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Construction Environmental Management Plan (CEMP)

Proposed Residential Development, Tyrell's Land, Portlaoise, Co. Laois.

Document Details

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Contents

1 Introduction

1.1 Background

This Construction Environmental Management Plan (CEMP) sets out the procedures, standards, work practices and management responsibilities to address potential environmental effects that may arise during the construction of the proposed residential development at Tyrell's Land, Co. Loais.

The CEMP outlines the approach that will be adopted for environmental management throughout the project works at the site, with the primary aim of reducing and avoiding any adverse effects from construction on the environment. The CEMP remains at all times a live document, subject to amendment including the revision and addition of content throughout the works. In this context, the values and information presented herein are subject to change and refinement through the selection of the contractor and the delivery of the project.

This plan shall be further refined and expanded by the appointed Contractor (hereafter referred to as the Contractor). The elements contained within this plan will be included in the Contractor's CEMP, which will be prepared before construction by the appointed Contractor and approved by the Client.

1.2 Objectives

The objectives of this CEMP and any subsequent Contractor CEMP are therefore to:

- Act as a continuous link and reference document for environmental issues between the design, construction, testing and commissioning stages of the Project;
- Demonstrate how construction activities and supporting design shall properly integrate the requirements of environmental legislation, planning consent conditions, policy, good practice, and those of the environmental regulatory authorities and third parties;
- Record environmental risks and identify how they will be managed during the construction period;
- Record the objectives, commitments and mitigation measures to be implemented together with the programme of works and date of achievement;

- Describe the Contractor's proposals for ensuring that the requirements of the environmental design are achieved, or are in the process of being achieved, during the Contract Period;

1.3 CEMP Scope

The scope of this CEMP covers the design and construction of the proposed residential development at Tyrell's Land, Portloaise.

This CEMP considers the following subject areas:

- Environmental Management
- Roles and Responsibilities
- Biodiversity
- Water Quality
- Noise and Vibration
- Air Quality (Dust and Emissions)
- Rubbish, Litter and Waste

1.4 Site Location

The site of the proposed residential development is located in Portlaoise town and bounded to the north by the Stradbally Road, the wooded Ridge of Portlaoise esker to the west, a large pond fed by a river and linear woodland to the east, and by a large area of grassland and hedgerows to the south. A small drainage ditch/stream crosses the southern section of the site, which will be diverted as part of this development. It is currently under cover of agricultural grassland, grazed by horses.

Figure 1: Site layout. The watercourse shown here is listed as part of the Triogue River in the WFD dataset used for this report, however EPA watercourse lists it as the 'Little Borris' River (River waterbody code: IE_SE_14T010200), and shows it as unconnected to the Triogue, which flows through Portlaoise to the west of the site.

1.5 Project Description

The proposed residential development comprises 67 no. housing units on a c. 2 ha site at Tyrell's Land, Stradbally Road, Portlaoise (figure 1), consisting of:

- 6 no. 1 bed 2-person units,
- 5 no. 2 bed 3-person units,
- 17 no. 2 bed 4-person units,
- 35 no. 3 bed 5-person units, and
- 4 no. 4 bed 7-person units.

The site is within the Curtilage of a Protected Structure, RPS 925, Portrain House, Stradbally Road, Portlaoise. The development will also include the provision of public open space, public walk-way along east boundary, flood defence infrastructure, public lighting, upgraded vehicular access along the

Stradbally Road, 116 no. car parking spaces including both in-curtilage and on street parking, (includes required accessible parking space and EV charging spaces), cycle parking, boundary treatments, ESB Substation, laying of underground sewers, watermains and pipes, attenuation, the importation of soil and stone as by product for engineering and landscaping purposes within the development and all associated ancillary works including site development works, and hard and soft landscaping, including the removal of several trees of mixed ages.

