



**OPERATIONAL  
WASTE  
MANAGEMENT  
PLAN**

PRESENTED TO  
**Land Development Agency**  
**Clongriffin Blocks 5 & 6**

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## DOCUMENT CONTROL SHEET

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## TABLE OF CONTENTS

<b>REPORT LIMITATIONS .....</b>	<b>II</b>
<b>LIST OF TABLES .....</b>	<b>IV</b>
<b>LIST OF FIGURES .....</b>	<b>IV</b>
<b>1 INTRODUCTION .....</b>	<b>1</b>
<b>2 OVERVIEW OF WASTE MANAGEMENT IN IRELAND .....</b>	<b>3</b>
2.1 EUROPEAN AND IRISH LEGAL CONTEXT .....	3
2.2 WASTE POLICY IN IRELAND .....	4
2.3 NATIONAL WASTE MANAGEMENT PLAN & LOCAL BYE-LAWS .....	5
<b>3 DESCRIPTION OF THE PROJECT .....</b>	<b>7</b>
3.1 DESCRIPTION OF THE DEVELOPMENT .....	7
3.2 PROXIMITY OF THE DEVELOPMENT TO RECYCLING FACILITIES .....	7
<b>4 WASTE GENERATION AND STORAGE .....</b>	<b>9</b>
4.1 WASTE TYPES ARISING .....	9
4.2 LIST OF WASTE CODES .....	9
4.3 WASTE STORAGE CAPACITY REQUIREMENTS - RESIDENTIAL .....	10
4.4 WASTE STORAGE ARRANGEMENTS - RESIDENTIAL .....	14
4.5 WASTE STORAGE AREAS - RESIDENTIAL .....	15
<b>4.6 WASTE STORAGE CAPACITY REQUIREMENTS – CRÈCHE (BLOCK 6) .....</b>	<b>18</b>
<b>4.7 WASTE STORAGE CAPACITY REQUIREMENTS - COMMUNITY, ARTS AND CULTURAL ...</b>	<b>18</b>
4.7.1 Block 5 – Community, Arts and Cultural .....	18
4.7.2 Block 6 – Community, Arts and Cultural .....	19
4.8 OTHER WASTE MATERIALS .....	19
4.9 RECYCLING RATES & TARGETS .....	19
4.10 BIN WEIGHT LIMITS & DIMENSIONS .....	20
<b>5 WASTE COLLECTION .....</b>	<b>21</b>
<b>6 MANAGEMENT SYSTEM .....</b>	<b>24</b>
6.1 INFORMATION AND COMMUNICATION .....	24
6.2 WASTE MANAGEMENT CONTRACTS .....	24
<b>7 CONCLUSIONS .....</b>	<b>25</b>
<b>8 REFERENCES .....</b>	<b>26</b>
<i>Head Office .....</i>	<i>1</i>
<i>South West Regional Office .....</i>	<i>1</i>
<i>South East Regional Office .....</i>	<i>1</i>

## LIST OF TABLES

Table 4-1 Expected Waste Types and List of Waste Codes .....	10
Table 4-2 Description and Number of Unit Types .....	10
Table 4-3 Calculations of Waste Arising.....	11
Table 4-4 Breakdown of Bin Numbers & Capacity for weekly Collection .....	12
Table 4-5 Breakdown of Waste Storage Capacity into Recyclable and Non-Recyclable .....	13

## LIST OF FIGURES

Figure 3-1 Bring Banks and Civic Amenity Recycling Centre Located in proximity to the Proposed Development (Source: Repak), site location identified with an orange star. ....	8
Figure 4-1 Location and Internal Layout of Residential Waste Storage Areas - Block 5 (Yellow) .....	16
Figure 4-2 Location and Internal Layout of Residential Waste Storage Areas - Block 6 (Yellow) .....	17
Figure 4-3 Internal Layout of Creche Waste Storage Area (Yellow) .....	18
Figure 5-1 Location of Waste Staging Areas Block 5 (Blue) .....	22
Figure 5-2 Location of Waste Staging Areas Block 6 (Blue) .....	23

# 1 INTRODUCTION

Enviroguide Consulting has produced this Operational Waste Management Plan (OWMP) at the request of Land Development Agency for a Residential Development located at Main Street, Clongriffin, Dublin 13.

A full project description is included in Section 3 of this report.

The OWMP 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 the 'Waste Management Act 1996, as amended', and associated Regulations including, 'Protection of the Environment Act 2003 as amended', 'Litter Pollution Act 1997 as amended', the 'Eastern-Midlands Region (EMR) Waste Management Plan 2015 – 2021' and 'Dublin City Council (Segregation, Storage and Presentation of Household and Commercial Waste) Bye-laws, 2018 as amended' (hereinafter referred to as 'the bye-laws').

At present, there are no specific guidelines issued by Dublin City Council for the preparation of OWMPs. Therefore, in preparing this document, consideration has been given to the requirements of national and regional waste policy, legislation, and other guidelines.

The plan will be subject to review if planning permission is granted and any material changes in the proposed operational strategy will be subject to agreement with Dublin City Council at project construction and operational stages.

This OWMP aims to provide a detailed plan for the storage, handling, collection, and transport of the wastes generated at the development in a manner that does not present a risk to human health or the environment, or a risk of common waste related nuisance such as litter or odour.

The OWMP is designed to ensure that waste arising from the operational phase of the project is managed to incentivise waste prevention and to encourage the segregation of waste so that it can be managed in accordance with the Waste Hierarchy. Diversion of waste from landfill and waste prevention will be the overarching philosophy adopted.



[https://environment.ec.europa.eu/topics/waste-and-recycling/waste-framework-directive\\_en](https://environment.ec.europa.eu/topics/waste-and-recycling/waste-framework-directive_en)

The plan estimates the type and quantity of waste to be generated from the Proposed Development during the operational phase and provides a strategy for managing the different waste streams.

This OWMP considers the requirements of national and regional waste policy, legislation, and other local authority guidelines. In addition, it takes account of the following guidance:

- *“Sustainable Urban Housing: Design Standards for New Apartments”, July 2023* and
- *BS 5906:2005 Waste management in buildings — Code of practice*
- *EPA Best Practice Guidelines for the preparation of resource & waste management plans for construction and demolition projects: <https://www.epa.ie/publications/circular-economy/resources/CDWasteGuidelines.pdf>*

## 2 OVERVIEW OF WASTE MANAGEMENT IN IRELAND

Operational Waste Management Plans are prepared to support planning applications in Ireland. The purpose of this Operational Waste Management Plan is to detail and plan how waste generated during the operational phase of the Proposed Development will be managed. This will include requirements for waste storage provisions, access to authorised waste collection and proximity to additional recycling facilities.

