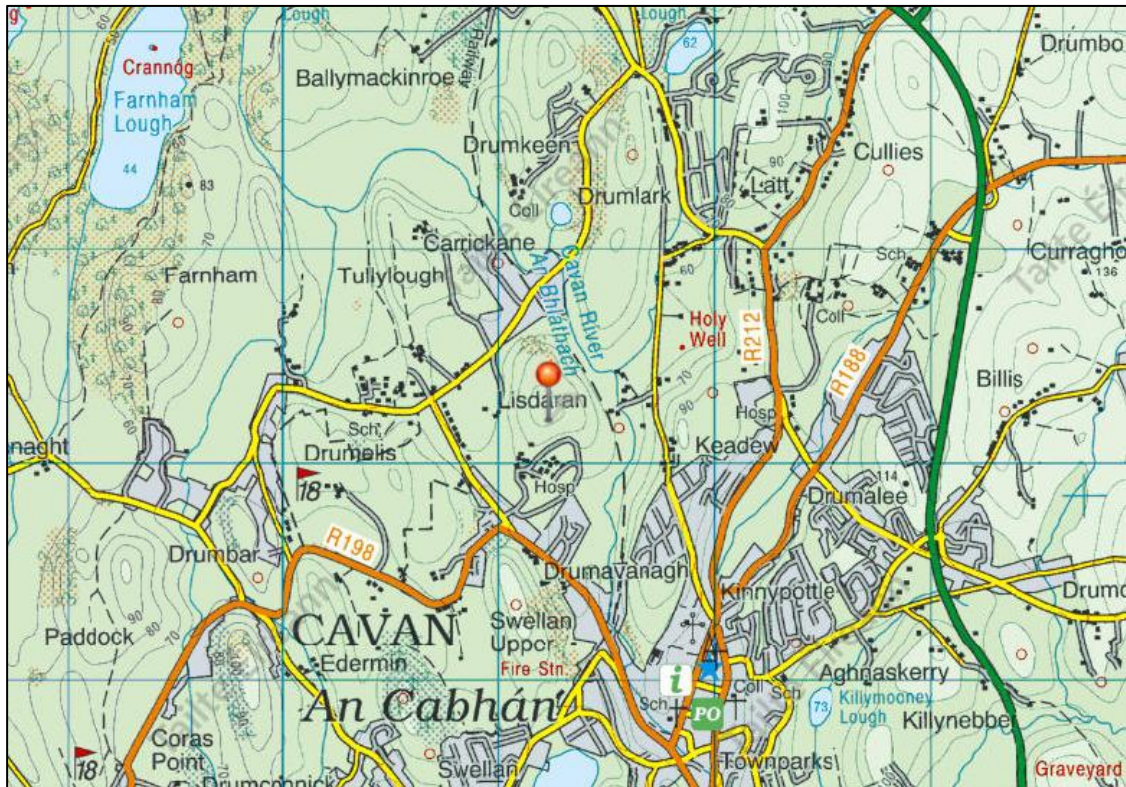


Figure 1.1 – Site Location Map (Discovery Series)



Figure 1.2 – Site Location Map (Aerial)

2.0 THE PROPOSED DEVELOPMENT

2.1. Site Location & Surrounding Land use

The proposed development site is located at Lisdaran, Cavan, Co. Cavan. The site is located on a partly greenfield/partly brownfield which is surrounded by existing residential and hospital services. The area is approximately 8.6ha. The site can be accessed via Loreto Road L-1513-0. The Cavan River is located c.30.28m east of the site. The site boundary generally consists of L1513 to the north and existing once of housing, there is a Greenway to the east which is also the entrance to Cavan Wastewater Treatment Plant. Cavan General Hospital Carpark is located to the south. There is existing once of housing to the west.

2.2. Existing Site Setting

The site is zoned as 'Proposed Residential', 'Residential Strategic Reserve', 'Proposed Low Density Residential' and 'Public and Community' in the Cavan County Development Plan 2022-2028. It is also located within the settlement boundary of Cavan Town. It is located close to Cavan town centre. It is within 5-minute walking distance from local schools (Loretto College 0.5km north) and Cavan General Hospital located directly south of the site. The site can easily access Cavan town centre by foot with surrounding areas containing footpaths, streetlights and local link services.

2.2.1 Proposed Development

The development will consist of the provision of a total of 109no. residential units along with provision of a crèche. Particulars of the development comprise as follows:

