

**OPERATIONAL
WASTE MANAGEMENT PLAN**

FOR

**CORNEL LIVING LIMITED
RIVERSIDE ONE
SIR JOHN ROGERSON'S QUAY
DUBLIN 2**

RELATING TO A PROPOSED

RESIDENTIAL DEVELOPMENT

AT

**LANDS AT CORNELSCOURT VILLAGE, OLD BRAY ROAD, CORNELSCOURT,
DUBLIN 18**

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Table of Contents	Page
1.0 Introduction	2
2.0 Operational Phase Waste Management Plan	3
3.0 Residential Units Domestic Waste Management	5
4.0 Apartment & Houses Communal Waste Storage Ares	6
5.0 Facility Management Company waste management responsibilities	8
6.0 Waste Management in residential amenity spaces	9
7.0 Waste Management at Creche	9
8.0 Waste Management at Café/Retail Unit	9
9.0 Waste types and quantities generated	10
10.0 Communal waste storage area design	11
11.0 Waste Collection Strategy	11
12.0 Conclusions	13
Appendix I Location of communal bin stores and bin collection point	
Appendix II Waste collection vehicle dimensions and turning	

1.0 INTRODUCTION

This document presents the Operational Waste Management Plan (OWMP) for the control, management and monitoring of waste associated with a proposed residential development on lands at Cornelscourt Village, Dublin 18.

The proposed residential development comprises 412 no. apartment units (consisting of 294 no. one-bed apartments, 111 no. two-bed apartments, and 7 no. three-bed apartment units) and 7 no. three-bed houses. The proposed apartments are arranged in 5 no. Blocks which range in height from 4 no. storeys to 12 no. storeys over basement/podium level. The proposed houses are two storey in height. In addition, the proposed development provides a childcare facility (approximately 258sqm) with capacity for in the order of 50-60 children to serve the needs of the proposed development. A café/retail unit is proposed fronting onto the Old Bray Road (total 264sqm GFA).

The **Objective of this Waste Management Plan** for the operation of the development is to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, and to provide 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 Operational 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 development's 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 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.*

Relevant Waste Policies as detailed in the *Dun Laoghaire Rathdown County Development Plan 2016 – 2022* are as follows:

Policy EI12 Waste Management Strategy

It is Council policy to conform to the EU and National waste hierarchy as follows:

- waste prevention
- minimisation
- re-use
- recycling
- recovery
- disposal

Policy EI13 Waste Plans

It is Council policy to publish plans for the collection, treatment, handling and disposal of waste in accordance with the provisions of the Waste Management Act 1996 (as amended) and the Protection of the Environment Act 2003 (as amended).

Policy EI14 Private Waste Companies

It is Council policy to ensure that all waste that is disposed of by private waste companies is done so in compliance with the requirements of the EPA and the Waste Management Legislation and in accordance with the Planning Code.

Policy EI15 Waste Prevention and Reduction

It is Council policy to promote the prevention and reduction of waste and to co-operate with industry and other agencies in viable schemes to achieve this.

Policy EI16 Waste Re-use and Re-cycling

It is Council policy to promote the increased re-use and re-cycling of materials from all waste streams. The Council will co-ordinate with other agencies in viable schemes for the extraction of useful materials from refuse for re-use or re-cycling and will adopt the

National Targets as stated in The Eastern-Midlands Region Waste Management Plan 2015-2021.

This OWMP has been prepared with regard to *DLRCC's Guidance Notes for Waste Management in Residential and Commercial Developments, Feb 2020.*

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 residential houses shall have sufficient space for the storage of a 3-bin waste system within the curtilage of the house either to the front or the rear.
- 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

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 and with consideration of DLRCC's domestic waste reduction and segregation at source requirements.

The houses and apartments which will include a 3-bin waste segregation at source systems, 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 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.

3.1 Waste Segregation in 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.

Domestic waste generated by residents of the housing aspect of the development shall be stored in dedicated communal bulk waste bin stores located adjacent to the houses.

3.2 Waste Segregation in 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.

Domestic kitchen 3 bin systems to segregate waste at source



4.0 APARTMENTS & HOUSES COMMUNAL WASTE STORAGE AREAS

The development shall be served by communal waste storage areas for apartments and separately for houses and shall include clearly visible guidelines on the appropriate segregation of different waste types.

Signage shall be installed to inform residents indicating the location of the local can and glass recycling banks and clothing banks. This will encourage to bring these items for recycling themselves.

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 areas shall be passively / mechanically 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 weekly 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 as required.
- 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.

Image of an Apartment Basement Communal waste storage area



A battery box and a WEEE Bin shall also be provided in the communal waste storage areas, an example of which is shown in the following image. This shall be managed by a specialist waste contractor who will be responsible for its routine collection.