The Proposed Development is located in the Dublin City Council (DCC) planning district. In preparing this document, consideration has been given to the requirements of DCC Environment Department, national and regional waste policy, legislation, and other Local Authority Guidelines.

### 2.1 European and Irish Legal Context

Waste Legislation in Europe and the Republic of Ireland (hereinafter referred to as “Ireland”) is extensive and often complex.

The Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste) is a core component of waste regulations across Europe. The Waste Framework Directive (which was transposed into Irish law in 2011) ‘S.I. No. 126/2011 - European Communities (Waste Directive) Regulations 2011’, encourages the prevention, recycling, and processing of waste. The Waste Framework legislation establishes the legal structure for the prevention and management of waste in Ireland. It sets out a Waste Hierarchy which priorities waste prevention, preparation for re-use, recycling, and energy recovery. Waste disposal is the last resort and least favourable option. The Directive requires Member States to adopt waste management plans and waste prevention programmes. It also governs the reporting on waste generation, waste treatment, and capacity and sets down mandatory targets for waste diversion, collection, and treatment.

The new WFD (Directive (EU) 2018/851 of the European Parliament, amending Directive 2008/98/EC on waste) was approved by the EU in July 2018, and was transposed into Irish Law in July 2020. The new WFD forms part of the circular Economy Package adopted by the EU; it requires EU Member States to improve their waste management systems, to improve the efficiency of resource use, and to ensure that waste is valued as a resource.

In Ireland, the primary platform for waste legislation is the ‘Waste Management Act 1996, as amended’, and the ‘Protection of the Environment Act 2003, as amended’. ‘The Waste Management Act, as amended’, has been brought into effect by making a series of subordinate regulations, covering a range of specific ‘priority’ waste types such as food waste, waste electrical and electronic equipment, batteries etc. The Act has been further amended by enacting regulations, mainly the Waste Directive Regulations which addresses new EU environmental initiatives and strengthen areas where problems have arisen.

One of the guiding principles of European waste legislation, which has in turn been incorporated into the ‘Waste Management Act, as amended’, and subsequent Irish legislation, is the principle of “Duty of Care”. This implies that the waste producer is responsible for waste from the time it is generated until its legal disposal (including its method of disposal).



As it is not practical in most cases for the waste producer to physically transfer all waste from where it is produced to the final waste treatment destination, waste contractors will be employed to physically transport waste to the final waste destination. It is therefore imperative that residential development management companies undertake on-site management of waste in accordance with all legal requirements and employ appropriately authorised waste contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contractor handle, transport, and reuse/recover/recycle/dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

Each appointed Waste Contractor must hold a valid waste collection permit to transport waste which is issued by the National Waste Collection Permit Office (NWCPO). Waste treatment facilities must also be appropriately permitted (Waste Facility Permit or Certificate of Registration) or licensed by the Local Authority or Environmental Protection Agency to accept the waste. The Management Company appointed will be responsible for ensuring that all Waste Contractors hold the appropriate authorisations.

## 2.2 Waste Policy in Ireland

In addition to waste regulations, Ireland has adopted waste management policies. Waste management policy is adopted by the government and is detailed in a set of policy documents which have been produced since 1998:

- Waste Management: Changing Our Ways (1998)
- Preventing and Recycling Waste: Delivering Change (2002)
- Taking Stock & Moving Forward (2004)
- National Strategy on Biodegradable Waste Management (2006)
- A Resource Opportunity – Waste Management Policy in Ireland (2012)
- A Waste Action Plan for a Circular Economy (2020)
- Climate Action Plan (2024)

‘A Waste Action Plan for a Circular Economy: Ireland’s National Waste Policy 2020-2025’ was published by the Department of Communications, Climate Action, and Environment in September 2020. This policy sets out several important policy actions with the aim of transforming the current economic and waste system from linear to circular. These include the following actions:

- A shift towards a policy framework which rewards circularity and moves away from the waste of resources.
- Increased accountability of products that producers place on the market through levies on non-recyclable waste and the overuse of packaging.
- Targets for recycling (65% by 2035), food waste (reduced by 50% by 2030) and waste to landfill (no more than 10% by 2035).
- To support households, awareness and education measures will be strengthened; the waste collection industry will be encouraged to play a role in such measures.
- All Regional Waste Management Plans will be replaced with a National Waste Management Plan for a Circular Economy.

- A standardising of the colour coding of bins (Mixed Municipal Waste (MMW) / General Waste to be designated as a 'recovery' bin: colour black; Dry Mixed Recyclables (DMR) bin: colour green; Glass bin: colour blue, Organic (food) Waste bin to be designated as 'organic waste recycling bin': colour brown).

## 2.3 National Waste Management Plan & Local Bye-laws

The National Waste Management Plan for a Circular Economy 2024 -2030 sets out the framework for the prevention and management of waste across Ireland. This document is a statutory document underpinned by national and EU waste legislation.

The strategic vision of the Plan is to rethink the approach to managing waste, and to move towards a 'circular economy' approach where resources are reused or recycled as much as possible, and the overall generation of waste is minimised.

In order to achieve this vision, the Plan has set out a number of specific and measurable performance targets:

- Achieve a recycling rate of 55% by 2025, 60% by 2030 and 65% by 2035.
- Mitigate total waste growth to 0% growth per person over the life of the Plan (baseline for total waste generated per person per year is 2.7 tonnes based on NWCPO data).
- 6% aggregate reduction in all residual municipal waste by 2030 (including commercial and household) (Baseline 0.37 tonnes rMSW per person).
- Reduce contamination in municipal bins. This is measured as 'material compliance' which is the fraction of appropriate material placed in each of the residual, recyclable or food waste recycling bins.
  - A material compliance target of 90% in the dry recycling bin as a minimum standard.
  - A target of 10% per annum increase in material compliance in the residual bin is applied in this Plan. This represents a potential 90% material compliance rate by the end of 2030.

The relevant Priority Actions identified by the Plan in regard to the management of Municipal Household Waste are as follows:

- *"Maximise households on kerbside systems, standardise the identification of bins and promote items accepted for recycling using visual representation."*
- *"Identify appropriate segregated waste collection systems for apartments and mixed-use developments and support the waste industry in the implementation of these systems."*

The Dublin City Council (Segregation, Storage and Presentation of Household and Commercial Waste) Byelaws, 2018 (hereinafter referred to as ‘the bye-laws’) place some additional obligations in how waste is stored and managed at the development.