- Site excavation works to facilitate the proposed development to include excavation and general site preparation works.
- The provision of a total of 65no. residential dwellings which will consist of 23no. 2 bed units, 26no. 3 bed units and 18no. 4 bed units. The dwelling types range from detached units to terrace units and are 2storey.
- The provision of a total of 44no. duplex apartment units consisting of 8no. 1 bed units, 18no. 2bed units and 18no. 3 bed units. The duplex units range in height from 2storey to 3storey.
- Provision of a two storey creche with associated parking, bicycle and bin storage.
- Provision of associated car parking at surface level via a combination of in-curtilage parking for dwellings and via on-street parking for the creche and duplex apartment units.
- Provision of electric vehicle charge points with associated site infrastructure ducting to provide charge points for residents throughout the site.
- Provision of associated bicycle, bin and bulky items storage facilities for duplex apartment units.
- Upgrading the existing access point from Loreto Road with associated works to include for provision of a right turning lane, provide for internal access roads, footpaths and associated site works.
- Provision of internal access roads and footpaths and associated works to include for regrading of site levels as required along with connections onto the Greenway.
- Provision of residential communal open space and public open space areas to include formal play areas along with all hard and soft landscape works with public lighting, planting and boundary treatments to include boundary walls, railings & fencing.
- Internal site works and attenuation systems which will include for provision of hydrocarbon and silt interceptors prior to discharge.
- All ancillary site development/construction works to facilitate foul, water and service networks for connection to the existing foul via a rising main and provision of a foul pumping station, water connections and ESB network connections along with provision of an ESB substation network connections.

A Natura Impact Statement (NIS) has been prepared and accompanies this application.



Figure 1.3 -Site Layout Plan

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.
- Site mobilisation.
- Construction stage
- Completion.

It is anticipated that the construction phase will take 60 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 Environmental Management Plan for agreement with Cavan County Council.

2.4 Construction Phase

There will also be earth removal works associated with the construction of the proposed development. A Resource Waste Management Plan (RWMP) will be submitted with the application.

Construction of the proposed development will initially involve excavations to facilitate the construction of foundations and the installation of services, and then construction of the proposed large scale residential development.

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	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
Forklift truck	15
Portable compaction equipment	20
Scaffolding and mobile hydraulic access platforms	20
Telescopic handler	30
Trucks	600

2.4.2 Construction Personnel

It is anticipated that the construction phase will take 60 months with a daily range of 10-20 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 bundled 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 construction of the proposed development and concurrent development 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.

A silt fence will be put in place for the duration of the construction phase to protect the watercourse from any fugitive sediment during development.

2.4.6 Construction Security / Fencing

Temporary Heras fencing or hoarding will be provided during the construction phase; the locations of this temporary hoarding will vary as work progresses across the site.

2.4.7 Construction Water Demand

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

2.4.8 Resource Waste Management Plan (RWMP)

A RWMP will be submitted with the application 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 Method Statement and Safety Risk Assessment will be prepared by the construction contractors.

The following provides a summary of the proposed construction sequence:

- Temporary construction facilities and site set up.
- Site enabling and preparation Infrastructure construction.
- Building construction
- 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.

3.0 PROPOSED DESIGN

The project involves the development of a site located on Lisdaran, Cavan Co. Cavan, with the objective of delivering a large-scale residential development. The development will consist of the provision of a total of 109 no. residential units along with provision of a creche.

The aim is to provide high-quality, and energy efficient homes that comply with all national and local policies. The layout was very much formed around the existing nature of the site, the topography of the site, the zoning parameters, and the flood zones. There are significant level changes on the site with approximately 41.5m between the lowest part of the site, along the northern boundary of the site, and the highest part, a hill towards the south of the site. The ground level falls steeply in all directions from the crest of the hill. Some enabling works were carried out for previous development including kerbing of internal roads and some drainage. Through landscaping works proposed as part of the development the character of the surrounding area will be reinforced and the green space which will foster community interaction.

3.1 Drainage

Foul Drainage

The foul water from the residential units located towards the south of the site at the top of the hill will be collected using a suitably sized gravity sewer network and discharged to the existing foul sewer manhole at the southeast of the corner of the site where it will combine with the foul discharge from the existing foul water pumping station and proceed to be discharged to existing Uisce Eireann infrastructure to the east of the site. The foul sewer network at the top of the hill has been sized to cater for possible future development.

The proposed creche along with the first four low density residential units will be connected directly to the existing gravity foul water sewer running along the western and northern boundary of the site. A new foul sewer network will be constructed to service the remaining eight low-density residential units which will discharge to the existing foul sewer at the north corner of the site upstream of the existing foul water pumping station. A Pre-connection Enquiry was submitted to Uisce Eireann for an overall master plan development of the area which included the proposed development, and a Confirmation of Feasibility letter received. A connection agreement with Uisce Eireann for the foul sewer will be in place prior to any works commencing onsite.

Surface Water

It is proposed to use permeable paved parking areas, gullies, downpipes, and a suitably sized network to collect all run-off from the proposed hardstand/roof areas. Permeable paving systems will reduce peak discharges into the drainage system and treat run off by providing a 70-90% removal efficiency rate for hydrocarbons and 60-95% removal of suspended solids thereby improving the quality of water being discharged. A swale will be used to collect the surface water runoff from the majority of the access road to the residential units which will be constructed with a single crossfall towards the swale. Due to the size and scope of the development, it is proposed divide the development into four surface water drainage networks, each of which will have its own outfall/discharge point. The discharge value for each network (Q_{bar}) was calculated using the UK suds website and where required was set to a minimum of 2.0l/s to prevent build-up of vegetation in the infrastructure.

