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Title

Preliminary Construction Environmental and Demolition Waste Management Plan

Development Description

“Housing development consisting of 39 residential units, ranging for 1 to 3 storeys high and modification of existing stone vehicular bridge over Pausdeen stream to include footpath and associated and ancillary services and site works”

Location

Ardclough Road, Celbridge, Co. Kildare

Applicant

Kildare County Council

Prepared by

Megan Lee (B.Sc (Hons) M.Sc (Hons)) and Colette C. (B.Sc (Hons)) in partnership with James O' Donnell MRUP, Dip APM

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James O' Donnell

BA, MRUP, Dip APM

Planning Consultancy Services

Suite 3,

Third Floor,

Ross House,

Victoria Place,

Eyre Square,

Galway

M: 087-6066166

info@planningconsultancy.ie

www.planningconsultancy.ie

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1.0 Introduction

The purpose of this *Preliminary Construction Environmental Demolition Management Plan* is to detail the works necessary to ensure sustainable construction, environmental protection, and waste prevention. Mitigation measures are outlined and should be adhered to throughout the duration of the works. The following report follows the guidelines set out in “*Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects (2006)*”.

1.1 Development description and Location

This *Preliminary Construction Environmental and Demolition Waste Management Plan* has been prepared by Planning Consultancy Services on behalf of Kildare County Council who are seeking permission for a “*Housing development consisting of 39 residential units, ranging for 1 to 3 storeys high and modification of existing stone vehicular bridge over Pausdeen stream to include footpath and associated and ancillary services and site works*” at Ardclough Road, Celbridge, Co. Kildare. This *Preliminary Construction Environmental and Demolition Waste Management Plan* should be read in conjunction with the drawings prepared by Vincent Hannon Architects. This *Preliminary Construction Environmental and Demolition Waste Management Plan* has been prepared as the site for the proposed development lies adjacent to a flood risk area, which is connected via the River Liffey to the Rye Water Valley/Carton SAC. The potential surface water runoff from the construction and operational phases could result in the habitat deterioration of the habitats associated with the Rye Water Valley/ Carton SAC.



