

**OPERATIONAL WASTE
MANAGEMENT PLAN FOR A
RESIDENTIAL DEVELOPMENT
IN MAYESTON, POPPINTREE,
DUBLIN 11.**

“MAYESTON S179A”

Report Prepared For

Fingal County Council

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Our Reference

LB/237501.0498WMR02

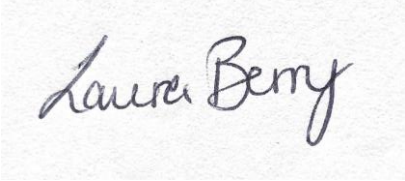

Date of Issue

19 October 2023

Document History

Document Reference		Original Issue Date	
LB/237501.0498WMR02		19 October 2023	
Revision Level	Revision Date	Description	Sections Affected

Record of Approval

Details	Written by	Approved by
Signature		
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Date	19 October 2023	19 October 2023

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1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Resource & Waste Management Plan (RWMP) on behalf of Fingal County Council. The proposed development relates to a site of c.1.35ha. located within existing residential development referred to as Mayeston, Poppintree, Dublin 11. The site is located north of St Margaret's Road and is bound by the M50 motorway to the north, Mayeston Green and Silloge Green to the east, Mayeston Downs to the south, and to the west by public open space.

The proposed development will include for the provision of 119 no. apartment units consisting of 39 one-bedroom apartments, 68 no. two-bedroom apartments and 12 no. 3-bedroom apartments ranging from 3-6 no. storeys and will also include for car parking, cycle parking, pedestrian and cycle links, storage, services and plant areas. Landscaping will include for high quality private open space, communal amenity areas and public open space provision.

This OWMP has been prepared to ensure that the management of waste during the operational phase of the development is undertaken in accordance with all current legal and industry standards including, the *Waste Management Act 1996* as amended ¹, *Environmental Protection Agency Act 1992* as amended ², *Litter Pollution Act 1997* as amended ³, the '*Eastern-Midlands Region (EMR) Waste Management Plan 2015 – 2021*' ⁴, the Draft National Waste Management Plan for a Circular Economy (NWMPCE) (2023) ⁵ and the FCC '*Fingal County Council Segregation, Storage and Presentation of household and Commercial Waste Bye-Laws*' (2020) ⁶. In particular, this OWMP aims to provide a robust strategy for the storage, handling, collection and transport of the wastes generated at the development site.

This OWMP aims to ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible. The OWMP also seeks to provide guidance on the appropriate collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil or water resources). The plan estimates the type and quantity of waste to be generated from the development during the operational phase and provides a strategy for managing the different waste streams.

At present, there are no specific national guidelines in Ireland for the preparation of OWMPs. Therefore, in preparing this document, consideration has been given to the requirements of national and regional waste policy, legislation and other guidelines.

2.0 OVERVIEW OF WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Irish Government issued a policy statement in September 1998 titled as '*Changing Our Ways*' ⁷ 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 ⁸. 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*'⁹. 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*'¹⁰. 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'¹¹ (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 and 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)¹² 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*¹³ 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 work 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'¹⁴ 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 2020 National Waste Statistics, which is the most recent study published, along with the national waste statistics web resource (December 2022) reported the following key statistics for 2019:

- **Generated** – Ireland produced 3,210,220 t of municipal waste in 2020. This is a 4% increase since 2019. This means that the average person living in Ireland generated 645 kg of municipal waste in 2020.
- **Managed** – Waste collected and treated by the waste industry. In 2020, a total of 3,180,620 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 29,600 t was unmanaged in 2020.
- **Recovered** – The amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In 2020, around 84% of municipal waste was recovered – an increase from 83% in 2019.
- **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 2020 was 41%, which is up from 37% in 2019.
- **Disposed** – 16% of municipal waste was landfilled in 2020. This is an increase from 15% in 2019.

2.2 Regional Level

The development is located in the Local Authority area of FCC. The EMR Waste Management Plan 2015 – 2021 is the regional waste management plan for the SDCC area which was published in May 2015. Currently the EMR and other regional waste management plans are under review and the Regional Waste Management Planning Offices have issued a Draft NWMPCE in June 2023.

The current regional plan sets out the following strategic targets for waste management in the region:

- A 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

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 €85 per tonne landfill levy introduced under the *Waste Management (Landfill Levy) (Amendment) Regulations 2015 (as amended)*.

