

**OPERATIONAL WASTE & RECYCLING MANAGEMENT PLAN
FOR A LARGE-SCALE DEVELOPMENT
AT**

**RAILPARK WEST
MAYNOOTH
CO. KILDARE**



MONTANE

Prepared for
Maynooth Montane Limited.

Prepared by
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Reference Number
25.073 TE

Date of Issue
15th December 2025



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Client: Maynooth Montane Limited.

Traynor Env Ref: 25.073 TE

Status: Final

Date: 15th December 2025

Report Title:	Operational Waste & Recycling Management Plan
Doc Reference:	15 th December 2025
Client:	Maynooth Montane Limited.
Authorised By:	 Nevin Traynor BSc. Env, H. Dip I.T, Cert SHWW, EPA/FAS Cert. Environmental Consultant

Rev No	Status	Date	Writer	Reviewer
1	Draft	09 th May 2025	Angela Kelly	Nevin Traynor
2	Updated SOA and issued as final	19 th May 2025	Angela Kelly	Nevin Traynor
3.	Updated Development Description.	25 th November 2025.	Angela Kelly	Nevin Traynor
4.	Final	15 th December 2025	Angela Kelly	Nevin Traynor

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1.0 INTRODUCTION

This Operational Waste Management Strategy (the 'Strategy') has been prepared by Nevin Traynor BSc.Env, HDIP IT, Cert SHWW, IAH of Traynor Environmental Ltd on behalf of Maynooth Montane Limited., in support of the proposed development at Railpark West, Maynooth, Co. Kildare (hereafter referred to as the 'Proposed Development') within the Kildare County Council.

The principal aim of this Strategy is to demonstrate how the Proposed Development has taken into account sustainable methods for waste and recycling management during its operation. Furthermore, with regards to waste and recycling management within the Proposed Development, this Strategy has the following aims:

- To contribute towards achieving current and long-term government, Eastern Midlands Region (EMR) and Kildare County Council targets for waste minimisation, recycling, and re-use.
- To comply with all legal requirements for handling operational waste.
- To achieve high standards of waste management performance, through giving (and continuing to give) due consideration to the waste generated by the Proposed Development during its operation; and
- To provide the Proposed Development with a convenient, clean, and efficient waste management strategy that enhances the operation of the Proposed Development and promotes recycling.

It is important to note that the Kildare County Council is part of the Eastern Midlands Region. The Eastern Midlands Region comprises of Dublin City Council, Dun Laoghaire – Rathdown, Fingal, South Dublin, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath, and Wicklow County Council.

This Strategy provides a review of the requirements placed upon the Proposed Development under national legislation and implemented policy at all levels of government (i.e., national (Ireland), regional (EMR), district and local (Kildare). Consideration has also been given to requirements included in local standards and guidance documents (i.e., DoEHLG, Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (2018) in line with the Regional Waste Management Plan and British Standard Waste Management in Buildings, Code of Practice (BS 5906:2005) so as to comply with relevant objectives and targets.

Estimate volumes of waste generated during operation of the Proposed Development have been provided in the report which also includes a breakdown of the waste management process, which details waste handling, storage area provision, and collection arrangements. All waste reduction measures are compliant with BS 5906:2005, Eastern Midlands Region (EMR) and Sustainable Urban Housing: Design Standards for New Apartments which are also discussed in this strategy.

2.0 LEGISLATION/ PLANNING POLICY

A summary of the European, national regional and local planning policy relevant to the Proposed Development is outlined in the section below. It should be noted that this summary identifies those elements of the policy or guidance applicable to waste management within the Proposed Development.

2.1 International and European Policy

The EU Waste Framework Directive (EU WFD) provides the overarching legislative framework for the collection, transport, recovery, and disposal of waste, and includes a common definition of waste. It encourages the prevention and reduction of harmful waste by requiring that Member States put waste control regimes into place. These waste management authorities and plans should ensure that necessary measures exist to recover or dispose of waste without endangering human health or causing harm to the environment and includes permitting, registration and inspection requirements.

The directive also requires Member States to take appropriate measures to encourage firstly, the prevention or reduction of waste production and its harmfulness and secondly the recovery of waste by means of recycling, re-use or reclamation or any other process with a view to extracting secondary raw materials, or the use of waste as a source of energy. The directive also puts an end to co-disposal of waste streams.

The definition of waste for the Ireland is governed by the EU WFS as:

"Any substance or object...which the holder discards or intends or is required to discard."

It is the responsibility of the holder of a substance or object to decide whether or not they are handling waste. The European Protection Agency is the authority responsible for enforcing waste management legislation in Ireland, but where there is a disagreement as to whether or not something is waste it is ultimately a matter for the courts to decide.

The European Waste Catalogue In 1994, the *European Waste Catalogue* and *Hazardous Waste List* were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List*, which was a condensed version of the original two documents and their subsequent amendments. This document has been replaced by the EPA 'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous' which became valid from the 1st of June 2015. This waste classification system applies across the EU and is the basis for all national and international waste reporting, such as those associated with waste collection permits, COR's, permits and licences and EPA National Waste Database.

The European Landfill Directive is in place to reduce the negative effects of land filling on the environment and health. It aims to encourage waste minimisation and increased levels of recycling and recovery; the increased costs of land filling associated with compliance with the Directive will also encourage alternative waste management methods.

The first requirement of the regulations was a ban on the co-disposal of hazardous waste with non-hazardous waste in landfills. The Directive has also imposed a ban on whole tyres going to landfill since 2003, with this ban extending to shredded tyres from July 2006, while liquid wastes were banned from landfill from October 2007.

The Directive also brings with it, tighter site monitoring and engineering standards. This is supplemented by the European Waste Catalogue, which has extended the range of materials classified as 'hazardous', and the Waste Acceptance Criteria, which has introduced potential pre-treatment requirements.