Fig. 1.1 – Map showing site location

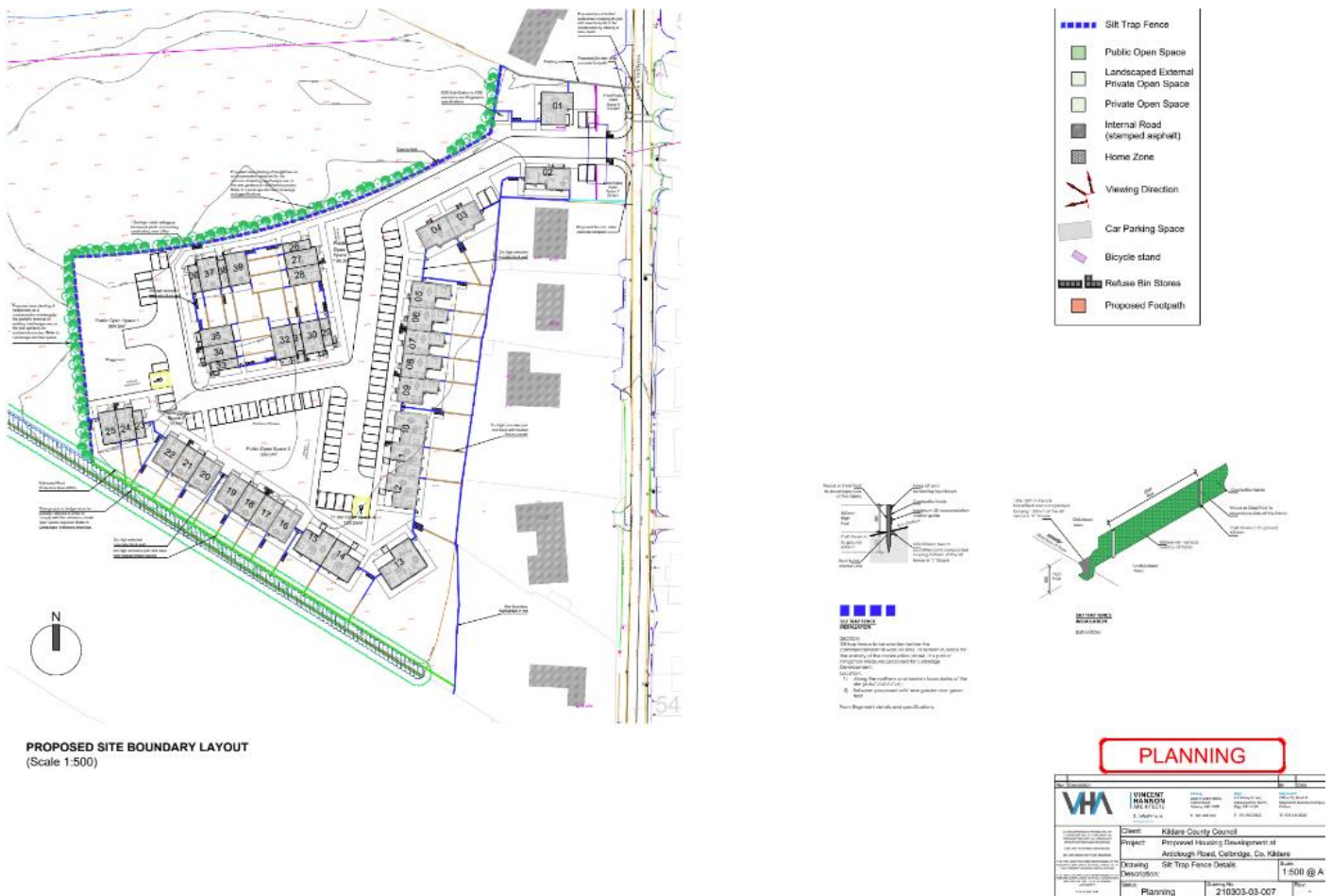


Fig 1.2 – Site layout prepared by Vincent Hannon Architects.

2.0 Site Management

The site will be in the overall control of the Contract Manager. However, there will be a Construction and Demolition Waste Manager employed onsite whose responsibilities will include overseeing environmental control measures. Employees will be site inducted and made aware of their environmental duties while working onsite and must be fully compliant with the PSDS and PSCS plans.

3.0 Demolition Program

An existing dwelling house in the application site will be demolished as part of the development.

4.0 Method Statement

Will include the following headings:

- Location of the activity and access / egress arrangements
- Work to be undertaken and methods employed.
- Plant and materials to be used

- Labour and Supervision Requirements
- Health, Safety & Environmental considerations
- Any permits or consent requirements

5.0 Construction/Demolition Waste Materials

In the course of this project, it is expected that the following waste materials will arise. An estimate of the quantity of waste produced is not confirmed at the time of writing of this report.

Table 1 – Demolition surpluses expected from the proposed project

Materials Type	EWC code
Wood	17 02 01
Glass	17 02 02
Concrete	17 01 01
Mixture of Materials (plaster)	17 01 07
Insulation	17 06 04
Cables	17 04 11
Plastic	17 02 03
Tiles and ceramics	17 01 03
Mixed metals	17 04 07
Soil and stones	17 05 04

Table 2 – Construction surpluses expected from the proposed project

Materials Type	EWC code
Wood	17 02 01
Glass	17 02 02
Concrete	17 01 01
Mixture of Materials (plaster)	17 01 07
Insulation	17 06 04
Cables	17 04 11
Plastic	17 02 03
Tiles and ceramics	17 01 03
Mixed metals	17 04 07
Soil and stones	17 05 04

5.1 Proposals for minimisation, reuse and recycling of Construction waste

Construction waste will arise on the project mainly from unavoidable construction and demolition waste. The Purchasing Manager will ensure that the quantity of materials ordered, the timing of delivery and storage of these materials onsite will

not result in unnecessary waste. Excavated soil or rock that can be used for refilling will be carefully stored in segregated piles onsite.

