



Louth County Council

Preliminary Construction Environmental Management Plan

Westgate 2040 Regeneration, Drogheda

Project no: 603903 (04)

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RSK



RSK GENERAL NOTES

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1 INTRODUCTION

Introduction

- 1.1 This preliminary Construction Environmental Management Plan (pCEMP) has been prepared by RSK as part of a planning application for public realm and urban regeneration works on lands within the Westgate Vision Area of Drogheda, Co Louth.
- 1.2 The pCEMP is intended to form the basis for management of the main environmental aspects of the construction of the proposal in order to protect the *River Boyne and River Blackwater SAC* or other downstream European sites and any residential and commercial neighbours in close proximity to the proposed scheme.
- 1.3 The project is currently at planning stage and as such input from the contractor has not been incorporated into the document. Upon appointment of the contractor, this preliminary document will be issued for further development as a final CEMP for the project. It will contain the site-specific control measures that will be applied by the Contractor and where relevant their sub-contractors during the construction stages of each element of the proposal. All works must be carried out in accordance with the mitigation measures outlined in this pCEMP, the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement (NIS) and necessary planning conditions.
- 1.4 A copy of the final CEMP will be provided to each Contractor working on behalf of Louth County Council and a copy maintained on site for reference by the entire workforce. It must be accessible to all site personnel, subcontractors and representatives of the relevant enforcement authority.

Scope

- 1.5 It is intended that this pCEMP will be expanded and updated by the appointed Contractor prior to construction works commencing. The aims of the CEMP are to:
 - Ensure construction works and activities are completed in accordance with mitigation and best practice approach presented in the EIAR, NIS and any associated planning documentation;
 - Ensure construction works and activities are completed in accordance with all planning conditions for the development and that the CEMP is updated as required;
 - Ensure construction works and activities have minimal impact/disturbance to local landowners and the local community;
 - Ensure construction works and activities have no adverse effect on the integrity of any European Site;
 - Ensure that construction traffic to and from the site is strictly managed to avoid unnecessary traffic movements;
 - Appoint a dedicated person, who will be on site to liaise with the Public regarding any concerns that they may have in relation to the site operation;

- Adopt a sustainable approach to construction; and,
- Provide adequate environmental training and awareness for all project personnel.

Document Structure

1.6 This pCEMP is structured as follows:

- Section 1 provides an introduction, with scope of the CEMP;
- Section 2 describes the project and overview of construction activities;
- Section 3 references contractual and legal requirements;
- Section 4 details key roles and responsibilities;
- Section 5 details the environmental mitigation measures to be employed during the construction phase;
- Section 6 details the methods of communication;
- Section 7 details the approach to environmental training, logs and site awareness;
- Section 8 details the emergency response and preparedness procedures in the event of an incident; and,
- Section 9 details the approach to monitoring and audit procedures.

2 THE PROJECT

Description of the Development

- 2.1 The proposed development consists of the following:
- (1) Public realm improvement works comprising: new hard landscaping including resurfacing, soft landscaping including new tree planting, a water feature channel with stepped concrete elements and integrated landscaping, a Corten steel ground insert delineating the location of the former medieval town wall, a wayfinding Corten steel ground insert, Corten steel signs, Corten steel walkways, street furniture, new pedestrian connections, a SUDS rainwater retention pond, cycle lanes, pedestrian footpaths, external steps, tactile paving, road signs, cycle parking stands and provision of new railings;
 - (2) Public realm improvement works will also include the creation of a new urban plaza gateway/arrival area at Georges Square and a new enhanced public amenity area adjacent the River Boyne riverfront including a new pedestrian wooden deck promenade/boardwalk;
 - (3) Demolition of the existing public toilet block at George's Square (between the junctions of George's Street/Fair Street and George's Street/West Street), a section of boundary wall located between Old Abbey Lane and Father Connolly Way and a section of wall located between Dominick Street and Dominick Street car park;
 - (4) A new raised, free-standing, curved walkway located between the R132 and the existing Medieval Wall to provide a universally accessible connection from West Street to the River Boyne riverfront;
 - (5) A new freestanding Corten steel pavilion located adjacent the River Boyne riverfront to create a new mixed use/public space;
 - (6) A new freestanding Corten steel canopy located within, and offset from, the remains of the Old Abbey (being a Protected Structure – ID No. DB-187 and a recorded monument - RMP No. LH024-041011) to create a new flexible community and cultural space;
 - (7) Two freestanding Corten steel structures located at the junction of West Street and the R132/George's Street to mark the location of the former medieval West Gate;
 - (8) Repair and restoration of the old Medieval Wall located adjacent the R132/George's Street (being a Protected Structure – ID No. DB-188 and a recorded monument - RMP No. LH024-041014);
 - (9) Repair and restoration of the Old Abbey (being a Protected Structure – ID No. DB-187 and a recorded monument - RMP No. LH024-041011) including the west gable of its north aisle located within Old Abbey Lane;
 - (10) Reprioritisation of traffic and movement patterns for the streets/roads/lanes/footpaths within the application site to accommodate the proposed public realm improvement works and integrate with the Council's emerging Active Travel projects to the north and south of George's Street/R132;
 - (11) Road improvement works to include alteration of road alignment, resurfacing, shared surface treatments, revised access arrangements, cycle lanes, pedestrian crossing points, parking bays, loading bays, accessible parking bays, bus stops and new public lighting; and
 - (12) All associated site works including: drainage, undergrounding of services and all associated ancillary development works.
- 2.2 The overall objective of the 'Westgate 2040' project' is to act as a catalyst to support positive regeneration, compact growth and sustainable development.

Site Location and Plan

- 2.3 The application site is located on the northern bank of the River Boyne in the western side of Drogheda Town centred at Irish Grid Reference O 08445, 75254. It measures approximately 1.89 hectares and includes the following lanes/streets/roads/areas and their adjoining footpath/public realm/junction areas: R132/Bridge of Peace/George's Street (including the underpass on the northern side of the River Boyne); George's Square; Father Connolly Way (including part of an existing car park area); Dominick Street; Patrickswell Lane; Old Abbey Lane (including an area to the rear of 56/57 West Street); Scholes Lane; R900/West Street/Narrow West Street; Fair Street; and Wellington Quay, in the townland of Moneymore, Drogheda, Co Louth.
- 2.4 The western margins of the site extend from the Bridge of Peace northwards along George's Street to the junction with Fair Street. The northern area of the Application Site extends along Fair Street to the junction with Bolton Street with the east boundary marked by Scholes Lane which extends south to West Street and Dominic Street. The southern extents of the proposal extend from Dominic Street in the southeast corner back toward the Bridge of Peace along Father Connolly Way. The River Boyne Estuary flows past the southern boundary of the Site. The redline boundary of the Site is detailed on Figure 1.

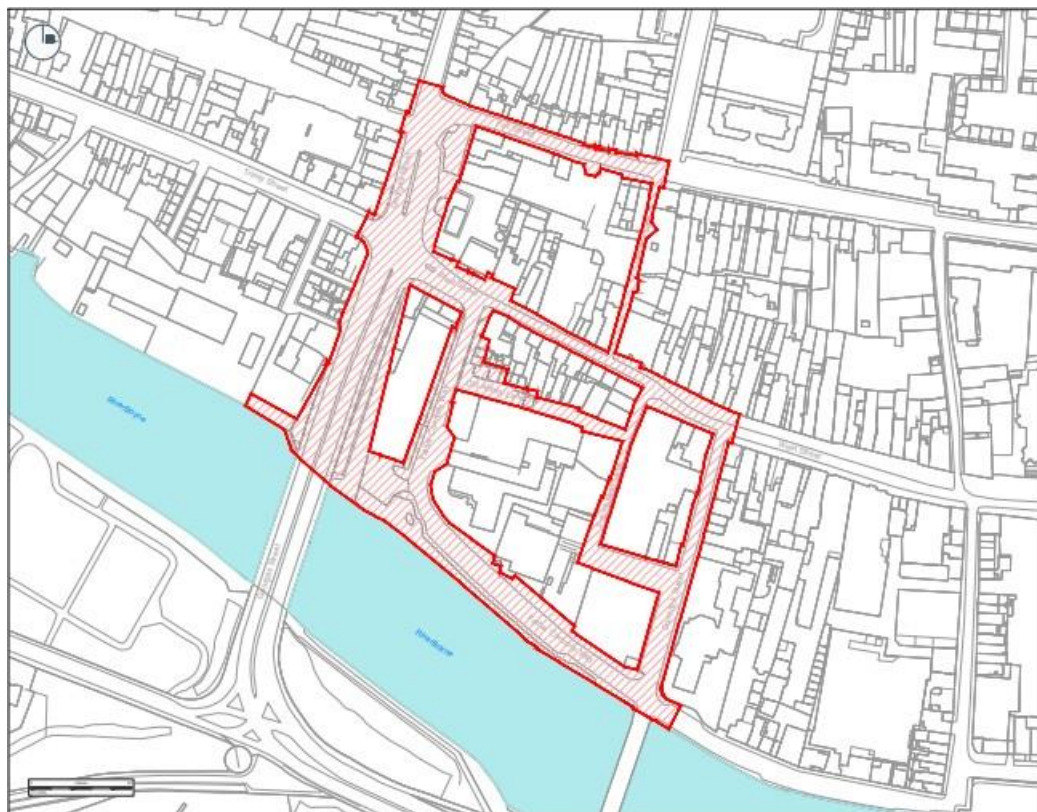


Figure 1: Redline boundary of the Site

- 2.5 The topography across the site varies considerably with levels between 3.5 – 4.5m AOD along the Riverfront area/Father Connolly Way rising to 8.0 – 11.0m AOD along West Street, located north of 'The Old Abbey', and up to 17 – 18m AOD at Fair Street on the northern boundary of the Site.
- 2.6 The closest major waterbody to the Site is the River Boyne, which flows adjacent to the southern boundary of the Site. The river is estuarine at this point, mixed with the tidal waters of the Irish Sea. The estuary meets the coast approx. 9 km downstream. Under the Water Framework Directive status assessments 2013 – 2018, the transitional waters of the River Boyne are of Moderate status, as are the coastal waters at the mouth of the river.
- 2.7 The Natura Impact Statement (NIS) prepared for the proposed development identifies that the southern boundary of the application site adjoins the River Boyne and River Blackwater Special Areas of Conservation (SAC), and a small section of the application site is located within the SAC. However, the NIS confirms that none of the qualifying interests of the SAC are located within this small overlapping area of the subject site.
- 2.8 The site will be served by existing foul and storm water drainage systems. No modifications to the existing drainage system are proposed.

