

Waste Management Plan

Glencarrig, Celbridge, County Kildare

For

Garyaron Homes Ltd.

August 2022

Introduction

This Waste Management Plan (WMP) has been prepared to ensure that the management of waste during the operational phase of the proposed development is undertaken in accordance with current legal and industry standards, including Kildare County Council Waste Presentation Bye-Laws, and in accordance with policy Refs WM-7 and WM-15 of the County Development Plan.

The OWMP is designed to ensure that waste arising from the operational phase of the project is managed to ensure waste prevention and the segregation of waste. The plan estimates the type and quantity of waste to be generated from the proposed development on completion and provides a strategy for managing the waste generated.

This report has been prepared to demonstrate that the development when completed shall be in accordance with Kildare County waste presentation byelaws and in accordance with WM-7 and WM-15 of the Kildare County Development Plan 2017- 2022

WM-7 states:

It is the policy of the Council to secure appropriate provision for the sustainable management of waste within developments, including the provision of facilities for the storage, separation and collection of such waste.

WM-15 states:

It is the policy of the Council to 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 reused and recycled or composted and divert organic waste from landfill, in accordance with the 'National Strategy on Biodegradable Waste 2006 and the Eastern – Midlands Region Waste Management Plan 2015-2021.

Project Description

The development will provide for 137 no. new residential units on a site of approximately 2.1ha. located within the environs of Celbridge, Co. Kildare.

The proposed residential development consists of 54 no. one bed apartments, 61 no. two bed apartments, 17 no. 3 bed houses and 5 no. four bed houses including terraced and semi-detached two storey houses and a single storey, 4 classroom creche.

Assessment of Waste Generated

The development can be broken down into two waste generating areas:

1. Houses
2. Apartments

The residential houses and apartment elements of the development have been addressed individually for the provision of facilities for the storage, separation and collection of waste. The creche is similar in nature to the housing and for the purposes of this plan it is counted as a dwelling. The waste likely to arise from the development is calculated and proposals for the storage, management and collection of this waste from each element will be described.

Typical Waste that will be generated at the proposed development include the following types:

- General Waste
- Dry Mixed Recyclables - includes cardboard, plastic packaging, aluminium cans, tins, paper and Tetra Pak cartons.
- Organic waste including food and garden waste

In addition, there will be some additional waste types generated in small quantities that will need to be managed by individual households that are outside the scope of this plan including:

- Glass – glass bottles and jars.
- Bulky wastes – including furniture, carpets, mattresses.
- Waste electrical and electronic equipment (WEEE).
- Batteries.
- Textiles – clothes or soft furnishings.
- Light bulbs or fluorescent tubes.
- Chemicals – old medicines, paints, detergents.
- Waste oil - cooking oil.

The appointed management company will be required to ensure that all residents will be provided with details from the waste collection provider. This will detail the waste items that can and cannot be placed in the bins provided. These bins shall be located in the designated refuse areas ensuring waste segregation is actively encouraged.

Other waste items can be recycled at local bring centres or recycling facilities which are located in close proximity to the development within the Town environs. Information on locations of adjacent recycling facilities will be provided to residents by the management company

Residents of each of the apartment will be provided with a private enclosed refuse area containing a sufficient number of bins to ensure that waste is managed in a manner not to cause any environmental nuisance or pollution. This will be reviewed by the management company on a routine basis

Household waste Statistics for Ireland- (Source EPA/ CSO)

The EPA published Household Waste Statistics for Ireland for 2019 on the 16 September 2021. Household waste includes residual waste, recyclable waste and organic waste collected directly from households and waste brought by householders to waste collection centres such as bring banks, civic amenity sites, pay to use compactors and landfills. Ireland generated approximately:

- 1.622 million tonnes of household waste in 2019;
- 1.573 million tonnes of household waste was managed
- An estimated 48,660 tonnes was unmanaged.

This data release presents key statistics on the generation and management of Irish household waste in 2019.

Key Trends in Household Waste (Source Central Statistics Office)

1.573 million tonnes of household waste was managed in Ireland in 2019. This is a 3% increase since 2018. Managed waste is waste that is collected from households or brought to waste collection centres.

The EPA estimates that a further 48,660 tonnes of household waste was unmanaged in 2019. Unmanaged waste is waste that is not collected or brought to waste collection centres and is

therefore likely to cause pollution in the environment because it is fly tipped or disposed of through backyard burning.

