

**ORANMORE LRD
CARTRON
ORANMORE
CO GALWAY**

**MARSHALL YARDS
DEVELOPMENT COMPANY LTD.**

**RESOURCE & WASTE MANAGEMENT PLAN (RWMP) for CONSTRUCTION &
DEMOLITION WASTE**

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1. INTRODUCTION

AKM Consulting Engineers were commissioned by Marshall Yards Development Company Ltd to prepare a Resource & Waste Management Plan (RWMP) for a proposed Large-scale Residential Development (LRD) of 171 residential units and a creche at Cartron, Oranmore, Co. Galway.

This Plan has been prepared during the planning stage prior to construction and will be updated by the Contractor for the Construction Stage of the project. This document presents the applicants Resource & Waste Management Plan (RWMP) to cover the following phases:

- Design phase including the project conception, preliminary, outline and detailed design phases.
- The statutory planning phase under the Planning and Development Act 2000 (as amended).
- Procurement of contractor services and materials.

2. PROJECT DESCRIPTION

2.1 Site Location

The Subject site is located on the north side of the Coast Road (R338) in Cartron, Oranmore, Co. Galway.

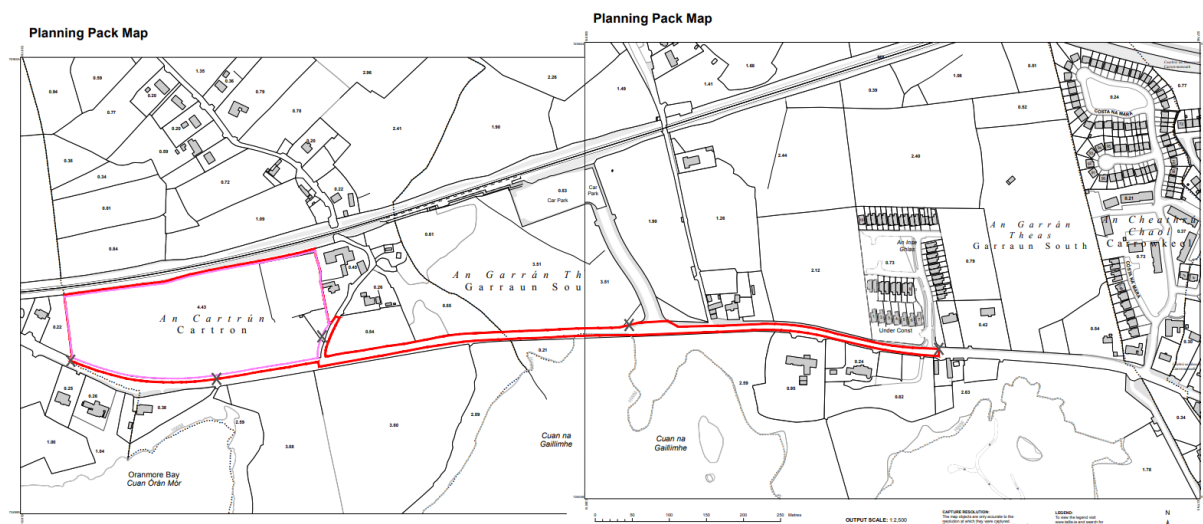


Figure 2.1 Site Location Plan

2.2 Site Description

The proposed development is an LRD comprising the demolition of the existing shed and associated structures on site and the construction of 171 no. residential units, 1 no. creche and all associated development works including the provision of pedestrian/cyclist facilities along the R338 public road connecting to Oranmore rail station, 1 no. ESB substation, 1 no. pumping station, the undergrounding of the existing ESB sites traversing the site, footpaths, lighting, parking, drainage, bicycle and bin stores and landscaping/amenity areas at Cartron (townland), Oranmore, Co. Galway. Access will be via a new entrance on the L-71051 to the east.

2.3 Construction Program

At the time of writing in May 2024, it is likely that construction of the proposed development could commence in 2025 for completion in 2026.

2.4 Scale of Development

The proposed development will comprise some 171 residential units with a Creche on a greenfield site which is currently used for agricultural purposes. See Figure 2.2 below.

The development includes all associated infrastructure to service the development including access junctions, footpaths and cycle paths together with a network of watermain, foul water drains and surface water drains.



Figure 2.2 Proposed Site Layout

2.5 Non-Hazardous Wastes Arising

The non-hazardous waste which could arise on site during the course of the construction stage of this development include:

- Soil and Topsoil
- Bedrock (Located at 2 – 4m BGL)
- Inert Waste including Concrete, Blocks and Bricks
- Metal including Steel, Aluminium and Lead
- Timber
- Plastic
- Glass
- Plasterboard

In addition, waste will be generated by site staff throughout the construction phase. This waste will encompass general refuse, mixed dry recyclables, food wastes and wastes from any onsite portaloos.