Project Programme

- 2.9 A procurement process will commence, upon securing planning approval to appoint a competent and experienced Contractor for delivering the proposed works. The construction phase is currently estimated to be five years.
- 2.10 The Contractor, once appointed, will develop a detailed construction work programme including plans to minimise risks to construction workers and local residents from dust, noise and vibration and procedures and measures to prevent pollution entering the water environment. The contractor will also address any restrictions when undertaking certain tasks within sensitive bird breeding seasons etc. to avoid or prevent the impact of the construction of the identified species within the site and its environs.

Construction Management

- 2.11 The appointed Contractor for the works will be required to comply with this CEMP and any revisions made to the document. A broad overview of the proposed construction methodologies is provided below.

Site set up and Compound

- 2.12 A compound where practicable will be set up as part of the initial preparation works in each work area. The site compound will not be located adjacent to or beside the River Boyne and River Blackwater Special Areas of Conservation. It is proposed that the site compound will be positioned outside of a 50 metre buffer zone from the edge of the river bank. If necessary this requirement can be secured by the implementation of a planning condition.

- 2.13 The Contractor will ensure that the following information is displayed in the compound as

a minimum:

- Traffic Management and Site Information/Services Plan;
- Silt Run-off Prevention and Protection Poster;
- Name and contact details of person(s) accountable for air quality and dust issues on the site boundary;
- Head or regional office contact information; and,
- Nominated Community Liaison Officer.

- 2.14 The compound will provide a site office, canteen, first aid room and welfare facilities as well as foul drainage and potable water supply and a designated storage area for materials and wastes.
- 2.15 Access to the compound will be security controlled and all site visitors will be required to sign in on arrival and sign out on departure.
- 2.16 All construction materials, debris, temporary hardstands etc. in the vicinity of the site compound will be removed off-site on completion of the works and the area will be restored as required.

Site Access

- 2.17 The existing road network adjacent to each work area will be utilised by all construction vehicles and personnel.
- 2.18 A set down area for deliveries and temporary storage of construction materials may need to be established at each work area. Each work area is to be clearly demarcated and managed to ensure it is well ordered and tidy in line with good site management practice.

Parking

- 2.19 Construction personnel will use the nearest available public carpark where feasible when working in each area of the development. The contractor will ensure that construction machinery and plant is sited on impermeable hardstanding only.
- 2.20 No parking shall be permitted by any site personnel outside the red boundary line of the work area where practical.

Hoarding and Fencing

- 2.21 Fencing demarcating the boundary of the site, during construction, will be a combination of double clipped traditional secure heras panels (with feet and rakers) and 2.4m timber hoarding either secured to the ground or ballast block.
- 2.22 The purpose of the 2.4m hoarding will be to act as a buffer with any noise or dust emissions and to minimise any visual impacts by screening the workings areas, plant and equipment.
- 2.23 Appropriate sight lines / visibility splays will be maintained around the site to ensure the safety of both vehicles and pedestrians.
- 2.24 Signs will be erected on the boundary hoarding that describes the site as being a construction site, accessible to workers and authorised personnel only, i.e., "Construction

Site – Do Not Enter – Authorised Personnel Only”.

- 2.25 Display information boards will also be erected detailing out of hours contact details, telephone helpline number (for comments / complaints) and information on the works.

Security

- 2.26 The Contractor will provide site security in the area of the construction that is sufficient and adequate to ensure that the work area is secure and protected from unauthorised access and casual trespass for the duration of the works.

- 2.27 The following security measures will be provided:

- Site and compound boundaries i.e., fencing, gates, locks etc;
- Deterrence of stockpiling materials close to site / compound boundaries, so they cannot be used for unwanted access;
- Polluting materials to be well secured;
- Procedure to inform Garda Síochána about the site and taking their advice on security; and,
- Procedure for dealing with vandalism, graffiti etc.

Site Lighting

- 2.28 Entry and egress routes to the site will be illuminated via approved street lighting arrangements. Lighting will be positioned so as not to cause a distraction to passing motorists.

- 2.29 Site task lighting will have a low lux level and be maintained at a low trajectory only so as to prevent over spill to surrounding properties, ecological receptors or structures used by protected species.

Working hours

- 2.30 The normal hours of working on any part of the development during the construction period will be:

- 07:00 hours to 19.00 hours Mondays to Fridays; and,
- 07:00 hours to 13:00 hours on Saturdays.

- 2.31 The following controls will also apply to the works:

- No construction work or operational machinery will be permitted between the hours of 23:00 to 07:00hrs;
- No work will be permitted on Sundays and on public holidays; and,
- There will be no stacking of lorries on the site boundary outside of the working hours.

- 2.32 Any works outside these normal hours will be subject to the requirement to obtain consent from Louth County Council. The agreement of works outside normal hours should include detail of the site specific working hours and work methods to ensure that the ‘best

practicable' means to control potential nuisance are included.

Construction Activities

2.33 Construction activities will involve all the necessary operations to construct the development as described. A high-level overview of the construction activities involved is provided below. This list is not exhaustive and is provided to give an overview of the typical nature of activities. Note also that the precise order in which these activities will take place is not known at this stage.

- Temporary Site Offices / Staff Welfare Units and Storage Compound;
- Site Clearance – isolate and remove existing utilities, demolition of toilet block and walls; vegetation removal, topsoil stripping, storage of topsoil for future reuse, breakout of hardstanding, storage removal of excess spoil;
- Construction of freestanding corten steel pavilions, structures and ground insert - foundation trenching, establishment of foundations, installation of utilities, importation of building materials by HGV, storage of building materials, erection of unit, erection of scaffolding, roofing, fit out of unit;
- Construction/ realignment of access routes and paving areas - site levelling, earthworks, soil compaction, installation of road base, kerbing, road drainage, tarmacking and paving surface; and,
- Tree planting and Landscaping and a SUDS feature; and
- A water feature channel with stepped concrete elements and integrated landscaping;
- Signage.

Typical Equipment

2.34 A list of typical equipment to be used on site during the construction period is summarised below;

- Hand Tools including Hammers, Crow Bars, Shovels, Wheelbarrows;
- Power Tools including Stihl Saws, Battery Drills, Angle Grinders;
- Machinery/Plant including 20t excavators, 1200 rollers, Generators, Hiab Lorry, mobile Crane, Lorries, Forklift, Scaffold including Hop Ups and Aluminium Towers;
- Pumps to enable excavation and service trenches to remain dry;
- Delivery vehicles articulated and non-articulated; and,
- Fuel tank delivery vehicles.

Site Clearance and Earthworks

2.35 Minor site clearance, earthworks and ground preparation will be required as part of the redevelopment at the riverfront area, Old Abbey and Medieval Wall and for the re-profiling of roadways, footpaths and cycle paths along with seating areas. No infilling works will be required. Best practice relating to site clearance, earth works and ground preparation will be implemented. Extra precautions will be put in place along the riverfront area to

minimise and avoid impacts on the River Boyne and River Blackwater Special Areas of Conservation (SAC).

- 2.36 Given the historic development of the area, and lack of site investigation reports at the time of drafting of the EIAR, further assessment of the underlying soils to determine their nature and potential presence of contamination may be required. A suitably qualified geo-environmental engineer should be engaged to undertake an assessment and intrusive investigation if deemed required prior to the commencement of any significant earthworks or excavations works that may be required as part of the proposal.
- 2.37 Stripping of topsoil will be coordinated with the proposed staging for the development. The extent of topsoil strip (and consequent exposure of subsoil) will be limited to the immediate vicinity of active work area(s).
- 2.38 Disturbed subsoil layers will be stabilised as soon as practicable (e.g., backfill of service trenches, construction of hardstanding, construction of building foundations).
- 2.39 Any infill material/landscaping that is required will be placed and levelled in appropriate lift thicknesses to ensure the material is not over compacted thereby retaining its drainage properties.
- 2.40 Efforts will be made to ensure that any soil from site clearance and excavation works is re-used on site. Any other waste that cannot be immediately recovered will be tested prior to disposal at the appropriately licensed facility.

Demolition Works

- 2.41 The proposal includes for the demolition of the toilet block at Georges Square, a section of wall between Father Connelly Way and Old Abbey Lane and a section of wall along the eastern boundary of Dominic Street car park, as demonstrated in the accompanying planning drawings (Insert No) All demolition will be undertaken by a competent demolition contractor in accordance with the current code for demolition and the consultant engineer's specification down to below foundation level. All works will be undertaken in accordance with current best practice¹.
- 2.42 Prior to the demolition works commencing, the Contractor will ensure that a pre-demolition survey is undertaken on all buildings and structures. In the event that asbestos containing materials are identified, these will be removed by an appropriately qualified and competent asbestos contractor prior to the demolition works commencing.
- 2.43 The demolition works will be scheduled to minimise any potential disturbance to wildlife using the site or surrounding environment, such as any breeding birds during the bird nesting season March 1st to 31st August. Best practice relating to site demolition works will be implemented. Extra precautions will be put in place along the riverfront area to minimise and avoid impacts on the River Boyne and River Blackwater Special Areas of Conservation (SAC).
- 2.44 If feasible, the waste generated from the demolition works will be segregated for reuse or recycling in accordance with the relevant legislation and guidelines and the project's Construction Waste Management Plan. Demolition will be carried out in a considered

¹ BEST PRACTICE GUIDELINES for the preparation of resource & waste management plans for construction & demolition projects
Louth County Council

manner to reduce the amount of dust, debris and vibration. No crushing or screening of demolition material is proposed on site.

