

**OPERATIONAL PHASE
WASTE MANAGEMENT PLAN**

FOR

**GLENVEAGH HOMES LTD
DIGITAL OFFICE CENTRE, BLOCK B
MAYNOOTH BUSINESS CAMPUS,
STRAFFAN ROAD, MAYNOOTH
Co. KILDARE**

RELATING TO A PROPOSED

RESIDENTIAL DEVELOPMENT

AT

CARPENTERSTOWN ROAD, CASTLEKNOCK, DUBLIN 15

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1.0 INTRODUCTION

This document presents the Operational Phase Waste Management Plan (WMP) for the control, management and monitoring of waste associated with a proposed residential development at Carpenterstown Road, Castleknock, Dublin 15.

The proposal will comprise a residential development of 192 no. apartments (and ancillary facilities) in 5 no. 5 storey apartment buildings (including setbacks), comprising 67 no. 1 bedroom apartments, 104 no. 2 bedroom apartments and 21 no. 3 bedroom apartments; 240 car parking spaces (82 surface car parking and 158 basement car parking); 180 no. basement cycle spaces and 172 surface cycle spaces; The ancillary facilities (at ground floor of Block A) will comprise a (c. 174 sq. m), gym (114 sq. m), amenity facility (40 sq. m) and security office c. 22 sq. m; Vehicular access to the development will be from 2 no. access points onto the Carpenterstown Road (with secondary reconfigured access [exit only] at western corner of lands) existing access to be closed and planted; Provision of landscaped areas, attenuation and all ancillary site development works, single storey ESB substation, single storey bicycle and bin stores, all on a site of c.1.77 hectares, located on the Carpenterstown Road, Carpenterstown, Dublin 15.

The **Objective of this Waste Management Plan** is to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information to the residents of the development.

The **Goal of this Waste Management Plan** is to achieve a residential recycling rate of 50% of managed municipal waste by 2020 in accordance with *The Eastern-Midlands Region Waste Management Plan 2015-2021*.

The Waste Management Plan shall be integrated into the design and operation of the development to ensure the following:

- That sufficient waste management infrastructure is included in the design of the development to assist residents minimise the generation of mixed waste streams.
- That the principle of waste segregation at source is the integrated into the development by the provision of separate bin systems, signage and notifications.
- That the facility management company shall record the volumes and types of waste generated by the development to assess on an annual basis if the 50% recycling rate is being achieved.
- That all waste materials generated by site activities are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Act 1996 and all associated Waste Management Regulations.

- That the Facilities Management Company will manage wastes storage areas and provide annual bulky waste collection services to facilitate residents.

2.0 WASTE MANAGEMENT PLAN – OPERATIONAL PHASE

The Operational Phase of the Waste Management Plan has been prepared in accordance with *The Eastern-Midlands Region Waste Management Plan 2015-2021* which defines the following Waste Targets:

- 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 2021
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill

Key Aspects to achieve Waste Targets

- All residential units shall be provided with information on the segregation of waste at source and how to reduce the generation of waste by the Facilities Management Company.
- All waste handling and storage activities shall occur in the dedicated communal apartment waste storage areas or within the curtilage of individual houses.
- The development's Facility Management Company shall appoint a dedicated Waste Services Manager to ensure that waste is correctly and efficiently managed throughout the development.
- The Operational Phase of the Waste Management Plan is defined by the following stages of waste management for both the residential and commercial aspects of the development:

Stage 1	Occupier Source Segregation
Stage 2	Occupier Deposit and Storage
Stage 3	Bulk Storage and On-Site Management
Stage 4	On-site treatment and Off-Site Removal
Stage 5	End Destination of wastes

The operational phase of the WMP has been prepared with regard to *British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice* which provides guidance on methods of storage, collection, segregation for recycling and recovery for residential building.

The apartments which will include a 3 - bin waste segregation at source system together with the communal waste storage areas have been designed with regard to *Section's 4.8*

and 4.9 Refuse Storage of The Department of Housing, Planning and Local Government – Sustainable Urban Housing : Design Standards for New Apartments – Guidelines for Planning Authorities. 2018.

3.0 RESIDENTIAL UNITS DOMESTIC WASTE MANAGEMENT

The Facilities Management Company shall be responsible for the implementation of all aspects of the Domestic Waste Management Plan which are detailed as follows.