The Draft NWMPCE does not dissolve the three regional waste areas. 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.

Proposed National Targets

- 1a. (Residual Municipal Waste) 1% Reduction / person /year – Waste decline for landfill or recovery by thermal treatment.
2. (Contamination of Materials) 90% of Material in Compliance – Contamination of recycling and food waste with other materials

3a. (Reuse of Materials) 10kg Per person / year – Reuse of materials like cloths or furniture to prevent waste.

The *Fingal Development Plan 2023 – 2029*¹⁵ sets out a number of policies and objectives for the Fingal region in line with the objectives of the regional waste management plan, including the following:

- Objective **IUO34** – Waste Management in New Developments - Require the provision of appropriate, well designed, accessible space to support the storage, separation and collection of as many waste and recycling streams as possible in all new commercial and residential developments within the County.
- Objective **DMSO234** – Provision of Public Bring Banks - Ensure the provision of public bring banks in all large retail developments, unless there are existing facilities within a 1 km radius. Bring bank facilities will generally be required at appropriate locations in the following development types:
 - In conjunction with significant new commercial developments, or extensions to existing developments.
 - In conjunction with new waste infrastructure facilities, proposals should include bring facilities for the acceptance of non-hazardous and hazardous wastes from members of the public and small businesses.
 - In conjunction with medium and large scale residential and mixed-use developments providing in excess of 10 residential units, proposals should provide recycling and bring bank facilities to serve residents and in some appropriate locations, the wider community.
 - In conjunction with all large retail developments provide space for reverse vending machines to promote the circular economy.
- Objective **DMSO235** – Communal Refuse Storage Provision - In the case of communal refuse storage provision, the collection point for refuse should be accessible both to the external collector and to the resident and be secured against illegal dumping by non-residents. In the case of individual houses, the applicant shall clearly show within a planning application the proposed location and design of bin storage to serve each dwelling, and having regard to the number of individual bins required to serve each dwelling at the time of the application and any possible future requirements for refuse storage/collection. The following criteria will be considered in the assessment of the design and siting of waste facilities and bring facilities:
 - The location and design of any refuse storage or recycling facility should ensure that it is easily accessible both for residents and/or public and for bin collection, be insect and vermin proofed, will not present an odour problem, and will not significantly detract from the residential amenities of adjacent property or future occupants.
 - Provision for the storage and collection of waste materials shall be in accordance with the guidelines for waste storage facilities in the relevant Regional Waste Management Plan and the design considerations contained in Section 4.8 and 4.9 of the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities, DHLGH (2020).
 - Refuse storage for houses should be externally located, concealed / covered and adequate to cater for the size and number of bins normally allocated to a household. For terraced houses, the most appropriate area for bins to be stored is to the front of the house, which should be located in well-designed enclosures that do not detract from visual amenity.
 - All applications shall clearly identify the waste storage and collection points and detail the anticipated waste collection schedule having regard to the impact on road users both within the development and the surrounding area.

- Access to private waste storage in residential schemes should be restricted to residents only.
- Objective **DMSO236** – Segregation and Collection of Waste - Ensure all new large-scale residential and mixed-use developments include appropriate facilities for source segregation and collection of waste.
- Objective **DMSO237** – Distance from Front Door to Communal Bin Area - Ensure all new residential schemes include appropriate design measures for refuse storage areas, details of which should be clearly shown at pre-planning and planning application stage. Ensure refuse storage areas are not situated immediately adjacent to the front door or ground floor window, unless adequate screened alcoves or other such mitigation measures are provided.
- Objective **DMSO239** – Refuse storage areas - Ensure all new residential schemes include appropriate design measures for refuse storage areas, details of which should be clearly shown at pre-planning and planning application stage. Ensure refuse storage areas are not situated immediately adjacent to the front door or ground floor window, unless adequate screened or other such mitigation measures are provided.
- Objective **DMSO240** – Distance to Communal Bin Areas - Ensure the maximum distance between the front door to a communal bin area does not exceed 50 metres.

2.3 Legislative Requirements

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

- Waste Management Act 1996 as amended;
- Environmental Protection Agency Act 1992 as amended;
- Litter Pollution Act 1997 as amended;
- Planning and Development Act 2000 as amended ¹⁶ and
- Circular Economy and Miscellaneous Provisions Act 2022.