Preservation of Designated and Protected Areas

- 2.45 Buildings, such as the old Abbey within Old Abbey Lane and the Medieval walls along the eastern side of George's Street are identified as having heritage/archaeological value. Whilst no significant earthworks or excavation works are proposed on any designated sites or protected areas within the development area, the Contractor will implement the appropriate mitigation measures when working in close proximity to these areas to ensure that they are protected and preserved.

- 2.46 Best practice and precautions during construction will be put in place along the riverfront area to minimise and avoid impacts on the River Boyne and River Blackwater Special Areas of Conservation (SAC). These measures will be in accordance with those outlined in this pCEMP, the EIAR, NIS and any necessary planning conditions.

3 ENVIRONMENTAL POLICIES AND LEGAL REQUIREMENTS

- 3.1 All site works shall be undertaken in compliance with the CEMP and with all applicable legal and regulatory requirements.

Environmental Policies

- 3.2 As part of the appointment, the Contractor will provide a copy of their Safety and Environmental Policy. They will ensure that a copy of their Health, Safety and Environmental Policy is clearly displayed on site notice boards during the construction period. All employees are expected to comply with the requirements of the Environmental Policy.
- 3.3 The Contractor will ensure their employees and support staff (contractors, sub-contractors, suppliers etc.) actively promote and administer a strong environmental culture. To achieve this, a number of initiatives will be in operation during the life of the project. This will include the use of poster campaigns to raise awareness of topical subjects, and toolbox talks involving all members of the project team and site workforce.

Health and Safety Management

- 3.4 The Contractor shall be responsible for ensuring that the construction works Health and Safety Plan is implemented and followed on site. The works will be carried out in accordance with all relevant health and safety legislation and Codes of Practice and site rules relating to the works will be observed.

Legislation and other legal requirements

- 3.5 The Contractor shall comply as necessary with all relevant Statutory requirements such as the 2005 Safety Health and Welfare at Work Act, The Construction Regulations (SI 291 of 2013), the General Application Regulations (SI 299 of 2007), etc. (and any amendments thereof). In addition, the Contractor shall comply with all the reasonable safety requirements of the Client, the Project Supervisor for the Design Process and the Project Supervisor for the Construction Stage.
- 3.6 A legislation register shall be held by the Contractor and reviewed periodically and updated as necessary. Any legislative changes shall be disseminated to project management immediately, after which the method statements of any affected operations shall be changed accordingly. A consents and licenses register shall also be held by the Contractor which will contain a schedule of all consent submissions and a tracker to confirm they are in place for the start of works. This will be tracked and managed by the Site Manager and confirmation and approved documentation will be sent to the HSEQ manager before works begin, when new consents are obtained, or when consent is withdrawn, or terminated.

4 ENVIRONMENTAL MANAGEMENT IMPLEMENTATION

Roles and Responsibilities

- 4.1 The appointed Contractor and all sub-contractors will be responsible for ensuring that the potential risks to the environment and local community are adequately avoided or controlled by the application of measures documented within this pCEMP. These will be further developed in their final CEMP and shall be complied with throughout the construction phase. The main organisations and persons involved in the construction stage works are set out below.

The Client

- 4.2 Louth County Council (LCC) shall be responsible for:
- Securing the land including access required for all works;
 - Appointment of the Contractor;
 - Setting and communicating appropriate standards for environmental management and ensuring that their environmental policy is delivered; and,
 - Review and approval of the CEMP.

Appointed Contractor

- 4.3 The Contractor shall be responsible for:
- Appointing a Site Manager / Site Supervisor.

Site Manager / Site Supervisor

- 4.4 The Site Manager shall be responsible for:
- Undertaking weekly Site Compound Checks, and appointing persons to supervise refuelling of tanks and bowsers;
 - Ensuring the required consents are in place before work starts;
 - Ensuring environmental and waste requirements are included on requisitions and in subcontracts and orders;
 - Ensuring oil, including diesel is stored in properly bunded tanks / drip trays;
 - Ensuring Waste Transfer Notes / Waste Consignment Notes are checked against invoices before payment;
 - Liaising with statutory authorities as required and ensuring records of communication (including verbal communication) are kept. Statutory authorities should always be accompanied on site visits;

- Ensuring employees, contractors and subcontractors implement the controls set out in the CEMP;
- Ensuring employees, contractors and subcontractors receive Induction Training (including project environmental issues) and Toolbox Talks, as appropriate;
- Ensuring personnel needed for audits are available when required;
- Verifying actions resulting from Corrective Action Requests and Observations raised during audits are completed by the deadlines;
- Ensuring environmental training is provided;
- Reporting incidents to the immediately, and to statutory authorities where required;
- Logging and monitoring incidents and non-conformances;
- Disseminating information, including changes to legislation, and relay to relevant contractor's employees;
- Identifying employees who require environmental training and maintain training records in line with the contract for the works;
- Providing advice and dealing with queries and correspondence on environmental issues;
- Identifying significant environmental impacts for the project and assist in setting up contracts to include the necessary controls;
- Monitoring the progress in closing out Corrective Action Requests and Observations raised during audits;
- Ensuring all records are retained and readily available;
- Carrying out monthly site audits; and,
- Appointing any third-party specialists as required.

All Staff

4.5 All staff have responsibility for the environment, responsibilities include but are not limited to:

- In the case of an incident, stopping work, implementing control procedures and reporting it to the Site Manager;
- Contacting the Waste Representative when waste needs collecting;
- Passing any queries or correspondence on public health or environmental issues to the Site Manager; and,
- Working in accordance with environmental procedures, the CEMP and Method Statements.

The Community Liaison Officer / LCC Engagement Officer

4.6 The Community Liaison Officer shall be responsible for:

- Responding to telephone and email queries within 48 hours of receipt;
- Sharing key contact information associated with site development with key stakeholders and update these details as required;
- As a general courtesy, alerting the community to any disruptive works one week in advance of commencement, where reasonably practicable;
- Minimising the impact of site traffic and associated parking on the local road network;
- Arranging any necessary meetings that may be requested by community representatives regarding any on-site issues; and,
- Circulating updates as required on the projects progress to include information of relevance and interest to the local community.

5 ENVIRONMENTAL MANAGEMENT OF SITE ACTIVITIES

General

- 5.1 The following outlines how potential impacts from the construction phase of the project will be mitigated.

Air Quality - Dust

- 5.2 During Construction, dust emissions from a site can cause a nuisance for neighbours and contribute to air pollution. The principal activities that have the potential to result in fugitive emissions of dust from site construction works are considered to be construction activity, earthworks and the movement of site traffic on paved and unpaved roadways. Dust can be spread onto the public highway and along public access paths by vehicles entering and exiting the site.
- 5.3 There are human receptors within 350m of the boundary of the site and within 50m of the track out route; therefore, construction dust may have the potential to cause an adverse effect in the local area. In addition there are designated ecological receptors within 50m of the track out route; therefore, construction dust may also have the potential to cause an adverse effect on ecological receptors.
- 5.4 The Contractor will develop a Dust Management Plan for the site to detail the controls to be applied throughout the construction phase to ensure that emissions are mitigated. The DMP will include details of any monitoring scheme, if appropriate. The elements of the DMP are provided in Table 1 below.

Table 1: Fugitive Dust Measures

Issue	Control Measure
Site planning	<ul style="list-style-type: none"> • Erect solid barriers as appropriate to site boundary to screen any proposed stockpiles on site. • Display the name and contact details of the person(s) accountable for air quality and dust issues on the site boundary. • All site personnel to be fully trained . • Trained and responsible manager on site during working times to maintain logbook and carry out site inspections. • Plan site layout - machinery and dust causing activities should be located away from sensitive receptors.
Site Operations	<ul style="list-style-type: none"> • Maintain a complaint logbook for all dust and air quality complaints which includes source(s)/cause(s) and migration measures / controls taken to reduce emissions. • Store the complaints logbook on the site and make available to local authority on request.

Issue	Control Measure
	<ul style="list-style-type: none"> • Conduct regular dust inspections to monitor compliance with dust management plan, record the findings of the inspection within inspection logbook. Increase the frequency of the inspections during prolonged dry and windy conditions or when any activities with higher potential to produce dust are being conducted on site • If required, operations will be fully enclosed where there is a high potential for dust production, or the activities will take an extensive period to undertake. • Dust suppression techniques should be employed for cutting, grinding or sawing activities. • Earthworks and stockpiles will be sited and managed to avoid adverse effects from dust and to prevent damage to underlying soil. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. • Cover, seed or fence stockpiles to prevent wind 'whipping', where practicable for any long term storage of materials. • Use enclosed chutes and conveyors and covered skips. • Minimise dropping material from heights from conveyors, loading shovels or handling equipment and use fine water sprays on equipment where appropriate. • All vehicles to switch off engines when not in use - no idling vehicles • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable. • Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas. • Site construction vehicles will be retained on site during the construction period. To minimise noise and emissions, all construction machinery will be switched off when not in use and speed limits imposed on internal roads and across the site • If possible, remove materials that have a potential to produce dust from the site as soon as possible. • Deliveries to and removal of plant, equipment, machinery and waste from the site to take place within permitted hours. • Materials deliveries report to site office and unload within materials storage area • Ensure equipment is readily available on site to clean any dry spillages • Use mobile bowsers and water cannons for dust suppressant where applicable. Move around the site as required. • Water should be administered as required (weather and site conditions dependant) • Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless required

Issue	Control Measure
	<ul style="list-style-type: none"> • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems • For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriate to prevent dust. • All site roads will be swept and sprayed with water in prolonged spells of dry weather to prevent dust causing a nuisance off-site • No site runoff of water or mud permitted • Ensure all site fencing, barriers and scaffolding is clean • No bonfires or burning of wastes to be permitted on site • Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
Demolition	<ul style="list-style-type: none"> • Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust). • Ensure effective water suppression is used during demolition operations. Hand held sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. • Avoid explosive blasting, using appropriate manual or mechanical alternatives. • Bag and remove any biological debris or damp down such material before demolition.
Track out	<ul style="list-style-type: none"> • Avoid scabbling (roughening of concrete surfaces) if possible. • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. • Avoid dry sweeping of large areas. • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. • Ensure vehicles entering and leaving sites are securely covered to prevent escape of materials during transport. • Record any inspections of haul routes and any subsequent action in the site logbook. • Install hard surfaced haul route, which are regularly cleaned and damped down with fixed or mobile sprinkler systems, or mobile water bowsers • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permit.