Waste materials will be segregated based on type into individual skips. Where a category of waste forms only a small quantity, it will be disposed of in the general waste skip. The general waste will be brought to a Materials Recovery Facility by a fully licensed waste contractor where the waste will be further sorted for recycling, recovery or disposal. Hazardous waste will be identified, removed and kept separate from other waste to prevent further contamination.

Any waste generated during construction, which cannot be reused onsite, will be removed by a licensed waste disposal contractor, in accordance with Kildare County Council guidelines. Dispatch of waste will occur within the normal working hours: 08:00 – 19:00 Monday to Fridays inclusive, and 09:00 – 17:00 on Saturdays, and will be delivered to a facility which holds the necessary licenses/permits. Deviations from these times will only occur in exceptional circumstances where prior written approval has been received by the relevant planning authority.

Accordingly it may be necessary to arrange the following waste authorisations for the project:

Table 3 – Waste Authorisation for site at Ardclough Road, Celbridge, Co. Kildare

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

5.2 Assignment of Responsibilities

Prior to commencement of works, a Construction and Demolition Waste Manager will be chosen by the project team. The waste manager will be responsible for the implementation of the guidelines set out in this report regarding the management of waste, and will ensure that the waste disposal contractors will have the necessary authorisation. The waste manager will conduct regular waste audits to ensure that the management plan is operating effectively.

5.3 Training

Copies of the *Preliminary Construction Environmental and Demolition 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 Preliminary Project Construction Waste Management Plan and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation and material reuse techniques apply, each member of staff will

be given instructions on how to comply with the Preliminary Project Construction Waste Management Plan. Posters will be designed to reinforce key messages within the waste management plan and will be displayed prominently for the benefit of the staff.

5.4 Waste Auditing

The Construction and Demolition Waste Manager shall arrange for full details of all construction waste generated to be recorded, including movements and treatment of construction waste discards during the construction stage of the Project. Each consignment of construction waste taken from the site will be subject to documentation, which will conform to Table 4 and ensure full traceability of the material to its final destination.

Table 4 – Details to be included within transportation documents

Detail	Particulars
Project	Ardclough Road, Celbridge, Co. Kildare
Material being Transported	Soil, Rocks, ect.
Quantity of Material	TBC
Date of Material Movement	TBC
Name of Carrier	TBC
Destination of Material	TBC
Proposed Use	TBC

Details of the outputs of waste from the site will be recorded and assessed in a Waste Audit to determine the quantities and types of waste produced on site. The audits will investigate the operational factors and management policies that contribute to the generation of waste and identify appropriate corrective actions. Reviews of waste management will occur regularly and at every stage of construction and development onsite. The measured waste quantities will be used to quantify the costs of management and disposal in a Waste Audit Report, which will also record lessons learned from these experiences which can be applied to future projects. The total cost of construction waste management will be measured and will take into account the purchase cost of materials (including imported soil), handling costs, storage costs, transportation costs, revenue from sales, disposal costs etc. Costs will be calculated for the management of a range of construction waste materials, using the format shown in Table 4 below:

Table 5 - Standard Record Form for Costs of Construction Waste Management (Sample relates to Soil – separate record forms should be compiled in respect of each waste material)

Material	Estimated Quantities & Costs (tonnes & Euro)
<u>SOIL</u>	
Quantity of Waste Soil(tonnes)	TBC

Purchase Cost i.e. Import Costs (€)	TBC
Materials Handling Costs (€)	TBC
Material Storage Costs (€)	TBC
Material Transportation Costs (€)	TBC
Revenue from Material Sales (€)	TBC
Material Disposal Costs (€)	TBC
Material Treatment Costs (€)	TBC
Total Waste Soil Management Costs (€)	TBC
Unit Waste Soil Management Costs (€)	TBC