The key objectives are to:

- Achieve a cohesive urban layout of blocks and street with sustainable residential densities, making the best use of existing local services and infrastructure.
- Ensure the new development integrates into the existing surrounding built environment.
- Achieve high quality residential units and public realm spaces.
- Create a visually attractive development that will provide appropriate accommodation and good quality living environments.

There are no works proposed other than what is reasonably required to facilitate the proposed construction. All consequent foul and grey water will be directed to existing wastewater sewers for treatment by Uisce Eireann at the treatment works.


NORTH
Stradbrook A1
Stradbrook A2
STRADBALLY ROAD
Portrait House
Pond
GLENDOWNS
BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4
BLOCK 5
BLOCK 6
BLOCK 7
BLOCK 8
BLOCK 9
BLOCK 10
BLOCK 11
BLOCK 12
BLOCK 13
BLOCK 14
BLOCK 15
Site Details
Area of development site
(outlined in red) = 28044 m² / 2.80 Ha
Extent of Residential zone = 19995m²
Total Area of development site
(outlined in red) = 19995 m² / 1.99 Ha
SCHEDULE OF ACCOMMODATION:
OPEN SPACE:
Landscaping Surfaces
Black Tarmac to engineers spec
150mm below footpath level, raised pedestrian crossings
Black Tarmac Footpath to engineers spec with insitu kerb
Porous Paving to engineers spec
Impermeable Paving to engineers spec
Coloured Resin Bound Surface to engineers spec
van Dijk Architects
Proposed Site Layout

2 Environmental Management

2.1 Overview

As noted earlier, the CEMP shall fully address the particular requirements of the objectives listed in Section 1.2, and any updated or new supplementary environmental reports made available to the Contractor as necessary. The CEMP shall also comply with the requirements of the relevant authorities/environmental bodies.

The CEMP shall be reviewed and updated by the Contractor and submitted prior to works commencing on Site. It shall be prepared in sufficient detail to describe the framework of the Contractor's proposed management, control and mitigation strategy for each environmental aspect considered here.

2.2 Roles & Responsibilities

The Contractor shall appoint a Construction Environmental Management Plan Co-ordinator (CEMPC). This can be a member of site staff including the Site Foreman or Project Manager. A CEMPC or an Environmental Site Representative(s) shall be present on-site for the duration of the Project. The CEMPC shall be the point of contact for dealing with environmental issues for the Contractor's employees, subcontractors, relevant authorities/environmental bodies, and members of the public. The CEMPC will also be responsible for controlling the construction impacts arising from the activities of the Contractor and his Subcontractors in accordance with the CEMP. The CEMPC shall prepare, implement, manage, review and revise the CEMP with the sole purpose of ensuring that the environment and public are safeguarded at all times from anticipated or unexpected adverse impacts during construction.

Within the Contractor's team, the CEMPC shall have the authority to ensure that the CEMP is effectively implemented. The CEMPC must notify the Client of any transgressions in respect of the CEMP so that necessary sanctions can be imposed.

In general, the duties of the CEMPC can include the following:

- Implementation of the CEMP procedures;
- Routine environmental monitoring, recording and reporting;

- Maintaining and auditing the CEMP and documents that underpin it;
- Environmental training including toolbox talks to site staff and design staff;
- Liaison with statutory authorities as required;
- Assist in liaison with the relevant authorities/environmental bodies and local community;
- Any other activities that may be necessary in order to protect wildlife and the environment during the works.

3 Environmental Management Procedures and Plans

3.1 Biodiversity

3.1.1 Regulatory & Policy Framework

The following legislation and guidance documents are of relevance to ecological constraints present within the proposed development site:

- The Irish Wildlife Act 1976 and 2000, as amended;
- European Communities (Birds and Natural Habitats) Regulations 2011, as amended;
- The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna);
- The Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds); and
- The Water Framework Directive (WFD) 2000/60/EC;
- Fisheries Consolidation Act 1959 (No. 14 of 1959), as amended;
- The Inland Fisheries Act 2010 (No 10 of 2010), as amended; and
- The Local Government (Water Pollution Acts) 1977-1990, as amended;
- Various National Road Authority (NRA) guidance from the 'Environmental Planning and Construction Guidelines series'.