The first surface water sewer network will serve the residential units located at the top of the hill towards the south of the site. The surface water runoff will be discharged to the open drain at the southern boundary of the site. The discharge from the proposed network to the open drain will be restricted to maximum value of 14.5l/s by means of a hydro brake fitted to the first storm water manhole upstream of the discharge point. When the discharge restriction is exceeded, all excess water will be attenuated in an attenuation pond (minimum capacity 583.4m³) located in the green area beside the discharge point at the south of the site.

The second surface water sewer network will serve the beginning of the access road to the units, as far as the junction with the access road to the low-density residential units, and the creche and associated carpark. The surface water runoff will be discharged to existing surface water infrastructure to the west of the existing access road. The discharge from the proposed network will be restricted to maximum value of 2.0l/s by means of a hydro brake fitted to the first storm water manhole upstream of the discharge point. When the discharge restriction is exceeded, all excess water will be attenuated in an attenuation tank (Attenuation Tank 1, Capacity 47.4m³) located in green area to the north of the proposed creche.

The third surface water sewer network will serve the majority of the access road to the to the residential units along with the first four houses of the low-density residential units and the associated access road and hardstand areas. The surface water runoff will be discharged to the open drain / small stream to the north of site at a location just to the northeast of the entrance to the site. The discharge from the proposed network will be restricted to maximum value of 4.0l/s by means of a hydro brake fitted to the first storm water manhole upstream of the discharge point.

When the discharge restriction is exceeded, all excess water will be attenuated in an attenuation tank (Attenuation Tank 3, Capacity 59.8m³) located in green area and road just to the north of the first four low density residential units. Due to the length and area of the access road to the residential units the flow proceeding downstream at the end of the swale will be restricted to 2.0l/s by means of a hydro brake fitted on the first manhole downstream of the swale. When the discharge restriction is exceeded, all excess water will be attenuated in an attenuation tank (Attenuation Tank 2, Capacity 203.2m³) located in green area to the northeast of the proposed creche beside the access road.

The fourth and final surface water sewer network will serve the remaining low density residential units and associated access road and hardstand areas. The surface water runoff will be discharged to the open drain / small stream to the north of site at the northern corner of the site beside the existing foul water pumping station. The discharge from the proposed network will be restricted to maximum value of 4.0l/s by means of a hydro brake fitted to the first storm water manhole upstream of the discharge point. When the discharge restriction is exceeded, all excess water will be attenuated in an attenuation tank (Attenuation Tank 4, Capacity 132m³) located in green area beside the existing foul water pumping station.

The attenuation tanks have been sized to cater for a 1 in 100-year storm event with an allowance for an additional 20% increase in rainfall quantities due to climate change. The surface water runoff will pass through a petrol interceptor prior to being discharged at any of the four discharge locations.

Water

It is proposed to connect to one of the existing spurs with a 150mm watermain which will be used to service the residential units towards the south of the site at the top of the hill. A 150 mm spine watermain will be laid in the footpath along the main road through the development where possible with appropriate loops servicing the side roads of the development where required. A 100mm connection to the existing watermain will be required to service the 12 low density residential units and foul water pumping station at the north of the site. This connection will consist of a single line terminated in a loop. The creche will be connected directly to the existing watermain running along the access road to the site. Sluice valves, air valves, scour valves, and hydrants will be located as required by Irish Water Standards and Code of Practice.

Due to the scale of the development a bulk meter will be required for the watermain servicing the residential units and a bypass flow meter for the watermain servicing the low-density residential units. The exact configuration of the meters required will be confirmed with the Uisce Eireann Design Engineer during the connection application process. A connection agreement with Uisce Eireann for the watermain will be in place prior to any works commencing onsite.

