



RESOURCE WASTE MANAGEMENT PLAN (RWMP)

Ballinlee Wind Farm

Ballinlee Green Energy Ltd.

September 2025

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1. Introduction

This Resource and Waste Management Plan (RWMP) has been prepared by Malachy Walsh and Partners (MWP) on behalf of Ballinlee Green Energy Ltd. The proposed Ballinlee Wind Farm (referred to as the 'Proposed Development'). will consist of seventeen (17) No. wind turbines, an on-site electrical substation and an underground electrical connection to an off-site existing substation known as 220/110kV Killoonan substation This RWMP has been prepared to accompany the submission of this Environmental Impact Assessment Report (EIAR) as part of a planning application for the proposed development to An Coimisiún Pleanála.

This RWMP has been developed in accordance with the Environmental Protection Agency (EPA) Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects, 2021.

1.1 Purpose of the Plan

The principal purpose of this plan is to ensure efficient use of material resources, reduce waste at the source and reduce the quantity of waste that requires final off-site disposal to landfill in accordance with the waste hierarchy. A secondary aim is to facilitate the transition to a more circular economy thereby minimising the need for new inputs of virgin materials and energy, while reducing environmental pressures linked to resource extraction, emissions, and waste management.

The objective of this plan is to provide information necessary to the appointed contractor to ensure that the construction waste generated by the development will be managed in accordance with current legal legislation, guidelines and industry standards.

The RWMP should be viewed as a live document and should be regularly revisited and revised as necessary throughout a project's lifecycle so that opportunities to maximise waste reduction / efficiencies are exploited throughout.

The Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction and Demolition Projects (EPA, 2021) outline a recommended structure and content that defines Tier 1 and Tier 2 RWMPs. The proposed development at Ballinlee qualifies for a Tier 2 RWMP as the proposed development is a Strategic Infrastructure Development and surpasses the thresholds of a Tier 1 project. As information becomes available in the design phase these above guidelines can be addressed, however some sections of the guidelines can only be completed during the construction phase and the Appointed Contractor commits to these responsibilities. To provide full transparency and commitment during the planning and procurement phases these sections of the guidelines in the design phase are included.

1.2 Contractor Commitment

The Appointed Contractor is committed to ensure that the preferred waste management hierarchy of avoidance, minimisation, reuse, recycling and finally disposal is followed and that the appropriate measures are implemented to comply with all relevant legislation and other guidance as outlined in **Section 1.3**.

1.3 Legislation and Guidance

- Waste Framework Directive 2009/98/EC (as amended);
- Landfill Directive 1999/31/EC (as amended);
- Waste Management Act 1996 (as amended);
- Waste Management (Facility Permit and Registration) Regulations 2007 (as amended);
- Waste Management (Collection Permit) Regulations 2007 (as amended);
- Litter Pollution Act 1997 (No. 12 of 1997) (as amended);
- European Communities (Waste Directive) Regulations, 2011 (as amended);
- EU Construction and Demolition Waste Management Protocol (European Commission 2018) Updated 2024;
- The Department of Communications, Climate Action and Environment (DCCAE) A Waste Action Plan for a Circular Economy, Ireland's National Waste Policy 2020-2025 (DCCAE 2020);
- By-Product Guidance Note, A Guide to by-products and submitting a by-product notification under Article 27 of the European Communities (Waste Directive) Regulations 2011 (S.I. No. 126 of 2011) (EPA, 2020);
- Circular Economy Action Plan, For a Cleaner and More Competitive Europe (European Commission 2020);
- Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction and Demolition Projects (EPA 2021);
- National Waste Management Plan for a Circular Economy, 2024 - 2030;
- The Circular Economy Programme 2021-2027 (EPA, 2021);
- Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less';
- National Hazardous Waste Management Plan 2021 – 2027 (EPA 2021);
- Guidance Document for the Local Authority Sector: Management of Materials Arising from Roadworks, (CCMA 2020);
- Guidance on the Interpretation of Key Provisions of Directive 2008/98/EC on Waste (European Commission, 2018);
- The Management of Waste from National Road Construction Projects (TII, December 2017);

1.4 Resource Targets

The following targets have been established for the management of waste generated during the proposed development. **Figure 1-1** illustrates the most preferred and least preferred waste hierarchy options with waste prevention highlighted as the most desired.

- The CEMP will be used to help minimise the production of waste.
- 100% of uncontaminated packaging material, metals, timber, plastic, paper and cardboard waste to be sent for recycling/recovery.
- It is anticipated that the majority of the excavated material within the wind farm will be reused on site.