5.5 Regular dust monitoring as part of site inspections will be undertaken to monitor compliance with the DMP and particularly during critical construction periods at nearby

sensitive locations and/or development site boundaries. Monitoring will include dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundaries.

- 5.6 Dust deposition, dust flux, or real-time PM10 continuous monitoring locations and duration (including baseline monitoring) will be agreed with the local authority as required.

Noise and Vibration

- 5.7 During the construction phase, the range of activities with potential to generate noise and vibration emissions to off-site sensitive receptors will include site clearance, ground excavation works, construction of the proposed development, landscaping and erection of any temporary buildings/compounds that may be required.

- 5.8 The nearest sensitive locations (NSL's) with regards to noise to the proposed development are a number of residential dwellings which surround the site at various points. The distance between the construction site and nearby NSL's varies, the closest distance between the site and neighbouring dwelling will be approximately 10 metres but generally construction works will occur between 15 and 100 metres from existing dwellings, depending on the location where specific works are occurring.

- 5.9 A baseline noise survey has been undertaken as part of the planning application prepared for the proposed development in general accordance with ISO 1996-2:2017 *Acoustics -- Description, measurement and assessment of environmental noise -- Part 2: Determination of sound pressure levels*. Specific details are set out in the following sections. The implementation of the below suitable control measures will ensure that the impact is minimised.

- 5.10 Works associated with the site preparation and landscaping are likely to be the most significant construction noise sources, due to the proximity of these works to site perimeters. Other general construction works occurring close to the site boundary adjoining neighbouring dwellings also have the potential to generate significant short-term noise impacts. Noise mitigation measures will therefore be necessary in order to reduce impacts as far as is reasonably practicable.

General Construction Noise

- 5.11 The Contractor shall ensure to comply with BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014 *Parts 1 and 2 "Code of practice for noise and vibration control on construction and open sites"* and Safety, Health and Welfare at Work (General Application) Regulations 2007, Part 5 Noise and Vibration.

- 5.12 The Contractor shall at all times apply the principles of Best Practicable Means and carry out all construction work in such a manner as to reduce any disturbance from noise and vibration to a minimum.

- 5.13 No construction work will be permitted, nor plant or machinery operated outside the hours of:

- Monday to Friday 07.00 - 19.00
- Saturday 07.00 – 13.00
- Sunday & Bank Holidays - No workings without prior authorisation

- 5.14 The appointed Contractor will monitor levels of noise and vibration during critical construction periods at nearby sensitive locations and/or development site boundaries.
- 5.15 Site hoarding, minimum 2.0m height will be appropriately positioned around the perimeter of the construction site for the duration of works where the distance of works is 30m or less to nearby noise sensitive locations to buffer any noise transmitted from plant, equipment and vehicles entering or existing the site.
- 5.16 In exceptional circumstances, and subject to agreement with the Local Authority, extended hours of operation may be applied for. In such instances an assessment of potential noise impacts shall be carried out in advance of works taking place, and submitted to the Local Authority, as part of the extended hours request.
- 5.17 Monitoring of construction noise and vibration levels will be undertaken at the closest noise sensitive locations.
- 5.18 Site access roads will be kept maintained so as to mitigate the potential for vibration from lorries.
- 5.19 The Contractor will ensure that a site representative is appointed to be responsible for all matters relating to noise and vibration.
- 5.20 Generators and other potentially noisy plant will be located away as far from sensitive receptors as is practical and vibration isolated support structures will be used where necessary.
- 5.21 Noisy plant such as generators or high duty compressors will be screened as appropriate to prevent nuisance. No generators or machinery will be permitted to operate at night (is between the hours of 23:00-07:00hrs).
- 5.22 All appropriate equipment will be fitted with silencers, mufflers or acoustic covers where possible.
- 5.23 Any plant or machinery that will be used intermittently will be shut down when not in use or throttled back to a minimum.
- 5.24 All plant and equipment will be maintained by trained personal to ensure noise emissions are reduced, this may include but not be limited to the proper use any maintenance of tools and equipment, the positing of machinery on site to reduce the emission of noise, the avoidance of unnecessary noise, the protection of persons against noise and the operation of sound measuring equipment.

Vehicle Noise

- 5.25 Vehicles and plant used during construction will be maintained in good and efficient working order. When not in use machinery is to be switched off and not left running. Site vehicles will not be over-revved.

- 5.26 All machinery will be properly maintained and silenced according to manufacturer's instructions.
- 5.27 Acoustic covers will be fitted to appropriate machinery.
- 5.28 All vehicles to observe set speed limits on site and local roads.
- 5.29 Toolbox talks will be communicated to site staff and contractors so that they are fully informed of noise and vibration control.

Pollution Control

General

- 5.30 The Contractor will adhere to best practice guidance as detailed below, particularly the CIRIA guidance document C532 Control of water pollution from construction sites. The construction approach will also adhere to the requirements set out in the Inland Fisheries Ireland guidance document Requirements for the Protection of Fisheries Habitat during Construction and Development Works and Development Sites.
 - The Good Practice Guidance notes proposed by EA/SEPA/EHS:
 - PPG 1: Understanding your environmental responsibilities - good environmental practices
 - GPP 2: Above ground oil storage tanks
 - PPG 3: Use and design of oil separators in surface water drainage systems
 - GPP 4: Treatment and disposal of wastewater where there is no connection to the public foul sewer
 - GPP 5: Works and maintenance in or near water
 - PPG 6: Working at construction and demolition sites
 - PPG 7: Safe storage - The safe operation of refuelling facilities
 - GPP 8: Safe storage and disposal of used oils
 - GPP 8: Safe storage and disposal of used oils
 - GPP 8: Safe storage and disposal of used oils
 - GPP 19: Vehicles: Service and Repair
 - GPP 21: Pollution incident response planning
 - GPP 22: Dealing with spills
 - GPP 26 Safe storage - drums and intermediate bulk containers
 - PPG 27: Installation, decommissioning and removal of underground storage tanks
 - CIRIA Environmental Good Practice on Site.
 - CIRIA Control of Water Pollution from Construction Sites. Technical Guidance C648.
 - CIRIA SuDS Manual Technical Guidance C697.
 - Development on Unstable Land. Department of Environment (DOE), UK.

- 5.31 Where possible, hard surfaces that are positively drained will be laid at an early stage in the construction to allow permanent facilities to be used to collect silt and hydrocarbons.
- 5.32 The extent of exposed ground will be minimised at all times during construction and any stockpiles of mud, sand or other fine sediments will be stored at least 50m from the River Boyne. Stockpiles will be levelled and compacted, and will be covered with thick plastic membranes in order to prevent the creation of contaminated run off.

Surface Water Run-off and Silt Mitigation

- 5.33 No pollutants, including sediments will be allowed to enter any surface watercourse or to the River Boyne and River Blackwater SAC during construction activities. The Contractor will follow the principles of the CEMP in order to prevent sediment or other contaminants entering any adjacent watercourse.
- 5.34 It is proposed to maintain existing on-site levels as far as is practical, which will reduce the volumes of soils being disturbed and soils being stockpiled which will reduce the potential for sediment run-off and sediment loading of surface waters.
- 5.35 All watercourses drain and potential conduits for silt laden runoff will be identified and where necessary, measures shall be taken to minimise direct sediment run-off from the working site into watercourses.
- 5.36 No permanent, or semi-permanent stockpile will remain on the site during the construction phase of the Development.
- 5.37 Suitable locations for temporary stockpiles will be identified on a case-by-case basis. The suitability of any particular location will consider characteristics of the proposed site including; slope incline and topography, drainage networks in the vicinity and proximity to same, other relevant characteristics which are likely to facilitate, increase, or compound the potential for entrainment by surface water runoff.
- 5.38 Temporary stockpiles will be covered with plastic sheeting during all relatively heavy rainfall events and during periods where works have temporarily ceased before completion at a particular area (e.g. weekends).
- 5.39 Earthworks will be limited to seasonally dry periods and will be suspended if high intensity local rainfall events are forecast (e.g. >10 mm/hr, >25 mm in a 24 hour period, or high winds).
- 5.40 Silt fencing will be installed around the perimeter of the site at any locations where surface water is likely to run off, directly into the River Boyne. This could include the river bank, land drains, natural depressions in the soil surface, or any other geomorphological feature which might accommodate surface water run-off.
- 5.41 The location of the silt fencing will be finalised by the Contractor in accordance with their programme of works and detailed within the final CEMP prepared for the site. The purpose of the silt fencing will be to prevent silt leaving the site in run-off water and entering adjacent land with the potential to impact nearby watercourses.

- 5.42 Silt fences will consist of a geotextile membrane fixed to wooden stakes approximately 600 mm high. The membrane will be anchored into the ground to form a continuous barrier with the soil surface. Silt fences will be monitored and maintained when necessary during the construction period. Maintenance will include the replacement of the geotextile when damaged and the removal of any silt build-up on the upslope side of the silt fence. Silt fences will be temporary features but will remain in place for a period following the completion of the Construction Phase.
- 5.43 Emergency contact numbers for the Local Authority Environmental Section, Inland Fisheries Ireland, the Environmental Protection Agency and the National Parks and Wildlife Service will be displayed in a prominent position within the site compound. These agencies will be notified immediately in the event of a pollution incident. See list of emergency contact numbers in Table 3, Section 8.
- 5.44 Road sweepers will be employed to clean the site access route as required. For example, Any hard surface site roads will be swept to remove mud and aggregate materials from their surface.
- 5.45 Terram will be placed under new drain covers and in road gullies, where appropriate, in order to intercept silt-laden surface run-off and prevent it from entering the surface water drainage network. This mitigation will be assessed on a regular basis (especially after heavy rain) and maintained if required.
- 5.46 The Contractor shall provide dedicated persons to ensure that the required mitigation is installed and maintained to an appropriate standard. They will be inspected on at least a daily basis for the duration of the works, and a record of these inspections will be maintained.