These Acts and subordinate Regulations enable the transposition of relevant European Union Policy and Directives into Irish law.

One of the guiding principles of European waste legislation, which has in turn been incorporated into the *Waste Management Act 1996* as amended and subsequent Irish legislation, is the principle of “*Duty of Care*”. This implies that the waste producer is responsible for waste from the time it is generated through until its legal disposal (including its method of disposal). As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final disposal area, waste contractors will be employed to physically transport waste to the final waste disposal site.

It is therefore imperative that the residents, crèche operator and 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) licence granted by the EPA. The COR/permit/licence 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.

2.3.1 Fingal County Council Waste Bye-Laws

The FCC “*Segregation, Storage and Presentation of Household and Commercial Waste Bye-Laws 2020*” came into effect in March 2020. The Bye-Laws set a number of enforceable requirements on waste holders and collectors with regard to storage, separation, presentation and collection of waste within the FCC functional area. Key requirements under these *Waste Bye-Laws* are:

- Kerbside waste presented for collection shall not be presented for collection earlier than 6:00pm 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 9:00am on the day following the designated waste collection day;
- Neither recyclable household kerbside waste nor food waste arising from households shall be contaminated with any other type of waste before or after it has been segregated; and
- A management company, or another person if there is no such company, who exercises control and supervision of residential and/or commercial activities in multi-unit developments, mixed-use developments, flats or apartment blocks, combined living/working spaces or other similar complexes shall ensure that:
 - Separate receptacles of adequate size and number are provided for the proper segregation, storage and collection of recyclable household kerbside waste and residual household kerbside waste;
 - Additional receptacles are provided for the segregation, storage and collection of food waste where this practice is a requirement of the national legislation on food waste;
 - The receptacles referred to in paragraphs (a) and (b) are located both within any individual apartment and at the place where waste is stored prior to its collection;
 - Any place where waste is to be stored prior to collection is secure, accessible at all times by tenants and other occupiers and is not accessible by any other person other than an authorised waste collector;
 - Written information is provided to each tenant or other occupier about the arrangements for waste separation, segregation, storage and presentation prior to collection;
 - An authorised waste collector is engaged to service the receptacles referred to in this section of these bye-laws, with documentary evidence, such as receipts, statements or other proof of payment, demonstrating the existence of this engagement being retained for a period of no less than two years. Such evidence shall be presented to an authorised person within a time specified in a written request from either that person or from another authorised person employed by South Dublin County Council;
 - Receptacles for kerbside waste are presented for collection on the designated waste collection day; and
 - Adequate access and egress onto and from the premises by waste collection vehicles is maintained.

The full text of the Waste Bye-Laws is available from the FCC website

2.4 Regional Waste Management Service Providers and Facilities

Various contractors offer waste collection services for the residential sectors in the FCC region. Details of waste collection permits (granted, pending and withdrawn) for the region are available from the NWCPO.

As outlined in the 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. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second facility in Poolbeg in Dublin.

The Oscar Traynor Road Bring Centre is located on Oscar Traynor Road, Kilmore, Dublin 5, c. 6.3km southeast of the development site and can be utilised by the residents of the development. The centre accepts paper, cans, cardboard, Tetra Pak, plastics, textiles, batteries, light bulbs, glass, cooking oil, waste engine oil, small waste electrical goods no larger than a microwave, and green waste. There is a bring bank located at FAS Training Centre, Poppintree Industrial Estate, Ballymun, c. 300m from the development.

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.

3.0 DESCRIPTION OF THE PROJECT

3.1 Size and Scale of the Development

The development comprises the construction of The construction of a new development of 119 no. residential apartment units and crèche, arranged in 5 buildings varying in height from 3 storeys to 6 storeys (Block A – 18 no. 1-bedroom units, 10 no. 2-bedroom units, 6 no. 3-bedroom units; Block B – 9 no. 1 bed units, 29 no. 2 bed units; Block C – 6 no. 3 bed units and crèche; Block D – 8 no. 1 bed units, 14 no. 2 bed units; Block E – 4 no. 1 bed units, 15 no. 2 bed units), all associated carparking and bicycle parking including an external covered bike store, hard and soft landscaping, an acoustic fence to the northern boundary and acoustic screens between Blocks D, A and B, connections to existing services and all ancillary/enabling site development works at Mayeston, Poppintree, Dublin 11.