The bye-laws state that “household kerbside waste shall only be presented for collection in an appropriate waste container. The container shall not be over-loaded, and the lid shall be securely closed. No waste shall be presented on the top of the lid or adjacent to the waste container.”

A management company of an apartment complex shall ensure that “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” and “additional receptacles are provided for the segregation, storage and collection of food waste.”

Section 2.9(h) of the bye-laws state “adequate access and egress onto and from the premises by waste collection vehicles is maintained” for the collection of waste. This requirement has been considered when designing the development. Sufficient access and egress for waste collection vehicles will be provided.

This OWMP also takes into account the objectives of Chapter 9 of the Dublin City Development Plan 2022-2028:

**Objective SI29: Segregated Storage and Collection of Waste Streams**

To require new commercial and residential developments, to include adequate and easily accessible storage space that supports the separate collection of as many waste and recycling streams as possible, but at a minimum general domestic waste, dry recyclables and food waste as appropriate.

**Objective SI30: Waste Management in Apartment Schemes**

To require that the storage and collection of mixed dry recyclables, organic and residual waste materials within proposed apartment schemes have regard to the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities (or and any future updated versions of these guidelines produced during the lifetime of this plan).

### **3 DESCRIPTION OF THE PROJECT**

#### **3.1 Description of the Development**

The proposed development site is located on lands at Main Street, Clongriffin, Dublin 13.

The proposed development will consist of the construction of two Blocks ranging in height between 3- to 7-storeys to provide 408 no. apartments (comprising 180 x 1 bed; 226 x 2 bed and 2 x 3 bed units) together with ancillary car, bicycle and motorcycle parking provision. Ancillary communal amenity spaces are provided at podium level within the respective courtyards and at 4th floor roof terrace level.

At ground floor level provision is made for 1,209 sq.m Community / Arts and Cultural floorspace and a childcare facility of 413 sq.m (with an ancillary play area of 125 sq.m). Other facilities provided at ground floor level include refuse / bin stores; energy centre, plant rooms and integrated ESB substations and associated switch rooms. On-street loading bays are provided along Lake Street and Dargan Street.

Other works include the provision of road infrastructure and green infrastructure (in the form of a public open space / landscaped pocket park extending to 1,433 sq.m in area) together with street planting and public lighting throughout plus all associated engineering and site works (including underground services and utility connections) necessary to serve the proposed development.

The Operational Waste Management Plan addresses waste management for the development once it is operational i.e., post the construction phase.

#### **3.2 Proximity of the Development to Recycling Facilities**

The development site is located at Main Street, Clongriffin, Dublin 13. Figure 3-1 presents the proximity of the development site to local bring bank facilities. There is a large civic amenity centre in Coolock servicing the area, with numerous bring banks throughout the region for glass bottle collection.

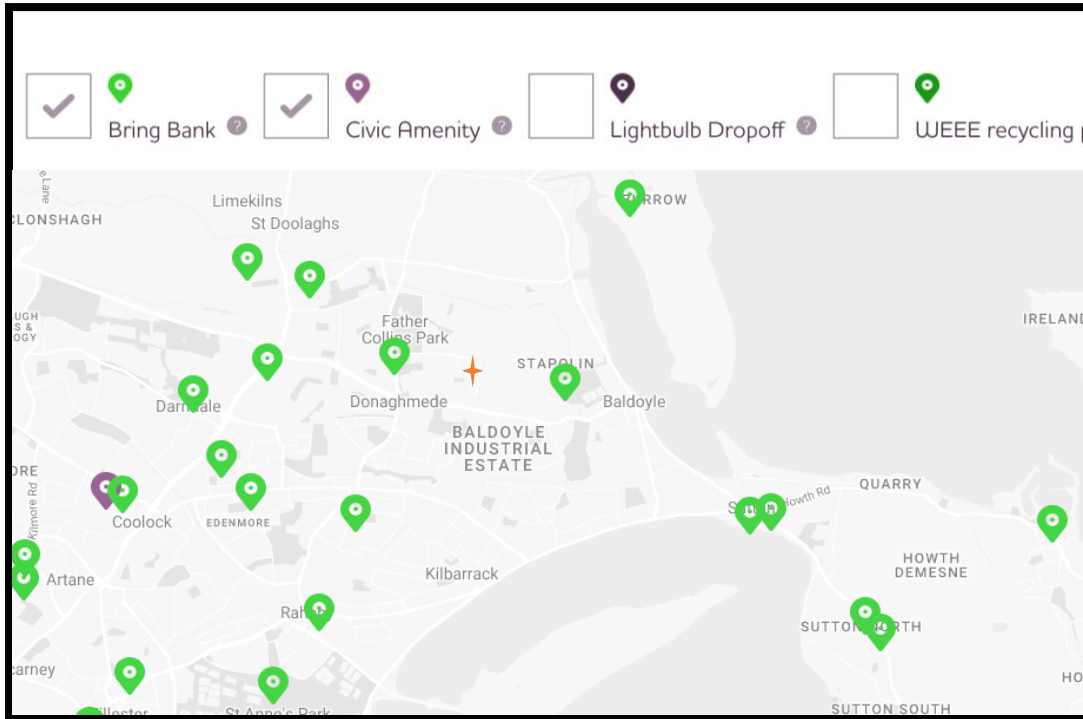


Figure 3-1 Bring Banks and Civic Amenity Recycling Centre Located in proximity to the Proposed Development (Source: Repak), site location identified with an orange star.

## 4 WASTE GENERATION AND STORAGE

### 4.1 Waste Types Arising

The predicted waste types that will be generated at the Proposed Developments residential properties include the following:

- i. Mixed Municipal Waste (MMW) / General Waste;
- ii. Dry Mixed Recyclables (DMR) - including cardboard, plastic packaging, aluminium cans, tins, paper, and Tetra Pak cartons;
- iii. Organic (food) Waste; and
- iv. Glass.

In addition to the typical waste materials that will be generated daily, there will be some additional waste types generated in small quantities that will need to be managed separately including:

- 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; and
- Waste oil - cooking oil.

### 4.2 List of Waste Codes

Correct classification of waste is the foundation for ensuring that the collection, transportation, storage, and treatment of waste is carried out in a manner that provides protection for the environment and human health and in compliance with legal requirements. In 1994, the *'European Waste Catalogue'* was published by the European Commission. In 2002, the EPA published a document titled the *'European Waste Catalogue and Hazardous Waste List'*. This document has been replaced by the EPA *'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous'* which became valid from the 1<sup>st</sup> of July 2018.

The waste classification system applies across the EU and is the basis for all national and international waste reporting obligations such as those associated with waste collection permits, certificates of registration, waste facility permits and EPA Waste and IED licences and EPA National Waste Database.