3.1.2 Key Ecological Features

Key ecological features on site include:

- Hedgerows and grasslands to the south of the site, within which several mammal features

including Badger setts, were found.

- The Ridge of Portlaoise esker is a proposed Natural Heritage Area (pNHA) bounds the site to the west. It is a unique geographical feature and is currently under cover of semi-natural scrub and woodland, with a diverse range of native species.
- The Maryborough stream, (the aforementioned drainage ditch) which runs through the site and will be diverted, as well as the greater watercourse network to which it mya be connected.
- The pond to the west of the site.
- Trees and treelines, which provide important habitat for bats and birds.
- The general darkness and quietness of the site, which are uncommon in the local built-up area.

3.1.3 Flora and Fauna

The surrounding treelines contained many active bird nests at the time of survey in April 2026, mostly crow species, though a heronry was also noted. Three Badger (*Meles meles*) sett entrances were found at the southern end of the green area to the south of the site. While these were at least 100 m outside of the site boundary, they indicate that Badgers forage and commute through the wider area. Tadpoles of the Common Frog (*Rana temporaria*) were found in a pool south of the site, indicating that the large greenfield area here is used by frogs for breeding and likely foraging as well. Though the Maryborough stream is not mapped on the EPA watercourse database and was considered to be of low fisheries potential and of relatively poor water quality, it connects to the pond fed by the Little Borris, an EPA mapped stream, and will still be considered as a watercourse and protected accordingly. Lastly, a bat walkover of the site, carried out in late April 2026, found significant bat activity around the proposed development area. This is not surprising as the greater area, including stagnant/slow-moving water, linear features such as hedgerows and treelines, and the presence of old trees with moderate bat roosting potential make the habitat suitable for multiple bat species.

To avoid negative impacts to any wildlife present within proximity to the works area or moving through the works area, the following precautionary construction mitigation measures are recommended:

- Good housekeeping practices will be implemented on-site, such as appropriate storage of materials and hazardous chemicals in confined and controlled areas.
- To avoid entrapment or injury to any mammals on site, excavations will be covered at the end of

each day or have a plank or other ingress/egress ramp lowered so that any animals can escape. Any open pipes that or flush with, or near to ground level, will be capped each evening.

- All working areas will be clearly demarcated with fencing prior to the commencement of proposed works to ensure the works are confined to this area and do not sprawl into surrounding habitat such as the woodland/scrub and stream.
- Retain as many trees as possible, only removing what is strictly necessary.
- Secured static fencing will be erected around trees to be retained to protect against accidental damage, located at least 1.5 m or six times the radius of the tree trunk at breast height, whichever is the greater, from the base of any trees that are to be retained.
- During the active season for bats (April to October), works will not take place outside of daylight hours to avoid impacts on bats normal function. Similarly, the site will not be lit after sunset at any time, to prevent impacts due to artificial light at night (ALAN) on the local ecosystem.
- Further, works must be carried out during daylight hours only; no works will be carried out at night.
- Low-level, directional lighting may be used only where deemed absolutely necessary, such as for safety reasons e.g. works within excavations during hours of low light before sunset.
- Any and all lighting used for this purpose will be of the following specifications: ≤ 2700 K in warmth, ≤ 40 W energy usage, ≤ 4000 lumens with ≤ 80° beam mounted at ≤ 8 m height, angled downwards with cowling to prevent light spill outside of the targeted area of illumination.