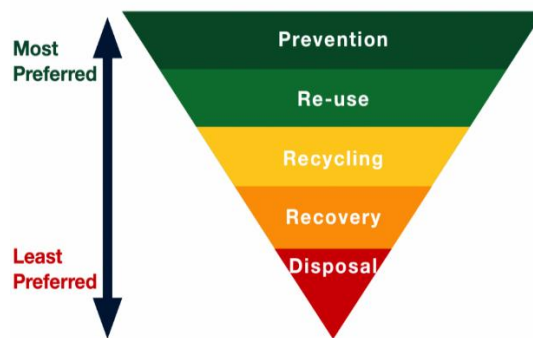


Figure 1-1 Waste Hierarchy (Source: EPA)

Table 1-1 Standard, Good and Best Practice Recovery Rates by Material

Material	Standard Practice Recovery (%)	Good Practice Recovery (%)	Best Practice Recovery (%)
Metals	95	100	100
Packaging	60	85	95
Concrete	75	95	100
Inert	75	95	100
Plastics	60	80	95
Miscellaneous	12	50	75
Electrical Equipment	Limited Information	70	95
Cement	Limited Information	75	95
Liquid and Oils	100	100	100
Hazardous	50	Limited Information – cannot be 100% since some hazardous waste must be landfilled	

To help with the setting of target waste recovery rates, WRAP (Waste & Resource Action Programme) (a UK based organisation) has identified standard, good and best practice recovery rates for a broad range of waste materials (**Table 1-1**). The recovery rates shown in **Table 1-1** are for key construction materials and relevant construction wastes associated with the proposed development.

1.5 Supporting Documentation

- The Construction and Environmental Management Plan (CEMP) (EIAR **Volume III, Appendix 2A**).

2. Project Description

2.1 Site Location and Description

The proposed development is located within the townlands of Ballincurra, Ballinlee South, Ballingayrou, Ballinrea, Knockuregare, Ballinlee North, Carrigeen and Camas South approximately 18km southeast of Limerick City and 3km southwest of Bruff, Co. Limerick see **Figure 2-1**. The proposed development and surrounding area are in a rural area characterised by agricultural holdings and one-off residential dwellings. Some patches of forestry plantation occur within the proposed development and some on neighbouring properties.

The proposed grid route is approximately 27.6km and is located along road networks within the townlands of Milltown, Ballysimon Commons, Coolyhenan, Knockananty, Ballybrennan, Drombanny, Carrigmartin, Cahernarry (Cripps), Scart, Ballyogartha, Ballyneety, Knockbrien, Glen, Ballymacreese, Ballynagarde, Stonepark, Carriganattin, Rochestown, Friarstown, Rockstown, Skool, Friarstown South, Grange, Ballynagallagh, Rockbarton, Cahirguillamore, Ballynanty, Ballybane, Ballyreesode and Camas North.

To facilitate the turbine delivery a new temporary access road is proposed on privately-owned predominantly agricultural lands within the townland of Tullovin approximately 3.3km northwest of Croom, Co. Limerick.

The total proposed development area (planning application area) is approximately 255.12 hectares (ha).