WEEE RECYCLING CAGE

Available **FREE** for small weee collections

Portable and mobile unit

Can be secured in-doors

FREE collection when full

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RECYCLE FOR GOOD

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email operations@weeireland.ie
or visit www.weeireland.ie

5.0 WASTE MANAGEMENT DUTIES OF THE FACILITY MANAGEMENT COMPANY

The Facilities Management Company shall conduct at least twice weekly inspections of the waste storage areas and shall sign a 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 to clean and sterilise all communal waste storage areas.

Waste Collection Contractor

The Facilities Management Company shall appoint a Waste Collection contractor capable of collecting Grey (mixed waste bins), Green (dry recyclable bins) and Brown (organic waste bins) from the waste storage areas at a minimum of a weekly basis. The name of the waste collection contractor once appointed shall be forwarded to the Environment Department of DLRCC.

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 Dun Laoghaire Rathdown County Council's Environment Department.

Annual Bulky Waste & WEEE Collections

The Facilities Management Company shall provide a bulky waste 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.

6.0 WASTE MANAGEMENT IN RESIDENT AMENITY AREAS

The Facility Management Company shall be responsible for ensuring that external areas and the internal residential amenity spaces are maintained and litter free. Recyclable and non-recyclable waste bins shall be installed in these areas and shall be maintained by the Facility Management Company.

The internal and external residential amenity spaces within the development will include 3-bin waste segregation systems.

Colour coded and clearly labelled waste bins for plastics, paper & cardboard, organic materials and non-recyclable general waste shall be installed in communal areas/rooms for easy and clear segregation by residents, an example of which is shown below.

Image of internal and external communal space waste segregation bin system



7.0 CRECHE WASTE MANAGEMENT

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

Wastes from the creche shall be stored in 4 no. commercial waste bins within the curtilage of the premises and shall be segregated into grey (mixed waste), green (dry recyclable), and brown (organic waste).

8.0 CAFÉ/RETAIL UNIT WASTE MANAGEMENT

Waste generated by the café/retail unit shall be managed by the operators of the unit who shall engage a commercial waste contractor to collect waste generated.

Wastes from the retail and café units shall be stored within a dedicated, separate and lockable commercial waste area within the basement bin store and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste.

9.0 GENERATED WASTE TYPES & QUANTITIES

The most recent EPA Waste statistics (2018) on household waste generation states 315kg is produced per person per year.

A value of 0.863Kg 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 development will be c. 950Kg/day, 6651Kg/week or 39m³/week s detailed in Table 1.

Table 1 Residential Waste Types per day/week

Waste Type	% Waste	Kg/week	Kg/day
Organic waste	30.6	2035	291
Paper	12.5	831	119
Cardboard	3.6	239	34
Composites	1	67	10
Textiles	15.5	1031	147
Plastics	13.6	905	129
Glass	3.4	226	32
Metals	3.1	206	29
Wood	1.2	80	11
Hazardous municipal waste	0.9	60	9
Unclassified combustables	1.4	93	13
Unclassified incombustables	1.2	80	11
Fines	11.7	778	111
Bulky Waste & WEEE	0.3	20	3
<i>Totals</i>	<i>100</i>	<i>6651</i>	<i>950</i>

10.0 COMMUNAL WASTE STORAGE AREA DESIGN

The development shall include communal bin storage areas for all units.

The dimensions of standard 1100 litre bin are:

Width (mm)	1.4
Depth (mm)	1.2
Height (mm)	1.5
Floor Area per bin (m ²)	1.7

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 Communal Residential Waste Bin Store Area Minimum Requirements

Residential Block Ref.	Minimum Bin Storage Area (m²)
A	27
B	27
C	20
D + Houses	27
E	11
<i>Total Domestic Waste Storage Area</i>	<i>112</i>

Note The design of the development's Bin Stores areas will meet the minimum area requirements

Table 3 Non-domestic Waste Bin Store Area Minimum Requirements

Non-Domestic Waste	Minimum Bin Storage Area (m²)
Retail	10
Resident Facilities	8
Creche	10
<i>Total Non-Domestic Waste Storage Area</i>	<i>28</i>

Note The design of the development's Bin Stores areas will meet the minimum area requirements

11.0 WASTE COLLECTION STRATEGY

All communal waste bins associated with the apartments shall be brought from the communal bin storage areas to the designated demarcated bin collection area within the development at road-level (as shown in Appendix I) by the Facilities Management staff of by the Waste Collection Contractor. Emptied bins shall be immediately returned to the bin storage areas following collection. Waste bins shall be transported to and from the collection point by a caddie vehicle to which the waste bins will be attached as described in the image below.