Foul & Stormwater Layout. 1 of 4

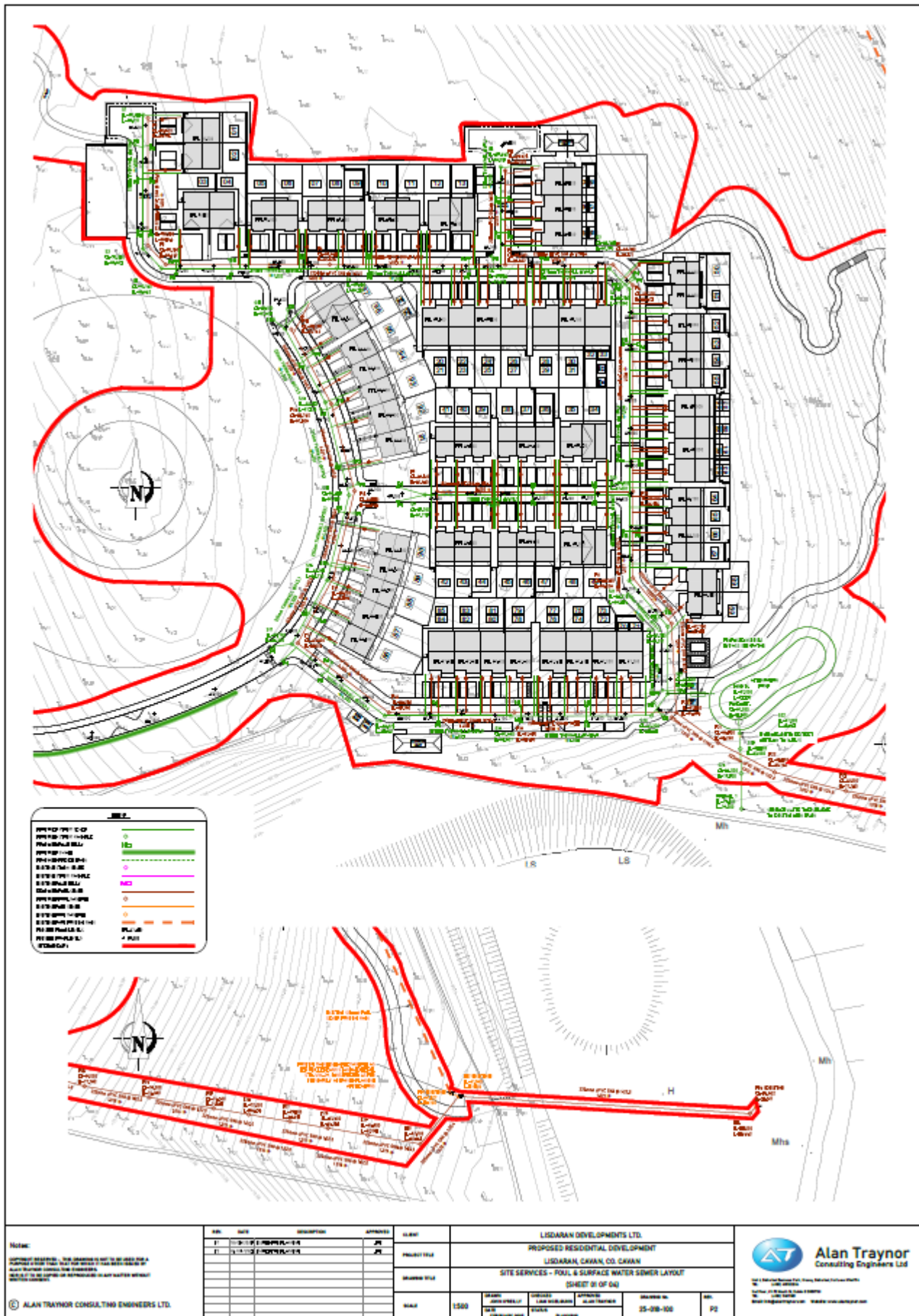


Figure 3.3: Foul & Stormwater Layout. 2 of 4

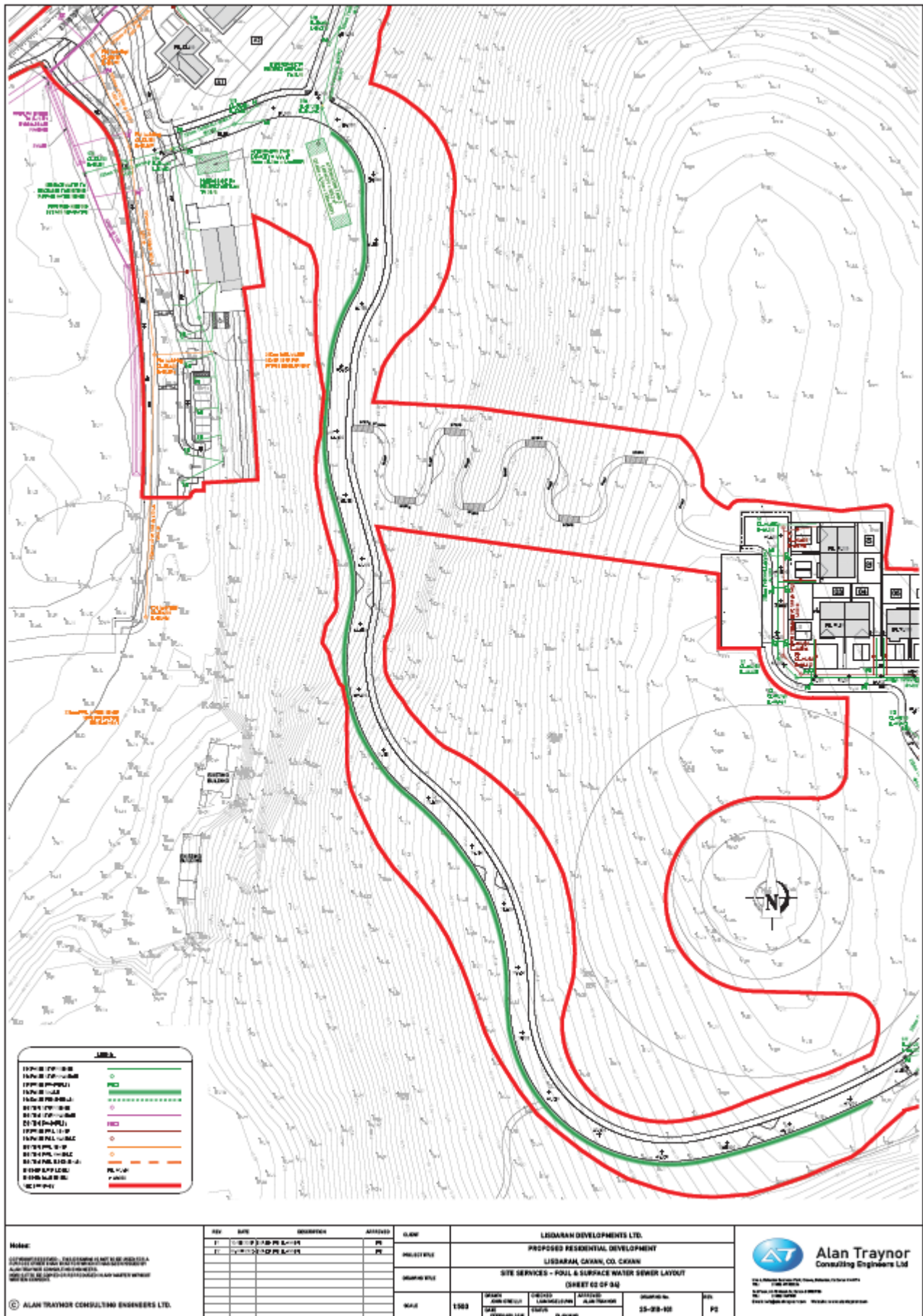