3.2 Typical Waste Categories

The typical non-hazardous and hazardous wastes that will be generated at the Development will include the following:

- Dry Mixed Recyclables (DMR) - includes waste paper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – food waste and green waste generated from internal plants/flowers;
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste.

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

- Green/garden waste may be generated from internal plants or external landscaping;
- Batteries (both hazardous and non-hazardous);
- Waste electrical and electronic equipment (WEEE) (both hazardous and non-hazardous);
- Printer cartridges/toners;
- Chemicals (paints, adhesives, resins, detergents, etc.) ;
- Lightbulbs;
- Textiles (rags);
- Waste cooking oil (if any generated by the residents or crèche operator);
- Furniture (and from time to time other bulky wastes); and
- Abandoned bicycles.

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 List of Waste Codes

In 1994, the *European Waste Catalogue*¹⁸ and *Hazardous Waste List*¹⁹ were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List*²⁰, which was a condensed version of the original two documents and their subsequent amendments. This document has recently been replaced by the EPA '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous*'²¹ (2018). 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.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code for typical waste materials expected to be generated during the operation of the Development are provided in Table 3.1 below.

Table 3.1 Typical Waste Types Generated and LoW Codes

Waste Material	LoW Code
Paper and Cardboard	20 01 01
Plastics	20 01 39
Metals	20 01 40
Mixed Non-Recyclable Waste	20 03 01
Glass	20 01 02
Biodegradable Kitchen Waste	20 01 08
Oils and Fats	20 01 25
Textiles	20 01 11
Batteries and Accumulators *	20 01 33* - 34
Printer Toner/Cartridges*	20 01 27* - 28
Green Waste	20 02 01
WEEE *	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

* Individual waste type may contain hazardous materials

4.0 ESTIMATED WASTE ARISING

A waste generation model (WGM) developed by AWN, has been used to predict waste types, weights and volumes arising from operations within the development. The WGM incorporates building area and use and combines these with other data including Irish and US EPA waste generation rates.

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. While the floor area usage (m²) has been used to estimate the waste arising from the crèche and retail units.

The estimated waste generation for the development for the main waste types is presented in Tables 4.1 and 4.2.

Table 4.1 Estimated waste generation for the development for Residential Blocks A - E

Waste Type	Waste Volume (m ³ / week)				
	Block A	Block B	Block C	Block D	Block E
Organic Waste	0.50	0.59	0.11	0.33	0.30
DMR	3.51	4.20	0.81	2.33	2.12
Glass	0.10	0.11	0.02	0.06	0.06
MNR	1.85	2.21	0.43	1.23	1.11
Total	5.95	7.12	1.37	3.96	3.59

Table 4.2 Estimated waste generation for the development for the commercial unit

Waste Type	Waste Volume (m ³ / week)
	Crèche
Organic Waste	0.05
DMR	1.71
Glass	0.01
MNR	1.93
Total	2.70

BS5906:2005 Waste Management in Buildings – Code of Practice ²² has been considered in the calculations of waste estimates. AWN's modelling methodology is based on recently published data and data from numerous other similar developments in Ireland and is based on AWN's experience. It provides a more representative estimate of the likely waste arisings from the development.

5.0 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 site layout as well as best practice standards, local and national waste management requirements including those of FCC. 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;
- The draft NWMPCE (2023);
- FCC *Fingal County Council Development Plan 2023-2029* (2023);
- FCC *Segregation, Storage and Presentation of Household and Commercial Waste Bye-Laws* (2020); and
- DoHLGH, *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (sections 4.8 & 4.9)* (2022) ²³

Waste Storage Areas

Five (5 no.) shared Waste Storage Areas (WSAs) have been allocated for use by residents of the development. One (1 no.) WSA is located at ground floor level of each block (Block A, B, C, D & E). There is one (1 no.) additional WSA located at ground floor level in Block C for use by the crèche. The locations of the shared WSAs can be viewed on the drawings submitted with the planning application under separate cover or in Appendix 1 of this report.

Using the estimated waste generation volumes in Table 4.1 above, the waste receptacle requirements for MNR, DMR, organic waste and glass have been established for the WSAs. It is envisaged that glass and organic waste will be collected on a weekly basis, and DMR and MNR will be collected weekly.