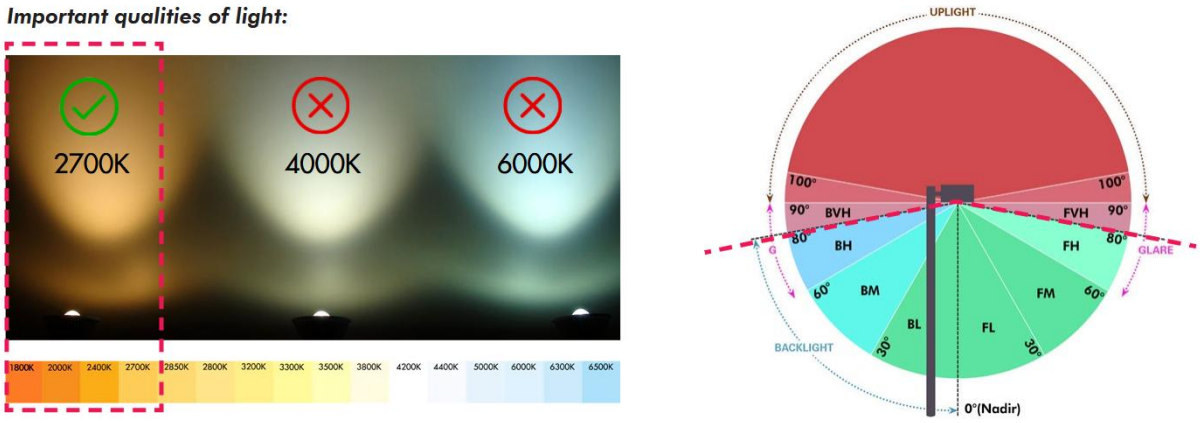

Figure 2: Lighting used on site will be no warmer than 2,700 K and angled no more than 80° above the vertical.

- The removal of trees, including those with low to moderate bat potential, will only be undertaken outside of sensitive periods for wildlife. These works must be scheduled for October to February, avoiding the bird breeding season (March-August inclusive) and the main bat activity period (April-September). The site will be resurveyed no more than 1 year prior to development to assess all trees on site for potential roosting features, as these may change between the surveys done for this report and the eventual site works.
- If bats or signs of bats are identified, removal of trees will be postponed, and the National Parks & Wildlife Service (NPWS) must be contacted and given time to advise on whether and how it should be carried out. A derogation licence to carry out such work will be necessary.
- Machinery disturbance will be minimised by using hand tools where feasible, limiting noise and vibration, and restricting machinery movement to designated areas. Opaque sound baffling fencing will be erected along the western, eastern and southern edges of the site to create a sound barrier that limit the spread of noise to the surrounding area and thus disturbance to animal species active during the day, as well as the local human community. This fencing will also help to reduce the light spill of any lighting used.
- Aside from the works necessary to the Maryborough Stream diversion, a minimum of a 20 m buffer from the top of the bank will be maintained for all waterbodies.
- Riparian vegetation within this buffer zone will be retained to provide cover for commuting and foraging animals species.
- If Badger or any other protected species is encountered during the works at any stage, all works will be temporarily stopped in that area, the project ecologist will be contacted for advice, and the NPWS will be notified immediately.
- Native trees, sourced as locally as possible, and never from outside Ireland, will be planted on-site to replace lost cover and provide long-term wildlife habitat. New trees will be of similar species to those found locally and will be on a 3-1 replacement basis, i.e. for every one tree lost, three will be planted, to account for the loss of a mature species with an immature one, and loss of trees due to disease and environmental factors.
- Newly planted vegetation to ensure it continues to provide shelter, foraging, and commuting routes.
- Retain all mature trees with low - moderate bat roosting potential where feasible.

- Allow for replanting, replacement and regeneration (using native plant species) where trees must be cleared. The landscape plan for the proposed development will advise on tree and shrub planting with native species. Native trees, shrubs and hedgerows are the most beneficial options for biodiversity.
- Under no circumstances will Cherry Laurel (*Prunus laurocerasus*) be used on site for any planting. This tree, though widely available and commonly used in residential areas for hedging, is a highly impactful invasive species that causes significant habitat loss in deciduous woodlands, such as those along the Ridge of Portlaoise.