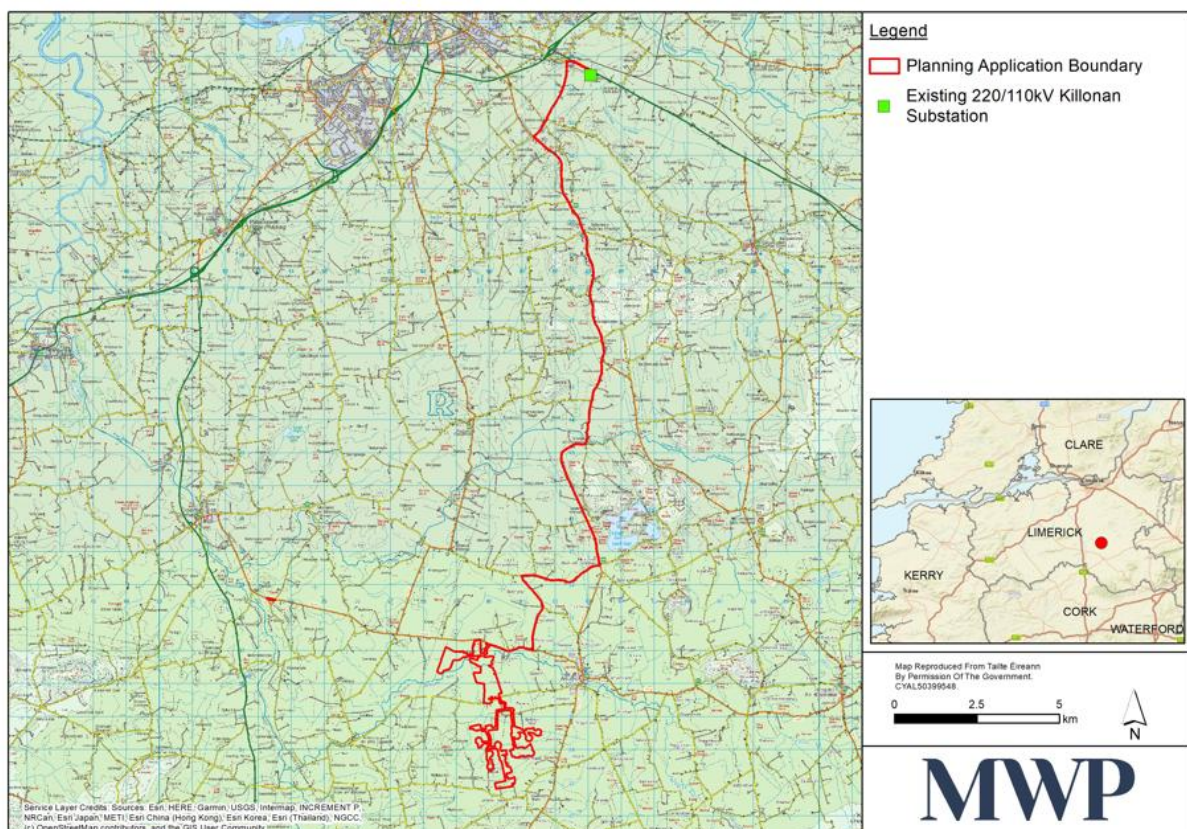


Figure 2-1 Site location

Refer to EIAR **Volume II, Chapter 02** Description of the Development for details on the proposed development.
The overall development will include:

- Seventeen (17) No. wind turbines (turbine tip height 160m, and 150m (T6)) with associated foundations and crane hardstand areas.
- One (1) No. Permanent Meteorological Mast (up to 92m height) and associated foundation, hardstand area and ancillary main crane hardstand area.
- One (1) No. Electrical Substation (110kV) including Eirgrid compound, IPP, maintenance compounds, ancillary building, security fencing and all associated works.
- Nine (9) No. site entrances.
- New and upgraded internal site service tracks (approximately 10.8km of new internal access tracks to be constructed).
- New clear span bridge over the Morningstar River.
- Underground electric collector cable systems between turbines within the wind farm site.
- Underground electric cabling systems between the wind farm site and connection point at existing Killonan 220/110kV substation.
- New temporary access track via R516 to facilitate turbine delivery route located in the townland of Tullovin.
- Three (3) No. temporary construction site compounds (one approximately 95m x 50m and two approximately 55m x 25m).
- Two (2) No. borrow pits to be used as a source of stone material during construction and for storage of excess excavated materials.
- Nine (9) No. permanent and two (2) temporary deposition areas.
- Associated surface water management systems.
- Tree felling required for wind farm infrastructure.
- Landscape, fencing and all associated works.

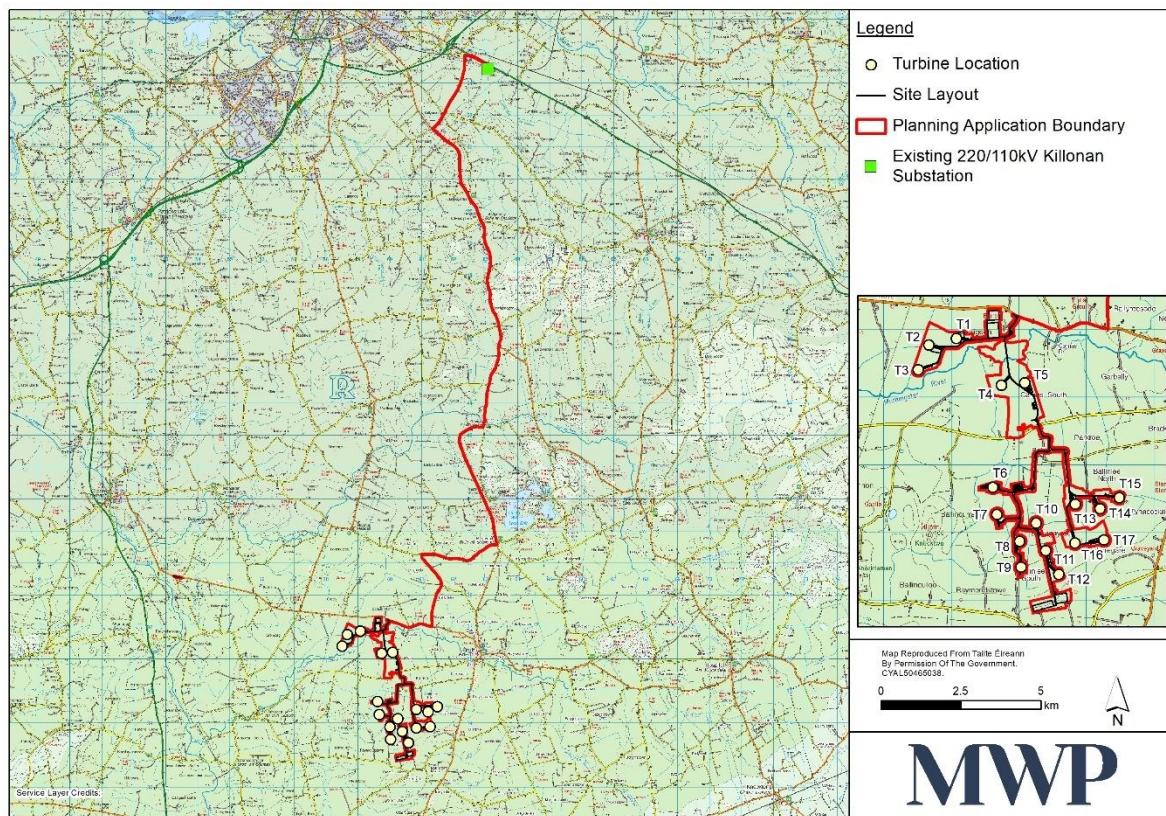


Figure 2-2 Proposed Site Layout

2.2 Description of Construction Elements

Key elements of the civil works and activities associated with the construction phase of the proposed development are as follows:

- Site Investigation work including pre-construction surveys;
- Site preparation and pre-construction activities;
- Construction of the temporary compound;
- Site Drainage;
- Internal Service Tracks;
- Turbine Bases and hardstands.
- Construction of substation control building and electrical compound;
- Underground internal collector circuit;
- Underground external grid connection;
- Complete electrical installation at the substation control building and compound;
- Commission and test plant;
- Complete site works, tidy up site;
- Demobilise offices, and;
- Provide any gates, signs etc. which may be required.

2.3 Project Programming

The typical construction works will be completed in phases. The total construction time frame for the proposed development is estimated to be approximately 24 months followed by a 6-month commissioning period. The start date is dependent on planning being granted, receipt of a grid connection offer from EirGrid, funding and all permits being in place.

A typical programme of work is outlined in **Table 2-1**. A number of these phases will however run concurrently outlined as follows:

- As the internal site access tracks are constructed up to each turbine, hardstanding areas for the crane, turbine foundations and building foundations will be prepared.
- Once the tracks are completed, the trenching and laying of underground cables will begin.
- Construction of the site substation and control houses will commence so that they will be ready to export power as turbines are commissioned.

Table 2-1: Preliminary Construction Programme

Phase	Activity	Duration
Phase 1	Site Clearance	0.5 months
Phase 2	Enabling Works	0.5 months
Phase 3	Site Establishment	0.5 months
Phase 4	SMA	1.0 month
Phase 5	Access Tracks	1.0 month
Phase 6	Borrow Pit	1.5 months
Phase 7	Turbine Hardstand	4.0 months
Phase 8	Turbine Foundation	4.0 months
Phase 9	Internal Cables	3.0 months
Phase 10	Clear Span Bridge	3.0 months
Phase 11	IPP	1.0 month
Phase 12	Substation	1.0 month
Phase 13	Met Mast	0.5 months
Phase 14	Turbine Delivery	2.0 months
Phase 15	Turbine Erection	3.0 months
Phase 16	Replanting	0.5 months
Phase 17	WF Commissioning	6.0 months

2.4 Site Clearance

2.4.1 Vegetation Removal

There will be forestry felling of 14.4ha and 1,900m of hedgerow removal. Felling of some hedgerows and portions of existing woodland is required within and around wind farm infrastructure to accommodate the construction of

the turbine foundations and associated hardstands, access tracks, and turbine assembly and turbine delivery routes.

2.4.2 Excavated Materials

An estimated total of 296,918m³ of excavated materials, this includes topsoil and mineral soil, will be produced during the construction phase of the wind farm. This includes creation of internal access tracks, excavation for crane hardstands and turbine bases. Excavation works will also be required for the proposed met mast, the temporary construction compound, substation, and cable routes. Excavated soils and subsoils will be managed within the site, with material primarily reused for bunding, landscaping, and localised earthworks, while any remaining volumes will be placed in the designated permanent deposition areas and used to infill the borrow pits.

An estimated total of 24,840m³ of excavated materials, this includes tarmacadam, concrete, backfill aggregate and mineral soil, will be produced during the construction phase of the external grid connection route. Public road excavations can generate some small quantities of tarmacadam which will require off-site disposal by a permitted waste contractor to an appropriately licensed facility.

2.4.3 General Waste

General Waste will be produced at the proposed development from employees, this will be disposed of using locally certified waste collectors. Waste will also be generated from deliveries, mainly plastic and cardboard from delivery packages. There will be wood generated from deliveries on pallets and timber dunnage. The wood used in deliveries is reusable and will be managed by an authorised waste collector.

2.5 Potential Hazardous Material and Waste

2.5.1 Ground Contamination

There is no known ground contamination at the proposed development.

EPA maps have been consulted, confirming that the proposed development does not fall within any historically designated landfill area.

2.5.2 Fuel, Oils and Chemicals

It is anticipated that fuel (lubricating oil, hydraulic fluid) will be required. For the vehicles and equipment that will be brought to the proposed development during construction, refuelling will be carried out using 110% capacity double bunded mobile bowzers.

Chemicals will be brought to the proposed development for construction works, some of which could be consider hazardous. Care will be taken with the usage and disposal of any fuel, oils and chemicals at the proposed development. Any hazardous waste generated at the proposed development will be disposed of to the licenced waste facility.

2.5.3 Invasive Species

Giant rhubarb *Gunnera manicata* and Japanese knotweed *Reynoutria japonica*, both listed under the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011, as amended), were recorded during ecological surveys at the site.

Four stands of giant rhubarb were recorded in the northern section of the site, all occurring along the banks of the Morningstar River.