6.0 Environmental Control Measures

During the construction Stage of the proposed development the following best practice mitigating measures must be employed to ensure that no possible adverse impacts arise on the surrounding environment or on nearby European Sites:

6.1 Site Setup

- A solid fence will be erected around the perimeter of the proposed development site prior to the commencement of construction works. This will create a solid boundary between the site and the surrounding area.
- All works will be located within the confines of these fences. No works will take place outside the fences to prevent damage to areas outside the necessary development footprint.
- A silt trap will be erected along the northern and western boundaries of site before the commencement of works on site. The silt trap will remain in place for the entirety of the construction phase. See Fig 2.1.
- Sedimats will be placed to the west of the proposed pedestrian bridge over Pausdeen stream, these sedimats are to remain in place for the entirety of the construction phase.
- Construction of the proposed pedestrian bridge and the storm drain is to take place outside of the salmon and trout season, October to the end of February.

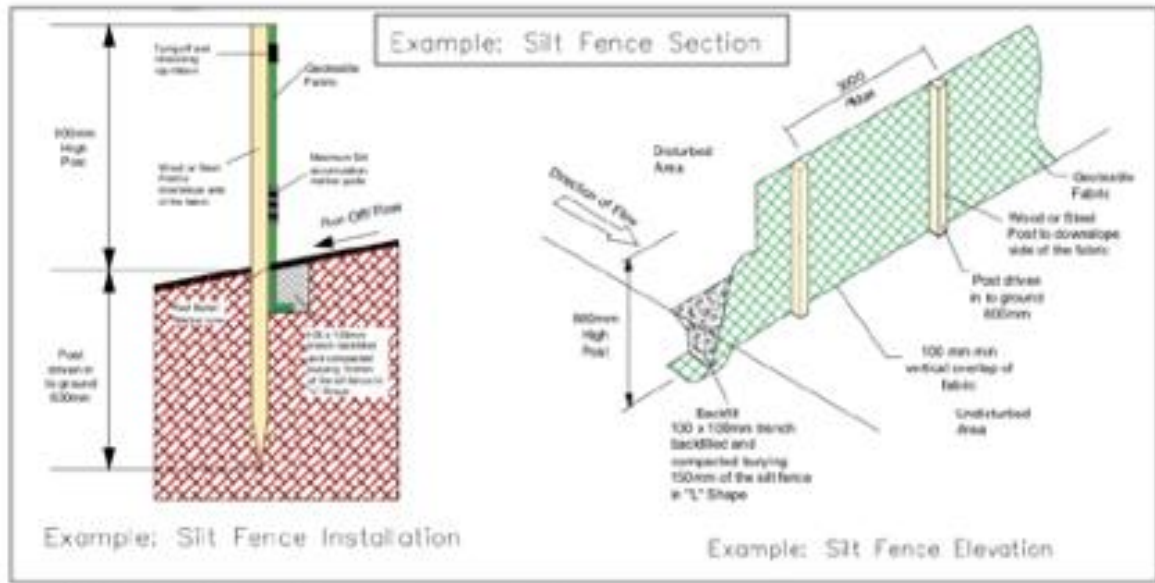


Fig 2.1. An example of the silt trap to be erected before the commencement of works on site.



Fig 2.2. An example of the sedimat to be placed in near waterways before the commencement of works on site.

6.2 Earthworks

- Works such as soil excavations, soil depositing or soil stripping shall not take place immediately following periods of heavy or prolonged rainfall.
- All stockpile areas of sand, gravels and soils should be stored on level terrain and shall be covered during heavy rainfall periods in order to prohibit the mobilisation of sediments.
- Removal of vegetation from Pausdeen stream should be only carried out when necessary. Removed vegetation should be stockpiled for replacement post construction. These stockpiles are to be placed away from the stream and covered to prevent run off.
- If gravel or handstand materials are being brought onsite ensure that the source is free of invasive species such as Japanese Knotweed, *Gunnera* and *Rhododendron*.