2.2 National Legislation

The Government issued a policy statement in September 1998 titled as '*Changing Our Ways*' which identified objectives for the prevention, minimisation, reuse, recycling, recovery, and disposal of waste in Ireland. A heavy emphasis was placed on reducing reliance on landfill and finding alternative methods for managing waste. Amongst other things, *Changing Our Ways* stated a target of at least 35% recycling of municipal (i.e., household, commercial and non-process industrial) waste.

A further policy document '*Preventing and Recycling Waste – Delivering Change*' was published in 2002. This document proposed a number of programmes to increase recycling of waste and allow diversion from landfill. The need for waste minimisation at source was considered a priority.

This view was also supported by a review of sustainable development policy in Ireland and achievements to date, which was conducted in 2002, entitled '*Making Irelands Development Sustainable – Review, Assessment and Future Action*'. This document also stressed the need to break the link between economic growth and waste generation, again through waste minimisation and reuse of discarded material.

In order to establish the progress of the Government policy document *Changing Our Ways*, a review document was published in April 2004 entitled '*Taking Stock and Moving Forward*'. Covering the period 1998 – 2003, the aim of this document was to assess progress to date with regard to waste management in Ireland, to consider developments since the policy framework and the local authority waste management plans were put in place, and to identify measures that could be undertaken to further support progress towards the objectives outlined in *Changing Our Ways*.

In particular, *Taking Stock and Moving Forward* noted a significant increase in the amount of waste being brought to local authority landfills. The report noted that one of the significant challenges in the coming years was the extension of the dry recyclable collection services.

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

The WAPCE sets the direction for waste planning and management in Ireland up to 2025. This reorientates policy from a focus on managing waste to a much greater focus on creating circular patterns of production and consumption. Other policy statements of a number of public bodies already acknowledge the circular economy as a national policy priority.

The policy document contains over 200 measures across various waste areas including Circular Economy, Municipal Waste, Consumer Protection & Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement and Waste Enforcement.

One of the first actions to be taken was the development of the Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less' (2021) to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021. It is anticipated that the Strategy will be updated in full every 18 months to 2 years.

The Circular Economy and Miscellaneous Provisions Act 2022 12 was signed into law in July 2022. The Act underpins Ireland's shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the

value of resources in our economy for as long as possible and that will to significantly reduce our greenhouse gas emissions. The Act defines Circular Economy for the first time in Irish law, incentivises the use of recycled and reusable alternatives to wasteful, single-use disposable packaging, introduces a mandatory segregation and incentivised charging regime for commercial waste, streamlines the national processes for End-of-Waste and By-Products decisions, tackling the delays which can be encountered by industry, and supporting the availability of recycled secondary raw materials in the Irish market, and tackles illegal fly-tipping and littering.

Since 1998, the Environmental Protection Agency (EPA) has produced periodic 'National Waste (Database) Reports' detailing, among other things, estimates for household and commercial (municipal) waste generation in Ireland and the level of recycling, recovery, and disposal of these materials. The 2019 National Waste Statistics, which is the most recent study published, along with the national waste statistics web resource (November 2021) reported the following key statistics for 2019:

- **Generated** – Ireland produced 3,085,652 t of municipal waste in 2019. This is almost a 6% increase since 2018. This means that the average person living in Ireland generated 628 kg of municipal waste in 2019.
- **Managed** – Waste collected and treated by the waste industry. In 2019, a total of 3,036,991 t of municipal waste was managed and treated.
- **Unmanaged** – Waste that is not collected or brought to a waste facility and is, therefore, likely to cause pollution in the environment because it is burned, buried, or dumped. The EPA estimates that 48,660 t was unmanaged in 2019.
- **Recovered** – The amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In 2019, around 83% of municipal waste was recovered – a decrease from 84% in 2018.
- **Recycled** – The waste broken down and used to make new items. Recycling also includes the breakdown of food and garden waste to make compost. The recycling rate in 2019 was 37%, which is down from 38% in 2018.
- **Disposed** – Less than a sixth (15%) of municipal waste was landfilled in 2019. This is an increase from 14% in 2018.

2.3 Regional Level

The proposed development is located in the Local Authority area of Kildare County Council. The *EMR Waste Management Plan 2015 – 2021* is the regional waste management plan for the DLR area which was published in May 2015. The *EMR Waste Management Plan 2015 – 2021* has been superseded as of March 2024 by the *NWMPCE 2024 - 2030*.

The NWCPCE sets the ambition of the plan to have a 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector.

This plan seeks to influence sustainable consumption and prevent the generation of waste, improve the capture of materials to optimise circularity and enable compliance with policy and legislation. The national plan sets out the following strategic targets for waste management in the country that are relevant to the development:

Proposed National Targets

- 1A. (Residual Municipal Waste) 6% Reduction in Residual Municipal Waste per person by 2030
- 2A. (Contamination of Materials) 90% of Material in Compliance in the Dry Recycling Bin
- 2B. (Material Compliance Residual) 10% per annum increase in Material Compliance in the residual bin. (90% by the end of 2030) 3A. (Reuse of Materials) 20kg Per person / year – Reuse of materials like cloths or furniture to prevent waste.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130 - €150 per tonne of waste which includes a €75 per tonne landfill levy introduced under the *Waste Management (Landfill Levy) (Amendment) Regulations 2015*.

The *Kildare County Development Plan 2023 – 2029* sets out a number of objectives and actions for the Kildare area in line with the objectives of the regional waste management plan.