Figure 3.4: Foul & Stormwater Layout. 3 of 4

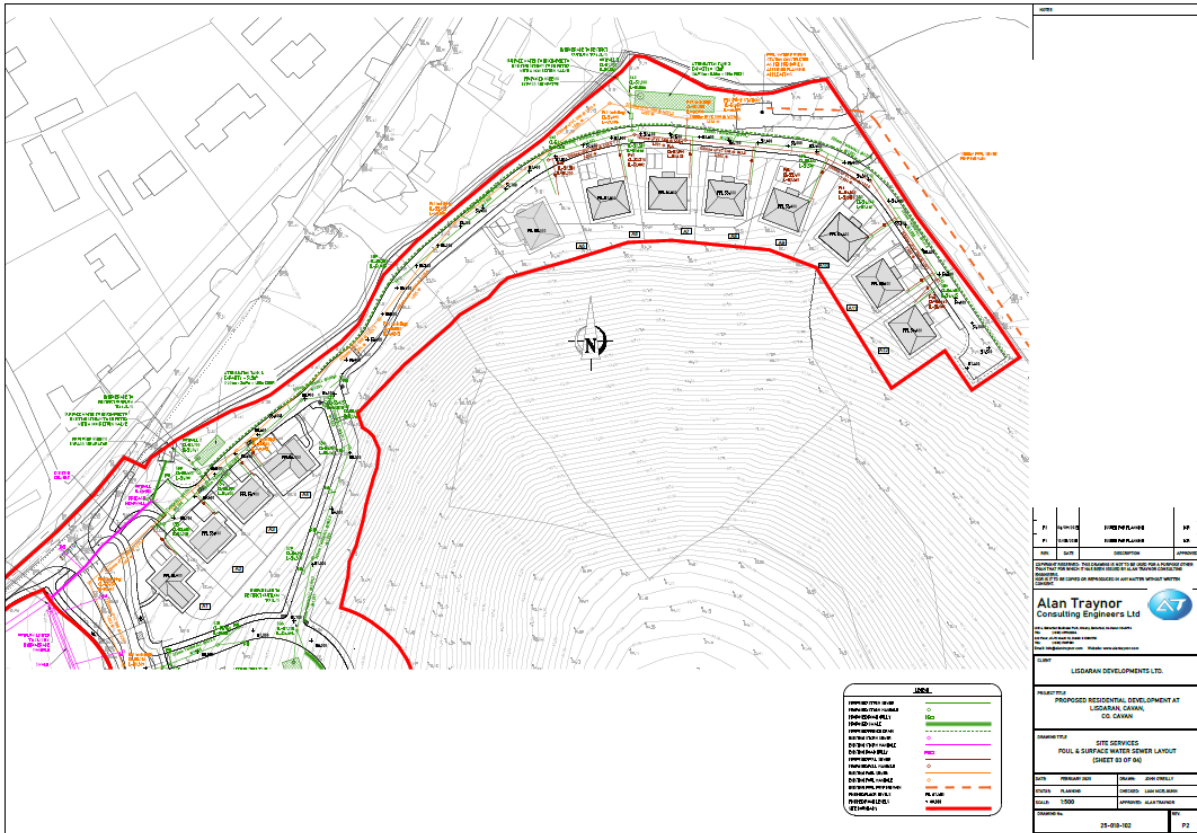
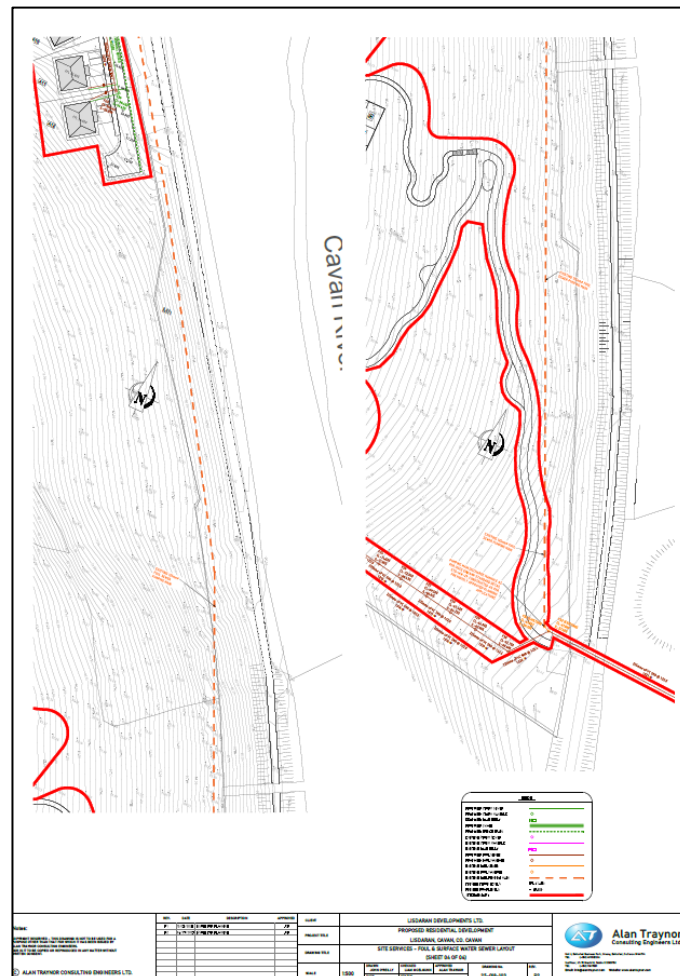