Table 4 Bin Collection Point

Non-Domestic Waste	Bin Collection Point Area (m²)
Residential	29
Resident Amenities	2
Creche	3
Café/Retail Unit	3
<i>Total Bin Collection Area</i>	<i>37</i>

Image of bulk bin transport from bin stores to collection point



12.0 CONCLUSIONS

The proposed residential development at Cornelscourt shall be designed and managed to provide residents with the required waste management infrastructure to minimise the generation of un-segregated domestic waste and to 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 2021 (and future targets in subsequent Regional Waste Management Plans).

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.

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 and segregation space for each residential unit as a 3-bin kitchen system. 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 information and 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*.

Appendix I

House communal bin stores



Apartment Bin Stores



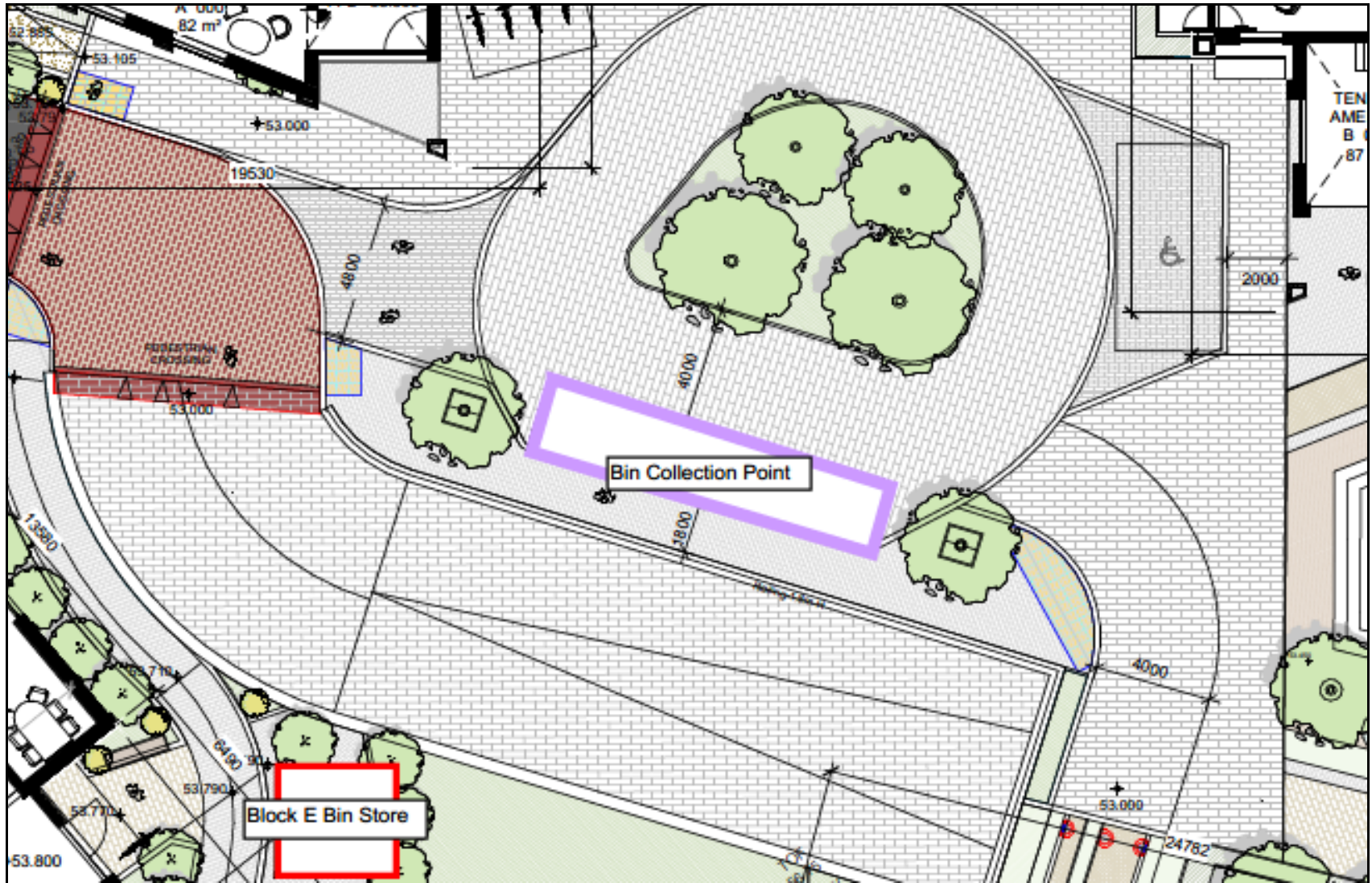
Non-Domestic/Commercial Bin Store



Bin Collection Point







Appendix II

Bin collection truck dimensions and turning area