3.2 Water Quality

The site is located within the Barrow_SC_20 subcatchment of the Barrow catchment. The river Triogue (EPA waterbody code: IE_SE_14T010200) is the largest watercourse in the area, into which many of the local watercourses are tributaries. The Triogue flows into the River Barrow (EPA waterbody code: IE_SE_14B010550) c. 15 km north of Portlaoise. The Barrow is part of the River Barrow & river Nore SAC [002162]. The Maryborough Stream runs along the south of the site, flowing from the south up into the pond at the east edge. This stream will be diverted further south as part of the proposed development, to accommodate the footprint of the development. The pond does not appear to connect to the wider watercourse network, though two streams appear further north with no obvious source. The proposed development will include connection to existing mains services (water and sewerage), with on-site stormwater treatment.

3.2.1 Environmental Control Measures and Proposals

For each of the potential sources of an environmental impact on the existing environment, the Contractor will identify the control and protection measures to be implemented. The following mitigation measures should be followed.

3.2.2 General Measures for site operative/ equipment and materials

- Any waste arising from the construction works must be disposed of to a licensed waste facility by a licensed waste haulier.
- Topsoil must not be stored within 10 m of the stream.

- Silt fencing shall be installed near any watercourses.
- The silt fences will have the following design features: - material be entrenched at least 100 mm into the ground with the ends upturned inward towards the works; - the fence posts will have a maximum spacing of 2 m to prevent sag on the fence; and - the geotextile fabric will be anchored to the fence posts as opposed to wrapped.
- Daily inspection of silt fences will be carried out by the site management to assess the effectiveness of the measures, to carry out maintenance, and to determine if there has been any damage/breach to the control measures. The silt fences will also be inspected immediately following heavy rainfall or strong winds (equating to a yellow weather warning). Where repair is necessary, this will be carried out immediately and may require the replacement of any damaged / degraded material.
- Any accumulated silt will be removed regularly from the base of silt fences and will be removed off-site. Silt will not be permitted to build up such that it reaches half the height of the fence or exceeds 15 cm in height (whichever is the lesser value).
- Silt fences must remain in place until the disturbed areas within the sites have been reinstated and revegetated.
- Silt fences must only be removed during dry weather.
- There must be no direct or indirect discharge of any surface water or groundwater to any water body during construction activities.
- Works must not take place in periods of heavy precipitation.
- Bare soil should be seeded as soon as possible with grass seed or native wildflower seed (local source if possible).
- Wet concrete is corrosive and can cause serious pollution to watercourses. Best practice in bulk-liquid concrete management must be employed addressing pouring and handling, secure shuttering, adequate curing times, etc.
- Wash water from cleaning ready-mix concrete wagons and mixers may be contaminated. Wagons and mixers must be washed off-site or in a bunded, designated area.
- Concrete batching will take place off-site.
- Raw or uncured waste concrete should be disposed of by removal from the site in a location in a manner that shall not impact any watercourse.

- No washings or waste materials of any kind can be directed into the local drainage network or the existing field drain on the site (including concrete washout from any concrete delivery).
- All fuels, lubricants, and hydraulic fluids will be kept in secure bunded areas remotely from any watercourse. The bunded area will accommodate 110% of the total capacity of the containers within it. Containers will be properly secured to prevent unauthorised access and misuse.
- An effective spillage procedure will be put in place with all staff properly briefed.
- Any waste oils or hydraulic fluids must be collected, stored in appropriate containers, and disposed of offsite in an appropriate manner.
- Storage areas will be located remotely from the watercourse.
- All refuelling and lubrication of equipment will take place on sealed and bunded surfaces to avoid the potential for accidental spillage of hydrocarbons.
- All plants and machinery will be regularly maintained and serviced to minimise the release of hydrocarbons.
- All excavation equipment should be in good working order and checked daily for any hydraulic leaks/oil leaks. Equipment must not be used unless in good working order.
- Welfare facilities including portaloos should be made available for all site operative for the duration of the project.
- Spill kits must be present on-site and in all plant machinery.
- Oil booms and oil soakage pads will be kept on-site to deal with any accidental spillage.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or recycling.
- Excavation and vegetation removal shall be minimised in all areas adjacent or close to the watercourse.