The majority of household waste managed in Ireland in 2019 was collected at kerbside (66%), with smaller quantities collected via civic amenity sites, skips and bring banks.

The quantity of household waste managed in Ireland in 2019 equates to 320 kilograms per person, up from 314 kg/person in 2018 and 312 kg/person in 2017. The latest data indicate that household waste generation in Ireland continues to be closely linked with disposable income, lifestyle and consumption patterns.

The quantity of household waste generated (i.e. managed & unmanaged) in Ireland in 2019 equates to 330 kilograms per person, up from 325 kg/person in 2018 and 321 kg/person in 2017.

Almost half (40%) of all waste collected from households was placed in the residual waste (black) bin in 2019 (635,000 tonnes). Residual waste in Ireland is generally incinerated for energy recovery or landfilled.

Almost 244,000 tonnes or 16% of household waste was collected in the recycling (green) bin in 2019. Previous EPA waste characterisation studies have shown approximately a third of waste placed in household recycling bins was not recyclable and belongs in the residual waste or organic bin.

Organic waste collected in the brown bin accounted for 10% of all household waste managed in 2019 (159,000 tonnes), a slightly greater proportion than in 2018. When properly segregated, this waste is either composted or undergoes anaerobic digestion to yield biogas and digestate for land spreading. However, despite improved brown bin services and use, only 48% of Irish households had access to a brown bin in 2019 (up from 43% in 2018 and 41% in 2017). EPA studies have shown that most household organic waste (over 60%) continues to be placed in the residual or recycling bins and is therefore not recycled.

Regional differences are evident in the quantity of household waste collected per person at kerb-side by bin type in 2019. Variations are likely to be linked with differences in the waste collection services and infrastructure provided (e.g. prevalence of two-bin vs. three-bin systems in rural vs. urban areas), variations in the proportion of the population using authorised waste collectors and behavioral factors such as bin sharing

Estimated Quantity of Waste Generation – Residential Apartments

Table 1 Household bin waste kg per capita Kildare 2020 (source EPA)

Mixed residual collection (black bin)	Mixed dry recyclables collection (green bin)	Organics collection (brown bin)	% of households with residual bin collection (bin sharing not included)	% of households with recycling bin collection service	% of households with organic bin collection service
Avg kilos per capita	Avg kilos per capita	Avg kilos per capita	%	%	%
134	50	52	95	94	65

2019 statistics on household waste (most recent statistics), published by the Central Statistics office and the EPA (National Waste Statistics Summary report for 2019) calculates that **nationally each person produces 330kg of household waste per year**. Kildare is currently producing less waste than the national average but for the purposes of this plan national figures are assumed.

At maximum capacity, the 115 apartment dwellings could accommodate 327 residents the expected waste produced per year would be 107,910kg. The following tables detail the expected occupancy of each apartment block and the overall apartment development:

Table 2 Expected Occupancy of Apartments

Block A

Apartment type	Occupancy	No. of Units	Total Occupancy
1 Bed	2	19	38
2 bed (3 person)	3	05	15
2 Bed (4 person)	4	15	60
Total		39	113
Waste Generated p.a.			37,290kg

Block B

Apartment type	Occupancy	No. of Units	Total Occupancy
1 Bed	2	24	48
2 bed (3 person)	3	20	60
2 Bed (4 person)	4	07	28
Total		51	136
Waste Generated p.a.			44,800kg

Block C

Apartment type	Occupancy	No. of Units	Total Occupancy
1 Bed	2	11	22
2 bed (3 person)	3	-	
2 Bed (4 person)	4	14	56
Total		25	76
Waste Generated p.a.			25,080kg

Overall Summary

Apartment type	Occupancy	No. of Units	Total Occupancy
1 Bed	2	54	108
2 bed (3 person)	3	25	75
2 Bed (4 person)	4	36	144
Total		115	327
Waste Generated p.a.			107,910kg

The bye-laws for Kildare do not specify maximum weight limits in respect of waste containers. However, we can assume a maximum weight of 250 kilograms of waste per 1,100L wheeled-bin and 250 kilograms of food waste per 660L wheeled-bin.

The waste capacity required for the apartment blocks, based on weekly collections, it is expected that 4 no. of 1,100L bins and 1 no. 660L bins would be required for the Block B refuse storage area which has the largest expected occupancy and waste requirement as detailed in Table 3 below (2 x bins for residual waste, 2 x bin for recyclables and 1 x bin for organic waste). This number of bins would give an annual capacity of 460kg per person.