Water Pumping

- 5.47 If pumping of water is required onsite, this will be done by pumping water, through terram and/or through installed silt fencing or into a settlement tank / pond using Green Rhino Sediment Filters. These methods will slow the water flow and filter any potential silt from the water. The suspended solids will be left to settle, and then discharged via a buffered outflow to a soakaway that is at least 50m from the River Boyne.
- 5.48 The requirement for water pumping will be planned in advance (as far as is practicable).
- 5.49 The Contractor will ensure that all necessary discharge consents are in place before commencing any dewatering activities.

Storage of fuels and hazardous materials

- 5.50 Any temporary storage areas for chemicals or fuels will be contained within impermeable bunds constructed in line with current best practice. Pollution Prevention Plans will be prepared, and site staff trained to implement them.
- 5.51 Chemical, fuel and oil stores will be sited on impervious bases and within a secured bund of 110% of the storage capacity, within the lay down area. The integrity and water

tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall also be tested and demonstrated.

- 5.52 Consideration will be given to the phasing of construction to reduce the time when temporary facilities for storage of chemicals refuelling, and vehicle maintenance are used to a minimum.
- 5.53 Diesel shall be stored in integral bunded fuel bowers. All connections shall be situated within the bund. Fuel shall be stored at least 50m away from any watercourse, where practicable.
- 5.54 Oils and lubricants used on the site shall be stored in temporary vessels designed to hold 110% of the containers. No oil or lubricants shall be stored within 50m of a watercourse, where practicable.
- 5.55 Refuelling will only take place in designated areas away from surface water drainage systems, on hardstanding, by appropriately trained personnel. The funnels/nozzles used will be appropriate to the equipment being used.
- 5.56 Refuelling on the site shall be undertaken at least 50m from any given watercourses (where practicable); mobile plant shall be pulled back from watercourses for refuelling as far as possible and in line with best practice to ensure protection of the water environment
- 5.57 Tanks will be locked when not in use.
- 5.58 All plant shall be checked for leaks of fuel and lubricants before being allowed onto the site.
- 5.59 Pumps and generators used on the site will have integral drip trays where possible. All items of plant without an integral drip tray shall be stored over a portable drip tray. Drip trays shall be inspected and kept free of accumulated rainwater as necessary. Any oily water shall be disposed of at an appropriate licensed facility.
- 5.60 Any cleaning/arising from drip trays etc. to be disposed of as hazardous waste in accordance with applicable guidance and legislation.

All oil, fuel etc. storage areas will be decommissioned upon completion of the construction phase.

Cement / Concrete

- 5.61 Wet concrete operations will be carried out in dry conditions. Operations will be suspended if high-intensity local rainfall events are forecast (e.g. >10 mm/hr, >25 mm in a 24 hour period or high winds).
- 5.62 All concrete pours will be carefully planned, and special procedures adopted as required.
- 5.63 Any in-situ concrete work to be lined and areas bunded (where possible) to stop any accidental spillage.

- 5.64 Smaller individual amounts for grouting and patching may need to be mixed on site, as well as larger amounts for general block and brick laying. All washout material and spillage will be contained to prevent cement material from entering the watercourse.
- 5.65 The wash-out will comprise either a lined skip or a pit lined with heavy-gauge polythene and will be located >50m from the River Boyne.
- 5.66 No wash down or washout of concrete trucks will be undertaken on site. The wash down or washout of trucks will take place off site in an appropriate facility.
- 5.67 All vehicles used to transport the cement around the site will be suitable for the amount to be carried. Extra care is to be taken when using public roads and these will be assessed for suitability in transporting large loads.
- 5.68 All staff should be informed of washing procedures.
- 5.69 Concrete batching will take place off site or in a designed area with an impermeable surface.
- 5.70 Excess concrete remaining after a pour will be returned to the batch plant.
- 5.71 At completion of each work section, solidified concrete will be broken out and disposed of in accordance with the Waste Management Plan.
- 5.72 If any cement-based products are to be stored on-site, they will be kept in a sheltered area at least 50m from the River Boyne, and covered (e.g. with a thick plastic membrane) to prevent spread by wind.

Flood Risk and Drainage Strategy

- 5.73 The River Boyne, at the location of the Application Site is a transitional waterbody, and is influenced by both fluvial and coastal waters. The Flood Risk Assessment (FRA) completed by NOD in November 2023 confirms that some areas of the development are at risk from fluvial and coastal flooding, namely the Riverfront area (Father Connolly Way) and lower section of Dominic Street and St Patrickswell Lane as these areas are located are within Flood Zone A and Flood Zone B.
- 5.74 NOD's FRA identifies the risk of pluvial flooding, groundwater flooding and flooding from human / mechanical error as being low. Inundation from floodwaters will be mitigated through retained and replaced drainage infrastructure, increased soft landscaping areas and incorporation of a SuDS feature.
- 5.75 NOD's FRA concluded that the proposed development satisfies all the criteria applicable to development management and sustainable management of flood risk to an acceptable level has been demonstrated.

Drainage

- 5.76 It is assumed that the existing drainage infrastructure will be maintained given the superficial nature of the regeneration project and no new drainage will be engineered as part of the scheme.

- 5.77 There is no overall increase in hardstanding area and the use of SuDS will ensure that there will be no additional discharge to the existing surface water drains that would increase surface water runoff. Therefore, the baseline greenfield runoff rate (QBAR) will be maintained.
- 5.78 Site welfare facilities, where required during construction works, will connect to the existing foul sewer system (in consultation with and authorized by Irish Water) or bunded porta-loos will be utilised.

Ecology / Biodiversity

National Sites

- 5.79 The Natura Impact Statement (NIS) which accompanies the planning application package confirms that the southern boundary of the application site adjoins the River Boyne and River Blackwater SAC, and a small section of the application site along the river front is located within the SAC. However, the NIS advises that none of the qualifying interests of this SAC are within the overlapping section with the subject site, so there will be no direct effects on the SAC.
- 5.80 The NIS advises that the River Boyne and River Blackwater SAC has been designated to protect a range of habitats and species associated with the freshwater section of the River Boyne, including alluvial forests, salmon, lamprey and otter.
- 5.81 The Boyne Estuary SPA and Boyne Coast and Estuary SAC are located 2.2 km and 3.4 km downstream of the Application Site. The Site is not within or adjacent to any Natural Heritage Areas, however the River Boyne could potentially provide a potential surface water pathway to the aforementioned designated sites. All other pathways (via groundwater, land or air) can be ruled out due to distance. Please refer to the NIS for further details.

Loss of Habitat

- 5.82 The habitat survey completed for the site identified a range of habitats of local importance such as dry meadows and grassy verges, scrub, ornamental / non-native shrubs and the River Boyne Estuary. The River Boyne is considered to be of International importance, and the dry meadow to be of Local importance.
- 5.83 No invasive non-native species covered by legislation were recorded within the development site. Butterfly-bush *Buddleja davidii* was recorded at a number of locations throughout the site. It is a problematic species that colonises buildings and other built surfaces, occasionally causing structural damage. However, it is very widespread in urban environments, it is not legally-restricted, and it does not have a negative ecological impact, so it is not considered to be an Important Ecological Feature.

Bats

- 5.84 A number of buildings were identified as having features that could potentially be suitable for roosting bats. However, following a series of bat surveys, there was no evidence that any bats are roosting anywhere in the vicinity of the Application Site. Therefore, the site is of Negligible importance for roosting bats.

- 5.85 The majority of the Application Site and its immediate surroundings are considered to be of Negligible importance as a feeding area / commuting route for bats. The only feature of importance for bats would be the Boyne Estuary, particularly those areas with little or no artificial light.
- 5.86 Bat sensitive lighting will be employed for any new lighting proposed, particularly along Father Connolly Way and in the vicinity of the River Boyne which are likely to be used by bats. Bat boxes may also be installed to provide alternative roosting opportunities within the site, if required.

Birds

- 5.87 A number of common urban birds were recorded on the site, including feral pigeon, jackdaw, rook, hooded crow, starling and pied wagtail. No species of conservation concern were recorded.
- 5.88 Any tree or shrub removal, and demolition of buildings proposed will be carried out between September and February (inclusive). If this is not possible, an ecologist will survey relevant vegetation in advance in order to determine whether any nests are present. If any are encountered, the vegetation clearance will be delayed until the nesting attempt has been completed, e.g. when chicks have fledged and the nest has been abandoned.
- 5.89 Tree protection zones will be marked out by the Contractor for all retained trees and hedgerows in the vicinity of working areas.

Other Terrestrial Mammals

- 5.90 No mammals were observed during field surveys, nor any characteristic field signs of protected species. The urban habitats within the Application Site would be unsuitable for most terrestrial mammals due to the lack of vegetation, the high levels of human activity, and the prevalence of artificial lighting.
- 5.91 Given that a number of sensitive habitats and species were recorded in the vicinity of the proposed development site, the Contractor will employ an Ecological Clerk of Works (ECoW) to oversee the implementation of the mitigation measures outlined above.
- 5.92 The ECoW will be required to provide reports and written correspondence to the Employers' Representative as requested, in order to demonstrate compliance with the proposed mitigation measures.

Archaeology / Urban Heritage

- 5.93 Drogheda is rich in archaeological, architecture and urban heritage therefore there is potential for archaeological features to be present beneath the site. Grounds works associated with the development will therefore have the potential to impact on these features in the absence of measures to protect such features.
- 5.94 A programme of archaeological testing will be carried out prior to construction by an archaeologist under licence to the National Monuments Service as recommended in the Archaeological, Architectural and Cultural Heritage Chapter of the EIAR.
- 5.95 The Contractor will undertake all ground disturbance works in accordance with the advice

provided by the appointed archaeologist. In the event that any archaeological features are identified these will either be integrated into the development plans and preserved in situ or recorded and excavated under archaeological conditions.

- 5.96 In the event that further mitigation measures are required, the Contractor will ensure that no works proceed without prior approval from the National Monuments Service of the Department of Housing, Local Government and Heritage (DoHLGH).