The EPA document *'Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous'* (EPA, 2018) consolidates the legislation and allows the generators of waste to classify the waste as hazardous or non-hazardous and in the process to assign the correct List of Waste entry.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) code (previously referred to as European Waste Code or EWC) for typical

waste materials expected to be generated during the operation of the Proposed Development are provided in Table 4-1.

Table 4-1 Expected Waste Types and List of Waste Codes

Waste Description	List of Waste Code
Mixed Municipal Waste	20 03 01
Dry Mixed Recyclables	20 03 01
Biodegradable Kitchen Waste	20 01 08
Glass	20 01 02
Bulky wastes	20 03 07
Waste electrical and electronic equipment*	20 01 35* 21 01 36
Batteries and accumulators*	20 01 33* 20 01 34
Textiles	20 01 11
Fluorescent tubes and other mercury containing waste*	20 01 21
Chemicals (solvents, pesticides, paints & adhesives, detergents, etc.)*	20 01 13/19/27-28/29-30
Plastic	20 01 39
Metals	20 01 40
Paper and Cardboard	20 01 01

\*Individual waste type may contain hazardous materials

### 4.3 Waste Storage Capacity Requirements - Residential

For the apartment buildings located in Blocks 5 and 6, it is necessary to calculate the required bin storage capacity based on the number of units and the number of bedrooms in each unit. The capacity requirements have been based on a scenario of full occupancy and collections of bins every week.

Table 4-2 Description and Number of Unit Types

	1 BED	2 BED	3 BED	Total
BLOCK 5	58	78	2	138
<b>Total</b>	<b>58</b>	<b>78</b>	<b>2</b>	<b>138</b>
BLOCK 6	122	148	0	270
<b>Total</b>	<b>122</b>	<b>148</b>	<b>0</b>	<b>270</b>

The British Standard BS5906:2005 *Waste management in buildings — Code of practice* provides guidance in respect of waste generation for domestic and commercial premises to calculate the storage, containment, and equipment requirements for effective waste management. Calculations provided in this British Standard document have been used to calculate the waste storage capacity requirements for the apartments in this Proposed Development. Table 4-2 details the Schedule of Accommodation for apartments.

The number of bedrooms is required to complete the calculations of waste volumes generated as per the *BS 5906:2005 Waste management in buildings — Code of practice*.

The calculation for typical weekly waste arisings and subsequent storage requirements for domestic dwellings is as follows:

$$\text{number of dwellings} \times \{(\text{volume arising per bedroom [70 L]} \times \text{average number of bedrooms}) + 30\}^a$$

<sup>a</sup> Based on average household occupancy.

Table 4-3 below includes the calculations of waste arising using the formula provided in the *BS 5906:2005 Waste management in buildings — Code of practice*. Table 4-4 details the number of bins required to service the volume of waste arisings. The volume arising per bedroom is assumed to be 70 litres (L) as per the calculation formula provided. An additional 30L is added onto every dwelling for each calculation. It is expected that this additional volume is to allow for sufficient storage capacity in periods of seasonal variations resulting in high waste generation.

Table 4-3 Calculations of Waste Arising

Block 5					
Type	No. of dwellings	Volume per Bedroom (70L)	No. of Bedrooms	Additional 30L	Total Litres /Unit/Week
1 Bed	58	70	1	30	5,800
2 Bed	78	70	2	30	13,260
3 Bed	2	70	3	30	480
	138		Total Litres		19,540
Total Weekly waste arising in Litres					19,540
Block 6					
Type	No. of dwellings	Volume per Bedroom (70L)	No. of Bedrooms	Additional 30L	Total Litres /Unit/Week
1 Bed	122	70	1	30	12,200
2 Bed	148	70	2	30	25,160
	270		Total Litres		37,360
Total Weekly waste arising in Litres					37,360



The calculations completed in Table 4-3 conclude that the typical weekly waste arising is 19,540L in Block 5 and 37,360L in Block 6.

Based on weekly waste collections for Block 5, it is anticipated that 16 no.1,100L bins and 17 no. 140L bins (or equivalent) will be required in the waste storage areas, as detailed in Table 4-4 below (6 no. 1,100L bins for Mixed Municipal Waste (MMW), 10 no. 1,100L bins for Dry Mixed Recyclables (DMR), 10 no. 140L bin for Organic (food) Waste, and 7 no. 140L bin for Glass). The percentage of recyclable and non-recyclable wastes are set out in Table 4-5.

Based on weekly waste collections for Block 6, it is anticipated that 30 no.1,100L bins and 33 no. 140L bins (or equivalent) will be required in the waste storage areas, as detailed in Table 4-4 below (11 no. 1,100L bins for Mixed Municipal Waste (MMW), 19 no. 1,100L bins for Dry Mixed Recyclables (DMR), 18 no. 140L bin for Organic (food) Waste, and 15 no. 140L bin for Glass). The percentage of recyclable and non-recyclable wastes are set out in Table 4-5.

*Table 4-4 Breakdown of Bin Numbers & Capacity for weekly Collection*

Block 5			
No. of Bins	Size of Bins	Total Litre Capacity/ Week (litres)	Waste Type
7	140	980	Glass
10	140	1,400	Organic (food) Waste
10	1100	11,000	Dry Mixed Recyclables (DMR)
6	1100	6,600	Mixed Municipal Waste (MMW)
<b>TOTAL</b>		<b>19,980</b>	
Block 6			
No. of Bins	Size of Bins	Total Litre Capacity/ Week (litres)	Waste Type
14	140	2,100	Glass
17	140	2,520	Organic (food) Waste
19	1100	20,900	Dry Mixed Recyclables (DMR)
11	1100	12,100	Mixed Municipal Waste (MMW)
<b>TOTAL</b>		<b>37,620</b>	

Table 4-5 Breakdown of Waste Storage Capacity into Recyclable and Non-Recyclable

		Waste Types to be Generated Block 5								Total Storage Volume Required per block (liters)
		Glass		Organic (food) Waste		Dry Mixed Recyclables (DMR)		Mixed Municipal Waste (MMW)		
Block ID	Total No. of Units	Bin Capacity (l)	No. of units required	Bin Capacity (l)	No. of units required	Bin Capacity (l)	No. of units required	Bin Capacity (l)	No. of units required	
Block 5	138	140	7	140	10	1,100	10	1,100	6	19,980
		980		1,400		11,000		6,600		19,980
% Of waste type		4.9%		7.0%		55.1%		33.0%		100.00%
		67%						33%		
		Waste Types to be Generated Block 6								Total Storage Volume Required per block (liters)
		Glass		Organic (food) Waste		Dry Mixed Recyclables (DMR)		Mixed Municipal Waste (MMW)		
Block ID	Total No. of Units	Bin Capacity (l)	No. of units required	Bin Capacity (l)	No. of units required	Bin Capacity (l)	No. of units required	Bin Capacity (l)	No. of units required	
Block 6	270	140	15	140	18	1,100	19	1,100	11	37,620
		2,100		2,520		20,900		12,100		37,620
% Of waste type		5.6%		6.7%		55.6%		32.2%		100.00%
		68%						32%		

The total capacity of the number of bins actually provided in Block 5 is 19,980L (or the equivalent of just over 18 no. 1100L wheeled bins), while the total capacity of the number of bins in Block 6 is 37,620L (or the equivalent of just over 34 no. 1100L wheeled bins). On this basis, the bin storage capacity comfortably allows for weekly collections.