The *Kildare County Development plan 2023-2029* came into effect on 28th January 2023 and sets policies and objectives in support of the regional development plan and the Waste Action Plan for a Circular Economy 2020-2025 for the proper planning and sustainable development of the Kildare area. The following policies and objectives are of particular relevance to waste management:

- *P6: Implement European Union, National and Regional waste related environmental policy, legislation, guidance, and codes of practice, in order to support the transition from a waste management economy towards a circular economy.*
- *INO36: Encourage a just transition from a waste economy to a green circular economy in accordance with 'A Waste Action Plan for a Circular Economy 2020-2025'.*
- *INO37: Provide, promote, and facilitate high quality sustainable waste recovery and disposal infrastructure /technology in keeping with the EU waste hierarchy to cater for anticipated population growth and the business sector in the County.*
- *IN O38: Ensure the provision of adequately sized public recycling facilities in association with new commercial developments and in tandem with significant change of use / extensions of existing commercial developments where appropriate to maximise access by the public.*
- *IN O39: Require the appropriate provision for the sustainable management of waste within developments (particularly apartment buildings), including the provision of facilities for storage, separation, and collection of waste.*
- *IN O41: Encourage waste prevention, minimisation, re-use, recycling, and recovery as methods for managing waste.*
- *IN O44: Support and facilitate the separation of waste at source into organic and non-organic streams or other waste management systems that divert waste from landfill and maximise the potential for each waste type to be re-used, recycled, or composted.*
- *IN O46: Support the implementation of the actions outlined in the Kildare Litter Management Plan 2020-2023 (and any subsequent updates).*

2.4 Legislative Requirements

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

- Waste Management Act 1996 (No. 10 of 1996) as amended. Secondary legislation includes:
 - European Communities (Waste Directive) Regulations 2011 (SI 126 of 2011) as amended
 - Waste Management (Collection Permit) Regulations (S.I No. 820 of 2007) as amended
 - Waste Management (Facility Permit and Registration) Regulations 2007 (S.I No. 821 of 2007) as amended
 - Waste Management (Licensing) Regulations 2004 (S.I. No. 395 of 2004) as amended
 - Waste Management (Packaging) Regulations 2014 (S.I. 282 of 2014) as amended
 - Waste Management (Planning) Regulations 1997 (S.I. No. 137 of 1997) as amended.
 - Waste Management (Landfill Levy) Regulations 2015 (S.I. No. 189 of 2015) as amended.
 - European Union (Waste Electrical and Electronic Equipment) Regulations 2014 (S.I. No. 149 of 2014) as amended.
 - European Union (Batteries and Accumulators) Regulations 2014 (S.I. No. 283 of 2014) as amended

- Waste Management (Food Waste) Regulations 2009 (S.I. 508 of 2009), as amended ○ European Union (Household Food Waste and Bio-waste) Regulation 2015 (S.I. No. 430 of 2015)
- Waste Management (Hazardous Waste) Regulations, 1998 (S.I. No. 163 of 1998) as amended
- Waste Management (Shipments of Waste) Regulations, 2007 (S.I. No. 419 of 2007) as amended
- European Communities (Shipments of Hazardous Waste exclusively within Ireland) Regulations 2011 (S.I. No. 324/2011)
- European Communities (Transfrontier Shipment of Waste) Regulations 1994 (SI 121 of 1994)
- European Union (Properties of Waste which Render it Hazardous) Regulations 2015 (S.I. No. 233 of 2015) as amended.
- Environmental Protection Agency Act 1992 (No. 7 of 1992) as amended.
- Litter Pollution Act 1997 (No. 12 of 1997) as amended.
- Planning and Development Act 2000 (No. 30 of 2000) as amended.

2.5 Responsibilities of the Waste Producer

The waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal.) Waste contractors will be employed to physically transport waste to the final waste disposal / recovery site.

It is therefore imperative that the residents, commercial tenants, and the proposed facilities management company undertake on-site management of waste in accordance with all legal requirements and employ suitably permitted/licenced contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contractor handle, transport, and reuse/recover/recycle/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or waste permit granted by the relevant Local Authority under the *Waste Management (Facility Permit & Registration) Regulations 2007* as amended or a waste or IED (Industrial Emissions Directive) license granted by the EPA. The COR/permit/license held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered, and/or disposed of at the specified site.

2.6 Kildare County Council Waste Management Bye-Laws

The *Kildare County Council Waste Management (Segregation, Storage and Presentation of Household and Commercial Waste) Bye-Laws 2018* were entered into force on the 1st day of March 2019. The bye-laws set a number of enforceable requirements on waste holders with regard to storage, separation, and presentation of waste within the KCC functional area. Key requirements under these bye-laws of relevance to the development include the following:

- Kerbside waste presented for collection shall not be presented for collection earlier than 8:00 pm on the day immediately preceding the designated waste collection day.
- All containers used for the presentation of kerbside waste and any uncollected waste shall be removed from any roadway, footway, footpath, or any other public place no later than 8:00am on the day following the designated waste collection day, unless an alternative arrangement has been approved in accordance with bye-law.
- Documentation, including receipts, is obtained, and retained for a period of no less than one year to provide proof that any waste removed from the premises has been managed in a manner that conforms to these byelaws, to the Waste Management Act and, where such legislation is applicable to that person, to the European Union (Household Food Waste and Bio-Waste) Regulations 2015; and

- Adequate access and egress onto and from the premises by waste collection vehicles is maintained.

2.7 Regional Waste Management Service Providers & Facilities

Various contractors offer waste collection services for the residential and commercial sector in the Kildare County Council. Details of waste collection permits (granted, pending, and withdrawn) for the region are available from the NWCPO. As outlined in the new regional waste management plan, there is a decreasing number of landfills available in the region. Only three municipal solid waste landfills remain operational and are all operated by the private sector.

There are a number of other licensed and permitted facilities in operation in the region including waste transfer stations, hazardous waste facilities and integrated waste management facilities. A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all waste/IED licenses issued are available from the EPA. Additionally, textiles and other bulky wastes can be brought to local bring banks or recycling centres. These can be utilised by the residents of the development for other household waste streams.

