

**OPERATIONAL PHASE
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	4
4.0 Waste Quantities	7
5.0 Communal waste storage area design	9
6.0 Waste Collection Strategy	10
7.0 Waste Management at the Café / Restaurant	10
8.0 Waste Management at the Office Space	10
9.0 Waste Management at the Residential Amenity Space	10
10.0 Conclusions	11

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 residential development on lands at Cornelscourt Village, Old Bray Road, Cornelscourt, Dublin 18.

The proposed development shall provide for the construction of a new residential development of 468 no. units in the form of 452 no. apartment units (41 no. studio apartment units, 257 no. 1 bed apartment units, 136 no. 2 bed apartment units; and 18 no. 3 bed apartment units) and 16 no. house units (10 no. 3 bed semi-detached house units and 6 no. 1 bed bungalow units). A café / restaurant of c. 140 sq m; office space of 149 sq m; concierge of c. 149 sq m and central residential tenant amenity space of c. 458 sq m is also proposed.

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 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 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.

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*.

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 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 contractor.

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 closest civic amenity centres (Ballyogan Road Recycling Park) and the nature of waste material that can be accepted.

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.

Apartments - Common Waste Storage Areas

The 8 No residential apartment blocks shall be served by individual common waste storage areas at basement level and shall include clearly visible guidelines on the appropriate segregation of different waste types.

Signage to inform residents indicating the location of the local Ballyogan Road Recycling Park and the nature of waste materials that can be brought and deposited there.

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 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 areas shall be located in the basement of each apartment block.
- The waste storage shall be 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 as required to minimise odours.
- Each communal waste storage area shall contain brown organic waste bulk bins. 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 weekly inspections of the waste storage areas and shall sign a weekly check list (generally on bin collection day) 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.

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 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

The 2018 EPA Publication, *National Waste Prevention Programme, 2016 Annual Report*, states that people generate 580Kg of domestic waste per year (1.58Kg of domestic waste per day).

A value of 1.58Kg 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 47m³/week.

Domestic kitchen 3 bin system



Communal waste storage area



5.0 COMMUNAL WASTE STORAGE AREA DESIGN

Each of the 8 No. apartment blocks shall have a dedicated communal bin storage area located at basement level.

The waste storage areas shall be located in the basement of each apartment block.

The dimensions of standard 1100 litre bin are:

Width (mm) 1360

Depth (mm) 1080

Height (mm) 1455

Floor Area per bin (m²) 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 per Apartment Block

Block Ref.	Green Bin#	Brown Bin#	Grey Bin#	Total Bin Area (m ²)
A	4	4	5	27
B	3	3	4	23
C	2	2	3	16
D	2	1	2	11
E	1	1	2	9
F	2	2	3	16
G	1	1	1	7
H	1	1	1	7

6.0 WASTE COLLECTION STRATEGY

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

7.0 WASTE MANAGEMENT AT THE CAFÉ / RESTAURANT

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

Wastes from the café/restaurant shall be stored within the curtilage of the premises and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste.

8.0 WASTE MANAGEMENT AT THE OFFICE SPACE

Waste generated by the office space shall be managed by the tenants of the office who shall engage a commercial waste contractor to collect waste generated.

Wastes from the office shall be stored within the curtilage of the premises and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste.

9.0 WASTE MANAGEMENT AT THE RESIDENTIAL AMENITY SPACE

Waste generated at the residential amenity space shall be managed by the facility's management company who shall collect and dispose of waste generated in the communal waste bins storage areas.

10.0 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 for each of the 8 no. apartment blocks.

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*.