2.6 Potentially Hazardous Wastes Arising

The potentially hazardous waste which could arise on site during the course of the construction stage of this development includes:

- Contaminated Soil

- Chemicals including Solvents
- Fuel / Oil / Waste Oil
- Batteries
- Asbestos
- Electrical and Electronic Equipment including Fluorescent Lamps
- Invasive Plant Species

In addition to the materials listed above, other materials could be identified / classified as hazardous during the construction stage of this project.

3. ROLES & RESPONSIBILITIES

3.1 Overview of Client and Advisory Team

Client	:	Marshall Yards Development Company Ltd.
Architect	:	John Fleming Architects
Landscape Architects	:	Simon Ronan Landscape Architects
Civil Engineer	:	AKM Design
Environmental Consultant	:	Enviroguide
Quantity Surveyor	:	To be appointed by the Client
Contractor	:	To be appointed by the Client
Resource Manager	:	To be nominated by the Contractor
Sub-Contractors	:	To be appointed by the Contractor

3.2 Client

The Client will finance the project and is responsible for the following:

- Establishing the programme and performance targets for the project.
- Setting out these commitments and targets in relation to prevention and minimisation in the project brief, tender documentation including pre-qualification requirements, invitation to tender, etc.
- Requiring the preparation and submission of an RWMP as part of the design and planning submission, even if not requested by the planning authority for planning.
- Requiring the preparation and submission of an updated RWMP as part of the construction tendering process.
- Ensuring that the RWMP is agreed and submitted to the local authority prior to commencement of works on site; and
- Requesting the end-of-project RWMP from the Contractor.

3.3 Design Team

The Design Team (engineers, architects, consultants, etc) has been procured by the Client and is responsible for the following:

- Drafting and maintaining the RWMP through the design, planning and procurement phases of the project.
- Appointing a Resource Manager (RM) to track and document the design process, inform the Design Team and prepare the RWMP.

- Including details and estimated quantities of all projected waste streams. This should also include data on waste types (e.g. waste characterisation data, contaminated land assessments, site investigation information) and prevention mechanisms (such as by-products) to illustrate the positive circular economy principles applied by the Design Team.
- Incorporating relevant conditions imposed in the planning permission into the RWMP.
- Handover of the RWMP to the Contractor at commencement of construction for the development of the RWMP in a similar fashion to how the safety file is handed over to the Contractor.
- Working with the Contractor as required to meet the performance targets for the project.

3.4 Local Authority

The Local Authority (or An Bord Pleanála) as the planning regulator is responsible for the following tasks:

- Ensuring that the requirement for an RWMP for C&D Projects (as specified in these guidelines) is required for all planning applications (through setting this requirement as an objective of the County Development Plan or local planning policy) for development where construction or demolition is proposed.
- Ensuring that any RWMP submitted with planning complies with the requirements of these guidelines.
- Setting appropriate planning conditions as required in line with the requirements of Section 34(4)(l) of the Planning and Development Acts, as amended.
- Ongoing enforcement of these conditions through the construction phase.

3.5 Contractor

The principal Contractor to be procured by the Client to undertake the construction operations will be responsible for the following:

- Preparing, implementing and reviewing the RWMP through the Construction Stage (including the management of all suppliers and sub-contractors) as per the requirements of the RWMP Guidelines.
- Identifying a designated and suitably qualified Resource Manager (RM) who will be responsible for implementing the RWMP.
- Identifying all hauliers to be engaged to transport each of the resources / wastes off-site. Note that any resource that is legally a 'waste' must only be transported by a haulier with a valid Waste Collection Permit.
- Identifying all destinations for resources taken off-site. As above, any resource that is legally a 'waste' must only be transported to an authorised waste facility.
- Addressing end-of-waste and by-product notifications with the EPA as required.
- Clarification of any other statutory waste management obligations, which could include on-site processing.
- Maintaining full records of all resources (both wastes and other resources) for the duration of the project.
- Preparing a RWMP Implementation Review Report at project handover.

4. DESIGN APPROACH

4.1 Design Workshops

At the time of writing in May 2024, the project is at the planning stage with the LRD application programmed to be lodged in May 2024. Discussions have been held among the design team in relation to the concept, preliminary and outline design phases of the project to establish the location, land use size and appearance of the project for the purposes of preparing a planning application. No workshops have been held in relation to the detailed design phase which is not expected to commence before receipt of planning permission.