Traffic Management

- 5.97 Construction traffic will consist of the following –
- Private vehicles owned and driven by site staff and management;
 - Construction vehicles e.g., excavation plant, dump trucks; and,
 - Materials delivery vehicles involved in site development works.
- 5.98 The Contractor shall prepare and implement a Traffic Management Plan (TMP) outlining procedures to follow and prescribed routes when working on the site. It is assumed that construction traffic will predominately travel along George's Street (R132) north and southbound and connect onto the N51 northbound and R152 southbound.
- 5.99 The TMP shall incorporate any restrictions imposed by the planning consents, National Roads Authority and/or the Garda Síochána. The TMP will include specific routing for construction traffic to each areas within the site and any restrictions on construction hours.
- 5.100 The TMP shall be circulated to all parties who are employed or have a legitimate interest in the works.
- 5.101 The Contractor shall ensure that Construction Traffic Routing Signs are erected prior to works commencing, and that these are maintained in good and clean condition throughout the duration of the works.
- 5.102 Management of Construction Traffic shall include the following measures:
- Construction Staff shall be encouraged to arrive before 8:00am and after 18:00pm to avoid the peak hour periods, where feasible;
 - Managed parking shall be provided on site with staff encouraged to travel by sustainable means;
 - Dedicated parking provisions shall be provided to prevent overspill onto surrounding network;
 - Appointment of Construction Manager/Community Liaison Officer;
 - Agreed haulage routes along designated HGV routes;
 - Provision of wheel wash facilities;
 - Road cleaning and sweeping along section of Mill Road adjacent to the site;

- Construction signage at all entrances and exits;
- HGVs inspected for dirt and mud before exiting onto public road network;
- Control and timing of deliveries where possible;
- Entrances and exits manned by flag men during deliveries.

Waste

- 5.103 The construction of the development will lead to the generation of waste. The key to minimising the production of waste is to implement the waste hierarchy of Prevent, Reuse, Recycle, Recover and Dispose. The Contractor will apply the principles in “*Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Waste Projects*” to reduce the amount of materials used thereby minimising use of natural resources and reducing costs.
- 5.104 There is a minimal amount of waste expected to be generated on the site with the removal of some assumed hardstanding surfacing in areas and demolition of a wall and building structure.
- 5.105 The Contractor shall implement a Waste Strategy for the project to deal with waste generation during the construction phases.
- 5.106 The Waste Strategy will set out the requirements of the project including how the project will:
- Clearly identify all wastes that are likely to be produced during construction and classify them as ‘controlled’ (‘general’) or hazardous wastes;
 - Minimise the waste generated;
 - Reuse or recycle wherever possible;
 - Collect, separate, store and contain securely and label all wastes;
 - Allocate responsibility for waste management on site;
 - Employ suitable licensed waste contractor(s) and audit their licence(s); and,
 - Monitor and periodically audit the waste management scheme and activities.
- 5.107 The Waste Strategy will ensure the Application Site meets and maintains the legal waste requirements and will be regularly updated by the Contractor throughout the duration of the development.
- 5.108 Should there be limited or no opportunities for reuse of materials generated from the excavations required to facilitate construction, the material will require removal for offsite reuse, recovery, recycling and/or disposal. The Contractor will endeavor to ensure that material is reused or recovered off-site insofar as is reasonably practicable before considering disposal at an authorized facility.
- 5.109 All waste will be classified in line with current waste legislation and guidance (including, soils though WM3 and WAC assessment). The waste will be removed from site by an

appropriately licensed contractor; and disposed of at an appropriately licenced landfill or soil recovery facility.

- 5.110 A waste register will be maintained to collate all waste management Duty of Care documentation such as waste transfer notes and consignment notes and waste classification documentation, where applicable.

Contaminated Land

- 5.111 The presence of any significant unsuspected contamination which becomes evident during the development of the site shall be brought to the immediate attention of Louth County Council and where necessary the appropriate statutory authority and works in connection with the unsuspected contamination shall cease until such time as a remediation scheme has been submitted to and approved in writing by the Planning Service. The agreed remediation measures shall then be implemented in their entirety and appropriately verified in accordance with the planning consent for the site.

Energy Strategy & Sustainability

- 5.112 The Contractor will be pro-active to implement measures to address the procurement of materials, the environmental impact of materials and the sourcing of materials.

6 COMMUNICATION

Internal Communication

- 6.1 Environmental mitigation measures shall be incorporated into the Risk Assessments and Method Statements (RAMS) prepared by all contractors. All RAMS shall be communicated to the workforce by the Site Manager.
- 6.2 Weekly construction meetings shall be held during the construction phase. These meetings shall include health, safety and environmental matters such as
- Works activities underway and planned;
 - Mitigation measures required to be implemented;
 - Results of weekly inspections and any audit results/ feedback;
 - Any corrective and preventive actions required to be implemented;
 - Identification of areas for continual improvement;
 - Status of staff competence and training needs; and,
 - Status of the CEMP and of any required consents and approvals and the need for review and updating.
- 6.3 Any issues resulting from daily or weekly audits shall be discussed with appropriate corrective actions agreed. A 'weekly look ahead' shall be provided at the construction meeting where any environmental constraints or special requirements can be discussed and agreed in advance, where required.
- 6.4 The Site Manager shall conduct daily construction briefings, as required, to ensure site personnel are advised of any specific environmental requirements and constraints.
- 6.5 Toolbox talks will be scheduled as and when necessary, over the duration of the project.
- 6.6 The Contractor will directly and promptly communicate any environmental issues with the relevant body/department via phone or email.
- 6.7 Site notice boards will display the Environmental Policy of the Client, emergency contacts list, relevant statutory and non-statutory advice and guidance; and any other relevant information. These environmental notice boards will be situated in prominent positions including the main reception area of the site office / compound.

External Communication

- 6.8 Prior to works commencing on site adjacent residents/commercial users and/or their representatives will be informed on each phase of the development with particular emphasis on safety, traffic management and the control of noise and dust throughout the construction period. The contractor will promote and maintain excellent relationships with adjacent local residents, businesses, occupiers and the general public through regular communication and updates on construction activities that may affect them.

- 6.9 All communications received by the Contractor that are relevant to the works in site, including enquiries and complaints, shall be passed to the Site Manager.
- 6.10 If required by the Client any relevant contractors shall attend community engagement events, meetings, etc details of which shall be communicated to stakeholders in advance.
- 6.11 The Site Manager shall serve as the point of contact for the regulatory authorities for their specific activities. Communications from the regulatory authorities received at the site by the Site Manager shall be immediately reported to the Client.
- 6.12 A record of all communications shall be maintained by the Contractor.
- 6.13 Through the induction all members of the workforce shall be made aware that any direct approaches from members of the public should be directed to their Site Manager. The Site Manager shall record all approaches made by members of the public and shall advise the Client's Project Team of all comments received at the worksite from members of the public.

Public Liaison

- 6.14 The Contractor will establish early community relations with any adjacent residents and local community. All businesses and where relevant local residents shall be notified in advance of works commencing on site.
- 6.15 A Community Liaison Officer / LCC Engagement Officer will be appointed for the duration of the project and will be responsible for complaint management, public consultation and liaison with the public.
- 6.16 The Community Liaison Officer / LCC Engagement Officer will manage any complaints from the community in a fair and efficient manner and share key information associated with site development such as potential disruptive works as and when necessary.

Complaints Procedure

- 6.17 The Contractor shall put in place a system for recording, and responding to, all complaints received from third parties. The system shall include the timely reporting of all such complaints.
- 6.18 As a minimum the activity leading to the complaint should be stopped immediately; or where not possible to entirely stop the activity reduce it to the lowest possible level e.g., shut off all non-essential plant.
- 6.19 All complaints will be acknowledged by the Contractor or Louth County Council on receipt and assessed to determine what information is required from all parties in order to formulate a response. The complainant will be called on the same day if a phone number is provided. Where a phone number is not provided an email response shall be given within three days. All complaints shall be recorded and investigated.

Documentation

6.20 The Site Manager shall be responsible for documenting and retaining safe all suitable records relating to environmental issues at the site and/or arising from site operations. Documents shall be stored in a suitable manner and backups created to safeguard the records. This CEMP shall be a controlled document and authorised latest version shall be signed and dated by the responsible person[s]. Other site data records and environmental management documentation would include, but not necessarily be limited to the following:

- Copies of relevant consents, permissions, or other approvals/ authorisations;
- Environmental data records including waste transfer notes/ records of waste collection and treatment/disposal;
- Records of any environmental incidents including actions taken and resolution;
- Records of complaints including actions taken and resolution;
- Records of all plant / equipment entering / leaving site together with any relevant compliance documentation (for instance in respect of noise or air pollutant emissions class);
- Copies of any enforcement notices or instructions issued by the local authority or any statutory regulatory body;
- Record of any prosecutions pending or resolved, and any penalties enforced;
- Records of daily site inspections;
- Records of weekly/monthly audits and minutes of environmental team briefings; and,
- Records of staff training including site inductions and toolbox talks.

7 ENVIRONMENTAL TRAINING AND AWARENESS

Inductions

- 7.1 All project personnel and sub-contractors shall receive an Environmental Induction Presentation, prior to commencement of works onsite. No personnel, including sub-contractors, shall be permitted to commence employment on site without prior attendance at an induction.
- 7.2 Environmental topics covered in the induction shall include but will not be limited to:
- Water resources;
 - Pollution prevention;
 - Emergency response procedures;
 - Waste management and housekeeping;
 - Management structure;
 - Duties and responsibilities;
 - Relevant procedures;
 - Ecologically sensitive areas;
 - Incident reporting;
 - Consents and licenses;
 - Legislation; and,
 - Environmental best practice.

Toolbox Talks

- 7.3 Regular 'Tool-Box Talks' on specialised topics shall supplement the induction course. Toolbox talks shall be used to highlight issues of concern and to disseminate new information not previously provided. They will also offer site personnel with the opportunity to provide feedback.
- 7.4 Tool-Box Talks shall include, but will not be limited to, instances where:
- There is a change to existing legislation, which requires an operational change;
 - Site inspections or audits have identified corrective actions which require rolling out;
 - Work is being undertaken in environmentally sensitive areas;
 - There are significant changes in environmental conditions, i.e., heavy rainfall.

