

**OPERATIONAL PHASE
WASTE MANAGEMENT PLAN**

**RELATING TO A PROPOSED
STRATEGIC HOUSING DEVELOPMENT**

AT

BELMOUNT, NAVAN, CO. MEATH

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Ian Byrne MSc, MIOA, Dip Environmental & Planning Law

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1.0 INTRODUCTION

This document presents the Operational Phase Waste Management Plan (OWMP) for the control, management and monitoring of waste associated with a proposed Strategic Housing Development (SHD) at Belmont, Navan, Co. Meath.

The proposal relates to a residential development of 544 no. dwellings on a site of c. 15.1 hectares comprising 260 no. houses (18 no. 2 bed, 207 no. 3 bed & 35 no. 4 bed) and 198 no. apartments (46 no. 1 bed, 152 no 2 bed), 30 no. duplex apartments (15 no. 2 bed & 15 no. 3 bed), and 56 no. dwellings in corner blocks (16 no. 1 bed, 24 no. 2 bed & 16 no. 3 bed) as well as the provision of two crèches (ground floor of apartment building [c. 195 sq. m] and single storey creche in housing area [c. 443 sq. m]) Open Space of c. 2.63 hectares including playground areas; all ancillary landscape works with public lighting, planting and boundary treatments including regrading/re-profiling of site where required as well as provision of cycle paths; Provision of vehicular and pedestrian looped access through the site from 3 no. junctions located on Academy Street as well as pedestrian connection in south east of site to Dublin Road and upgrade works to junction onto the Dublin Road; along with 875 no. car parking spaces and 516 cycle spaces and 4 no. car sharing spaces; Surface water attenuation measures and underground attenuation systems as well as all ancillary site development works (reprofiling of site as required) as well as connection to existing public water supply and drainage services. All site development and landscape works.

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.

Meath County Council's Development Plan 2013 – 2019 Waste Management Policy and Objectives:

The Operational Waste Management Plan has been prepared in accordance with policy and objective of the Meath County Development Plan 2013 – 2019 as detailed below:

WM OBJ 7 – To promote the implementation of Waste Management Activities in accordance with “Best Practice” and national policy.

2.0 WASTE MANAGEMENT PLAN – OPERATIONAL PHASE

The Operational 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 2020
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill

Key Aspects of the OWMP 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.
- 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

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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.

Houses

The design of residential houses shall provide sufficient internal kitchen space for the storage of up to 10kg of general domestic waste, green recyclable waste and organic waste.

Individual houses shall have a single grey mixed municipal waste 110 litre bin, a green 110 litre recyclable waste bin and a brown 110 litre organic waste bin which shall be stored within the curtilage of each house. Residential houses shall be served by private waste collection contractors.

Duplex Units

The design of the Duplex Units shall provide sufficient internal kitchen space for the storage of up to 10kg of general domestic waste, green recyclable waste and organic waste.

The Duplex units shall have a single grey mixed municipal waste 110 litre bin, a green 110 litre recyclable waste bin and a brown 110 litre organic waste bin which shall be stored to the front of each unit. Duplex units shall be served by private waste collection contractors.

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 Navan civic amenity recycling centres.

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.

Domestic kitchen 3 bin system



Common Waste Storage Areas

The 5 no. apartment Blocks A to E shall be served by screened ground level communal waste storage areas and shall include clearly visible guidelines on the appropriate segregation of different waste types.

Signage shall be posted within the waste storage areas to inform residents indicating the location of the local Navan based civic amenity recycling centres and the nature of waste materials that can be brought and deposited at them.

Signage shall be posted within the waste storage areas 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 areas 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 and student accommodation 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 regular 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.

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 on a weekly basis. The name of the waste collection contractor(s) once appointed shall be forwarded to the Environment Department of Meath County Council.

Common Waste Storage Area



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 Meath 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.

4.0 WASTE QUANTITIES GENERATED

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 residential development.

The total weekly domestic waste generated by the fully operational development is calculated to be 94m³/week with a breakdown of its composition presented in Table 1 below.

The total weekly commercial waste generated by the 2 cheche units is calculated to be 1m³/week.

Table 1 Weekly waste composition

Waste Type	% Waste	Kg/day	m3/day	kg/week
Organic waste	30.6	2361	3.92	16525
Paper	12.5	964	4.38	6750
Cardboard	3.6	278	1.30	1944
Composites	1	77	0.29	540
Textiles	15.5	1196	11.11	8371
Plastics	13.6	1049	26.13	7344
Glass	3.4	262	0.32	1836
Metals	3.1	239	2.69	1674
Wood	1.2	93	1.04	648
Hazardous municipal waste	0.9	69	0.26	486
Unclassified combustables	1.4	108	0.40	756
Unclassified incombustables	1.2	93	0.35	648
Fines	11.7	903	3.37	6318
Bulky Waste & WEEE	0.3	23	0.09	162
Totals	100	7715	56	54004

5.0 COMMUNAL WASTE STORAGE AREA DESIGN

Each of the 5 No. apartment blocks shall have a dedicated external communal bin storage area as defined in Table 2 below.

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 2 Bin Store Area Requirements

Block	Green Bin#	Brown Bin#	Grey Bin#	Total Bin Area (m ²)
A	2	2	3	16
B	3	2	4	20
C	1	1	2	19
D	1	1	2	9
E	1	1	2	9

6.0 WASTE COLLECTION STRATEGY

All communal waste bins shall be brought from the communal bin areas to the designated bin collection areas at road side locations throughout the development by the Facilities Management staff. Emptied bins shall be returned to the bin stores.

7.0 WASTE MANAGEMENT AT THE CRECHE'S

Waste generated by the Creche facilities shall be stored within the curtilage of the building and shall be managed by the operators of the Creche's who shall engage a commercial waste contractor to collect waste generated.

8.0 CONCLUSIONS

The proposed residential development at Belmont 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.

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 2020 (and future targets in subsequent Regional Waste Management Plans).

Apartment and Duplex residents will be provided with waste recycling and waste disposal information by the development's Facility Management Company who will be responsible for providing clean, safe and mobility impaired accessible communal waste storage areas for the apartment blocks.

House and duplex residents shall engage private waste collection contractors who provide a 3-bin waste collection service.

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 adequate domestic waste storage areas for each apartment blocks. 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 be designed in a manner to ensure that appropriate signage for the correct disposal and recycling of waste is available for residents.

The Facility Management Company shall prepare an annual report for the Local Authority and residents of the development 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*.