The Facilities Management Company shall employ an appropriately qualified and experienced staff member who will be responsible for all aspects of waste management at the development.

All accommodation units shall be provided with a Waste Management Information document, prepared by the Facilities Management Company, which shall clearly state the methods of source waste segregation, storage, and recycling initiatives that shall apply to the Management of the development. This Information document shall be issued to all residential units on an annual basis.

Apartments

The design of residential apartment units shall provide sufficient internal kitchen space for the storage of up to 10kg of general domestic waste, green recyclable waste and organic waste. Each apartment / unit shall include waste storage bins which will be of such a size that will allow their easy manual handling to be brought to the communal waste storage areas.

It shall be the responsibility of the Facilities Management Company to ensure that appropriate signage is provided in each apartment lobby/entrance hall notifying apartment residents of their obligations to recycle domestic waste items in accordance with the requirements of the contracted Waste Collection contractor and to inform residents of the location of the local Coolmine Industrial Estate Recycling Centre.

It shall be the responsibility of the Facilities Management Company to ensure that all domestic waste generated by apartment residents is managed to ensure correct storage prior to collection by an appropriately waste permitted waste collection company on a weekly basis.

Common Waste Storage Areas

The 5 No residential apartment blocks shall be served by common waste storage areas and shall include clearly visible guidelines on the appropriate segregation of different waste types.

Signage to inform residents indicating the location of the local Coolmine Industrial Estate Recycling Centre and the nature of waste materials that can be brought and deposited there.

Signage to inform residents of the closest Bring-Bank to the development which are located at Elm Green Golf Club. This Bring-Bank can accept waste glass, cans and clothing.

Signage to inform residents of their obligations to reduce waste, segregate waste within the home and dispose of waste in the correct bin will be clearly posted within the waste storage area.

All waste storage bins shall be clearly labelled with exactly what type of waste materials may be deposited within them.

The communal waste storage area shall be designed to include the following aspects:

- A defined pedestrian route shall be marked from the apartment buildings to the waste storage area.
- A non-slip surface shall be provided within the waste storage area.
- The waste storage area shall be of a block construction with a roof.
- The waste storage shall be passively ventilated.
- The waste storage area shall be fitted with sensor lighting.
- The waste storage area shall be fitted with CCTV cameras and associated signage.
- The waste storage area shall be designed to provide safe access from the apartment units by mobility impaired persons.
- A dedicated and clearly labelled area shall be provided in which mobility impaired persons may place wastes into receptacles at a lower level which will be subsequently transferred to the bulk storage bins on a daily basis by the Facilities Management Company.
- The waste storage area shall include ground drainage to allow for its regular cleaning and disinfection.
- The Facilities Management Company shall engage a mobile bin cleaning service provider to clean waste bins on a monthly basis.
- Sufficient domestic waste storage areas shall be provided throughout the development.
- Each communal waste storage area shall contain a brown organic waste bulk bin. Appropriate signage shall be placed on all brown bins informing residents of the exact nature of organic waste that can be placed in the bin. Signage will also state that all organic waste must be placed within biodegradable bags before placing in the bulk bin.
- Each communal waste storage area shall contain a biodegradable waste bag dispenser which will facilitate and encourage residents of apartments and duplexes to separately segregate food and organic waste within their apartments in a dedicated bin.

The Facilities Management Company shall conduct daily inspections of the waste storage areas and shall sign a daily check list which shall be displayed within the area.

The Facilities Management Company shall ensure that an adequate supply of biodegradable organic waste bags are in place at all times.

It shall be the responsibility of the Facilities Management Company to maintain and ensure the cleanliness of all waste storage areas to prevent odours and the attraction of vermin.

The Facilities Management Company shall engage a specialist cleaning contractor on a quarterly basis to clean and sterilise all communal waste storage areas.

It is expected that a single Waste Collection contractor shall be engaged to remove all mixed domestic waste and recyclable wastes from the waste storage areas and from individual houses on a weekly basis. The name of the waste collection contractor(s) once appointed shall be forwarded to the Environment Department of Fingal County Council.

Waste Management & Record Keeping

The Facilities Management Company shall maintain a weekly register detailing the quantities and breakdown of general mixed domestic waste, recyclable waste and organic waste wastes removed from the development. Supporting documentation shall be provided by the Waste Collection Contractor on a monthly basis. This will allow for waste recycling targets to be tracked to achieve the 50% recycling target.