#### **4.4 Waste Storage Arrangements - Residential**

A number of dedicated, shared Waste Storage Areas are provided below podium level to serve the apartment units. These Waste Storage Areas are centrally located to ensure security and ease of access for residents throughout the development.

Residents will be required to segregate waste into the following waste categories:

- Mixed Municipal Waste (MMW) / General Waste;
- Dry Mixed Recyclables (DMR) - includes cardboard, plastic packaging, aluminium cans, tins, paper, and Tetra Pak cartons;
- Organic (food) Waste; and
- Glass.

The layout and design of the apartments will ensure that there is adequate provision for the temporary storage of segregated materials prior to deposition in communal Waste Storage Areas. Adequate space is allocated in the kitchen area to accommodate a three-compartment bin for waste segregation at source. In-sink macerators will not be provided in the apartments.

The Management Company will be responsible for the provision of a leaflet to all new tenants encouraging good waste segregation and pictorial information detailing the waste streams that can be placed in each bin. In addition to this, clauses that support waste segregation targets will be included in relevant legal documentation e.g., tenancy agreements where possible.

A number of Waste Storage Areas have been allocated for the apartment residents at ground level. It will be the responsibility of the residents to bring their segregated waste to Waste Storage Areas and place into the appropriately labelled bins. Each bin will be clearly labelled to identify what wastes can and cannot be placed in the bin and labels will be pictorial. The route to the Waste Storage Areas, and the area itself, will be wheelchair accessible, adequately lit, and appropriately ventilated.

Residents will have secure access to the Waste Storage Areas (pin code or fob key). This will prevent unauthorised access to waste bins by the general public.

Any additional household wastes such as bulky waste, WEEE, batteries, textiles etc. must be brought by the apartment residents to a local recycling facility.

Access to a Waste Collection Service will be provided upon the first occupancy, irrespective of the occupancy levels of the new units.

## 4.5 Waste Storage Areas - Residential

The Department of Housing, Planning and Local Government published guidelines in July 2023 – “*Sustainable Urban Housing: Design Standards for New Apartments*”. These Guidelines detail the provisions that need to be made for the storage and collection of waste materials in apartment schemes. These guidelines have been considered when preparing the design of the Waste Storage Areas.

The Waste Storage Areas for this residential development are strategically located and will have the following provisions as minimum:

- i. **Access:** The Waste Storage Area will be accessible for the mobility impaired.
- ii. **Lighting:** The Waste Storage Area will have adequate lighting. Energy saving lighting operated on sensors is planned. This is to ensure that waste will not be tipped in dimly lit areas and that the areas do not pose as a safety risk.
- iii. **Spillage & drainage:** A non-slip surface will be provided to prevent slips or falls, and the Waste Storage Area will have adequate drainage which will be directed to foul sewer.
- iv. **Security:** The Waste Storage Area will have restricted access and will be accessible by tenants and residents only. This is to prevent unauthorised access to the bins by the general public.
- v. **Screening:** The Waste Storage Area will be appropriately screened to ensure it is not visible to the general public.
- vi. **Ventilation:** A natural vent will be provided. All vents will be ducted to an external opening so that the Waste Storage Area will not cause an odour nuisance, taking into account the avoidance of nuisance for habitable rooms nearby.
- vii. **Signage:** Pictorial signage will be provided to show residents and tenants what wastes can and cannot be placed in each bin. All signage will be provided by the management company appointed.
- viii. **Environmental nuisance:** The Waste Storage Area will be in an enclosed area to avoid environmental nuisances such as litter. Regular waste collections will be required from the waste collection providers to prevent any other environmental nuisances such as odour or vermin. The management company appointed will be required to ensure there is adequate vermin control in place.
- ix. **Vehicular Access:** The development has been designed to ensure that waste collection vehicles can collect the bins from the on-street staging areas. Section 5 details the waste collection arrangements.

Apartments are provided with shared Waste Storage Areas containing a four-bin wheelie bin system. The location and the internal layouts of the shared Waste Storage Areas are detailed in Figure 4-1 for Block 5 and Figure 4-2 for Block 6 below.



Figure 4-1 Location and Internal Layout of Residential Waste Storage Areas - Block 5 (Yellow)

