



Construction Waste Management Plan

Proposed Amendment Application at Tinahask, Arklow, County Wicklow.

October 2026

Waterman Moylan Consulting Engineers Limited

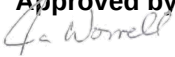
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Client Name: Castlethorn
Document Reference: 26-035r.007 Construction Waste Management Plan
Project Number: 26-035

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015)

Issue	Date	Prepared by	Checked by	Approved by
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Comments

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1. Introduction

This report has been prepared by Waterman Moylan Consulting Engineers on behalf of the Client, Castlethorn, as part of an amendment application for a proposed development of 352 residential units with a creche located at Tinahask, Arklow, County Wicklow. This submission seeks to amend a scheme previously granted under Wicklow County Council Planning Reg. Ref. 24/325.

This preliminary Construction Waste Management Plan (CWMP) is indicative only and should not be construed as representing the exact method or sequence in which the construction works shall be carried out. The Contractor is to produce a finalised Construction Waste Management Plan, adopting the information herein and developing it further.

As is normal practice, the Main Contractor for the project is responsible for the method by which the construction works are carried out and for ensuring that best practice and all legal obligations, including Local Authority requirements and Health and Safety legislation, are complied with. The Main Contractor is also responsible for the design and installation of all temporary works required to complete the permanent works. The Applicant reserves the right to deviate from the contents of this report, while still complying with all relevant Local Authority requirements and legislation.

It should also be noted that this document will be updated during the construction stage to include construction-specific items.

There are no existing dwellings on the lands proposed for development; therefore, no demolition is required as part of the works.

Should any demolition be required, the resulting material will be classified and quantified during the construction stage and, where necessary, removed off-site to a licensed landfill facility. Where the material classification allows for re-use, the Contractor will consider this. The exact details of such material will be outlined in a Construction Stage Waste Management Plan. Receipts will be kept in the construction Safety File for ease of reference when inspections are carried out.

2. Site Description

2.1 Site Location

The subject site is located to the southeast of Arklow town at Tinahask Upper in County Wicklow. The site is greenfield in nature and is bounded by agricultural lands to the north, east and south. The Dublin – Rosslare railway line bounds the site to the west.

The area of the works included in this application measures c. 12.7 hectares (ha). The approximate Irish Grid Co-ordinates of the site are X: 324147; Y: 171932.

Refer to Figure 1 for the location of the subject site.

Figure 1: Site Location



2.2 Existing Development

Site levels vary from c. 41.20 m OD Malin in the western part to c. 16 m OD Malin in the far eastern corner of the subject site.

The main body of the site is bounded by greenfield lands, with the proposed road-bridge section of the site bounded by existing residential development to the north.

These lands are zoned New Residential in the Wicklow County Development Plan as part of the Arklow Environs.

2.3 Proposed Development

- The proposed development comprises amendments to the Large-scale Residential Development permitted under WCC Reg. Ref. 24/325 consisting 352no. residential units proposed in a mix of houses and apartment units comprising 334no. houses (44no. 2-bedroom, 241no. 3-bedroom and 49no. 4-bedroom) ranging from 2 to 3 storeys, 18no. apartments (6no. 1-bedroom and 12no. 2-bedroom) in 1no. 4 storey building, 1no. creche (c. 711 sqm) at ground floor of apartment Block A; and all associated and ancillary site development works including on site attenuation, hard and soft landscaping and boundary treatment works, including public open space; communal open space, public lighting; surface car parking; bicycle parking store for apartment units; 4no. ESB substations; bin stores; vehicular access via existing Northwood Road and railway overbridge from Knockmore roundabout. The proposed development also includes road upgrade works to the existing railway overbridge and the western approach to same including the provision of a 2.5m footpath, 6m carriageway, safety barrier improvement works and other ancillary works required to facilitate these elements.

2.4 Proposed Construction Works

The proposed works will consist of the following:

- Site preparation;
- Erection of security fencing/perimeter fencing;
- Setting up a secure site compound including a wash-down area;
- Site clearance including topsoil stripping;
- Construction of infrastructure including access road, footpaths, drainage and services;
- Construction of 352 No. residential units and a creche.