If it is not feasible to provide an appropriate bin wash area, a contract can be put in place with the nominated contractor to collect and wash the bins.

Waste Storage Requirements

Estimated waste storage requirements for the operational phase of the development are detailed in Table 5.1, below. The WSAs have been appropriately sized to accommodate the weekly waste requirements for waste receptacles.

Table 5.1 Waste storage requirements for the development

Area/Use	Bins Required			
	MNR*	DMR**	Organic	Glass
Shared WSA 1 (Block A)	2 x 1100 L	3 x 1100 L	3 x 240 L	1 x 240 L
Shared WSA 2 (Block B)	2 x 1100 L	4 x 1100 L	3 x 240 L	1 x 240 L
Shared WSA 3 (Block C)	1 x 1100 L	1 x 1100 L	1 x 240 L	1 x 240 L
crèche WSA (Block C)	1 x 1100 L	2 x 1100 L	1 x 120 L	1 x 120 L
Shared WSA 4 (Block D)	1 x 1100 L 1 x 240 L	2 x 1100 L 1 x 240 L	2 x 240 L	1 x 240 L
Shared WSA 5 (Block E)	1 x 1100 L	2 x 1100 L	2 x 240 L	1 x 240 L

Note: * = Mixed Non-Recyclables
** = Dry Mixed Recyclables

The waste receptacle requirements have been established from distribution of the total weekly waste generation estimate into the holding capacity of each receptacle type.

Waste storage receptacles as per Table 5.1 above (or similar appropriate approved containers) will be provided by the facilities management company in the shared WSAs.

The types of bins used will vary in size, design and colour dependent on the appointed waste contractor. However, examples of typical receptacles to be provided are shown in Figure 5.1. All waste receptacles used will comply with the SIST EN 840-1:2020 and SIST EN 840-2:2020 standards for performance requirements of mobile waste containers, where appropriate.



Figure 5.1 Typical waste receptacles of varying size (240L and 1100L)

Receptacles for organic, mixed dry recyclable, glass and mixed non-recyclable waste will be provided in the shared WSAs prior to first occupation of the development i.e. prior to the first residential unit being occupied.

This Plan will be provided to each resident from first occupation of the development i.e. once the first residential unit is occupied. This Plan will be supplemented, as required, by the facilities management company with any new information on waste segregation, storage, reuse and recycling initiatives that are subsequently introduced.

5.1 Waste Storage – Apartment Units

Residents will be required to segregate their waste into the following main waste categories within their own units:

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

Provision will be made in all residential units to accommodate 3 no. bin types to facilitate waste segregation at source. An example of a potential 3 bin storage system is provided in Figure 5.2 below.



Figure 5.2 Example three bin storage system to be provided within the unit design

Residents will be required to take their segregated waste materials to their designated WSA and deposit their segregated waste into the appropriate bins. The locations of the shared residential WSAs are illustrated in the drawings submitted with the planning application under separate cover and in Appendix 1 of this report.

Each bin / container in the shared WSAs will be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which waste types can be placed in each bin.

Access to the shared WSAs will be restricted to authorised residents, facilities management and waste contractors by means of a key or electronic fob access.

Other waste materials such as textiles, batteries, printer toner/cartridges, waste cooking oil and WEEE may be generated infrequently by the residents. Residents will be required to identify suitable temporary storage areas for these waste items within their own units and dispose of them appropriately. Further details on additional waste types can be found in Section 5.3, below.

5.1 Waste Storage – Crèche (Commercial)

Staff will be required to segregate their waste into the following waste categories within their own unit:

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

As required, the crèche staff will be required to take the segregated waste materials to the designated crèche WSA in their block and deposit the segregated waste into the appropriate bins.

Each bin/container in the WSAs will be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which waste types can be placed in each bin.

Access to the WSAs will be restricted to authorised crèche unit staff facilities management and waste contractors by means of a key or electronic fob access.

Other waste materials such as textiles, batteries, lightbulbs, WEEE, cooking oil and printer toner / cartridges will be generated less frequently. The crèche operator will be required to identify suitable temporary storage areas for these waste items within their own unit and dispose of them appropriately. Further details on additional waste types can be found in Section 5.4.

5.2 Waste Collection

There are numerous private contractors that provide household and commercial waste collection services in the Fingal area. All waste contractors servicing the development must hold a valid waste collection permit for the specific waste types collected. All waste collected must be transported to registered/permited/licensed facilities only.