Figure 3.5: Foul & Stormwater Layout. 4 of 4



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.

4.3 Soils, Geology and Hydrogeology

According to the Geological Survey of Ireland (GSI) website, the "Teagasc Soils" indicates the predominant soil type underlying the proposed development area to be 'Clashmore which is defined as Coarse loamy drift with siliceous stones.' The subsoil underlying the site is predominantly underlain by Till Type which is Shales and sandstones till (Namurian)

The underlying bedrock geology at the site (Namurian) has been classified by the GSI as a '*Locally Important Aquifer (LI)*', this being bedrock which is generally moderately productive. Groundwater vulnerability varied within the site and vicinity of the site was generally mapped as being Low → Moderate → High.

4.3.1 Construction Impacts

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 licenced 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 site with the local context, adding to the existing screen planting.

4.4.2 Boundary Landscape

The boundary treatment will include maintaining the existing mature hedgerows. Please refer to architect drawings.

4.5 Water Resources

The site is mapped by the EPA (EPA, 2025) to be within the WFD Catchment of the Erne (36) & Hydrometric Area 36, the Cavan_SC_010 WFD Sub-catchment, the Cavan_20 (IE_NW_36C020400) and Cavan_10 (IE_NW_36C020300) WFD River Sub Basin.

The closest surface water feature to the site and Proposed Development is mapped by the EPA (EPA, 2025) as the Cavan River (WFD Name: Cavan 36; River Waterbody Code: IE_NW_36C020300) which is located to the east of the Proposed Development site. The Cavan River flows west of Cavan town in a northerly / north-westerly direction until it flows into Coalpit Lough, then Derrygid Lough and then eventually into the Annalee River.

The application site is within the Killashandra Ground Waterbody (IE_NW_G_062), and the EPA describe the overall status of this waterbody as good. This groundwater body is considered to be *Not at Risk*. Groundwater vulnerability varies throughout the site. The southern portion of the site is a combination of Low and Moderate vulnerability, while a norther portion of the site is a combination of high and extreme vulnerability.

4.6 Population and Human Health

The subject site is located on the outskirts of Cavan town. The latest census data (2022) indicates that the population of Cavan was 11,741 (Census, 2022).

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.

Table 4.3 outlines typical items of plant that it is advised will be in use during various phases of the construction programme.

Table 4.3 - Typical Noise Emission Levels for Typical Construction Activities

Item (BS 5228 Ref.)	Activity/ Notes	Plant Noise Level at 10m Distance (dB LAeq,1hr) ¹	Predicted Noise Level at 350m (dB LAeq,1hr)
HGV Movement (C.2.30)	Removing soil and transporting fill and other materials.	79	40
Tracked Excavator (C.4.64)	Removing soil and rubble in preparation for foundation.	77	38
General Construction (Various)	All general activities plus deliveries of materials and plant.	84	45
Dewatering Pumps (D.7.70)	If required.	80	41
JCB (D.8.13)	For services, drainage, and landscaping.	82	43
Vibrating Rollers (D.8.29)	Road surfacing.	77	38
Total Construction Noise (cumulative for all activities)			49

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 outlined in Table 4.3

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.

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

There is no significant risk of pollution of soil, groundwater or watercourses associated with the proposed development provided control/mitigation measures are followed at all times.