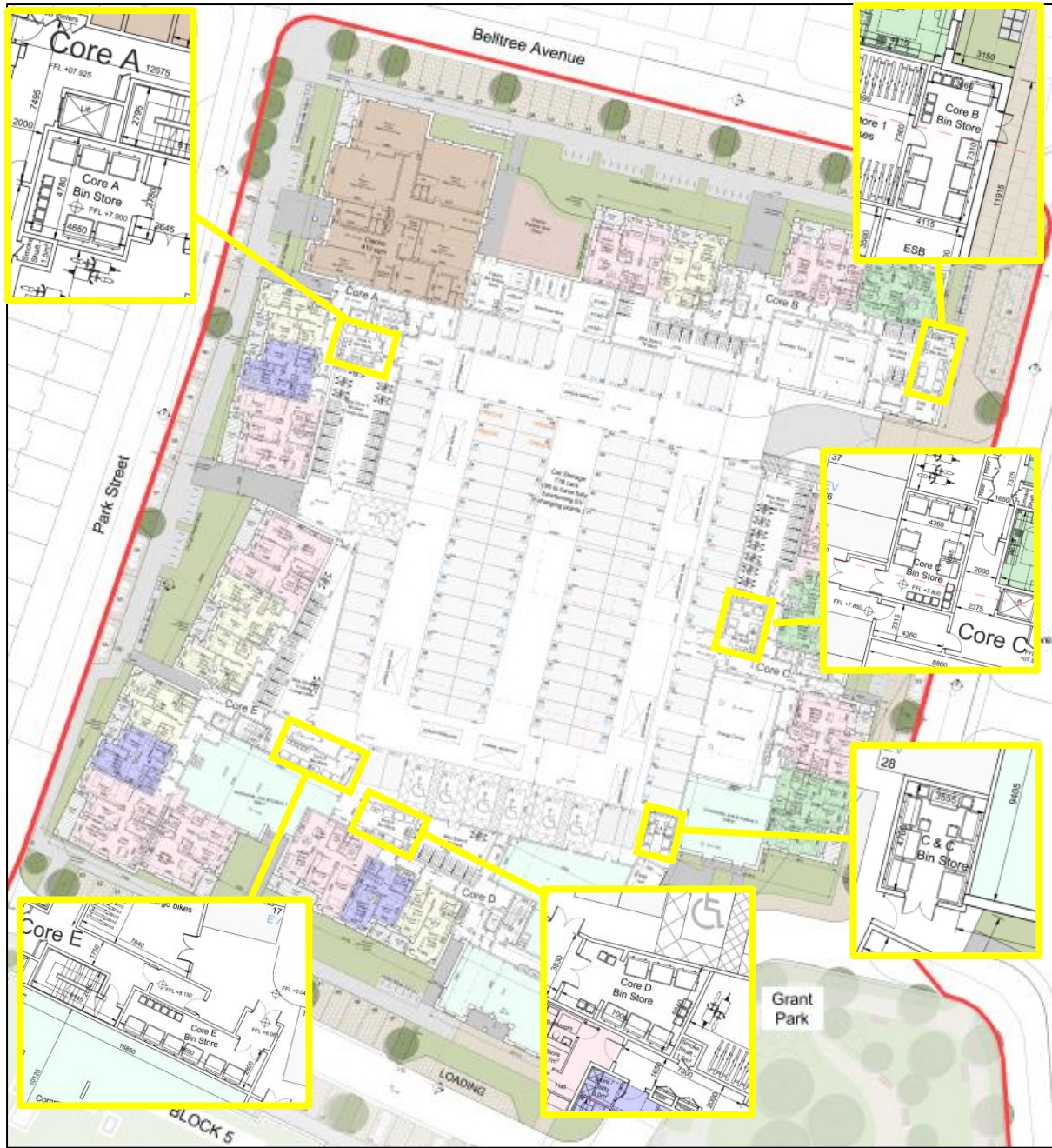


Figure 4-2 Location and Internal Layout of Residential Waste Storage Areas - Block 6 (Yellow)

## 4.6 Waste Storage Capacity Requirements – Crèche (Block 6)

The crèche will generate similar waste types to the domestic dwellings. It is estimated, based on the floor area of the facility, that there will be a requirement for 2 no. 1100 Litre bins for Dry Mixed Recyclables (DMR), 1 no. 1100 Litre bin for Mixed Municipal Waste (MMW) and 2 no. 140 litre bins for Organic (food) Waste, and 1 no. 140 litre bin for Glass (if required). Ample space is provided in the secure crèche Waste Storage Area to accommodate these receptacles. The crèche Waste Storage Area will only be accessible to the crèche staff and will not be accessible to residents or members of the public. The crèche may also generate some office type waste, it will be incumbent on the occupier to arrange collection of materials such as ink cartridges. See Figure 4-3 for location and internal layout of the crèche Waste Storage Area.

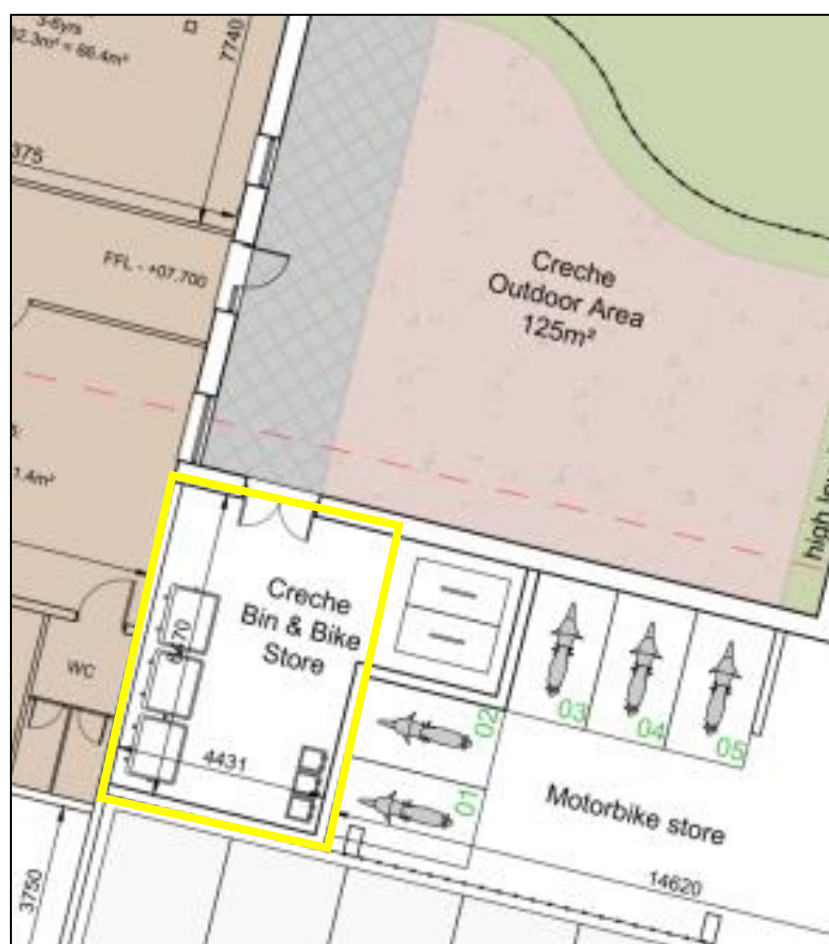


Figure 4-3 Internal Layout of Crèche Waste Storage Area (Yellow)

## 4.7 Waste Storage Capacity Requirements - Community, Arts and Cultural

### 4.7.1 Block 5 – Community, Arts and Cultural

It is estimated, based on the floor area of the facility, that there will be a requirement for 1 no. 660 Litre bin for Dry Mixed Recyclables (DMR), 1 no. 660 Litre bin for Mixed Municipal Waste

(MMW) / General Waste and 1 no. 140 litre bins for Organic (food) Waste, and Glass (if required) in the Community, Arts & Cultural areas 2, 3 and 4.