Japanese knotweed was recorded in the southern section of the site, with two large stands present adjacent to agricultural sheds approximately 50 m from a proposed access track. Further information on invasive species is available in EIAR **Volume II, Chapter 06 Biodiversity**.

2.5.4 Bituminous material

During the underground grid route works, excavated material will be generated. Any hazardous or bituminous material (asphalt, coal tar, and bitumen) will be sent to the licensed waste authority for treatment/disposal.

2.5.5 Other known Hazardous Substances

It is anticipated that a small quantity of Waste Electrical and Electronic Equipment (WEEE) (containing hazardous components), and batteries (Lead, Ni-Cd or Mercury) may be generated during construction activities from temporary site offices and machines. This waste will be stored in designated areas at the proposed development in labelled containers and will be collected by an authorised waste contractor.

3. Roles and Responsibilities

While the Appointed Contractor will manage the obligations of the proposed development during construction, the client and the client advisory team will ensure same is undertaken correctly. The general role of key people at the proposed development implementing the RWMP is described in **Table 3-1**.

Table 3-1 Roles and Responsibilities

Person Responsible	Responsibilities	Contact Details
Client	- To prepare a pre-construction RWMP as part of the planning compliance; - To ensure that the RWMP is submitted and agreed on by the local authority prior to construction; - To commission a competent contractor to carry out works and to update RWMP; and - To commission contractor to produce end-of-project RWMP	TBC
Client Advisory Team (Design Team including Engineers, Consultants, etc.)	- To maintain and update RWMP through the planning and procurement phases of the project; - To update record of details and estimated quantities of all projected waste streams; - To incorporate relevant conditions imposed in the planning permission into the RWMP; - To work with the Contractor as required to meet the performance targets for the project.	TBC
Contractor	- To update, implement and review the RWMP throughout the construction phase; - To assign relevant duties and responsibilities to the appropriate person; - To hire a responsible RM who will implement the RWMP; - To identify all hauliers engaged to transport each of the resources / wastes off-site; - To identify suitable licensed waste facility site for each type of waste; - To maintain the records of all waste resources for the duration of the project; and - To preparing an end-of-life RWMP Review Report.	TBC
Resource Manager	- To conduct waste checks; - To conduct audits annually/biannually as per the requirement of the proposed development; - To adopt construction and demolition methodology to facilitate maximum reuse and/or recycling of waste; - To liaise with client/contractor; - To assign duties in relation to RWMP; - To maintain and update the waste register (see Table 7-1).	TBC

4. Design Approach

International best practices have been considered in the design phase to prioritise waste prevention, reuse, recycling and recover material wherever possible (see **Table 4-1**).

Table 4-1 Design Approaches

Design Approach	Description
Designing For Prevention, Reuse and Recycling	The design team has considered the potential reuse of excavated materials at the proposed development wherever feasible, incorporating them for activities such as bunding, landscaping and reinstatement of the temporary construction compounds.
Designing for Green Procurement	Supply chain competency will be assessed prior to appointment via a pre-qualification questionnaire which cover key environmental matters. Procurement selection will minimise unnecessary packaging. Options for packaging reduction discussed with subcontractors and suppliers using measures such as 'delivery when required' delivery. Use ordering procedures that avoid waste, i.e., no over-ordering, take-back schemes for both material surplus and offcuts. The contractor will review 'new' materials to be used as part of the proposed development, which contain a recommended percentage of recycled content if they meet the functional, performance and regulatory requirements and are available locally at a reasonable cost.
Designing for Off-Site Construction	The design allows for the use of prefabricated and precast elements which can be manufactured off site to the required specifications. These include: • Cable conduits • Cable trays • Precast structural concrete panels • Fencing
Designing for Materials Optimisation	The proposed development has been designed in line with standardised design details and has utilised BIM which avoids overdesigning and unnecessary elements. No unconventional construction materials are required and a large proportion of the construction materials to be used can be locally or regionally sourced.
Designing for Flexibility and Deconstruction	No unconventional construction materials are required. The vast majority of the construction materials to be used can be recycled and/or recovered and are designed to be easily disassembled.

5. Key Materials, Quantities and Costs

Table 5-1: Waste Materials, Quantities and Cost

LoW Code	Description	Volume Generated (Approx. Tonnes)	Prevention (Approx. tonnes) (non waste)	Reused (Approx. tonnes) (non waste)	Recycled (Approx. tonnes)	Recovered (Approx. tonnes)	Disposed (Approx. Tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost	Waste Collector (Possible)
13 02 08*	Waste engine, gear and lubricating oils - Other engine, gear and lubricating oils	<0.1					<0.1	TBC	TBC	Clare Drains Environmental Ltd (NWCPO-13-11231-03) Lehane Environmental, Ambipar Response (NWCPO-08-04574-04)
13 05 08*	Oil/Water separator contents - Mixtures of wastes from grit chambers and oil/water separators	<2					<2	TBC	TBC	Clare Drains Environmental Ltd (NWCPO-13-11231-03) Lehane Environmental, Ambipar Response (NWCPO-08-04574-04)
15 01 01	Packaging (including separately collected municipal packaging waste) - Paper and cardboard packaging	15			15			TBC	TBC	Mr Binman (NWCPO-12-11056-08) United Metal Recycling (Ireland) Ltd. (NWCPO-10-05657-03)