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 of 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

The Health Service Executive (HSE) 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 through 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

Mitigation and monitoring will be carried out so that construction activities are undertaken in a manner that does not give rise to negative effects. 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.
- Effective prevention of infestation from pests or vermin.

8.2 Site Compound

All Construction 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 to the north of the existing car parking area. 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:

- 07:00 – 18:00 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 and scaffolding; and
- 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 Fences at key locations on the site which are in close proximity to waterbodies. These will be maintained for the duration of the construction works. 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.

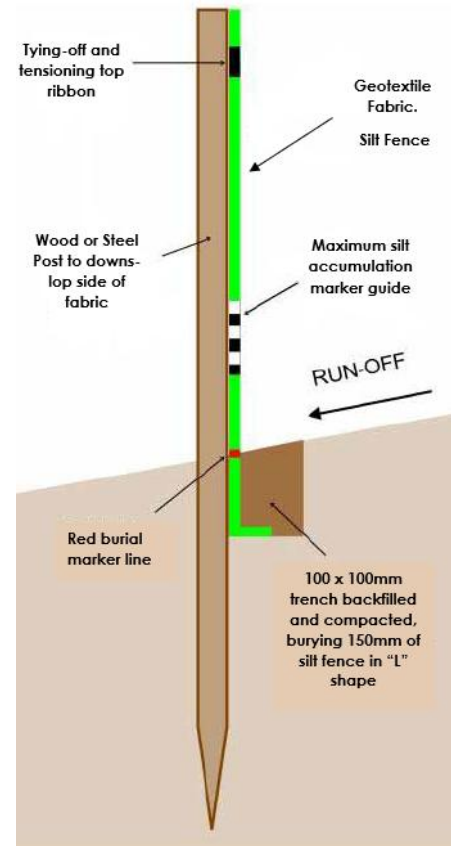
8.5.1 Silt Fence Maintenance

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 contract 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.

Silt Fence Specification.

1. Silt fence 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.



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 1.00M.

Figure 8.1 A Location of Silt Fence

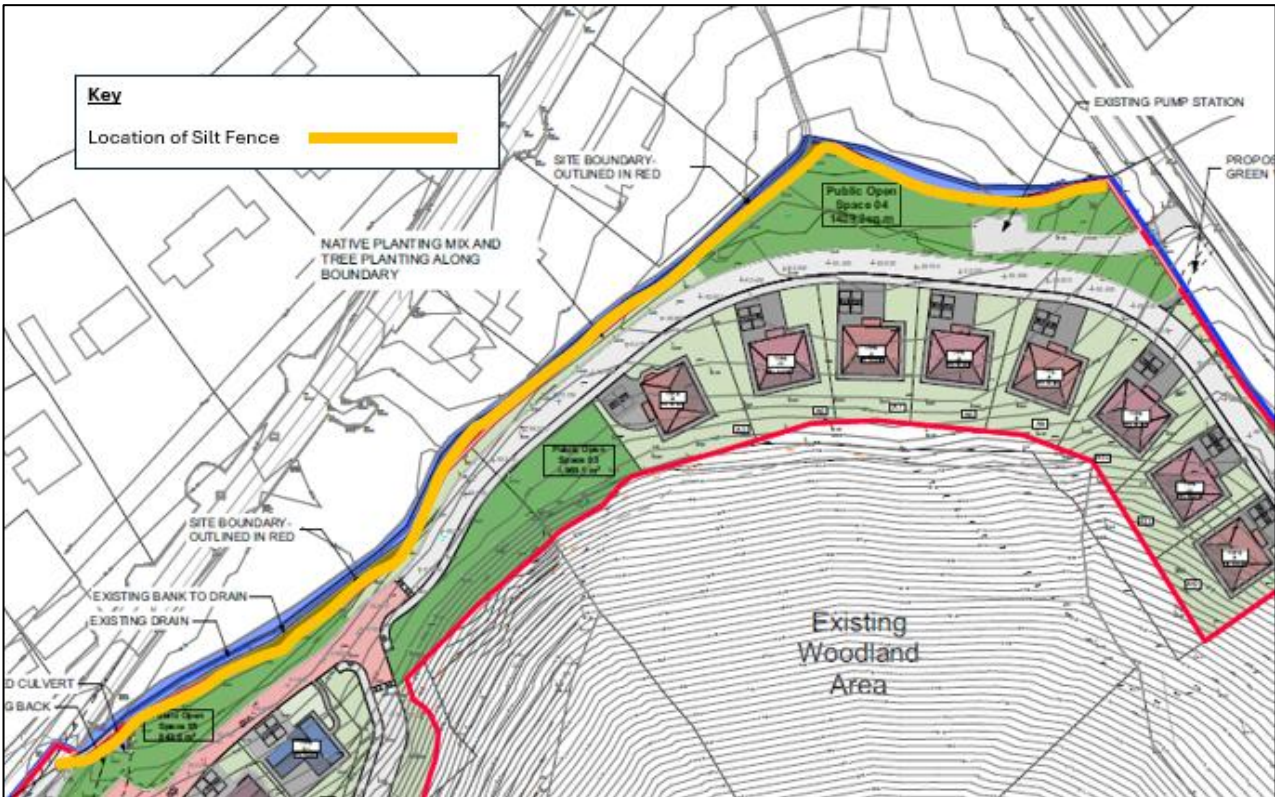


Figure 8.1 B Location of Silt Fence



8.6 Hoarding and Fencing

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

8.7 Water Quality and Monitoring

During the construction works there will be ongoing visual inspection monitoring of the local drains and water course 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.