It is estimated, based on the floor area of the facility, that there will be a requirement for 1 no. 1,100 Litre bin for Dry Mixed Recyclables (DMR), 1 no. 660 Litre bin for Mixed Municipal Waste (MMW) / General Waste and 2 no. 140 litre bins for Organic (food) Waste, and 1 no. 140 litre bin Glass (if required) in the Community, Arts & Cultural area 1.

#### **4.7.2 Block 6 – Community, Arts and Cultural**

It is estimated, based on the floor area of the facility, that there will be a requirement for 3 no. 1,100 Litre bins and 1 no. 660 Litre bin for Dry Mixed Recyclables (DMR), for 1 no. 1,100 Litre bins and 2 no. 660 Litre bin for Mixed Municipal Waste (MMW) / General Waste, 4 no. 140 litre bins for Organic (food) Waste, and 3 no. Glass (if required) in the Community, Arts & Cultural areas 1, 2 and 3.

The Community, Arts and Cultural Waste Storage Areas in Blocks 5 and 6 will only be accessible to the unit's staff members and will not be accessible to residents or members of the public.

The Community, Arts and Cultural units are expected to generate similar waste types to the domestic dwellings as well as volumes of packaging waste. It will be incumbent on the occupier to arrange collection of materials such as ink cartridges.

#### **4.8 Other Waste Materials**

Other waste materials such as bulky waste, textiles, printer toner/cartridges, WEEE and batteries and other household hazardous wastes may be generated infrequently by the occupants of the residential units. Residents will be required to suitably store these wastes within their own dwellings and dispose of them appropriately at bring centres or civic amenity facilities. Details of nearby recycling centres and bring banks is available on the Repak.ie website. All occupants will be supplied with information by the management company on the location of recycling facilities in the area.

#### **4.9 Recycling Rates & Targets**

The Waste Storage Areas will be provided with receptacles and signage to promote a rate of 30% of the overall waste collected to be Mixed Municipal Waste (MMW) / General Waste and 70% of waste collected recyclable waste streams which will include Dry Mixed Recyclables (DMR) (packaging, papers, cardboards, plastics, aluminium, metals, and tin) and Organic (food) Waste.

All of the Mixed Municipal Waste (MMW) collected will be transported for further recovery. All MMW will be consigned to a recovery facility where it will undergo mechanical waste recovery, or it will be consigned to a facility for energy recovery. No MMW will be transported directly to landfill.

On review of bin usage by the appointed Management Company, MMW bins may be replaced with additional Organic (food) Waste or Dry Mixed Recyclables (DMR) bins to further increase waste segregation at source.



The ratio of bins detailed in this OWMP is in line with the European Commission's proposal to introduce 70% plus re-use and recycling targets for Mixed Municipal Waste (MMW) by 2030. This waste collection proposal also provides a waste management solution that has sufficient flexibility to support future targets and legislative requirements.

#### **4.10 Bin Weight Limits & Dimensions**

The DCC bye-laws state that Waste presented for collection by a holder shall not be overloaded.

Due to the capacity of bins being provided, bins will not be overloaded and will comply with the bye-laws.

For the shared Waste Storage Areas, it is intended to use 1,100L bins of approximately 1300mm x 1000mm x 1300mm with a load capacity of no more than 240kg which will comply with IS EN 840 1997 for Dry Mixed Recyclables (DMR) and Mixed Municipal Waste (MMW), 660L bins of 1340mm x 1200mm x 700mm where appropriate for Dry Mixed Recyclables (DMR) and Mixed Municipal Waste (MMW), and 140L bins of 1060mm x 480mm x 550mm for Organic (food) Waste.

All bins will be color-coded and labelled to avoid cross-contamination, green bin for Dry Mixed Recyclables (DMR), brown bin for Organic (food) Waste, black bin for Mixed Municipal Waste (MMW) / General Waste, and blue bins for Glass (in accordance with the Waste Action Plan for Circular Economy). Use of and access to the Waste Storage Areas will be restricted to residents and waste contractors only. The Waste Storage Areas will not be visible to the public and will conform to the requirements of *BS 5906: 2005 – Waste Management in Buildings – Code of Practice*.

It is envisaged that residents of the apartments will be subjected to a service management company service charge where waste management will be included in the fee.

## 5 WASTE COLLECTION

All collections must take place in compliance with conditions of the Waste Contractor's Waste Collection Permit for the region and in line with the Local Authority bye-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 bye-laws and Statutory Instruments in relation to the presentation of waste for collection. Waste collections for a four-bin system service will be available from the time of first occupancy (i.e. even if all dwellings are not occupied).

A waste collection service will be available to all occupants from first occupancy, irrespective of whether all units have been filled or not.

It will be the responsibility of the management company to ensure bins are brought from the Waste Storage Areas to the dedicated Waste Staging Areas where they will be made accessible for collection by the waste management operatives (See Figure 5-1 for Block 5 and Figure 5-2 for Block 6, Blue). It will be the responsibility of the management company to assist on collection day to wheel out and replace bins during collection where required. Under no circumstances will the bins cause obstruction on public paths or roads. Bins will be returned to the Waste Storage Area immediately after collection. Bins will never be left outside the curtilage of the development.

Waste collection by waste vehicles will be on-street from the dedicated Waste Staging Areas and will be in accordance with the Traffic Management Plan for the facility which has ensured the design allows for free-flowing movement of refuse collection vehicles at the development. BS 5906: 2005 – Waste Management in Buildings – Code of Practice has been taken into consideration for the purposes of waste collection. Waste collections should be carried out outside of rush hours to avoid any potential impacts on traffic flows in the area.

Records of the collections from the apartments will be maintained by the management company for the development including reports from the facilities to which the waste is taken.

The staff of the Community, Arts and Cultural units will be responsible for arranging their own waste collection. It will be the responsibility of the staff of the Community, Arts and Cultural units to ensuring that bins are accessible for collection by the waste management operatives. Under no circumstances will the bins cause obstruction on public paths or roads. Bins will be returned to the Waste Storage Area immediately after collection. Bins will never be left outside the curtilage of the development.