LoW Code	Description	Volume Generated (Approx. Tonnes)	Prevention (Approx. tonnes) (non waste)	Reused (Approx. tonnes) (non waste)	Recycled (Approx. tonnes)	Recovered (Approx. tonnes)	Disposed (Approx. Tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost	Waste Collector (Possible)
15 01 02	Packaging (including separately collected municipal packaging waste) - Plastic Packaging	<6			<6			TBC	TBC	Limerick Metal Recycling Company Ltd (NWCPO-19-12324-01) United Metal Recycling (Ireland) Ltd. (NWCPO-10-05657-03)
15 02 02*	Absorbents, filter materials, wiping cloths and protective clothing - Absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	<0.1			<0.05	<0.05		TBC	TBC	Clare Drains Environmental Ltd (NWCPO-13-11231-03)
17 01 01	Concrete, bricks, tiles and ceramics - Concrete	240		140		50	50	300€/t	TBC	WM Fitzgerald Skip Hire Limited (NWCPO-11-05667-04) Mr. Binman (NWCPO-12-11056-08)

LoW Code	Description	Volume Generated (Approx. Tonnes)	Prevention (Approx. tonnes) (non waste)	Reused (Approx. tonnes) (non waste)	Recycled (Approx. tonnes)	Recovered (Approx. tonnes)	Disposed (Approx. Tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost	Waste Collector (Possible)
17 02 01	Wood, glass and plastic - Wood	<21		<7	<14			110€/t	TBC	WM Fitzgerald Skip Hire Limited (NWCPO-11-05667-04) Derry White Skip Hire Ltd. (NWCPO-14-11356-07)
17 02 03	Wood, glass and plastic - Plastic	<3			<3			TBC	TBC	Derry White Skip Hire Ltd. (NWCPO-14-11356-07) Mr. Binman (NWCPO-12-11056-08)
17 03 01*	Bituminous mixtures, coal tar and tarred products - Bituminous mixtures containing coal tar	<20					<20	TBC	TBC	Enva Ireland Limited (NWCPO-08-01116-04) Lehane Environmental, Ambipar Response (NWCPO-08-04574-04)
17 04 07	Metals (including their alloys) - Mixed Metals	<9			<9			TBC	TBC	United Metal Recycling (Ireland) Ltd. (NWCPO-10-05657-03) Limerick Metal Recycling Company Ltd (NWCPO-19-12324-01)

LoW Code	Description	Volume Generated (Approx. Tonnes)	Prevention (Approx. tonnes) (non waste)	Reused (Approx. tonnes) (non waste)	Recycled (Approx. tonnes)	Recovered (Approx. tonnes)	Disposed (Approx. Tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost	Waste Collector (Possible)
17 04 11	Metals (including their alloys) - Cables other than those mentioned in 17 04 10	<9					<9	TBC	TBC	United Metal Recycling (Ireland) Ltd. (NWCPO-10-05657-03) Limerick Metal Recycling Company Ltd (NWCPO-19-12324-01)
17 05 03*	Soil (including excavated soil from contaminated sites), stones and dredging spoil - Soil and stones containing dangerous substances	<500				<160	<340	TBC	TBC	Smith Demolition Ltd (NWCPO-11-05668-03) Derry White Skip Hire Ltd. (NWCPO-14-11356-07)
17 05 04	Soil (including excavated soil from contaminated sites), stones and dredging spoil - Soil and stones other than those mentioned in 17 05 03	482,637		445377			37260	TBC	TBC	WM Fitzgerald Skip Hire Limited (NWCPO-11-05667-04)
17 09 04	Other construction and	<30				<30		TBC	TBC	WM Fitzgerald Skip Hire Limited (NWCPO-11-05667-04)

LoW Code	Description	Volume Generated (Approx. Tonnes)	Prevention (Approx. tonnes) (non waste)	Reused (Approx. tonnes) (non waste)	Recycled (Approx. tonnes)	Recovered (Approx. tonnes)	Disposed (Approx. Tonnes) (waste)	Unit Cost Rate (€/tonne)	Total Cost	Waste Collector (Possible)
	demolition waste - Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03									Mr. Binman (NWCPO-12-11056-08)
20 01 01	Separately collected fractions (except 15 01) - Paper and cardboard	<15			<15			TBC	TBC	Derry White Skip Hire Ltd. (NWCPO-14-11356-07) Mr. Binman (NWCPO-12-11056-08)
20 03 01	Other municipal wastes - Mixed municipal waste	<3					<3	TBC	TBC	Mr. Binman (NWCPO-12-11056-08) Derry White Skip Hire Ltd. (NWCPO-14-11356-07)
20 03 04	Other municipal wastes - Septic tank sludge	90 tonnes per month					90 tonnes per month	TBC	TBC	Ward Waste Products Ltd (NWCPO-09-05619-04) Derry White Skip Hire Ltd. (NWCPO-14-11356-07)

6. Site Management

The following proposals are outlined below to aid in the effectiveness of this RWMP.