3.0 DESCRIPTION OF THE PROJECT

3.1 Location, Size and Scale of the Development

The development will comprise a Large-Scale Residential Development (LRD) on a site at Railpark West, Maynooth, Co. Kildare. The proposed development is for 139 no. units comprising 36 no. houses (ranging in heights up to 3 storeys), 95 no. apartments (5 no. blocks ranging in heights up to 5 storeys partially over podium parking) and 08 no. duplexes (1 no. 3/4 storey Block).

The proposal includes for a new vehicular/pedestrian/cyclist access from the permitted Maynooth Eastern Ring Road (MERR) to the east and the adjoining development to the South, and pedestrian/cyclist access (and vehicular access for one of the proposed houses) to Parklands Grove/Old Railpark to the north of the site.

The development also includes all car and bicycle parking at surface and podium underdeck level, new streets and footpaths, bin stores, residential private open spaces, public & communal open spaces, boundary treatments, waste management areas, landscaping and all associated site development works.

Block	Number of Units				Total
	1-Bed	2-Bed	3-Bed	4-Bed	
Apartment Block 1	3	17	1	-	21
Apartment Block 2	3	14	1	-	18
Apartment Block 3	5	5	0	-	10
Apartment Block 4	9	9	5	-	23
Apartment Block 5	4	15	4	-	23
Houses	-	-	13	23	36
Duplexes	2	2	4	-	8
Total	26	62	28	23	139

Table 1.0 Residential Development Unit Mix

3.2 Typical Waste Categories

The predicted waste types that will be generated at the proposed development include the following:

- **Dry Mixed Recyclables (DMR)** – includes Newspaper / General paper Magazines, Cardboard Packaging, Drink (Aluminum) Cans, Washed Food (Steel/Tin) Cans, Washed Tetra Pak Milk & Juice Cartons, Plastic Bottles (Mineral/Milk/Juice/Shampoo/Detergents), Rigid Plastics. (Pots/Tubs/Trays*)
- **Mixed Non-Recyclables (MNR) / All General Waste** – Nappies, soiled food, packaging, old candles, plasters, vacuum cleaner contents, broken delph, contaminated plastics.
- **Organic (food) Waste** – Bread, pasta and rice, Meat, fish, poultry bones, out of date food (no plastic packaging), Tea Bags, Coffee grounds and paper filters, Fruit and vegetables (cooked and uncooked), Food soiled cardboard or paper (no coated paper) Eggs and dairy products (no plastic packaging) Paper napkin and paper towels.
- **Glass**

In addition to the typical waste materials that will be generated on a daily basis, there will be some additional waste types generated in small quantities that will need to be managed separately including:

- Green/garden waste - may be generated from internal plants and external landscaping carried out by the management company.
- Textiles
- Batteries
- Waste electrical and electronic equipment (WEEE)
- Chemicals (solvents, pesticides, paints, adhesives, resins, detergents, etc.)
- Furniture (and from time-to-time other bulky wastes)

Wastes should be segregated into the above waste types to ensure compliance with waste legislation and guidance while maximising the re-use, recycling, and recovery of waste with diversion from landfill wherever possible.

3.3 European Waste Codes

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code (also referred to as European Waste Code or EWC) for typical waste materials expected to be generated during the operation of the proposed development are provided in the Table below 3.0.

Waste Material	LoW Code
Paper and Cardboard	20 01 01
Plastic	20 01 39
Metals	20 01 40
Mixed Municipal Waste	20 03 01
Glass	20 01 02
Biodegradable Kitchen Waste	20 01 08
Oils and Fats	20 01 25/26*
Biodegradable garden and park wastes	20 02 01
Textiles	20 01 11
Batteries and accumulators*	20 01 33*-34
Printer Toner / Cartridges*	20 01 27* -28
Green Waste	20 02 01
Waste electrical and electronic equipment*	20 01 35*-36
Chemicals (solvents, pesticides, paints & adhesives, detergents etc) *	20 01 13 / 19 /27 / 28 / 29* 30
Fluorescent tubes and other mercury containing waste*	20 01 21*
Bulky wastes	20 03 07

Table 3.0 LoW Code

3.4 Methodology

3.4.1 Residential Calculation Methodology

Waste arisings were calculated in accordance with BS 5906:2005 and included a provision of 5 litres (L) of food waste per residential unit per week. These guidelines determine the minimum capacity for waste storage space to be allocated and are as follows:

- 30 litres (L) per unit + 70L per bedroom (see Table 4.0 for further details).
- Split 50:50 between DMR and residual waste; and
- 5L per residential unit for food waste.

Number of Bedrooms	Weekly Waste Arisings per Unit (L)			
	DMR	Food Waste	MNR	Total
1 Bedroom	50	5	50	105
2 Bedrooms	85	5	85	175
3 Bedrooms	120	5	120	245
4 Bedrooms	155	5	155	315

Table 4.0 **Weekly Waste Arisings Methodology**

4.0 ESTIMATED WASTE ARISING

The estimated quantum/volume of waste that will be generated from the residential units is based on BS 5906:2005.

The estimated quantum/volume of waste that will be generated from the residential units has been determined based on the predicted occupancy of the units and is presented in table 5.0 below.