3. General Site Set-Up and Pre-Commencement Measures

Detailed condition surveys (including photographs) may be carried out on certain adjacent/adjoining third-party buildings prior to any work being carried out on the site. The purpose of the survey would be to record the condition of the properties before the works commence. Copies of these survey reports would be provided to the third-party owners.

A detailed condition survey (including photographs) may be carried out on the roads and footpaths surrounding the site. The purpose of the survey would be to record the condition of the streets and footpaths around the site prior to the works commencing.

The following archaeological mitigation measures will be implemented on site:

- The appointment of a suitably qualified archaeological consultant to oversee the project during the construction phase.
- The archaeological consultant should consult with the National Monuments Service and the design team to design and implement an appropriate archaeological management plan dependent on the final design and construction methodologies. The plan should include:
 - Archaeological monitoring, under licence from the National Monuments Service, of topsoil stripping during construction.
 - Excavation of any archaeological features encountered, under licence from the National Monuments Service, with provision for post-excavation analysis and publication of results.

Surface water mitigation measures are covered in Section 11.

Site compound(s), including offices and welfare facilities, will be set up by the Main Contractor at locations to be decided.

Prior to any site works commencing, the Main Contractor will investigate and identify the exact location of, and tag, all existing services and utilities around and through the site with the assistance of the relevant Wicklow County Council technical divisions and utility companies.

The proposed working hours for the site are set out in Section 9.1. No Sunday work will be permitted. Special construction operations may, however, need to be carried out outside these hours in order to minimise disruption to the surrounding area.

4. Site Security and Hoarding Lines

Hoarding lines and site security will be set up within the development site as required.

Hoarding and security fencing will be required on the public roads during the construction works.

Prior to construction commencing on site, a detailed Traffic Management Plan will be prepared by the appointed contractor and submitted to Wicklow County Council.

The Traffic Management Plan will identify staging areas, delivery of materials, strategy for large concrete pours, removal of construction waste, traffic routes etc.

Access gates will be operated by a flagman who will divert incoming/outgoing vehicles, pedestrians and general traffic as necessary.

5. Construction Waste Management

These preliminary Construction Waste Management guidelines will be incorporated into the requirements for the Contractor, and the Plan will be developed further by the Contractor as construction progresses.

5.1 Policy and Legislation

This report has been prepared in accordance with the Wicklow County Development Plan 2022–2028, which sets out the policy framework for sustainable waste management within the County.

Under Section 1.4.6 of Appendix 1 (Development & Design Standards), the Plan requires that:

"All construction sites shall be appropriately managed to ensure that environmental emissions are strictly controlled. This will be enforced by requiring (by planning condition) the agreement and implementation a 'construction and demolition management plan', which will set out detailed measures to manage waste arising from the construction activity. In particular, such plans will set out: Construction programme for the works; Hours of operation; A traffic management plan; Noise and dust mitigation measures (including details of a truck wheel wash at the site entrance); Details of construction lighting. A Construction Manager will be required to be appointed to liaise directly with the various sections of the Planning Authority."

In addition, the following objectives from Chapter 15 (Waste & Environmental Emissions) are relevant:

- **CPO 15.1** – *To require all developments likely to give rise to significant quantities of waste, either by virtue of the scale of the development or the nature of the development (e.g. one that involves demolition), to submit a construction management plan outlining the plan to minimise waste generation and the plan to protect the environment through the safe and efficient disposal of waste from the site.*
- **CPO 15.2** – *To require all new developments, whether residential, community, agricultural or commercial, to make provision for storage and recycling facilities, in accordance with the Development & Design Standards.*
- **CPO 15.6** – *To facilitate the development of sites, services and facilities necessary to achieve implementation of the objectives of the Regional Waste Management Plan (Eastern-Midlands Region Waste Management Plan).*

In addition, the following objectives are also relevant:

- **ENV 24** – *To implement and support the provisions of the Eastern-Midlands Region Waste Management Plan 2015-2021 or any subsequent plan and EU Directives/Policies.*
- **ENV 26** – *To facilitate the provision of adequate waste recovery and disposal facilities in appropriate locations, as deemed necessary in accordance with the requirements of the current 'Eastern Midlands Region Waste Management Plan' and any subsequent plans.*

These policies collectively seek to promote sustainable construction practices through the minimisation, segregation, and recycling of waste materials in line with regional and national waste policy objectives.