Bins from shared and commercial WSAs will be brought to a staging area by facilities management or the waste contractor prior collection.. The location of the staging areas is shown on the drawings submitted with the planning application under separate cover, and in Appendix 1 of this report. Bins will be moved to the staging area immediately prior to collection and will then be returned to their respective WSAs immediately after collection, either by facilities management or the waste contractor. A vehicle tracking exercise for a refuse truck is included as part of this drawing in Appendix 1 of this report.

The staging area is such that it will not obstruct traffic or pedestrians (allowing a footway path of at least 1.8m, the space needed for two wheelchairs to pass each other) as is recommended in the *Design Manual for Urban Roads and Streets (2019)*²³.

Suitable access and egress has been provided to enable the bins to be moved easily from the WSAs to the waste collection vehicles on the appropriate days. Waste will be collected at agreed days and times by the nominated waste contractors.

All waste receptacles should be clearly identified as required by waste legislation and the requirements of the FCC *Waste Bye-Laws*. 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.

It is recommended that bin collection times/days are staggered to reduce the number of bins required to be emptied at once and the time the waste vehicle is required to service the site. This will be determined during the process of appointment of a waste contractor.

5.3 Additional Waste Materials

In addition to the typical waste materials that are generated on a daily basis, there will be some additional waste types generated from time to time that will need to be managed separately. A non-exhaustive list is presented below.

Green Waste

Green waste may be generated from gardens, external landscaping and internal plants / flowers. Green waste generated from landscaping of external areas will be removed by external landscape contractors. Green waste generated from gardens internal plants / flowers can be placed in the organic waste bins.

Batteries

A take-back service for waste batteries and accumulators (e.g. rechargeable batteries) is in place in order to comply with the S.I. No. 283/2014 - European Union (Batteries and Accumulators) Regulations 2014, as amended. In accordance with these regulations, consumers are able to bring their waste batteries to their local civic

amenity centre or can return them free of charge to retailers which supply the equivalent type of battery, regardless of whether or not the batteries were purchased at the retail outlet and regardless of whether or not the person depositing the waste battery purchases any product or products from the retail outlet.

The crèche operator cannot use the civic amenity centre. They must segregate their waste batteries and either avail of the take-back service provided by retailers or arrange for recycling / recovery of their waste batteries by a suitably permitted / licenced contractor. Facilities management may arrange collection, depending on the agreement.

Waste Electrical and Electronic Equipment (WEEE)

The WEEE Directive (Directive 2002/96/EC) and associated Waste Management (WEEE) Regulations have been enacted to ensure a high level of recycling of electronic and electrical equipment. In accordance with the regulations, consumers can bring their waste electrical and electronic equipment to their local recycling centre. In addition, consumers can bring back WEEE within 15 days to retailers when they purchase new equipment on a like for like basis. Retailers are also obliged to collect WEEE within 15 days of delivery of a new item, provided the item is disconnected from all mains, does not pose a health and safety risk and is readily available for collection.

As noted above, the crèche operator cannot use the civic amenity centre. They must segregate their WEEE and either avail of the take-back / collection service provided by retailers or arrange for recycling / recovery of their WEEE by a suitably permitted / licenced contractor. Facilities management may arrange collection, depending on the agreement.

Printer Cartridge / Toners

It is recommended that a printer cartridge / toner bin is provided in the crèche, where appropriate. The crèche tenant will be required to store this waste within their unit and arrange for return to retailers or collection by an authorised waste contractor, as required.

Waste printer cartridge / toners generated by residents can usually be returned to the supplier free of charge or can be brought to a civic amenity centre.

Chemicals

Chemicals (such as solvents, paints, adhesives, resins, detergents, etc) are largely generated from building maintenance works. Such works are usually completed by external contractors who are responsible for the off-site removal and appropriate recovery / recycling / disposal of any waste materials generated.

Any waste cleaning products or waste packaging from cleaning products generated in the crèche unit that is classed as hazardous (if they arise) will be appropriately stored within the operator's own space. Facilities management may arrange collection, depending on the agreement.

Any waste cleaning products or waste packaging from cleaning products that are classed as hazardous (if they arise) generated by the residents should be brought to a civic amenity centre.