Waste Volume (L/week)					
Block	Organic Waste	Mixed Dry Recyclables	Mixed Municipal Waste	Glass	Total
Apartment Block 1	105	1715	1715	5	3,540
Apartment Block 2	90	1460	1460	5	3,015
Apartment Block 3	50	675	675	5	1,405
Apartment Block 4	115	1815	1815	5	3,750
Apartment Block 5	115	1955	1955	5	4,030
Houses	180	5125	5125	5	10,381
Duplexes	40	750	750	5	1,545
Total	695	13,495	13,495	35	27,666

Table 5.0 Residential Waste Prediction (L/per week)

4.1 Waste Storage and Collection

This section provides information on how waste generated within the development will be stored and how the waste will be collected from the development. This has been prepared with due consideration of the proposed site layout as well as best practice standards, local and national waste management requirements including those of Kildare County Council. In particular, consideration has been given to the following documents:

- BS 5906:2005 Waste Management in Buildings – Code of Practice.
- EMR Waste Management Plan 2015 – 2021.
- Kildare County Council, *Presentation and Storage of Waste Byelaws* (2018).
- DoEHLG, *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities* (2018).

4.2 Residential Waste and Recycling Management and Storage Strategy

It is required that space be provided for recycling bins to accommodate 50% of the total weekly volume. This is in line with the BS5906:2005 requirements. Residual waste (MNR) is required for 87.5% of the total weekly arising. For the purpose of the strategy Glass and Organic Waste is required for 87.5% of the total weekly arising.

	Number of Bins Required for a Weekly Collection			
	Organic	Mixed Dry Recyclables	Mixed Municipal Waste	Glass
Apartment Block 1	1 x 240L	2 x 1100L	2 x 1100L	1 x 240L
Apartment Block 2	1 x 240L	2 x 1100L	2 x 1100L	1 x 240L
Apartment Block 3	1 x 240L	1 x 1100L	1 x 1100L	1 x 240L
Apartment Block 4	1 x 240L	2 x 1100L	2 x 1100L	1 x 240L
Apartment Block 5	1 x 240L	2 x 1100L	2 x 1100L	1 x 240L
Duplexes	1 x 240L	1 x 1100L	1 x 1100L	1 x 240L
Houses	3 bin system	3 bin system	3 bin system	Recycling Centre

Table 7.0 Residential Storage Requirements

4.2.1 Apartments

Residents will be expected to take all waste arisings from their units to the appropriate residential waste storage area. Residents will be required to segregate their waste into the following waste categories within their own apartment units:

- DMR.
- MNR.
- Organic waste; and
- Glass.

The residents will bring their waste and recycling to the waste storage areas located on ground level of the apartment block as per figures 1.0 – 5.0 and place the waste and recycling into the appropriate bins. It is recommended that the WSAs will have secure access with either key or fob to ensure only residents may place waste in the WSA and for the control of potential fly-tipping and vermin.

On collection day, the bins will be brought from the bin store up to the waste collection point by the management company personnel. Once the bins are emptied the bins will be brought back down to the waste storage area.