These requirements are addressed in Sections 4, 5, 6, 7, 9, 10 and 11 of this Management Plan.

The principles and objectives for delivering sustainable waste management on this project have been incorporated into this report and are based on the following:

- National Policy: The Waste Management Act 1996 (as amended), the Environmental (Miscellaneous Provisions) Act 2011 and the Circular Economy and Miscellaneous Provisions Act 2022;
- Protection of the Environment Act 2003;
- Waste Policy: National Waste Management Plan for a Circular Economy 2024–2030, which supersedes the Eastern-Midlands Region Waste Management Plan 2015–2021.

This Management Plan has also been prepared having regard to the following guidance:

- Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition (C&D) Projects (Department of the Environment, Heritage and Local Government, 2006), as referenced in the Wicklow County Development Plan 2022–2028; and
- Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects (Environmental Protection Agency, 2021).

The hierarchy of waste management sets out the guiding principles in order of importance as follows:

- a. Reduction in the amount of waste generated by the construction process.
- b. Segregation of waste, which will be implemented throughout the construction phase to facilitate re-use and recycling wherever appropriate.
- c. Recycling of waste material where feasible, including the use of excess excavations as fill material, recycling of various waste fractions such as metals, packaging, etc.

5.2 Construction Waste

Typical construction waste that will be generated by the development is as follows:

- General site clearance waste
- Excavated material
- Surface water runoff
- Packaging and waste construction materials generated during the construction activities

The quantities of surplus construction waste and materials that will arise during the construction phase have not been confirmed at the time of writing. Construction waste will be categorised as outlined in Table 5-1 below.

The Purchasing Manager shall ensure that materials are ordered so that the quantity delivered, the timing of the delivery and the storage are not conducive to the creation of unnecessary waste.

Table 5-1: Estimated C&D Waste Arising on Site

C & D Waste Material	Quantity (tonnes)
Clay and stones	TBC by Contractor prior to starting works
Concrete	TBC by Contractor prior to starting works
Masonry	TBC by Contractor prior to starting works

Wood	TBC by Contractor prior to starting works
Packaging	TBC by Contractor prior to starting works
Hazardous Materials	TBC by Contractor prior to starting works
Other Waste Materials	TBC by Contractor prior to starting works
TOTAL ARISING	TBC by Contractor prior to starting works

5.3 Off Site Waste Management Licensing/Permitting

All waste materials (where necessary, after in-situ reuse and recycling options have been fully considered) shall be disposed of off-site under the appropriate Duty of Care and subject to approvals/consents from the relevant statutory bodies. It is the responsibility of the Main Contractor to ensure that any company to whom waste is transferred is legally permitted to accept it and that the facility to which the waste is brought is licensed to handle that type of waste as outlined in the Waste Management Act 1996 (as amended). The Waste Collection Permit Register, in accordance with the Waste Management (Collection Permit) Regulations 2007 (as amended), will be consulted to ensure that waste carriers hold the appropriate permit.

It is anticipated that some waste materials will need to be removed off-site. It is intended to engage specialist waste service contractors, who will hold the requisite authorisations, for the collection and movement of waste off-site and its transport to a facility that currently holds a Waste Licence, Waste Permit, or Certificate of Registration. Details of waste service contractors are not confirmed at the time of writing. The following waste authorisations will be arranged specifically for the project:

Table 5-2: Specific Waste Authorisations Necessary for the Scheme

Authorisation Type	Specific Need for Project (Yes / No?)
Waste Licence	Yes
Waste Permit	Yes
Waste Collection Permit	Yes
Transfrontier Shipment Notification	No
Movement of Hazardous Waste Form	No

Any waste that must be disposed of or recycled off-site will be transported to the nearest appropriate facility, in compliance with the proximity principle and to reduce the associated transport emissions. The Environmental Protection Agency holds details of waste facilities, which will be consulted where necessary.

An inspection of the site shall be made by the Main Contractor for hazardous substances, gas cylinders and the like. If such substances are encountered during construction, works must be halted. The Project Supervisor for the Construction Stage (PSCS) and the relevant Statutory Authority shall be informed immediately.

The Main Contractor shall prepare a detailed inventory of construction-based hazardous waste generated, such as tars, adhesives, sealants and other dangerous substances, and these will be kept segregated from other non-hazardous waste to prevent possible contamination. Arrangements shall be made for the safe disposal of such substances at an authorised disposal site or by means acceptable to the relevant Authority.