6.1 Resource Manager (RM)

The Appointed Contractor must appoint a designated Resource Manager. The designated Resource Manager (RM) of the construction team will be responsible to ensure commitment, operational efficiency and accountability during the Construction phase of the proposed development.

- The appointed RM will be responsible for managing the waste team, if necessary. The RM will hold the overall responsibility for supervising, recording, and providing regular feedback to the client regarding the proposed development's daily waste management activities.
- The RM will also report to contractor when required. Additionally, they will coordinate with suppliers, service providers, and subcontractors to prioritise waste prevention, recycling and reuse.
- Training will be provided to the RM, covering the maintenance of a record-keeping system, best practices for segregating and storing recyclable materials, conducting audits, and setting targets for on-site waste management.
- RM will be responsible for conducting site induction training. The proposed development staff will be trained to a basic awareness course (environmental induction) to detail the segregation of waste materials at source.
- The RM will be responsible to arrange Regular toolbox talks to ensure all staff are aware of the associated resources and waste management practices to be implemented at the proposed development.

6.2 Procedures for identifying suitably authorised waste collection operators & waste destination sites

The hiring of waste contractors will be undertaken in accordance with the Waste Management Acts 1996 - 2011, Waste Management (Collection Permit) Regulations 2007 as amended, and Waste Management (Facility Permit & Registration) Regulations 2007 as amended.

The following measures are adhered to ensure compliance with these requirements:

1. Ensure that waste collection contractors hold a valid waste collection permit.
2. Check that each waste contractor is permitted to carry the waste concerned. Details of authorised waste types are specified in Appendix A of each waste collection permit.
3. Check that the vehicle registration used to carry waste is listed on waste collection permit. Vehicles details are listed in Appendix C of each waste collection permit.
4. Ensure that waste is being taken to a licenced facility for processing/treatment/disposal. Details of authorised transfer facilities are set out in Appendix B of each waste collection permit.

Waste Collection: all waste shall be collected by a suitably authorised waste collection operator:

- A list of currently authorised waste collectors can be accessed here:
<https://www.nwcpo.ie/permitsearch.aspx>

Waste Disposal / Recovery: all waste shall be sent to a suitably authorised waste facility:

- Waste Facility Permits or Certificate of Registrations can be accessed here:
<http://facilityregister.nwcpo.ie>
- Waste facilities licensed by the EPA (Industrial Emissions or Waste Licence) is available on the EPA website.

6.3 Requirements for Resource Efficient Supply Chains

The contractor will ensure that the supply chain for the proposed development adheres to best practices with regard to resources and waste management. This will include the following:

- Select procurement routes to minimise unnecessary packaging – for example applying ‘Just-in-Time’ (JIT) delivery processes to minimise material spoilage.
- Implement ordering procedures and supply chain systems that avoid waste, i.e. no over-ordering, use of take-back schemes for packaging, material surplus and offcuts.
- Select procurement routes that minimise unnecessary packaging.
- Plan the work sequence to reduce the potential for on-site residual resource generation.

6.4 Procedures for Record Keeping and Reporting of all Off-Site Export of Resources

The RM will maintain records for all resource material which is used on the proposed development and leaves the proposed development, either for reuse, recycling, energy recovery, backfilling or other recovery or disposal on third party sites. All records (including for waste and all resources) pursuant to the agreed RWMP shall be made available for inspection at the site office at all times.

A recording system will be put in place to record residual waste and resources generated at the proposed development. A sample recording table is provided in **Section 5** of this document. **Table 5-1** will be used as a daily log to update resource movements off-site and compiled into a database as part of the RWMP files. The type of information to be recorded in the proposed development tracking system is described below.

1. For each movement of resource off-site, a signed docket/invoice will be obtained by the RM from the haulier/contractor detailing the following:
 - A description of the resource stream.
 - List of Waste (Low) Code for each stream (where applicable).
 - Validated quantity of material moved off-site by the haulier/contractor (typically reported in tonnes).
2. The name and authorisation of the haulier to transport the material – in the case of a ‘waste’ this requires a valid Waste Collection Permit (WCP). In the case of by-product or other materials that are not a waste, no WCP is required. In both cases the vehicle registration number should also be recorded for each load of material removed from the proposed development.
3. The name and authorisation of the destination site for the resource – again for a ‘waste’ this requires a valid Cert of Registration, Waste Permit or Waste Licence and in the case of by-product the relevant by-product determination.
4. It is the obligation of the RM to ensure that all resources taken off-site are in line with the relevant legislation and the key area relates to ensuring that hauliers and recovery/disposal sites have the appropriate authorisations. Some key considerations include:
 - Checking the expiry date of the authorisation relative to the duration of the works and whether any review of the permit is required over that period (e.g. WCPs have a maximum life of five years and review applications need to be lodged before expiry).