Figure 1.0: Waste Storage Area – Block 1



Figure 2.0: Waste Storage Area – Block 2

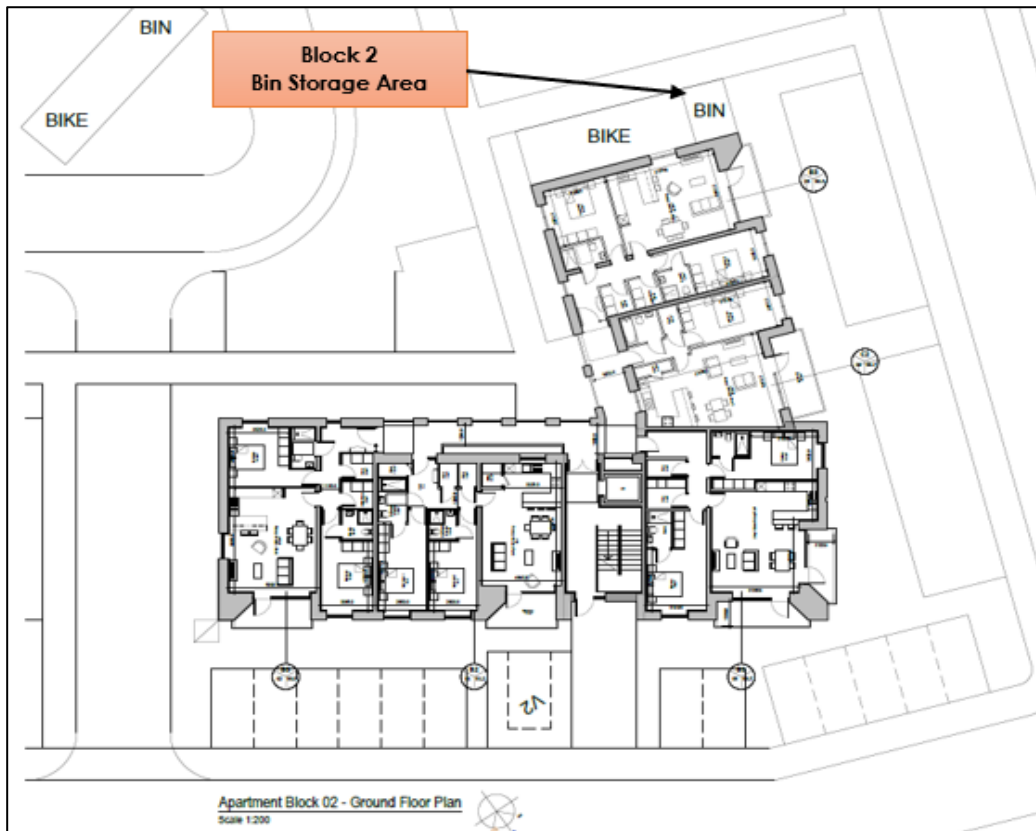


Figure 3.0: Waste Storage Area – Block 3

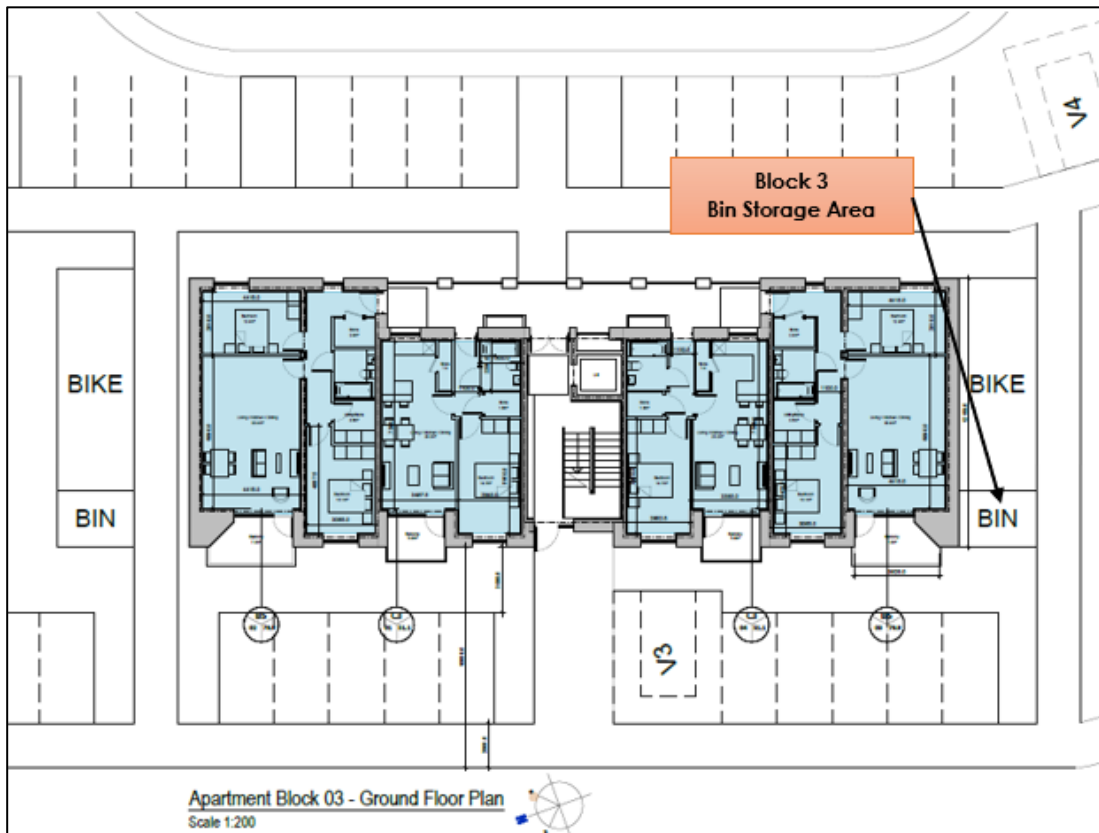


Figure 4.0: Waste Storage Area – Block 4

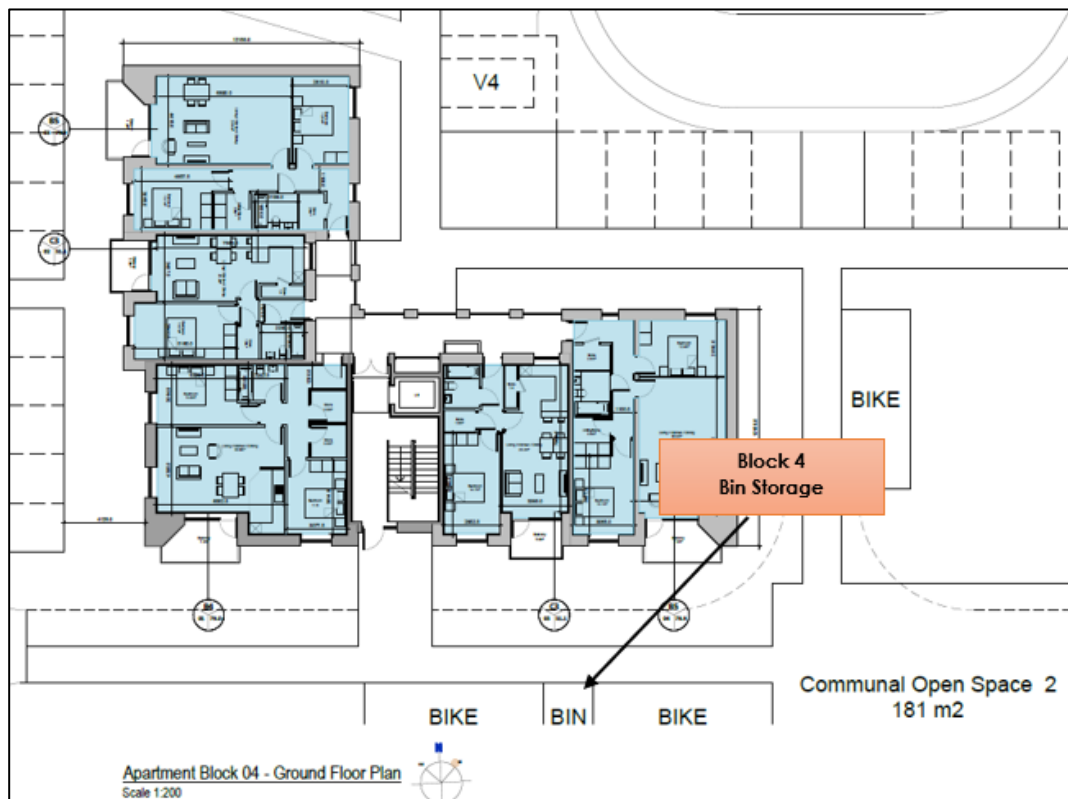
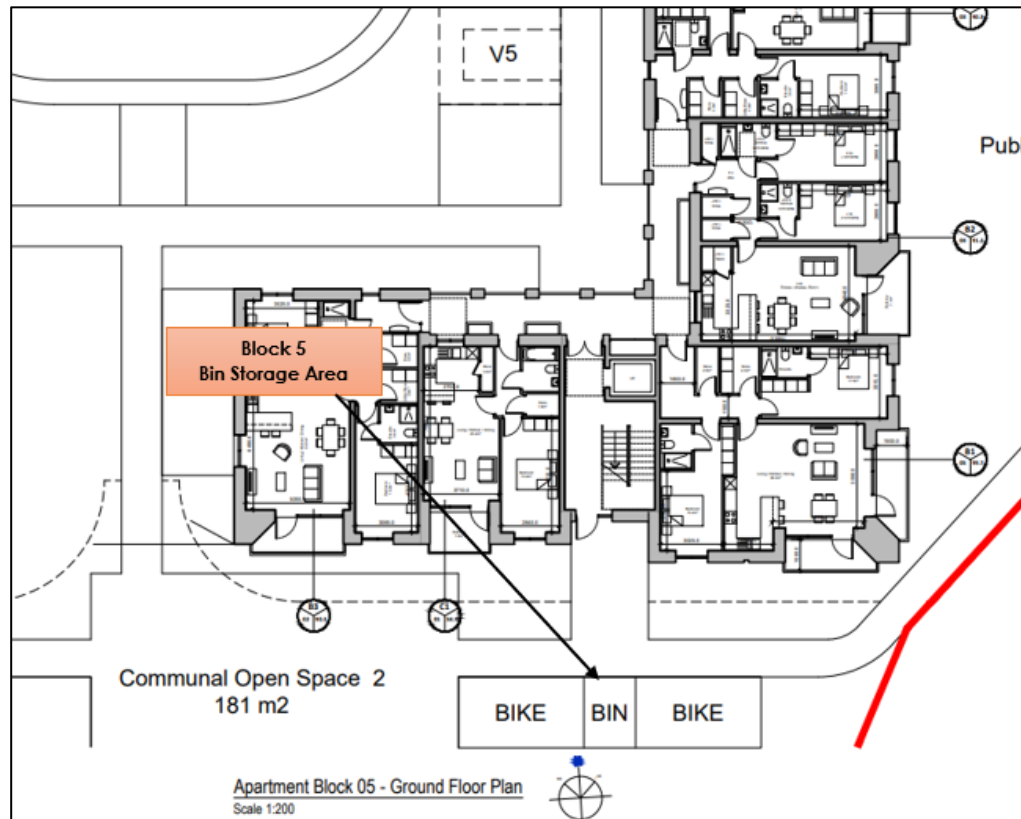