Light Bulbs

Waste light bulbs (fluorescent, incandescent and LED) may be generated by lighting at the crèche unit. It is anticipated that crèche operator will be responsible for the off-site removal and appropriate recovery / disposal of these wastes. Facilities management may arrange collection, depending on the agreement.

Light bulbs generated by residents should be taken to the nearest civic amenity centre for appropriate storage and recovery / disposal.

Textiles

Where possible, waste textiles should be recycled or donated to a charity organisation for reuse. Crèche operator and residential tenants will be responsible for disposing of waste textiles appropriately.

Waste Cooking Oil

If the crèche operator use cooking oil, waste cooking oil will need to be stored within the unit on a bunded area or spill pallet and regular collections by a dedicated waste contractor will need to be organised as required. Under sink grease traps will be installed in any cooking space.

If the residents generate waste cooking oil, this can be brought to a civic amenity centre.

Furniture & Other Bulky Waste Items

Furniture and other bulky waste items (such as carpet, etc.) may occasionally be generated by the crèche operator. The collection of bulky waste will be arranged, as required by the tenant. If residents wish to dispose of furniture, this can be brought a civic amenity centre.

Abandoned Bicycles

Bicycle parking areas are planned for the development. As happens in other developments, residents sometimes abandon faulty or unused bicycles, and it can be difficult to determine their ownership. Abandoned bicycles should be donated to charity if they arise or Facilities management will may arrange collection by a licensed waste contractor.

5.4 Waste Storage Area Design

The shared WSAs will be designed and fitted-out to meet the requirements of relevant design standards, including:

- Be fitted with a non-slip floor surface;
- Provide ventilation to reduce the potential for generation of odours;
- Provide suitable lighting – a minimum Lux rating of 400 is recommended;
- Appropriate sensor controlled lighting;
- Be easily accessible for people with limited mobility;
- Be restricted to access by nominated personnel only;
- Have a sloped floor to a central foul drain for bins washing run-off;
- Have appropriate graphical and written signage placed above and on bins indicating correct use;
- Have access for potential control of vermin, if required;
- Robust design of doors to bin area incorporating steel sheet covering where appropriate.

The facility management company will be required to maintain bins and storage areas in good condition as required by the FCC *Waste Bye-Laws*.

5.5 Facility Management Responsibilities

It shall be the responsibility of the Facilities Management Company to ensure that all domestic waste generated by apartment residents and crèche operator is managed to

ensure correct storage prior to collection by an appropriately permitted waste management company.

Facilities Management should provide the following items:

- Provision of a Waste Management Plan document, prepared by the Facilities Management Company to all residential and crèche units, which shall clearly state the methods of source waste segregation, storage, reuse and recycling initiatives that shall apply to the management of the development;
- Provision and maintenance of appropriate graphical signage to inform residents and tenants of their obligation to reduce waste, segregate waste and in the correct bin;
- Preparation of an annual waste management report for all residential and crèche units;
- Designation of access routes to common waste storage areas to ensure safe access from the apartment units by mobility impaired persons;
- Provision of an appropriately qualified and experienced staff member, who will be responsible for all aspects of waste management at the development;
- Daily inspection of waste storage areas and signing of a daily check list, which shall be displayed within the area; and
- Maintenance of a register, detailing the quantities and breakdown of wastes collected from the development and provision of supporting documentation by the waste collector to allow tracking of waste recycling rates.

6.0 CONCLUSIONS

In summary, this OWMP presents a waste strategy that addresses 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.

Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus achieving the targets set out in the *EMR Waste Management Plan 2015 – 2021 the draft NWMPCE*.

Adherence to this plan will also ensure that waste management at the development is carried out in accordance with the requirements of the *FCC Waste Bye-Laws*.

The waste strategy presented in this document will provide sufficient storage capacity for the estimated quantity of segregated waste. The designated area for waste storage will provide sufficient room for the required receptacles in accordance with the details of this strategy.

7.0 REFERENCES

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2. Environmental Protection Agency Act 1992, as amended.
3. Litter Pollution Act 1997 as amended.
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14. Environmental Protection Agency (EPA), *National Waste Database Reports 1998 – 2020*.
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21. BS 5906:2005 Waste Management in Buildings – Code of Practice.
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APPENDIX 1 – LOCATIONS OF WASTE STORAGE AND STAGING AREAS