The refuse stores are designed with a greater capacity than the figures above allowing for additional bins for increased levels of recycling or the storage of other waste material (such as Glass/ WEEE) if proposed in the future by the management company. If during the operational phase, the resident numbers are reduced to less than 316 residents the frequency of the bin collections could be varied.

Table 3 No. of Bins required (based on weekly collection- 50 weeks)

Block A

Waste	No. of Bins	Weight p.w.	Weight p.a. (required)
General (1100lt)	2	250kg	25,000
Dry Recycle (1100lt)	1	250kg	12,500
Organic (600lt)	1	250kg	12,500
Total	4		50,000 (37,290kg)

Block B

Waste	No. of Bins	Weight p.w..	Weight p.a.
General (1100lt)	2	250kg	25,000
Dry Recycle (1100lt)	2	250kg	25,000
Organic (600lt)	1	250kg	12,500
Total	5		62,500 (44,800kg)

Block C

Waste	No. of Bins	Weight p.w.	Weight p.a
General (1100lt)	2	250kg	25,000
Dry Recycle (1100lt)	1	250kg	12,500
Organic (600lt)	1	250kg	12,500
Total	4		50,000 (25,080kg)

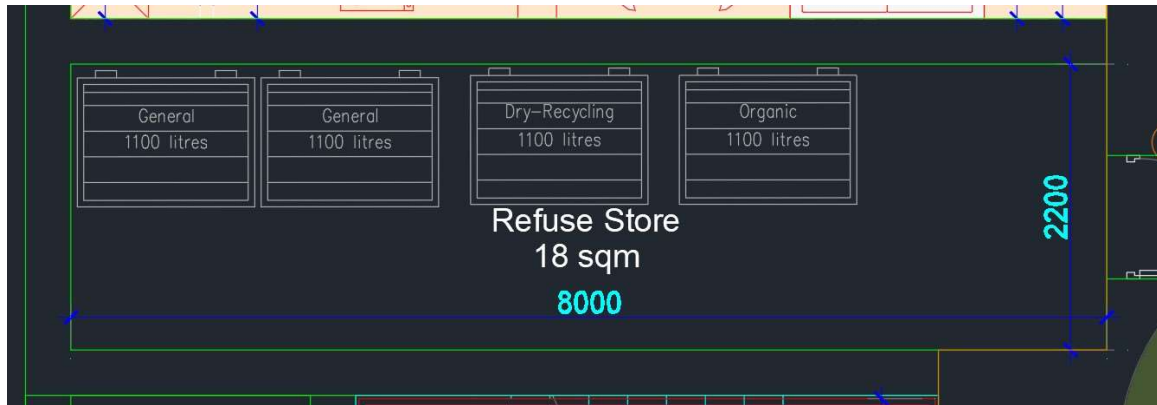
It is proposed to use 1,100L bins of 1.3m x 1m x 1.3m with a load capacity of no more than 250kg which will comply with IS EN 840 1997. Bins will be color-coded and labelled to avoid cross-contamination as follows:

- Green bin for dry recyclables,
- Brown bin for organic waste
- Black bin for mixed non-recyclable waste.

The waste storage area will be restricted to use and access by management, residents and waste contractors only.

The waste storage area is integrated into the buildings close to the main entrance and hence will not be visible/ accessible to the public. It is proposed that the bins will be collected on a weekly basis (50 weeks assumed allowing for Christmas period) by an authorized waste collector.

The refuse area will conform to the requirements of BS 5906: 2005 – Waste Management in Buildings – Code of Practice. The waste storage areas are approximately 14sq.m in area and 2.2m x 6.9m in dimensions which will allow sufficient space for access of bins by residents. This size area would comfortably house the bins required by the as detailed in the tables on the previous page. Each of the proposed Bins Stores are shown here:



BLOCK A – Refuse Store Layout

(2no. General Waste, 1no. Dry-Recycling, 1no. Organic)



BLOCK B – Refuse Store Layout

(2no. General Waste, 2no. Dry-Recycling, 1no. Organic)



BLOCK C – Refuse Store Layout

(2no. General Waste, 1no. Dry-Recycling, 1no. Organic)

Apartment residents will be provided with bins to allow for the segregation of domestic waste. Adequate space is allocated in the kitchen area to accommodate a three-compartment bin for waste segregation. The bins will allow for segregation of waste into the following waste categories:

- Non-recyclable (General)
- Dry Mixed recyclable
- Organic (food) waste

Any additional household wastes such as WEEE glass, old clothes, etc. must be brought to a local recycling facilities. The development site is located within the town of Celbridge, Co. Kildare. This site is located in close proximity to bring banks and recycling centres. A bring centre is located directly opposite the development at the Celbridge GAA grounds. Additional facilities are available in the town at the Tesco Car Park and the St. Wolstons Shopping Centre (Supervalu).