Figure 5.0: Waste Storage Area – Block 5

4.2.2 Houses

Residential houses will have a typical three/four bin system per house which will be separate to the waste storage areas discussed above in Section 3.0. Residents will be required to segregate their waste into the following waste categories within their own houses:

- DMR.
- MNR.
- Organic waste; and
- Glass.

It is anticipated that residents in houses and with external access to the rear of the property will store waste in bins at the front of their house. Proposed location of bin storage at the houses is outlined in figure 6 below.

Figure 6.0: Waste Storage Location – House

4.3 Waste Storage Residential Units

Provision is made for the segregation and storage of domestic waste within each unit. Each unit is provided with bins in the kitchen area to enable the separation of waste into different waste streams – 1.) glass, 2.) food, 3.) DMR (Dry Mixed Recycling) and 4.) general waste (MNR). Sample images of bin types in each unit below.



4.4 Waste Collection Contractors

There are numerous private contractors that provide waste collection services in the Kildare area who hold a valid waste collection permit for the specific waste types collected. All waste collected must be transported to registered/permitted/licensed facilities only.

All waste requiring collection by the appointed waste contractor will be collected from the WSAs by nominated waste contractors or facilities management depending on the agreement and will be brought to the temporary waste collection areas. The empty bins will be promptly returned to the appropriate WSAs.

All waste receptacles presented for collection will be clearly identified as required by waste legislation and the requirements of the Kildare County Council Byelaws. Also, waste will be presented for collection in a manner that will not endanger health, create a risk to traffic, harm the environment or create a nuisance through odours or litter.

4.5 Additional Waste Materials

There is likely to be a small component of the overall waste arising from the Proposed Development that will comprise other waste streams, such as WEEE, printer and toner cartridges, and fluorescent light tubes. Building maintenance will also give rise to materials such as paints and will be the responsibility of the management company to dispose of this waste.