- 7.5 The frequency and topics of the Toolbox Talks shall depend upon the area in which works are taking place. They shall be provided as often as necessary to address site-specific environmental requirements.
- 7.6 Toolbox talk topics for environmental management shall include, but will not be limited to:
- Control of noise and dust emissions.
 - Environmental incident and reporting.
 - Silt and water management.
 - Waste management and segregation.
- 7.7 Records of all 'Tool-Box Talks' and attendance shall be kept in the site offices.

Specialist training

- 7.8 Specialist training for specific members of the construction crews will be provided as required. This may include, but will not be limited to:
- Emergency environmental crews.
 - Environmental Monitoring.
 - Waste representatives.
 - Fuel tanker drivers.

8 EMERGENCY PREPAREDNESS AND RESPONSE

Emergency Response Plan

- 8.1 An outline Emergency Response Plan (ERP) is presented in this section of the CEMP. It provides procedures to be followed in the event of an emergency in terms of site health and safety and environmental protection.
- 8.2 The ERP is a working document and will require updating and submissions from the contractor/PSCS throughout the various stages of the project. Where sub-contractors that are contracted on site are governed by their own emergency response procedure, arrangements will be made to allow for inclusion of the sub-contractor's ERP within this document.

Roles and Responsibilities

- 8.3 The Site Manager will be responsible for activating and coordinating the emergency response procedure. In a situation where the Site Manager is unavailable or incapable of coordinating the emergency response, the responsibility will be transferred to the next person in the chain of command.

Spill Kits

- 8.4 Spill kits capable of dealing with hydrocarbon and chemical spills shall be available at appropriate locations on site. Each storage location shall be clearly visible to the workforce, for instance by deploying clear signage.
- 8.5 The spill kit contents shall include absorbent pads, absorbent booms, absorbent granules and hazardous waste disposal sacks as a minimum. Regular checks of the spill kits shall be completed to ensure they remain adequately stocked to deal with environmental incidents.
- 8.6 Spill drills shall be performed periodically to confirm that the workforce can effectively contain and clear up potentially polluting spillages. All drills will be documented, and details kept on record for the duration of the works.

Fire Prevention

- 8.7 Means to raise the alarm in the event of a fire such as a siren or foghorn shall be available at the points of work. An assembly point marked with a sign shall be designated a safe distance from the active works locations and will be communicated to all members of the workforce before works commence.
- 8.8 The workforce shall assemble at the point for a rollcall to be carried out by the Site Security Officer. The Site Manager will decide the appropriate course of and will advise all personnel accordingly.

8.9 All individuals on site, including visitors, will be obliged to immediately sign in on arrival.

Extreme Weather

8.10 The Site Manager shall register to receive Met Eireann weather warnings. All warnings issued by Met Eireann with the potential to impact upon the works shall be communicated by the Site Manager to the workforce in a timely manner so that measures can be implemented where necessary.

8.11 The Contractor shall maintain provisions to deal with extreme hot weather events. Measures shall include provision of safe drinking water and adequate shade.

8.12 Seasonable variations will be monitored to take account of potential wet weather when planning stripping of topsoil and excavations to minimise soil erosion and run off.

Incident Reporting and Investigation

8.13 All incidents, including near misses, shall be classified according to the categories outlined below. All categories of environmental incident shall be reported by the Contractor to Louth CC as outlined in **Table 2** below.

Table 2: Incident Reporting and Investigation

Incident Classification	Definition
Near Miss	An event, controlled through implementation of an effective incident control measure (e.g., drip tray used, effective use of noise barrier).
Minor Environmental Incident	Incidents that have caused minor harm or damage to the environment e.g. <ul style="list-style-type: none"> • a minor fuel spill below 20 litres onto ground which is immediately cleared; • a minor spill of a chemical not classified as presenting an ecotoxic risk; • exceeding noise levels; • silt runoff from site which does not enter into a surface water feature; or • excess dust emissions.
Major Environmental Incident	Incidents that have caused or may cause significant harm or damage to the environment e.g. <ul style="list-style-type: none"> • a minor fuel spill which impacts a sensitive land feature, a water body, or drains; • a major fuel spillage over 20 litres; • any spillage of a chemical which is classified as presenting an ecotoxic risk; • silt runoff from site which enters a water feature; or • receipt of a nuisance complaint.

- 8.14 The Contractor shall report all environmental incidents that are required to be reported to the relevant statutory or regulatory bodies.
- 8.15 The Contractor shall prepare an investigation report for all environmental incidents. The report is to include:
- Summary of the environmental incident, describing the:
 - nature of the incident;
 - details of any pollutant released including the type and quantity of pollutant released; and,
 - location for the incident (e.g., grid reference);
 - Receptors that were or could have been impacted;
 - An analysis of what led to the incident occurring;
 - Summary of immediate actions taken to mitigate the incident;
 - Summary of any remedial action required; and,
 - Lessons learned and future measures or actions to be implemented.
- 8.16 The Contractor will verify the incident investigation and agree with their contractors any further actions which are to be implemented to prevent a reoccurrence of comparable incidents. A timeline for the implementation of all actions shall be established and the Contractor shall provide details of when they have been implemented.
- 8.17 An incident investigation shall be complete when all details have been recorded on file.

Emergency Contacts

- 8.18 In the event of an emergency occurrence at the Site, the Contractor shall determine the relevant statutory and regulatory bodies that must be notified. Notification shall be in accordance with the measures outlined above.
- 8.19 A list of emergency contacts is presented in **Table 3**. A copy of these contacts will be included in the Site Safety Manual and in the site office.

Table 3: List of emergency contacts

Emergency Contacts	
Contact	Contact details
Project Supervisor Construction Stage (PSCS)	TBC prior to commencement
Project Supervisor Design Stage (PSDS)	TBC prior to commencement
Environmental Protection Agency	053 916 0600
Inland Fisheries Ireland	01 884 2600
National Parks and Wildlife Service's regional office	(076) 100 2557
National Environmental Complaints Line (NECL)	1850 365 121
Health and Safety Authority	1890 289 389
Louth County Council – environmental incident report	042-9335457
Emergency Services – Ambulance, Fire, Gardai	999 / 112
Hospital – Our Lady of Lourdes, Drogheda	041 983 7601
Bord Gáis Emergency	1850 20 50 50
Drogheda Garda Station	041 987 4200

Incident Response

- 8.20 All pollution incidents should be managed through the STOP - CONTAIN - NOTIFY concept.
- 8.21 As soon as an incident is identified, the first action should be to **STOP** and prevent further discharge to drainage/river/ground.
- 8.22 **CONTAIN** may constitute control of discharge in the event of a spill, or cessation of works if it is the works that are resulting in the incident, e.g., halting excavations until silt runoff is contained. It is recognised that due to personal health and safety risks it may not always be safe to stop the source of the spill, for instance if a significant volume of an unidentified substance has been released.
- 8.23 **NOTIFICATION** should take place as soon as practicable, and frequently can take place while further release is being stopped or while a spill is being contained.

Oil, fuel or chemical spill to ground

- i. Wear protective clothing, prevent further release at source e.g., switch off tap/ valve, correct leaking drum and make safe the area.
- ii. If the spill is migrating, create a temporary bund to prevent further spread by using spill kit materials / sandbags.

- iii. If drains or field ditches are located nearby, install drain seals/ deploy additional spill kit materials to prevent the spill discharging to the drain or ditch.
- iv. Apply absorbent granules or pads (available from spill kit) to the affected area.
- v. Contractor will notify the local authority regarding the nature and scale of incident. The following information should be included in the notification:
 - o Time of discharge;
 - o Type/quantity of material discharged;
 - o Location of discharge; and
 - o Site contact details.
- vi. Contractor will notify Louth CC of the incident and communicate the information provided to the local authority.
- vii. Containment measures should remain in place until the nature and extent of the contamination can be assessed and a remediation strategy must be prepared.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and Duty of Care requirements.

Discovery of unexpected contamination

- i. On the discovery of unexpected contamination, the Contractor will immediately halt works in the area.
- ii. If impacted materials have already been removed, they shall be returned to the excavation or placed on to a membrane, e.g., terram, to prevent migration of the contaminant to another area.
- iii. Contractor to report the situation to Louth CC.
- iv. Arrangements will be made between the Contractor and Louth CC for samples of the contamination to be collected and tested on fast turnaround.
- v. Contractor to only continue with works in the area once the test results have confirmed the contaminant and a safe means of working has been established.

The Contractor shall be free to continue works in areas unaffected by the contamination but will not speculatively continue to excavate material to find the extent of the contamination without supervision from a geo-environmental engineer.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements as well as relevant Duty of Care requirements.

Oil, fuel or chemical spill to surface water feature

- i. Wear protective clothing, prevent further release at source e.g., switch off tap/ valve, correct leaking drum and make safe the area.
- ii. If source not readily identifiable, contain first (see below) then identify and prevent further release at source.
- iii. Immediately deploy appropriately sized boom from nearest spill kit across affected surface water feature. Use stakes to attach it to the sides of the surface water feature. Tie booms together to increase length if required.

- iv. Supplement with additional booms across the surface water feature, as required, to contain any migration of the spill not halted by the first installation.
- v. Contractor shall notify the local authority regarding the nature and scale of incident. The following information should be included in the notification:
 - o Time of discharge;
 - o Type/quantity of material discharged to surface water feature;
 - o Location of discharge; and
 - o Site contact details.
- vi. Contractor shall notify Louth CC of the incident and communicate the information provided to the local authority.

All impacted materials will be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

Oil, fuel or chemical spill to drainage system

- i. Wear protective clothing, prevent further release at source e.g., switch off tap/ valve, correct leaking drum and make safe the area.
- ii. If source is not readily identifiable, contain the visible pollutant first, then identify and prevent further release at source.
- iii. Immediately deploy appropriate drain cover(s) to affected gullies.
- iv. Supplement with booms around the gully to contain any migration of the spill.
- v. The Contractor shall notify the local authority and the relevant water company regarding the nature and scale of incident. The following information should be included in the notification:
 - o Time of discharge;
 - o Type/quantity of material discharged to the drain;
 - o Location of discharge, specifically which drain; and
 - o Site contact details.
- vi. The Contractor shall notify Louth CC of the incident and communicate the information provided to the local authority.