One no. bin compound will be provided for each building at the development within the apartment block adjacent to the entrance. The refuse area shall be designed to ensure it is fully compliant with the guidelines in respect of:

- Signage
- Access
- Lighting
- Security
- Ventilation

Ref: “*Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities*”. The Department of Housing, Planning and Local Government published guidelines in March 2018

The management company shall be required to bring the bins to the roadside and return them to the refuse store following collection on the nominated collection day.

Kildare Byelaws 2018 (Segregation, Storage and Presentation of Household and Commercial Waste) Section 2.9. details the following requirements for Multi-user Buildings, Apartment Blocks, etc.:

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:

- (a) 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
- (b) 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,
- (c) 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
- (d) 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,
- (d) written information is provided to each tenant or other occupier about the arrangements for waste separation, segregation, storage and presentation prior to collection,

(f) 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 Kildare County Council,

(g) receptacles for kerbside waste are presented for collection on the designated waste collection day,

(h) adequate access and egress onto and from the premises by waste collection vehicles is maintained.

Collections

All collections must take place in compliance with conditions of the waste contractor's WasteCollection Permit for the region and in line with any Local Authority by-laws and the Waste Management (Waste Collection Permit) Regulations 2007 as amended.

All residents are obliged by law to avail of the waste management service and must comply with Local By-Laws & Statutory Instruments in relation to the presentation of waste for collection.

Waste collection trucks, with collection permits under the Waste Management (Waste Collection) Permit Regulations, will service the bins and the empty bins will be returned to the wastestorage area by the residents/ management company as appropriate. Records of the collections shall be maintained by the management company for the development. It shall be required of the management company that the facilities provided are maintained in such a manner so as to ensure that waste generated will be managed correctly and in compliance with all current waste management legislation.

Access and egress of the waste collection vehicles will be in accordance with the Traffic Management Plan for the facility. BS 5906: 2005 – Waste Management in Buildings – Code of Practice has been taken into consideration when detailing vehicular movements within the development including Turning areas for the waste collection vehicles which are provided.

Housing

The proposed development consists of 22 houses which includes 19 Semi-detached dwellings and 3 no. terraced dwellings. The Semi-detached units all have side access to the rear of the houses. Each unit has sufficient bin storage space for the storage of 3 no. 240L wheeled bins (1 x General waste, 1 x mixed dry recyclables, 1 x organic/food waste). There is unobstructed access to the kerbside available for the transport and collection of waste.

Mid Terrace houses do not have direct access to the rear and a bin storage bay is provided to the front of these dwellings that can accommodate 3 no. 240L wheeled bins.

In accordance with KCC requirements all waste shall be stored and presented for collection in appropriate containers on appropriate times days to be agreed with the authorized waste collector

Conclusion

By implementing design and actions outlined in this WMP, a high level of recycling, reuse and recovery will be achieved at the development.

Recyclables and organic waste will be segregated at source to reduce the quantity of residual waste materials requiring recovery or disposal.

The source segregation of waste types as detailed in this report will help to achieve the targets set out in the EMR Waste Management Plan 2015 – 2021.

The design of the waste storage areas will meet the requirements as detailed in the Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities

Sources:

Central Statistics Office:

SDG 11.6.1 Proportion of Municipal Solid Waste Collected and Managed in Controlled Facilities out of Total Municipal Waste Generated, by Cities

Environmental Protection Agency:

Household Waste Statistics for Ireland
EPA waste data release, 31st May 2022. Latest reference year, 2020
National Waste Statistics Summary report for 2019

Department of the Housing, Planning and Local Government

Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities
March 2018

Kildare County Council

Kildare County Development Plan Chapter 7 Infrastructure Section 7.6.5 Policies Waste Management
Policy reference WM- 7
Policy reference WM-15
Kildare County Council Bye-laws, 2018
(Segregation, Storage and Presentation of Household and Commercial Waste)

The EMWR Waste Management Plan