3.3 Rubbish Waste and Litter

3.3.1 Legislation and Guidance

The Irish Government issued a policy statement in September 1998, 'Changing Our Ways', which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. The target for Construction & Demolition (C&D) waste in this report was to recycle at least 50% of C&D

waste within a five-year period (by 2003), with a progressive increase to at least 85% over fifteen years (i.e. 2013). In response to the Changing Our Ways report, a task force (Task Force B4) representing the waste sector of the already established Forum for the Construction Industry, released a report entitled 'Recycling of Construction and Demolition Waste' concerning the development and implementation of a voluntary construction industry programme to meet the Government's objectives for the recovery of C&D waste.

In September 2020, the Irish Government published a policy document outlining a new action plan for Ireland to cover the period of 2020-2025. This plan, 'A Waste Action Plan for a Circular Economy' (WAPCE), replaces the previous national waste management plan, "A Resource Opportunity" (2012), and was prepared in response to the 'European Green Deal' which sets a roadmap for a transition to an altered economical model, where climate and environmental challenges are turned into opportunities.

The primary legislative instruments that govern waste management in Ireland and are applicable to the development are:

- Waste Management Act 1996 as amended.
- Environmental Protection Agency Act 1992 as amended.
- Litter Pollution Act 1997 as amended.
- Planning and Development Act 2000 (as amended) 14.

The approaches presented in these documents are based on international principles of optimising resources and reducing waste on construction projects through:

- Prevention;
- Reuse;
- Recycling;
- Green Procurement Principles;
- Off-Site Construction;
- Materials Optimisation; and
- Flexibility and Deconstruction.

3.3.2 Key Impacts

Waste including food waste, wind-blown litter and C&D waste can have a detrimental impact on the local environment of the area including water quality, air quality, human health and public nuisance.

3.3.3 Waste Management

The Best Practice Guidelines on the Preparation of Resource Waste Management Plans for Construction and Demolition Projects promote that the CEMPC should be responsible for managing wastes on-site or should appoint a person for waste management. This job may be performed by a number of different individuals over the life cycle of the Project.

Waste materials generated will be segregated on-site, where it is practical. Where the on-site segregation of certain waste types is not practical, off-site segregation will be carried out. There will be skips and receptacles provided to facilitate segregation at the source, where feasible. All waste receptacles leaving the site will be covered or enclosed. The appointed waste contractor will collect and transfer the waste as receptacles are filled.

All waste arisings will be handled by an approved waste contractor holding a current waste collection permit. All waste arisings requiring disposal off-site will be reused, recycled, recovered or disposed of at a facility holding the appropriate registration, permit or licence, as required. During construction, some of the sub-contractors on-site will generate waste in relatively low quantities. The transportation of non-hazardous waste by persons who are not directly involved with the waste business, at weights less than or equal to 2 tonnes, and in vehicles not designed for the carriage of waste, are exempt from the requirement to have a waste collection permit (per Article 30 (1) (b) of the Waste Collection Permit Regulations 2007, as amended). Any sub-contractors engaged that do not generate more than 2 tonnes of waste at any one time can transport this waste off-site in their work vehicles (which are not designed for the carriage of waste). However, they are required to ensure that the receiving facility has the appropriate COR/permit/licence.

Written records will be maintained by the contractor(s), detailing the waste arising throughout the C&D phases, the classification of each waste type, waste collection permits for all waste contractors who collect waste from the site and COR/permit/licence for the receiving waste facility for all waste removed off-site

for appropriate reuse, recycling, recovery and/or disposal. Dedicated bunded storage containers will be provided for hazardous wastes which may arise, such as batteries, paints, oils, and chemicals, if required.