4.2 Reuse and Recycling

Prior to the preparation of this Plan, it was decided by the Client that:

- The existing brownfield site should be adapted for reuse.
- There are no existing buildings on the site that could be directly adapted, reused or refurbished in whole or in part to meet the Clients requirements.
- A decision on reuse of any existing buildings for site accommodation, welfare facilities and / or materials storage during the Construction Stage will be made by the Client in conjunction with the Contractor after the appointment of the Contractor.
- Further consideration of re-use and recycling will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

4.3 Key Performance Indicators

The figures set by the Client to be used as Key Performance Indicators (KPIs) for this project are set out in Table 1. Project specific targets for these values are not set until project detailed design stage.

Indicator	Target
Weight (tonnes) or Volume (cum) of waste generated per construction value	See note below
Weight (tonnes) or Volume of waste generated per construction floor area (sqm)	
Fraction of resource used on site	
Fraction of resource notified as by-product	
Fraction of resource used which was recycled material	
Fraction of waste generated at source before being sent off -site for recycling / recovery	
Fraction of waste recovered, fraction of waste recycled, or fraction of waste disposed	

Table 1 Project Specific Targets

4.4 Green Procurement

During the detailed design and pre-tender phases, tender specifications, selection and award criteria, and contract conditions will be drafted with the objective of procuring products and services that will prevent and reduce waste. The detailed design and pre-tender phase are not expected to commence until after completion of the planning stage.

4.5 Off-Site Construction

Consideration of off-site construction will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

4.6 Materials Optimisation

Consideration of materials optimisation will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

4.7 Flexibility and Deconstruction

Consideration of flexibility and de-construction will be incorporated in the detailed design phase which is not expected to commence until after completion of the planning stage.

5. KEY MATERIALS & QUANTITIES**5.1 Residual Resource Stream**

Each residual resource stream predicted will be identified and described during the detailed design phase and updated by the Resource Manager during the Construction Stage.

5.2 List of Waste (LoW) Codes

A list of the appropriate waste codes will be included in the Resource Inventory to be prepared during the detailed design phase and updated by the Resource Manager during the Construction Stage.

5.3 Predicted Quantity of Material

The predicted quantity of materials (in tonnes) will be estimated by the Quantity Surveyor during the detailed design phase during the detailed design phase and updated by the Resource Manager during the Construction Stage.

5.4 Resource Management Routes

The identified resource management options from prevention, reuse, recycling, recovery and disposal for each material will be identified during the detailed design phase and updated by the Resource Manager during the Construction Stage.

5.5 Cost of Resource Management

The estimated cost of resource management will be prepared by the Quantity Surveyor during the detailed design phase and updated by the Resource Manager during the Construction Stage.

6. SITE MANAGEMENT**6.1 Resource Manager**

A suitably qualified Resource Manager will be nominated by the contractor at the commencement of the Construction Stage.

6.2 Site Induction Training

All training and induction in relation to resource management will be delivered by the Resource Manager.

6.3 Tool Box Talks

The Resource Manager will be responsible for the provision of toolbox talks on resource management on a continuous basis.

6.4 Waste Collection Operators

The Resource Manager will be responsible for ensuring that all residual resources legally classified as 'waste' moved off-site including soil and stone must be collected by authorised waste collectors.

6.5 Waste Collection Sites

The Resource Manager will be responsible for ensuring that all residual resources legally classified as 'waste' taken from site must be sent to suitably authorised waste facilities for disposal or recover.

6.6 Supply Chains

The Resource Manager will engage with a team or individuals tasked with the procurement of materials and services to ensure best practice procedures are employed to prevent residual resources at the site.

6.7 Record Keeping – Off-Site Export

Site records for waste and resources exported off-site will be maintained by the Resource Manager.

6.8 Record Keeping– On-Site Resource Uses

Site records for on-site resource uses will be maintained by the Resource Manager.

6.9 Reporting

The Resource Manager will be responsible for internal reporting of resource statistics to the Client and Contractor management.

On completion of construction, the Resource Manager will prepare a final report summarising the outcome of the resource management processes adopted, the total reuse and recovery figures and the final destination of all resources taken off-site.

6.10 Communications

Communication tasks to be carried out by the Resource Manager will include internal reporting, engaging with the relevant local authority, engaging with other stakeholders and preparing the final report.

6.11 Audits and Inspections

The Resource Manager will be responsible for periodic audits and inspection of work practices, reviewing all records of waste and resources generated on-site or transported off-site and comparison of resource records with established targets.

7. SITE INFRASTRUCTURE**7.1 Site Signage**

For the duration of the Construction Stage, labelling is adequate to provide information to assist good resource practice across the site.

7.2 Resource Storage

For the duration of the Construction Stage, the Resource Manager will be responsible for ensuring that the proposed Waste Storage Areas (WSAs) have adequate space for storage and handling.

7.3 Handling and Export of Resources

For the duration of the Construction Stage, the Resource Manager will be responsible for the on-site handling and export of resources in compliance with the Guidelines.