The Facilities Management Company shall prepare an annual information report for all residential units detailing the quantities and waste types generated by the development for the previous year. The report shall include reminder information on the correct segregation at source procedures and the correct placement of wastes in the waste storage area. Other aspects of ongoing waste management continuous improvement shall also be stated. This annual report shall also be submitted to Fingal County Council's Environment Department.

Annual Bulky Waste & WEEE Collections

The Facilities Management Company shall provide a bulky waste and WEEE collection and transport service to the closest recycling centres on an annual basis which will allow residents to have bulky items such as appliances and furniture removed from their houses and apartments and transported to a licenced facility. This initiative will also reduce the potential for illegal waste collections and fly-tipping in the local area.

Domestic kitchen 3 bin system



Typical Communal waste storage area



4.0 WASTE TYPES & QUANTITIES

Basement level and over-ground communal waste storage areas are proposed for apartment blocks with associated over-ground bin collection areas.

The 2016 EPA Publication, *National Waste Prevention Programme, 2015 Annual Report*, states,

“The household waste per person in Ireland has been decreasing over the period 2006 to 2012 from 470 kg/person in 2006 to 344 kg/person in 2012. This indicates success in national campaigns and awareness as regards waste minimisation – though effects of reduced consumption are also likely to have contributed. In addition, it suggests an economy and society that are improving the efficiency of consumption patterns with respect to waste generation.”

A value of 0.942Kg of waste generated per person per day has been therefore assumed for the purposes of this report to estimate the volume of waste to be generated at the proposed fully occupied residential development will be c. 24 m³/week.

5.0 COMMUNAL WASTE STORAGE AREA DESIGN

Each of the 5 No. apartment blocks shall have a dedicated communal bin storage area which shall be of sufficient size to house 4 No. 1100 litre wheelie bins.

Blocks A & B shall have externally located communal waste storage areas and Blocks C, D & E shall have basement level waste storage areas.

The dimensions of standard 1100 litre bin are:

Width (mm)	1360
Depth (mm)	1080
Height (mm)	1455
Floor Area per bin (m ²)	1.5

To allow free access to the bins and provide sufficient space for their movement, the required bin store area = bin floor area x 1.5

Table 1 Bin Store Area Requirements

Block	Green Bin#	Brown Bin#	Grey Bin#	Total Bin Area (m²)
A	2	2	2	14
B	2	2	2	14
C	3	2	2	16
D	2	1	1	9
E	2	2	2	14

6.0 WASTE COLLECTION STRATEGY

All communal waste bins shall be brought from the basement level communal bin areas to the designated bin collection areas within the development at road-level by the Facilities Management staff. Emptied bins shall be returned to the bin storage areas following collection.

7.0 WASTE MANAGEMENT AT THE CRECHE

Waste generated by the Creche facility shall be managed by the operators of the Creche who shall engage a commercial waste contractor to collect waste generated.

8.0 CONCLUSIONS

The proposed residential development at Carpenterstown Road, Castleknock shall be designed and managed to provide residents with the required waste management infrastructure to minimise the generation of un-segregated domestic waste and maximise the potential for segregating and recycling domestic waste fractions at source.

The **Objective** of this Waste Management Plan is to maximise the quantity of waste recycled by residents by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information services to the residents of the development.

The **Goal** of this Waste Management Plan is to achieve a residential recycling rate of 50% of managed municipal waste by 2021 (and future targets in subsequent Regional Waste Management Plans).

Residents will be provided with waste recycling and proper waste disposal information by the site's Facility Management Company who will be responsible for providing clean, safe and mobility impaired accessible communal waste storage areas.

The Facility Management Company shall maintain a register of all waste volumes and types collected from the development each year including a break-down of recyclable waste and where necessary, shall introduce initiatives to further encourage residents to maximise waste segregation at source and recycling. They shall also provide an annual bulky waste and WEEE collection service for all residents.

The development shall be designed to provide adequately sized mobility impaired waste storage areas. This will promote the appropriate segregation at source of domestic generated waste from all residential units at the development. Communal waste bin storage areas shall include appropriate signage and information on the correct disposal and recycling of wastes.

The Facility Management Company shall prepare an annual report for the Local Authority and residents on the quantities of waste generated within the development to demonstrate how waste reduction and recycling targets are being achieved with regard to the targets defined in *The Eastern-Midlands Region Waste Management Plan 2015-2021*.