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Outline Construction and Environmental Management Plan (CEMP)

for

**Proposed Redevelopment of 102 Main Street,
Portlaoise, Co. Laois**

April 2024



1. INTRODUCTION

This CEMP details the proposed works and defines the environmental measures that shall be implemented for the construction works in order to manage, minimise or mitigate any potential environmental impacts that may arise as a result of the Proposed Development.

'Live document'

This CEMP is considered a 'live' document and, as such, will be reviewed on a regular basis. Updates to this CEMP may be necessary due to any changes in environmental management practices and/or contractors.

The procedures agreed in this CEMP will be audited throughout the project's roll-out phase to ensure compliance. This CEMP will be updated, following grant of planning permission, to ensure all conditions, emission limit values and trigger levels contained within the Grant of Permission are incorporated and it will also set out how this will be achieved.

2. PROPOSED DEVELOPMENT DESCRIPTION

PROPOSED DEVELOPMENT OVERVIEW

The project brief for this new residential development and its associated works at 102 Main Street, Portlaoise, Co. Laois was to design and construct a new residential building. The development will include demolition and redesign of existing front building (formerly 'County Hotel') and design of a new residential extension to the rear of the property.

As a general overview, the proposed development comprises:

- a) new residential apartment block, ranging in height from 2 to 3 storeys, accommodating 10 no. apartments consisting of:
 - 8 no. 1 bed units
 - 2 no. 2 bed units
 - a communal/enterprise space at ground level
 - services and plant area at roof level
- b) public open space provided to the south of the site
- c) terraces and balconies provided for each apartment
- d) mobility scooter charging room
- e) refuse storage
- f) all associated site development works necessary to facilitate the proposed development
- g) proposed pedestrian gate in the south-west corner of the site

PROPOSED DEVELOPMENT SITE OVERVIEW

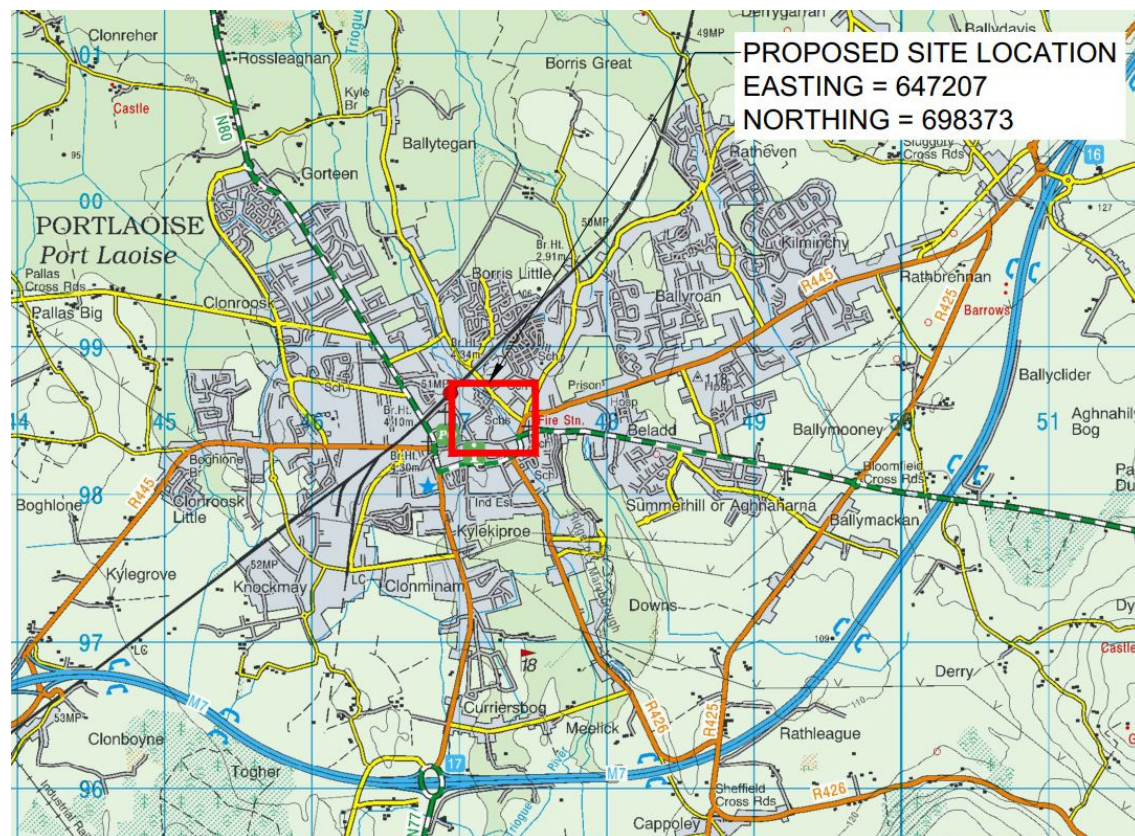
The proposed development land lies within the jurisdiction of Laois County Council, whose offices are located at JFL Avenue, Portlaoise.