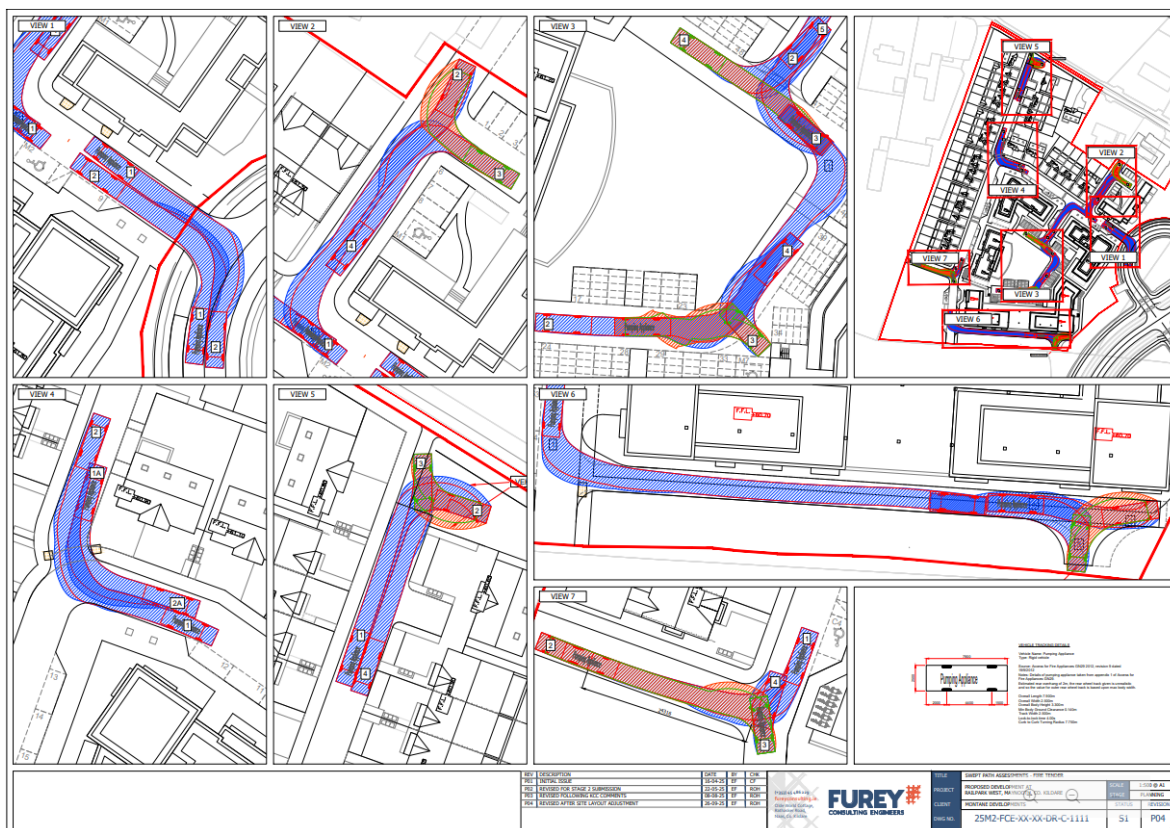
4.6 Waste Storage Area Design

This area will be installed in accordance with BS 5906:2005.

- The walls and roofs of the bin stores will be formed of non-combustible, robust, secure, and impervious material, and have a fire resistance of one hour. The enclosures will be suitably designed to prevent entry by vermin.
- All containers for waste, including recyclable material, will be easily accessible to both the occupier and waste collector.
- Waste stores will be designed and located in such a way as to limit potential noise disturbance to residents.
- Storage areas for waste and DMR will be clearly designated for this use only, by a suitable door or wall sign and, where appropriate, with floor markings.
- Waste storage sites will include areas for instructional signage detailing correct use of the facilities.
- Have access for potential control of vermin, if required.
- The entrance of the waste storage room will be free from steps and projections.
- Where the area is to be enclosed in a roofed building, adequate ventilation will be provided. Permanent ventilators will be provided giving a total ventilation area of not less than 0.2m²;
- Contain electrical lighting by means of sealed bulkhead fittings (housings rated to IP65 in BS EN 60529:199 for the purpose of cleaning down with hoses and inevitable splashing. Luminaires will be low energy light fittings or low energy lamp bulbs, controlled by proximity detection or a time delay button to prevent lights being left on; and
- Gullies for wash down facilities will be positioned so as not to be on the track of container trolley wheels.

In addition to the above requirements, experience, and best practice for the storage of waste materials will include the following provisions:

- Waste storage facilities will not block any utility service points.
- Waste storage areas will not obstruct sight lines for pedestrians, drivers, and cyclists, if doors open outwards, they will not open onto a road or highway.
- Waste containers will be inside or at least enclosed. If bins are outside, they will be secured in a compound; Information packs will be provided to residents to include full information on available recycling facilities.
- Colour coding will be used for bins of different streams; and any internal storage areas adjacent to a fire escape route will be fitted with fire doors, automatic fire detection and a sprinkler system and comply with the Building Regs.
- The facilities management company will be required to maintain the bins and their WSAs in good condition. All residents should be made aware of the waste segregation requirements and waste storage arrangements.

Figure 7.0- Auto track

5.0 Waste Collection Requirements

In line with BS 5906:2005 and Kildare County Council Bye Laws 2018 guidance, the following collection requirements have been designed into the Proposed Development in order to comply with all mandatory waste storage requirements:

5.1 BS 5906 2005

All paths used to transport bins from the storage area to the collection point will have a minimum width of 2m, be free from kerbs or steps, have a solid foundation and be finished with a smooth, continuous finish. Based on the clearance height and tonnage specified by the dimensions of a standard waste collection vehicle have been used to undertake the swept path analysis.

Dimensions	
Width	2.53 metres
Gross vehicle weight	26 tonnes
Length	11.2 metres
Clearance Height	4.75m (Any part of a building through which a waste collection vehicle passes must have a minimum clear height of 4.75 m, to allow for overhead fixtures and fittings)
Turning Circle (diameter)	9.5 metres

Table 10.0 Collection Vehicle Dimensions: Waste/Recycling Collection Vehicle

6.0 CONCLUSIONS

The Proposed Development will be achieved with high standards of waste management performance. As such, due consideration has been given to waste which will be generated by the Proposed Development during its operation. Waste management within the Proposed Development has the following aims:

- To contribute towards achieving current and long-term government, Kildare County Council and EMR targets for waste minimisation, recycling, and reuse.
- To ensure that all legal requirements for the handling and management of waste during the operation of the Proposed Development are complied with; and
- To provide tenants with convenient, clean, and efficient waste management systems that enhance the operation of the buildings and promote high levels of recycling.

Residential waste storage allows for a weekly (seven day) storage capacity for DMR, food and MNR (i.e., nonrecyclable). In summary, this OWRMP presents a waste strategy that complies with all legal requirements, waste policies and best practice guidelines and demonstrates that the required storage areas have been incorporated into the design of the development.