The Contractor shall ensure that the excavation works are carried out in accordance with best practice and that excavated materials are segregated to minimise any potential cross-contamination.

The Contractor shall carry out appropriate environmental chemistry testing to determine the waste classification of the soils that are to be excavated from areas where contamination is likely; this shall include Waste Acceptance Criteria (WAC) testing. The test regime shall be agreed with the receiving landfill operator and the testing shall be carried out by an accredited laboratory.

Should excavation materials be assessed to be hazardous, the Contractor shall carry out pre-treatment of the waste soil using a methodology agreed with the receiving landfill operator and in accordance with Environmental Protection Agency guidance.

The Main Contractor is encouraged to reuse and recycle any waste materials as far as is reasonably practicable.

In respect of the disposal of any liquids, including groundwater, the Contractor shall carry out appropriate environmental chemistry testing to determine whether the liquid is contaminated or not. The test regime shall be agreed with the receiving disposal facility and the testing shall be carried out by an accredited laboratory.

The Main Contractor shall manage and carry out the works in accordance with best environmental practice and in accordance with the requirements of the Local Authority and the EPA, and all requirements specified in this document.

5.4 Appointment of Construction Waste Manager

A Construction Waste Manager shall be appointed from the Contractor's staff and shall have overall responsibility for the implementation of the project Waste Management Plan (WMP) during the construction phase. The Construction Waste Manager will be appropriately trained and assigned the authority to instruct all site personnel to comply with the specific provisions of the WMP. At the operational level, a designated person from the Main Contractor and from each sub-contractor on the site shall be assigned the direct responsibility to ensure that the operations stated in the WMP are performed on an on-going basis.

Copies of the Waste Management Plan will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the Waste Management Plan and informed of the responsibilities which fall upon them under its provisions. Where source segregation and selective material re-use techniques apply, each member of staff will be given instructions on how to comply with the Waste Management Plan. Posters will be designed to reinforce the key messages within the Waste Management Plan and will be displayed prominently for the benefit of site staff.

5.5 Construction Record Keeping

Details of all arisings, movement and treatment of construction waste shall be recorded as part of the Waste Auditing regime.

It is the duty of the Construction Waste Manager to ensure that the necessary licences have been obtained. Each consignment of construction waste taken from the site will be subject to documentation which will conform with Table 5-3, along with transportation dockets to ensure full traceability of the material to its disposal site.

Table 5-3: Details of materials taken from site

Detail	Particulars
Project of Origin	Tinahask, Arklow, County Wicklow
Material being Transported	Soil, Construction waste etc.
Quantity of Material	TBC by Contractor prior to starting works
Date of Material Movement	TBC by Contractor prior to starting works
Name of Carrier	TBC by Contractor prior to starting works
Destination of Material	TBC by Contractor prior to starting works
Proposed Use	TBC by Contractor prior to starting works

5.6 Topsoil

In the case of topsoil, careful planning of on-site storage can ensure that this resource is re-used on-site as much as possible. However, topsoil is quite sensitive and can be rendered useless if not stored and cared for properly.

- It is important that topsoil is kept separate from all other construction waste as any cross-contamination of the topsoil can render it useless for reuse.
- It is important to ensure that topsoil is protected from all kinds of vehicle damage and kept away from site tracks, delivery vehicle turning areas and site plant and vehicle storage areas.

If topsoil is stored in stockpiles greater than two metres in height, the soil matrix (internal structure) can be damaged beyond repair. Topsoil shall also be kept as dry as possible and used as soon as possible to reduce deterioration through lengthy storage and excessive handling.

Records of topsoil storage, movements and transfer from site shall be kept by the Construction Waste Manager.

5.7 Earthworks – Fill Policy

The quantity of fill materials to be imported into the site can be greatly reduced by establishing proposed building levels that minimise the volume of fill. The infill material that will be imported to site during construction will comprise one of the following:

- I. Quarried products, i.e. stone, sand, gravel and aggregates;

- II. Related fill materials, including overburden from quarries (i.e. the material covering the rock to be quarried), which is permitted to be exported as a product as part of the quarry's planning permission; or
- III. Materials that have been approved as a by-product by the EPA in accordance with the EPA's criteria for determining a material as a 'by-product' under Article 27(1) of the European Communities (Waste Directive) Regulations 2011.