All impacted materials shall be disposed of in accordance with relevant legislative and regulatory requirements and relevant Duty of Care requirements.

Explosion / Fire Procedure

Explosion/fire incidents should also be dealt with through health and safety procedures. In the event that a fire is detected, or an explosion occurs:

- i. Notify the emergency services and evacuate the area.
- ii. Attempt to tackle the fire with site equipment only when it is safe to do so.
- iii. Ensure that pollution of nearby water bodies including surface water drainage from fire control water or other substances is minimised. Where possible and safe to do so, any site drainage systems should be protected through the deployment

of drain seals/ spill kit materials to ensure any firefighting waters are captured and can be disposed of appropriately.

- iv. At a time when it is acceptable to do so, the local authority shall be notified regarding the nature and scale of incident. The following information should be included in the notification:
 - o Nature of the incident;
 - o Time and date of the incident;
 - o Quantity of fire control water discharged to surface water feature/drainage, where relevant;
 - o Location of discharge; and
 - o Site contact details.

Discharge of Silt

In the event of an unexpected discharge of silty water, then:

- i. Prevent further release at source e.g., cease dewatering the excavations.
- ii. Contain silt and protect sensitive receptors from further discharge:
 - If a drain is located nearby, install drain seals or deploy spill kit materials to prevent discharge.
 - If silt flow is in the direction of surface water features deploy hay bales around surface the feature.
 - If silt is being generated by runoff from stockpiles deploy spill kit materials, silt fencing or move soil to form a bund at the base to prevent further silt laden runoff from the stockpile.
- iii. If silt is discharged without prior approval the Environment Protection Agency shall be notified. If the silt discharge enters the drainage system, the relevant water company shall also be notified regarding the nature and scale of incident. The following information should be included in all notifications:
 - o Time of discharge;
 - o Type/quantity of material discharged;
 - o Location of discharge, e.g., which drain or surface water feature; and
 - o Site contact details.

Contamination of or by waste materials

- i. Assess whether the area needs to be evacuated, such as if fumes are being given off.
- ii. Assess whether the damage can be undone through segregation.
- iii. Complete a risk assessment for the task including consideration of any COSHH risks.
- iv. If it is safe to do so segregate the waste. If it is not safe to do so, then the full waste quantity is to be consigned as hazardous waste.
- v. Contractor to report the incident to the client.
- vi. Waste to be collected from site in accordance with normal practice.

Discovery of archaeological artefact or heritage feature

- i. Immediately stop works in the area of the artefact or feature.
- ii. Ensure the area is isolated from interference by erecting fencing around the discovery. Prevent vehicles from navigating through this area.
- iii. Provide a safe means for pedestrians; and if possible, vehicles, to move around the isolated area.
- iv. Contractor shall report the find to the client.
- v. Client to arrange for the find to be assessed by a qualified heritage or archaeological specialist. Contractor to prevent tampering with the find until it has been assessed.
- vi. Works to proceed in accordance with the recommendations given by the heritage or archaeological specialist.

Ecological discovery or damage

- i. Immediately stop works in the area.
- ii. Contractor to immediately report the incident to the client.
- iii. Client to arrange for a qualified ecologist to assess the discovery or damage caused.
- iv. Works to proceed in accordance with the advice received from the ecologist.

Vandalism/theft procedure

Acts of theft and vandalism present the risk that damage may be caused to equipment containing hazardous substances that could cause pollution, or damage may be caused to measures which have been installed to prevent the release of pollution. On identifying an act of vandalism or theft:

- i. The Contractor shall notify Garda Síochána of the incident.
- ii. Inspect all fuel storage tanks/drums and equipment to ensure there has been no release of the fuel or other hazardous substances, e.g., hydraulic fluid.
- iii. If a spill is identified follow the procedures for Oil, fuel or chemical spills.
- iv. Inspect pollution protection measures, e.g., drainage or silt protection, to ensure it has not been interfered with. Where it is possible, correct any issues identified without causing further release.
- v. Inspect site boundaries to identify the access point if not immediately clear and secure the site.

9 MONITORING AND AUDITING

Introduction

- 9.1 Appropriate monitoring of the environmental effects of construction enables the effectiveness of environmental mitigation to be evaluated. It also allows environmental problems to be identified and responded to at an early stage. Monitoring will also help the Contractor to identify and implement environmental improvements, which will contribute to the overall environmental performance of the project.
- 9.2 The Contractor will carry out appropriate environmental inspections and monitoring of environmental performance in the form of daily inspections, monthly audits and if required appropriate equipment.
- 9.3 Where problems are recognised, the corrective action will be identified by the inspector and subsequent corrective action undertaken within a defined time frame.

Daily Inspections

- 9.4 Daily inspections shall be undertaken and recorded as follows:
- i. Visual inspection of the site perimeter to check for dust deposition (evident as soiling and marking) on vegetation, cars and other objects.
 - ii. Visual inspection of the access roads to check their condition to ensure there is no build-up of dust or earth deposits liable to cause dust emissions as vehicles pass.
 - iii. Vehicle, equipment and plant inspections shall be completed to check the absence of damage or maintenance issues and that it is correctly functioning.
 - iv. Visual inspection of all acoustic barriers / screening to check they are present and in good condition.
 - v. Visual inspection of waste containers and waste storage areas to verify wastes are being correctly segregated and to confirm the absence of mixing of hazardous and non-hazardous wastes.
 - vi. Visual inspection of all site areas to ensure there is no deposited or wind-blown litter.
 - vii. If a waste collection is made, a check shall be made of the Waste Transfer Note / Hazardous Waste Consignment Note provided for the collection.
- 9.5 On all days when potentially dust emitting activities are being conducted, the level of dust generation shall be kept under constant review. A record shall be added to the official site diary when such activities are conducted, the dust emission conditions observed and; when necessary, the mitigation measures taken.
- 9.6 Any elements of the site management found to be in an unsatisfactory condition during the site inspection shall be addressed on the day. In the event it is not possible to address

the matter on the day it is raised; a note of the reason why shall be made on the inspection record sheet.

Environmental Audits

- 9.7 Formal audits will be against an audit checklist, which will provide a mechanism to monitor and assess compliance against all project performance requirements and standards.
- 9.8 Only suitably trained and competent staff will be authorised to perform environmental audits at a suitable frequency to be determined by the nature / duration of the work.
- 9.9 All aspects of the environmental management at the site shall be assessed against this pCEMP.
- 9.10 The audit shall include checks of the site records including the daily inspection record sheets, vehicle arrival logs and waste disposal paperwork. All audits shall be documented; where audit actions are raised, close out of these actions shall be assessed at the following audit.

Environmental Monitoring

- 9.11 Environmental monitoring shall be carried out as necessary and requirements for environmental monitoring shall be reviewed as consents are received and consultations completed.
- 9.12 Key parameters that will require environmental monitoring include:
- Waste generation during construction; to be monitored as part of the Site Waste Management Plan to ensure the appropriate treatment, handling, management and disposal measures are applied. Records shall be kept of quantities and types of waste handled;
 - Inspections of the surface water course;
 - The site compound including fuel storage and spill control equipment;
 - Construction Plant and Equipment; and,
 - Dust and noise pollution arising from construction site activities.
- 9.13 In the unlikely event that noisy plant or machinery are to be operated that may have the potential to exceed the daily noise target (70 dB $L_{Aeq,1hr}$) or following a complaint, spot checks and/or continuous monitoring may be undertaken using a sound level meter to assess noise levels during such activities. This shall be kept under review and appropriate mitigation measures instigated if necessary.

Water Quality Monitoring

- 9.14 Surface water samples were collected at two locations; upstream and downstream of the Site to establish baseline water quality in the River Boyne. Routine monitoring will then be undertaken throughout any construction activities in close proximity to the River. Weekly sampling is proposed, as well as sampling following an event such as heavy

rainfall or an accidental spillage. Analysis for total suspended solids, pH and total petroleum hydrocarbons would allow for the detection of sediment loading, concrete pollution or spillages of hydrocarbons.

- 9.15 A Surface Water Management Plan (SWMP) will be prepared prior to construction works commencing in accordance with 'best practice' industry guidance. The SWMP will outline the requirements for monitoring and/or sampling when working in close proximity to the River Boyne.
- 9.16 The SWMP will remain as a live document and where there is a requirement for variation at the Site to provide more ecologically sensitive drainage during the construction phase, the SWMP will be updated accordingly.
- 9.17 The Contractor shall be responsible for monitoring all site works and update to the SWMP. Any changes required will be agreed with the Project Hydrologist, Environmental Clerk of Works (EnvCoW) and relevant stakeholders prior to any drainage works commencing.

Environmental incident and corrective action reporting

- 9.18 All environmental incidents and near misses shall be reported and investigated by the Contractor. All environmental incidents shall be reported as soon as possible. Where relevant, the appropriate statutory authority (e.g., EPA) shall be informed immediately. Copies of incident investigation reports shall be supplied by the Contractor and action taken to prevent recurrence.
- 9.19 All corrective action, incident and near miss report forms shall be held in a register maintained at the construction site office.

Non-conformity and corrective action

- 9.20 Where the client has a concern or raises an issue for resolution, or where potential issues are raised from an inspection or audit of the site/ operations, or by a regulatory authority, the Contractor shall investigate the root cause and any implications arising from the issue and shall if necessary following discussion with the client implement measures to rectify the problem.
- 9.21 The Contractor shall monitor the effectiveness of the corrective action and report the outcome to the client and where relevant the regulatory authority. All documentation of the issue/ event and corrective action/ outcome shall be retained by the Contractor.
- 9.22 Where necessary the CEMP and any associated documentation shall be revised and re-issued to avoid recurrence of the issue/ problem.

Review and updates to the CEMP

- 9.23 The final CEMP will be reviewed on a monthly basis; or following any significant change to the work activities, client requirements, legislation or guidance and updated accordingly. Therefore, the final CEMP will be continuously updated as required.