The site is located on the eastern edge of Main Street, within the town of Portlaoise.

The overall area of the subject site is 0.05 Hectares. The site is bounded to the North by Main Street, to the West by an existing Public House, to the East by a commercial property and to the South by the yard of a commercial premises. Presently the site is an existing derelict building and will be demolished. The site is reasonably level.

At present the only access to the site is from Main Street.

Figure 1: SITE LOCATION





3. OUTLINE CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

A CEMP shall be prepared in advance of the physical elements of the project commencing and will be implemented throughout. Such plans shall incorporate relevant mitigation measures indicated below.

Laois County Council (LCC) will be informed in advance of construction activities in sensitive environmental areas. LCC will be informed of all construction or maintenance works. Monitoring of works will be undertaken and the results of monitoring will be provided to LCC.

Where works are undertaken in or adjacent to sensitive environmental receptors, all construction/maintenance staff will be inducted by means of a “Tool-box Talk”, which will inform them of environmental sensitivities and the best practice to be implemented to avoid disturbance to these receptors.

All construction and maintenance works will be undertaken in accordance with the following guidance documents:

- o CIRIA (Construction Industry Research and Information Association) Guidance Documents
- o Control of water pollution from construction sites (C532);
- o Control of water pollution from linear construction projects: Technical Guidance (C648);
- o Control of water pollution from linear construction projects: Site Guide (C649);
- o Environmental Good Practice on Site (C692);
- o NRA Guidance Documents;
- o Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes;
- o Guidelines for the Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads;
- o Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, during and Post Construction of National Road Schemes;



3.1. OPERATIONAL CONTROLS

The proposed environmental control measures that will be implemented during the construction phases are detailed below.

Any excavations and/or vegetation removal will be minimised during construction and/or maintenance works.

Excavated material will not be stored immediately adjacent to watercourses.

Disturbance to natural drainage features should be avoided during the construction and/or maintenance of routes.

Construction machinery should be restricted to public and/or site roads. As a general rule, machinery should not be allowed to access, park or travel over areas outside the footprint of proposed development.

Protection of existing drainage that lead to water courses:

Suitable prevention measures should be put in place at all times to prevent the release of sediment to the drainage system from associated construction works on site during the development. These protections must reduce erosion and silt-laden runoff, create – where necessary and possible – natural vegetation buffers and divert runoff from exposed areas, control the volume and velocity of runoff, and convey that runoff away from the existing drainage that leads to watercourses.

Where necessary, drainage waters from construction areas should be managed through a series of treatment stages that may include swales, check dams and detention ponds along with other pollution control measures such as silt fences and silt mats.

The following measures will be included in the Environmental Impact Assessment Screening report and the Screening Statement in support of Appropriate Assessment:

3.2. POTABLE WATER SUPPLY

INTRODUCTION

Uisce Eireann's record indicate a 150mm ductile iron watermain and a 100mm uPVC watermain within Main Street.

PROPOSAL

There is an existing water supply serving the buildings on site. It is proposed to reuse the existing water supply connection. There is also an existing fire hydrant located within the footway opposite the building on Main Street.



A Pre-Connection application was issued to Uisce Eireann on the 13th October 2021. A Confirmation of Feasibility (COF) was received on the 23rd March 2022 and can be seen in Appendix B. The COF confirmed the development can be accommodated without infrastructure upgraded works.

Once planning is granted a Connection application will be made to Uisce Eireann and a self-lay agreement be entered into between the developer and Uisce Eireann.

3.3. WASTEWATER INFRASTRUCTURE

INTRODUCTION

Uisce Eireann's record maps indicate a 225mm diameter concrete pipe traverse beneath the existing building at the back of the site. The pipe discharges into a 300mm diameter Concrete pipe within Well Road, to the east of the site.

PROPOSAL

The wastewater infrastructure has been designed in accordance with Uisce Eireann's latest standard details, code of practice and Building Regulations Part H. The design is subject to approval by Uisce Eireann after a Connection Application has been made and a Build over Application.