6. Construction Traffic Routes

Deliveries and access to the construction site will primarily be via Northwood, as shown in Figure 2 below. As the road is two-way, it can accommodate both inbound and outbound site traffic.

The use of the surrounding residential roads by construction traffic will be kept to a minimum.

Due regard will be paid to minimising any impacts by construction vehicles on the existing developments in the area. Should routing become an issue, the position will be reviewed by the Project Team and changes made as necessary.



Figure 2: Construction Access Route

All delivery vehicles will be co-ordinated as required by a flagman on duty at the relevant access point. All large pours will be carefully co-ordinated with the roads department at Wicklow County Council.

The Main Contractor will be required to schedule delivery of materials daily. If necessary, the Main Contractor will be required to provide a secure material staging compound on the site.

7. Deliveries

Deliveries and access to the construction site will be as described in Section 6 above.

In the event that large concrete pours are required, which may result in congestion at the entrance to the site, the deliveries will be organised such that concrete trucks will queue at a pre-determined staging point and then be called forward to the site by radio, as appropriate, via a pre-determined route to the required access gate.

Set procedures and designated wash-out areas will be provided; if a suitable wash-out area cannot be identified, vehicle wash-out on site will be prohibited.

The fill material will be classified in accordance with the TII Specification for Road Works. All material delivered to the site will be visually inspected prior to placement. A record of where delivered material is placed on site will be kept. GPS trackers on delivery vehicles will be used to confirm both the source and delivery destination.

8. Parking and Cycle Storage

Site management will organise additional off-site parking and car-sharing arrangements if required. The nearest bus stops are on Wexford Road (Stop ID 355181 northbound and Stop ID 355171 southbound), c. 430 m from the site. They are served by Wexford Bus route 740A and Expressway route 2.

For those who wish to cycle to and from the site, dedicated cycle parking will be provided for the duration of the works within the site. Shower facilities and lockers will also be provided, and cycle links will be maintained at all times.

A Construction Stage Mobility Plan will be prepared by the contractor alongside the Construction Management Plan before commencing work on site.

9. Hours of Operation

9.1 Proposed Working Hours

The proposed working hours for the development are set out below:

- Monday to Friday : 08:00 – 18:00
- Saturday : 08:00 – 13:00

No Sunday works will be permitted.

9.2 Mitigation Measures

To mitigate the impact of construction activities both during and outside working hours, the following measures are proposed:

- Scheduling deliveries to avoid peak traffic hours;
- Coordinating deliveries to the site with adjoining developments;
- Scheduling noisier activities as early in the day as possible;
- Implementing noise mitigation measures as outlined in Section 10.2 of this Plan; and
- Applying vibration mitigation measures as detailed in Section 10.3 of this Plan.

10. Control of Noise & Vibration

10.1 Existing Noise Sources

The dominant source of noise in the vicinity of the site is traffic along Northwood, to the west of the site, and Tinahask Road, to the north.

10.2 Construction Noise Management

In the absence of any statutory Irish guidance relating to the maximum permissible noise level that may be generated during the construction phase of a project, it is proposed that the construction works will incorporate:

- Best practice measures relating to the control and minimisation of noise during all phases of the work, as set out in BS 5228-1 and BS 5228-2:2009+A1:2014;
- Selection of quiet plant including proprietary acoustic enclosures to compressors and generators;
- Control of noise sources including reduction of resonance effects by stiffening and / or the application of damping compounds to panels and / or cover plates;
- Control of rattling and grinding noises by fixing resilient materials between the contact surfaces;
- Screening by demountable enclosures;
- The siting of mechanical plant as far away from residential areas as possible; and
- Regular maintenance of all plant.

Ref: BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise.

10.3 Construction Vibration Management

In the absence of any statutory Irish guidance relating to the maximum permissible vibration level that may be generated during the construction phase of a project, it is proposed that the construction works will incorporate:

- Selection of quiet plant with low vibration emissions;
- Provision of anti-vibration mounts on reciprocating plant;
- Limitation of vibration from construction activities to the levels recommended in BS 5228;
- Strip and pad foundations in lieu of piling;
- Materials to be lowered rather than dropped; and
- Resilient materials to be provided on surfaces onto which materials are being lowered.