- Checking that the waste consent i.e. permit/licence has the authorisation 'COR holders, Waste Facility Permit holders and Waste Licence holders' for the resource stream proposed.
- Checking the authorisation for the resource management operation proposed.
- Check that any waste acceptance limits expressed in the permit/licence for material acceptance are known and that on site sampling has indicated that the residual resource complies with these limits.

6.5 Requirements for Communications with the Local Authority and Other Stakeholders

The RM will communicate through the construction phase with all stakeholders as required. This may include:

- Internal reporting of resource statistics to the Client and the wider construction management team. This may include performance relative to agreed targets and objectives.
- Engaging with Limerick City and County Council on any site inspection or enforcement audits undertaken at the proposed development. All follow-up actions and corrective actions should be logged and reported to the local authority.
- Engaging with other stakeholders (EPA, public, etc.) as appropriate in relation to the resource management at the proposed development.
- Upon completion of construction, the RM will prepare a final report (post-project RWMP) summarising the outcomes of resource management processes adopted, the total reuse and recovery figures and the final destinations of all resources taken off-site.

6.6 Audits and Inspections of Resource Management Practices

- Routine waste audits will be conducted to assess the composition of generated waste. Waste patterns, waste categories, and opportunities for reduction, recycling, or reuse will be analysed.
- Detailed records of waste audits, including methodology, findings, and action plans will be maintained. Documentation of waste categories, quantities, and diversion rates for future reference will be done.
- Checklists for daily, weekly or monthly site audits will be finalised by the RM and the relevant personnel informed of their duties.
- On-site and off-site facility inspections will be conducted to monitor waste management practices. Waste segregation stations, recycling efforts, and storage areas will be inspected.
- Regular inspection of incoming materials for compliance with eco-friendly packaging and minimal waste generation standards will be conducted.
- Proper training will be provided to the proposed development workers about waste management best practices, highlighting the importance of proper segregation, recycling, and responsible disposal.

7. Site Infrastructure

7.1 Minimum Requirements for Site Signage on Resource Management

Labelling and signage will be used at the proposed development to inform personnel of key waste storage area requirements and restrictions, with clear signage provided at all Waste Storage Areas (WSAs).

7.2 Minimum Requirements for Resource Storage

- Waste materials are to be stored in appropriate areas that prevent degradation or damage from weathering or moisture.
- All construction waste within the proposed development shall be removed from the proposed development and disposed of/recovered at a suitably authorised waste facility. Soil and stone material will be stored in controlled deposition areas.. Bunds or other diversions will be put in place to keep run off from entering the deposition area where required. Stockpiles of excavated soil and/or subsoil will be graded so as to shed water.
- A dedicated trained banksman will supervise the operation paying particular attention to the condition of materials and making sure that different materials are separated accordingly to their deposition points.
- Wastewater from welfare facilities at the proposed development will drain to integrated wastewater holding tanks associated with the toilet units. The stored effluent will then be collected when required from the proposed development by a permitted waste contractor and removed to an appropriately authorised waste facility for treatment and disposal.
- Designated and secure WSAs (**Figure 7-1**) will be created at the temporary construction compound and other suitable locations, for storage and segregation of wastes prior to transport for recovery/disposal at suitably licensed/permitted facilities. Suitably sized containers for each waste stream will be provided and will be supervised by the Waste Management Coordinator (WMC).



Figure 7-1: Good practice waste segregation at WSA (Source: EPA RWMP Guidelines)

- Liquid waste (Waste oils, paints, lubricants, adhesives, chemicals) will be stored in appropriate containers in bunded areas until transported offsite. Bunded areas will have the capacity to hold 110 per cent of the liquid waste volume.

- Plastic waste will be taken for recycling by an approved contractor(s) and disposed or recycled at an approved facility.

7.3 Handling and Export of Resources

- All waste material is only removed from the proposed development by suitable persons/organisations, holding all appropriate local regulatory agency issued licenses and permits for the particular waste.
- Waste material removed from the proposed development is only taken for further processing or final disposal at sites approved by the appropriate local regulatory agency holding valid licenses and permits.

The following measures are adhered to ensure compliance with these requirements:

- Ensure that waste contractors hold a valid waste collection permit.
- Check that each waste contractor is permitted to carry the waste concerned. Details of authorised waste types are specified in the Contractors waste collection permit Appendices.
- Check that the vehicle registration used to carry waste is listed on the waste collection permit. The Contractors waste collection permit details have been provided to the weighbridge in order to permit the ongoing checking of the status of waste collection vehicles.
- Ensure that waste is being taken to a licensed facility for processing/treatment/disposal. Details of authorised transfer facilities are set out in the Contractors waste collection permit Appendices.
- Details all materials leaving the proposed development are to be recorded.

Table 7-1: Example of Waste Register Template

Date	Material Description Type	LoW Code	Storage Location	Hazardous (Yes/No)	Quantity (Tonnes)	Waste Treatment Operation	COLLECTION DETAILS				TRANSFER DETAILS		
							Collected by	Permit No	Vehicle Details	Vehicle listed in Appendix C	Transferred to		
											Facility Name	Address	Licence/Permit /COR No