Due to the location of the existing pipe within the site and the requirement within Uisce Eireann's code of practice for private connections to be at 90 degrees to the main, two No. connections are required to accommodate this. Two No. Private inspection chamber will be provided within the site adjacent to the existing public main.

A Pre-Connection application was issued to Uisce Eireann on the 13th October 2021. A Confirmation of Feasibility (COF) was received on the 23rd March 2022. The COF confirmed the development can be accommodated without infrastructure upgraded works but a Build Over application is required. A build over application will be made to Uisce Eireann once planning is granted.

Once planning is granted a Connection application will be made to Uisce Eireann and a self-lay agreement be entered into between the developer and Uisce Eireann.

3.4. SURFACE WATER INFRASTRUCTURE

INTRODUCTION

Laois County Council's records indicates an existing 375mm diameter Concrete public main within Main Street, which falls from west to east.



DESIGN PRINCIPLES

The design and management of the Surface Water for the proposed development will comply with the policies and guidelines outlined in the following:

- The Greater Dublin Strategic Drainage Study (GSDSDS);
- Laois County Council's Development Plan, 2021-2027;
- DCC's Sustainable Drainage Design & Evaluation Guide, 2021;
- Recommendations for Site Development Works for Housing Areas published by the Department of the Environment;
- Greater Dublin Regional Code of Practice for Drainage Works;
- The SuDS Manual (2015)

The key design principles of the Surface Water drainage are as follows:

- a) The flow from the development to the existing Surface Water Infrastructure is designed to equal the natural greenfield runoff in accordance with the GSDSDS and sustainable drainage best practice;
- b) There are no additional or increased flows for the developed site compared to the existing greenfield condition;
- c) The site will have an Attenuation Area designed to store volumes from the 30 year and 100-year storm events on site in accordance with SuDS best practise;
- d) The design of the attenuation system includes an allowance for 20% climate change

PROPOSAL

It is proposed to construct a new surface water conveyance system within the site, which will provide treatment, storage and infiltration to the existing surface water public main.

All surface water collected on site will pass through green Sustainable Urban Drainage System (SuDS), this will allow for a certain level of treatment of the surface water and also infiltration into the ground. It is proposed to construct underground pipes to convey surface water from source to the SuDS infrastructure. The underground pipes will have slopes between 1:200 and 1:40 to ensure self-cleansing velocities are achieved.

The surface water infrastructure has been designed in accordance with the "Greater Dublin Regional Code of Practice for Drainage Works" (Draft version 6.0) and Laois County Council's Development Plan 2021-2027.



Surface water drainage for the proposed development is designed using recommendations of the GSDS, EN752 and BS8301:1985, with the following parameters applied:

- Return period for pipe network: 2 years,
- Time of entry = 4 minutes
- Pipe Friction (Ks) = 0.6 mm
- Minimum Velocity = 0.75 m/s
- M5 - 2D = 57.2
- M5-60 = 15.8 mm

The surface water drainage network has been designed and simulated for a range of storm events (including 1 in 5, 1 in 30 and 1 in 100-year storm events) using the Source Control module of Micro Drainage.

Sustainable Urban Drainage Systems (SuDS):

A number of SuDS features have been proposed as part of the surface water drainage system in accordance with the GSDS. SuDS are incorporated to attenuate runoff and volumes, reduce pollutant concentrations in surface water and to replicate the natural characteristics of surface water run off for the site in its pre-developed state.

The following SuDS features are proposed:

a) Permeable surfacing

It is proposed to install permeable surfacing within the paved areas of the site. The water, once permeated into the pavement, will be allowed to infiltrate into the ground. The inclusion of the permeable paving will slow the surface water run off at source, treat the surface water runoff and provide storage.

b) Soakaway

It is proposed to install a soakaway within the landscape area to the South of the site. The surface water will be collected through gullies and underground pipes and directed to a perforated pipe within the soakaway. The perforated pipe will allow the collected water to discharge into the soakaway. The collected water will be allowed to infiltrate into the groundwater. When the rate of water being collected by the underground pipes exceeds the infiltration rate into the ground, the collected water will be stored within the porous stone and allowed to discharge into the existing 375mm diameter pipe in Main Street.

c) Filter Trench

It is proposed to install two filter trenches within the landscape areas adjacent the building. The surface water discharging from the site will pas through the filter trenches and be allowed to infiltrate into the ground through the use of perforated pipes. When the rate of water being collected by the underground pipes exceeds the infiltration rate into the ground, the collected water will be stored within the porous stone and allowed to discharge into the existing 375mm diameter pipe in Main Street.



d) Treatment Train

Through the SuDS measures described above, the surface water management (treatment train) approach has been incorporated into the development in accordance with the GDSDS. This will assure the surface water runoff quantity and quality issues are addressed.