6.3 Air Quality, Dust and Emissions

- Dust and mal odours will be kept to a minimum.
- The site shall be dampened down as necessary to minimise windblown dust when necessary or during periods of dry weather.
- Dust suppression equipment must be used when point source emissions are likely
- No Burning of materials will be allowed onsite.
- Care will be taken from the commencement of the project that the deposition of debris on local roads is kept to a minimum

6.4 Refuelling, Fuel and Hazardous Materials Storage

- All machinery maintenance and re-fuelling shall be carried out off-site. Spill kits for contaminants such as fuels oils and lubricants must be used
- All petroleum products to be bunded during the construction stage of the development.

6.5 Environmental Approvals, Licenses and Approvals

- Appropriate waste permits will be provided to and retained by the supervising engineer for the completion of demolition / waste disposal file

6.6 Groundwater Contamination

- All direct discharges of pollutants into groundwater is prohibited.
- Drip trays must be utilized for all machinery on site and monitoring undertaking to ensure that there is no risk of overflowing and that they are adequately sized to deal with the specific element of machinery that they are protecting against.

6.7 Drainage and Water Quality

- The works shall be planned and executed in accordance with Environmental Protection Agency Guidelines.
- Construction of the Storm drain will adhere to the Inland Fisheries Guidelines 2016, a petrol interceptor will be installed to minimize water quality deterioration.
- Wash water from on-site mixers or lorries shall be disposed of appropriately off site.
- The contractor should ensure that operations do not give rise to the discharge of large quantities of dirty water into the watercourses. Measures must be in place to ensure that silt will not be allowed to enter the water system.
- To prevent run off from stripped ground, banks are to be placed on the downstream side of stock piles.
- Water from excavations shall be pumped to land and allowed to settle, or passed through silt traps, before returning into the watercourse.

- Good site management will ensure that surface water and groundwater will be protected from accidental contamination.
- Washing out of concrete trucks should not be permitted within the site and should be conducted in hard standing areas.
- Works with concrete shall be done during dry conditions for a period sufficient to cure the concrete (at least 48 hours).
- Concrete pours shall occur in contained areas.
- During construction of the pedestrian bridge concrete structures should be pre-casted, this is to minimize concrete pours on site.
- All shuttering must be inspected for leaks prior to pouring during the construction of the proposed pedestrian bridge.
- Portable toilets and sanitary facilities will be provided for site use.
- Plant will be re-fuelled away from watercourses.
- All site operatives will have immediate access to spill kits when machinery is being used.

7.0 Protection of Buried Services

Throughout the entirety of the development, measures will be taken to ensure protection of existing buried services.

8.0 Noise Control Measures

- While increased levels of background noise are unavoidable during the demolition and construction phase of any project, measures will be implemented to reduce the number of noise-generating activities occurring concurrently. As a precautionary measure, it is suggested that the noisiest works be scheduled to take place outside the winter bird season to prevent disturbance of Wildlife and Wintering Birds in the area.

9.0 Sourcing of Materials

Granular fill materials will come from the nearest suitable quarry to SR1 Appendix E. Timber sources will be recorded to ensure sustainable and legal acquisitions of the resource.

10.0 Working hours

Site construction works shall be carried out only between the hours of 08:00 to 19:00 Mondays to Fridays inclusive, between 09:00 and 17:00 hours on Saturdays and not at all on Sundays and public holidays. Deviation from these times will only be allowed in exceptional circumstances where prior written approval has been received from the planning authority.

11.0 Welfare

- Potable water will be taken from the existing well servicing the house.
- Mess huts and welfare facilities including portable toilets will be provided on site for use by operatives. Toilets will be cleaned and emptied regularly by licensed contractors.