Ref: BS 5228-2:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration.

11. Surface Water Control

11.1 Surface Water Impacts

Surface water runoff from construction activities has the potential to become contaminated. The main contaminants arising from construction activities include:

- Suspended solids: arising from ground disturbance and excavation;
- Hydrocarbons: accidental spillage from construction plant and storage depots;
- Faecal coliforms: contamination from coliforms can arise if there is inadequate containment and treatment of onsite toilet and washing facilities; and
- Concrete/cementitious products: arising from construction materials.

These pollutants pose a temporary risk to surface water quality for the duration of the project if not properly contained and managed.

11.2 Surface Water Mitigation Measures

The following mitigation measures are proposed to address potential impacts on water quality. All works will be undertaken with reference to the following guidelines:

- CIRIA C532: Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (Masters-Williams et al., 2001);
- CIRIA C692: Environmental Good Practice on Site (Audus et al., 2010);
- BPGCS005: Oil Storage Guidelines;
- CIRIA C648: Control of Water Pollution from Linear Construction Projects: Technical Guidance (Murnane et al., 2006a);
- CIRIA C649: Control of Water Pollution from Linear Construction Projects: Site Guide (Murnane et al., 2006b).

The schedule of mitigation presented in the table below summarises the measures that will be undertaken to reduce impacts on ecological receptors within the zone of influence of the proposed development.

Table 11-1 - Schedule of Surface Water Mitigation Measures

No.	Risk	Possible Impact	Mitigation	Result of Mitigation
1	Hydrocarbons from car parking area entering the watercourse.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	Designated parking at least 50m from any watercourse.	Ensures no soil disturbance or hydrocarbon leakage near the aquatic zone
2	Pollutants from site compound areas entering the watercourse.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	The site compound will be located at least 50m from any watercourse.	Prevents pollution of the aquatic zone from toxic pollutants
3	Pollutants from material storage areas entering the watercourse.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	Fuels, oils, greases and other potentially polluting chemicals will be stored in bunded compounds at the Contractor's compound or at a location at least 50m from any body of water. Bunds are to have a capacity of 110% of the storage container volume. Spill kits will be kept on site at all times and all staff trained in their appropriate use. Method statements for dealing with accidental spillages will be provided by the Contractor for review by the Employer's Representative.	Prevents contamination of aquatic zone by toxic pollutants
4	Concrete/cementitious materials entering the watercourse from washdown.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	A designated wash down area within the Contractor's compound will be used for cleaning of any equipment or plant, with the safe disposal of any contaminated water. Pouring of cementitious materials will be carried out in the dry.	Prevents contamination of aquatic zone by suspended solids or pollutants, ensures invasive species material is not transported off site
5	Leaching of contaminated soil into groundwater.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	Spill kits will contain 10 hr terrestrial oil booms (80mm diameter x 1000mm) and a plastic sheet, upon which contaminated soil will be placed to prevent leaching to groundwater	Prevents contamination of aquatic zone by petrochemicals
6	Pollutants from equipment storage/refuelling area entering the watercourse.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	Any refuelling and maintenance of equipment will be done at designated bunded areas with full attendance of plant operative(s) within contained areas at least 50m from any watercourse	Prevents contamination of aquatic zone by petrochemicals

7	Runoff from exposed work areas and excavated material storage areas entering the watercourse.	Water quality impacts Reduction in habitat quality Mortality of aquatic key ecological receptors/qualifying interests	Contractor to prepare a site plan showing the location of all surface water drainage lines and proposed discharge points to the sewer. The plan will include the location of all surface water protection measures, including monitoring points and treatment facilities.	Prevents contamination of aquatic zone by suspended solids or pollutants.
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11.3 Protection of Surface Waters