In accordance with the GDSDS, the following four objectives of the treatment train provide an integrated and balanced approach to help mitigate the changes in surface water runoff flows that occur as land is urbanised and to help mitigate the impacts of surface water quality on receiving systems:

- Pollution Prevention: spill prevention (protection provided by filter trench, permeable surfacing and soakaways), recycling, public awareness, and participation;
- Source Control: conveyance and infiltration of runoff (provided by the proposed surface water network, soakaway, permeable surfacing and filter trench);
- Site Control: reduction in volume and rate of surface water runoff, with some additional treatment provided (provided by soakaway, filter trench and permeable surfacing);
- Regional Control: Interception of runoff downstream of all source and on-site controls to provide follow-up flow management and water quality treatment (provided by the Existing Surface Water infrastructure).

The above measures ensure a suitable treatment train is provided in accordance with GDSDS.

e) Interception

Interception storage has been provided on site by the permeable paving, soakaway and filter trench. The initial 5-10mm of rainfall falling onto the site will be allowed to infiltrate through the permeable paving and further infiltrate into the ground by the soakaway and filter trench. Rainfall falling onto the impermeable roof will be collected through gutters and downpipes. The collected water will discharge to the perforated pipes within the soakaway and filter trench. The perforated pipes will allow the water to seep out into the soakaway and filter trench and infiltrate into the ground. The initial rainfall falling onto the roofs will either be discharged to the soakaway or filter trench.

SURFACE WATER CONTAMINATION MITIGATION MEASURES

Surface water runoff during construction stage can be potentially contaminated. The most likely forms of contamination are siltation and spillage.

Siltation can happen when soil and particulate matter are washed away in the storm by rainwater. Siltation will be mitigated on the project using stilling tanks and strainers within the site to prevent silt being lost to the drainage network.



As fuels and oils are required in construction, it is necessary to mitigate the possibility of there being an accidental leakage of these liquids to a water course. As per the construction methodology and legislative requirements, all fuels stored on site will be bunded and all chemicals will be stored in an appropriate chemical storage tanks. Should a spillage of fuel occur on site during construction, it is likely that there will be a localised moderate impact on the environment, which will be short in duration.

The following mitigation measures shall be implemented with the construction of the surface water network:

- The filtering of surface water that is likely to be contaminated by soil particles in order to reduce the silting effects of these particles in the receiving downstream watercourse;
- Construction of suitable silt traps prior to the surface water out-falling to the existing watercourse;
- Relocation of existing services and preparation of detailed construction Methods Statements;
- Existing gullies on the Main Street will be cleaned out, lined with a geotextile and filled with pea gravel this will trap and gather any sediment that accidentally gets onto the roads surface. Inspections and regular cleaning will be carried out.
- The preparation of a detailed CEMP (this document) to include measures to protect against contamination and runoff;

Appropriate storage and settlement facilities will be provided on site. Areas of high risk include:

- Fuel and chemical storage;
- Refuelling areas;
- Vehicle and equipment washing areas (concrete mixer trucks will not be permitted to wash out on site, with the exception of cleaning the chute into a container, which will then be emptied into watertight skip.)
- Site compound

DRAINAGE AND WATER QUALITY MITIGATION MEASURES

The following mitigation measures have been proposed to ensure that no potential adverse effects will arise from construction-related surface water discharges from the Proposed Development. The construction contractor will be required to implement the following specific mitigation measures, for release of hydrocarbons, polluting chemicals, sediment/silt and contaminated waters control:



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- Specific measures to prevent the release of sediment over baseline conditions during the construction work, which will be implemented as the need arises. These measures include, but are not limited to, the use of silt traps, silt fences, silt curtains, settlement ponds and filter materials. This is particularly important when undertaking any works/upgrading to the surface and foul water drainage networks at the proposed development site;
- Provision of exclusion zones and barriers (e.g. silt fences) between earthworks, stockpiles and temporary surfaces to prevent sediment washing into the existing drainage systems and hence the downstream receiving water environment;
- Imported materials such as terrain, straw bales, coarse to fine gravel should be used either separately or in-combination as appropriate to remove suspended matter from discharges;
- Monitoring shall be carried out on surface water discharge (if necessary and as specified in any Discharge Licence associated with the construction phase of the project);
- Provision of temporary construction surface drainage and sediment control measures to be in place before the construction of the pipeline and/or earthworks commence;
- Weather conditions will be taken into account when planning construction activities to minimise risk of run-off from the site;
- Prevailing weather and environmental conditions will be taken into account prior to the pouring of cementitious materials for the works adjacent to surface water drainage features, or drainage features connected to same. Pumped concrete will be monitored to ensure no accidental discharge. Mixer washings and excess concrete will not be discharged to surface water drainage systems;
- Concrete washout areas will be located remote from the surface water drainage features, where feasible, to avoid accidental discharge to watercourses;
- Any fuels of chemicals (including hydrocarbons or any polluting chemicals) will be stored in a bunded area to prevent any seepage of into the local surface water network or groundwater, and care and attention taken during refuelling and maintenance operations;
- Temporary oil interceptor facilities shall be installed and maintained where site works involve the discharge of drainage water to receiving waters;
- All containment and treatment facilities will be regularly inspected and maintained;
- All mobile fuel bowsers shall carry a spill kit and operatives must have spill response training. All fuel containing equipment such as portable generators shall be placed on drip trays. All fuels and chemicals required to be stored on-site will be clearly marked;
- Implementation of response measures to potential pollution incidents;
- Emergency procedures and spillage kits will be available and construction staff will be familiar with emergency procedures in the event of accidental fuel spillages;



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- All trucks will have a built-on tarpaulin that will cover excavated material as it is being hauled off-site and wheel wash facilities will be provided at all site egress points;
- Water supplies shall be recycled for use in the wheel wash. All waters shall be drained through appropriate filter material prior to discharge from the construction sites;
- The removal of any made ground material, which may be contaminated, from the construction site and transportation to an appropriate licenced facility shall be carried out in accordance with the Waste Management Act, best practice and guidelines for same;
- A discovery procedure for contaminated material will be prepared and adopted by the appointed contractor prior to excavation works commencing on site. These documents will detail how potentially contaminated material will be dealt with during the excavation phase;
- Implementation of measures to minimise waste and ensure correct handling, storage and disposal of waste (most notably wet concrete, pile arisings and asphalt).

PROPOSED WASTE MANAGEMENT OPTIONS

Waste materials generated will be segregated on site where it is practical. Where the on-site segregation of certain wastes types is not practical, off-site segregation will be carried out by the appointed waste management contractor. Skips and other receptacles will be provided to facilitate segregation at source. The appointed waste contractor will collect and transfer the waste according as receptacles are filled.

During the demolition phase a certain number of materials will arise. Materials will include glass, concrete, masonry, tiles, ceramics, plasterboard, timber, steel and tarmac.

The classification of materials as non-hazardous and/or hazardous will be based on the HazWasteOnline web based system as well as classification using Waste Acceptance Criteria in accordance with the European Communities (EC) Council Decision 2003/33/EC, which establishes criteria for the acceptance of waste at landfills.

Once the Construction Contractor is appointed, following grant of planning permission, a more detailed CEMP for contract stage will be developed.



STRUCTURE OF CEMP

CEMPs typically provide details of intended construction practice for the proposed development, including:

- a) location of the sites and materials compound(s) including area(s) identified for the storage of construction refuse;
- b) location of areas for construction site offices and staff facilities;
- c) details of site security fencing and hoardings;
- d) details of on-site car parking facilities for site workers during the course of construction;
- e) details of the timing and routing of construction traffic to and from the construction site and associated directional signage;
- f) measures to obviate queuing of construction traffic on the adjoining road network;
- g) measures to prevent the spillage or deposit of clay, rubble or other debris;
- h) alternative arrangements to be put in place for pedestrians and vehicles in the case of the closure of any public right of way during the course of site development works;
- i) details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels;
- j) containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained; such bunds shall be roofed to exclude rainwater;
- k) disposal of construction/demolition waste and details of how it is proposed to manage excavated soil;
- l) a water and sediment management plan, providing for means to ensure that surface water runoff is controlled such that no silt or other pollutants enter local water courses or drains;
- m) details of a water quality monitoring and sampling plan;



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- n) if peat is encountered - a peat storage, handling and reinstatement management plan;
- o) measures adopted during construction to prevent the spread of invasive species (such as Japanese Knotweed);
- p) Appointment of an ecological clerk of works at site investigation, preparation and construction phases;

Signed:

Brian Fahy B Arch MRIAI