12.0 Logistics Transport & Roads / Site access during the works period

- Roads will be inspected and cleaned when necessary.
- Vehicles delivering materials to and from the site will be sheeted or covered.
- Materials will not be delivered to site until needed.
- Materials brought to site from store will use a vehicle suited to the roads.
- Care will be taken to ensure that no damage is caused to the road network.
- Security fencing to be erected around the site boundary to prevent unauthorized access onto the property.

13.0 Traffic management plan

The overall objective is to allow construction traffic within the site and traffic on the approach to the site to flow as normal as possible, in a safe and efficient manner, whilst at the same time minimizing the impact on the traffic flow on the public road and to the existing residents and neighboring houses also the surrounding businesses. It is proposed that all delivery vehicles to the site will approach the site at the designated entrance. The scope of the plan is to eliminate any risks to the general public by segregating pedestrians and local traffic from vehicles at the entrance to the construction site.

- To ensure control methods are used properly such as fixed barriers, signage and traffic controllers (flagmen).
- To reduce the need of vehicles to reverse wherever possible and provide traffic controllers.
- To limit crossing of pedestrians and vehicles as much as is possible.
- To control all site vehicles during movement, reversing and turning, so that no injury or damage may occur.
- To warn all personnel, pedestrians and diverted vehicles of any hazards that may exist and provide suitable precautions.
- To minimise the impact of the construction works on local traffic.
- To make every endeavor to comply with all current legislation — Safety, Health and Welfare at Work Act (Construction) Regulations 2013 (amended 2019).

14.0 Conclusion

The above guidelines will be adhered to for the duration of the proposed project. All site personnel will be informed of the Construction Environmental Demolition Management Plan during site induction. The waste hierarchy will always be

employed to ensure that construction waste is kept to a minimum on site. The reuse of waste materials onsite, where possible, will reduce the cost and requirement for raw materials to be brought onto the site.

- In particular, it should be noted that the application site adjoins a flood risk area and a silt trap will be constructed along the western and northern site boundaries of the housing site before the commencement of works on site and will remain in place for the entirety of the construction phase.
- The proposed removal of the existing stone parapet/ construction of the pedestrian bridge over the Pausdeen stream will require sedimats to be placed to the west of the bridge to prevent water deterioration, these will remain in place throughout the construction phase
- For the construction of the pedestrian bridge where possible pre casted concrete structures will be used. Shuttering for concrete pours will be inspected prior to use to look for leaks to prevent deterioration of water quality.
- Construction of the proposed storm sewer should be carried out in line with guidelines from Inland Fisheries Ireland 2016.

RULES.

1. Deliveries shall be carried out between the normal working hours of 08:00 – 19:00 Monday to Fridays inclusive, and 09:00 – 17:00 on Saturdays only.
2. Signage and road cones to be used will include three warning signs before the approach of the site entrance from either direction.
3. Any debris on public road will be cleaned daily or more frequently as necessary.
4. All aspects of the traffic management plan will be clearly explained to all site workers during the site specific safety, health and environmental induction.
7. All machinery and vehicles on site will have the appropriate insurance and be driven by qualified drivers.
8. Site plant vehicles are to be operated by trained personnel and copies of their training certificates passed to PSCS (project supervisor construction stage).
9. Vehicles entering the site shall proceed to a place designated by the PSCS for loading and offloading of materials involved in the construction process.
10. Vehicles shall only turn & reverse in the designated areas on the site.
11. The PSCS or persons delegated by the PSCS shall supervise the turning movements and safe egress of vehicles leaving the construction site.
12. Where circumstances arise that prevent the driver to see clearly behind them, they shall not manoeuvre until a banks man has been arranged to guide him/her and at no time shall the banks man stand directly behind the vehicle.
13. Vehicles shall not reverse towards edges, pedestrian's routes, hazardous or flammable materials.
14. PSCS will organize for signage to be placed on the approach roads indicating the designated entrance to the site.
16. PSCS shall arrange for signage to be placed within the site indicating the designated exit from the site.