- The Main Contractor will appoint a suitably qualified person to oversee the implementation of measures for the prevention of pollution to the receiving surface water environment.
- Cut-off trenches along the eastern and southern boundaries of the development will be constructed prior to topsoil stripping. These cut-off trenches will have a settlement pond silt trap at the end of each trench with an overflow. Straw bales will be placed within the cut-off trenches at strategic locations and at the outfall of the settlement ponds to the overflow. These measures will be implemented and maintained during the construction phase to prevent surface water runoff from discharging directly into the local watercourse.
- Settlement ponds/silt traps as outlined above will be provided to prevent silt runoff into the existing ditches/watercourses during the drainage works.
- Regular testing of surface water discharges will be undertaken at the outfall from the subject lands. The location will be agreed between the project ecologist and the site foreman at the commencement of works. Trigger levels for halting works and re-examining protection measures will be: pH >9.0 or pH <6.0; and/or suspended solids >25 mg/l. These trigger levels are based on those outlined within 'Guidelines on Protection of Fisheries During Works in and Adjacent to Waters (IFI, 2016)'.
- Where silt control measures are noted to be failing or not working adequately, works will cease in the relevant area. The project ecologist will review and agree alternative pollution control measures, such as deepening or redirecting trenches as appropriate, before works may recommence.
- All fuels and chemicals will be bunded, and where applicable, stored within double skinned tanks / containers with the capacity to hold 110% of the volume of their contents. Bunds will be located on flat ground a minimum distance of 50m from any watercourse or other water conducting features, including the cut-off trenches.
- All existing services will be located using service records, GPR surveys and slit trenches to ensure that their positions are accurately identified before excavation works commence.

11.4 Surface Water Management of Environmental Impacts

Construction is envisaged to commence once final planning permission has been obtained.

11.4.1 Roles and Responsibilities

Main Contractor

The Main Contractor will have overall responsibility for the implementation of the project Construction Waste Management Plan (CWMP) during the construction phase. The appointed person from the Main Contractor's team will be appropriately trained and assigned the authority to instruct all site personnel to comply with the specific provisions of the CWMP. At the operational level, a designated person from each sub-contractor on the site shall be assigned the direct responsibility to ensure that the operations stated in the CWMP are performed on an on-going basis.

Copies of the Plan will be made available to all relevant personnel on site. All site personnel and sub-contractors will be instructed about the objectives of the CWMP and informed of the responsibilities which fall upon them under its provisions.

The responsibilities of the appointed person will be as follows:

- Update the CWMP as necessary to reflect activities on site;
- Advise site management (including, but not limited to, the site Construction Manager) on environmental matters;
- Ensure pre-construction checks for protected species, if any, are undertaken;
- Review sub-contractors' method statements to ensure that they incorporate all aspects of the CWMP;
- Provide toolbox talks and other training, and ensure understanding by all involved of all mitigation measures;
- Assess effectiveness of mitigation, check weather forecast and site conditions where trigger levels are required;
- Ensure adherence to the specific measures listed in the Planning Conditions;
- Advise upon the production of written method statements and site environmental rules and on the arrangements to bring these to the attention of the workforce;
- Investigate incidents of significant, potential or actual environmental damage, ensure corrective actions are carried out and recommend means to prevent recurrence;
- Be responsible for maintaining all environment-related documentation;
- Ensure that the plant selected is environmentally suited to the task in hand; and
- Co-ordinate environmental planning of the construction activities to comply with environmental authorities' requirements and with minimal risk to the environment. Give contractors precise instructions as to their responsibility to ensure correct working methods where risk of environmental damage exists.

12. Duties and Responsibilities

12.1 Standards

Insofar as the construction of this development may impact the surrounding road network, all works, including the development and associated roadworks, shall be carried out in compliance with the requirements of Wicklow County Council as issued by the Transportation Department as well as any additional requirements the Council may impose during the course of the works.

12.2 Project Team

It shall be the duty of the Project Team to provide the Main Contractor in good time with all necessary designs, details, drawings and specifications so that the Contractor can, in conjunction with the Project Team, prepare detailed proposals and programmes for the execution of the works for submission to Wicklow County Council as specified in the “Guidance for the Control and Management of Traffic at Roadworks”.

It shall also be the duty of the Project Team to ensure that the Contractor's proposals are reasonable and that they are implemented in a safe and competent manner.

12.3 Main Contractor

It shall be the duty of the Main Contractor, in conjunction with the Project Team, to prepare detailed construction and traffic management proposals for the implementation of the works.

The Contractor shall give adequate and timely notice to Wicklow County Council as specified in the “Guidance for the Control and Management of Traffic at Roadworks”.

The Contractor(s) shall also be responsible for implementing the traffic management proposals in a safe and competent manner on an ongoing basis.

UK and Ireland Office Locations