8.8 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.

8.9 Lighting

The following measures will be applied in relation to site lighting:

- Lighting will be provided with a minimum luminosity sufficient for safety and security purposes. Where practicable, precautions will be taken to avoid shadows cast by the site hoarding on surrounding footpaths, roads, and amenity areas; and,
- Motion sensor lighting and low energy consumption fittings will be installed to reduce usage and energy consumption.

8.10 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 the HSE or the HSE Representatives 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.

8.11 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.

8.12 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.

8.12.1 Building Site

It is not unusual for the site of a new building to be infested with rats before construction commences. The 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.

8.12.2 Sewers and Drains

(a) During the laying of new drains the sewers, open pipe ends and manholes should be protected against entry by rodents when work is not in progress— particularly at night time.

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

8.12.3 Construction of Building

It is known that rats can jump vertically up to three feet and that mice are capable of passing under a gap of three eighths of an inch. Consequently, the outer walls of a building should be rodent proofed to a height of three feet and there should be no opening in excess of a quarter of an inch around bases of doors etc. Particular attention should be paid to: (a) Openings made for waste and soil pipes, washing machines and central heating pipes. (b) Openings made for electric, telephone, and T.V. cables. (c) Openings made for ventilation plates and air bricks. (d) The gap between the bottoms of external doors and their thresholds.

8.12.4 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.

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 areas.
- 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:

- Silt Fence will be placed close to waterbodies 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 removing the material off-site as soon as possible to designated storage areas.
- 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.

11.0 CONCLUSION

The project CEMP will be a live document which will be reviewed throughout the construction process through regular auditing, monitoring, and site inspections. This will ensure that the environmental performance of construction activities associated with the project are subject to continual improvement and will ensure that environmental objectives and targets outlined in the Plan are achieved. Revisions to the CEMP may include any changes and improvements made during the works from an environmental perspective.

APPENDIX A

CONTROL MEASURES REGISTER FOR THE PROPOSED DEVELOPMENT



Document Type : Register For Proposed Development at Lisdarn, Cavan, Co. Cavan										
Document Title: Environmental Controls Register										
Responsible Department: Lisdarn Developments Ltd										
Document Number: EMS 001 September 2025										
Area of Activity	Aspect	Probability	Severity	Significance	Description of impact	Control Measures	With Controls			Site Specific Controls
							Probability	Severity	Significance	
Lisdaran Developments Ltd										
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. 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 wheelee 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.
Planning & Permitted Development	Permissions from Louth County Council (LCC)	3	5	15	Failure to adhere to or be fully aware of planning conditions or constraints and permitted development parameters can lead to environmental harm and prosecution by Louth County Council (LCC). Failure to comply with the controls in place can lead to environmental harm and prosecution. This has wider implications to the project development, client reputation and programme.	Any Planning permission conditions will be passed to the Contractor as part of the Contract document.	2	5	10	No additional measures.
Existing Knowledge - Drainage	Identification and protection of drainage	4	5	20	Failure to protect drains from pollutants can cause harm to ground and watercourses. Damage to drains and drainage systems introduces pollution pathways and effects ground, ground water and watercourses.	Site drainage plans will be made available by the Structural Engineers to all Contractors and other related personnel working on the project. Works areas, laydown areas, stockpiles have all been assessed in relation to drain locations. Spill kits and drain covers (where applicable) will be made available and easily accessible to the Contractors on site. Drip trays to be used under all static plant.	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 silt 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 NWCPD.	2	3	6	No additional measures.
Demolition	Demolition of the existing building on site.	3	4	12	Demolition of structures can cause dust impacts on local receptors (residences, businesses and water bodies).	Dampening down is employed during demolition activities if the weather is dry. Barriers may be required to be installed to prevent dust passing to sensitive receptors. Road sweeping employed where necessary to reduce dust impacts. All broken out material is checked for signs of contamination. If any are suspected this material is segregated. The concrete is then removed off site	2	4	8	Continuous Dust Monitoring to be carried out
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.
Demolition / Equipment Removal	Segregation, storage and disposal of equipment	4	5	20	Equipment which contains hazardous substances such as oils, can harm the environment when incorrectly managed. Equipment which is to be relocated for reuse could be damaged through incorrect storage on the site. Failure to follow the Waste Regulations may result in environmental harm. Mismanagement of waste streams constitutes a breach of legislation and could result in prosecution and fines.	Equipment will be removed and held in secure containers or placed on containment. It will be appropriately labelled. Equipment intended for re-use or return to is stored securely and away from works areas and traffic routes which may have the potential for accidental damage. Competent contractors are used to remove equipment and all removal activities.	2	5	10	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 bowsters 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.