Figure 5-1 Location of Waste Staging Areas Block 5 (Blue)

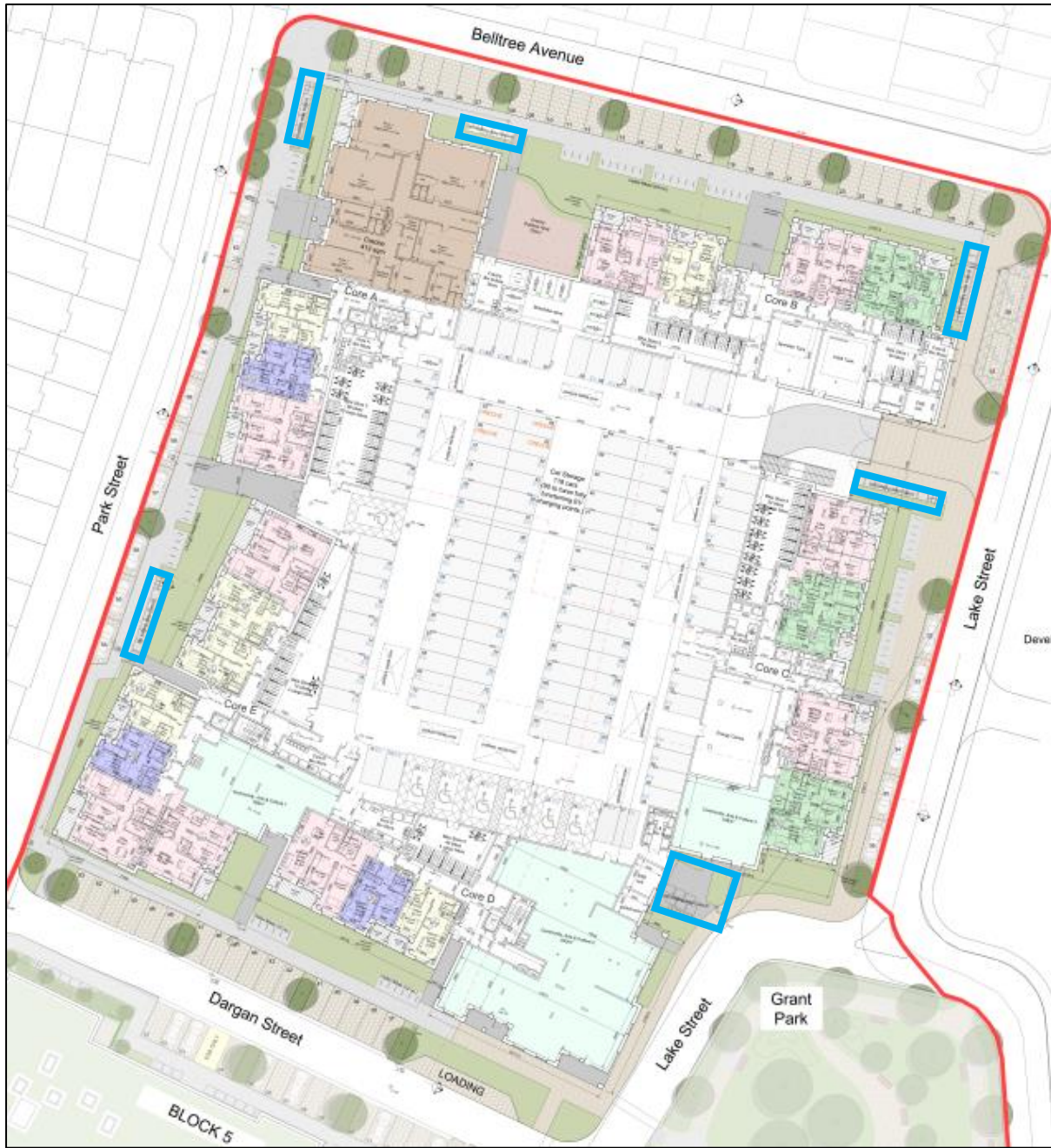


Figure 5-2 Location of Waste Staging Areas Block 6 (Blue)

## **6 MANAGEMENT SYSTEM**

### **6.1 Information and Communication**

Written information will be provided by the appointed management company, to each tenant or other occupier about the arrangements for waste separation, segregation, storage, and presentation prior to collection. The information pack will also contain information about nearby recycling facilities. This information will also be included in information booklets provided to new occupants of properties on the development.

It shall be a condition of contract with the appointed management company to ensure that all residents will be provided with an information pack from the waste collection provider. This information pack will detail the waste streams that can and cannot be placed in the bins provided in the waste compound so that waste segregation is actively encouraged and the specific dates on which the bins will be collected are clearly identified.

A clause will be included in the contract with the waste collection provider to provide this information pack to new residents.

### **6.2 Waste Management Contracts**

It will be a condition of any management contract at the development that adequate budgets are in place for the provision of all required waste management services including a four-bin system for the collection of separate Organic (food) Waste, Dry Mixed Recyclables (DMR), Mixed Municipal Waste (MMW) / General Waste and Glass from the apartments.

In addition to the requirements set out in Section 6.1 Information and Communication, the Management Company appointed will be required to continually monitor the performance of the waste management system. This will include routine visual checks of the Waste Storage Areas to ensure that all bins collected are returned to the Waste Storage Areas and to ensure this area is maintained so as not to cause any environmental nuisance to residents. These checks will also assess if the bins are in good condition or need to be replaced where damage is identified.

Provision for bin cleaning will be included in the contract with the waste management contractor appointed to ensure the provision of bin cleaning services or replacement of clean bins by the waste contractor.

The Management Company will review all annual waste reports from the Waste Collection Company appointed to ensure that the waste collected is in line with the European recycling targets. Where poor recycling rates are noted information leaflets will be recirculated to all residents which will include information on what materials can be recycled and the waste streams that can be placed in bins. Residents will also be reminded of legal obligations where applicable. Further communication strategy to engage tenants and owner occupiers in good waste management practices will be adopted if deemed necessary.

Contingency policies will be in place to ensure continuity of service.

## 7 CONCLUSIONS

By implementing design and actions outlined in this OWMP, a high level of recycling, reuse and recovery will be achieved at the development in line with European targets. Dry Mixed Recyclables (DMR) and Organic (food) Waste will be segregated at source to reduce the quantity of residual waste materials requiring off-site recovery or disposal.

The source segregation of waste types as detailed in this report will help to achieve the targets set out in the Eastern-Midlands Waste Region 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*”, July 2023.

## 8 REFERENCES

*Dublin City Council (Segregation, Storage and Presentation of Household and Commercial Waste) Bye-laws, 2018 as amended.*

*Dublin City Development Plan 2022-2028.*

*National Waste Management Plan for a Circular Economy 2024-2030.*

*Waste Management Acts 1996, as amended.*

*Protection of the Environment Act 2003 as amended.*

*Litter Pollution Act 1997 as amended.*

*Guidance Notes for Waste Management in Residential and Commercial Developments, Dun Laoghaire-Rathdown County Council, February 2020.*

*Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste).*

*European Communities (Waste Directive) Regulations 2011, S.I. No. 126/2011.*

*Waste Management (Collection Permit) Regulations 2007 (S.I. No. 820 of 2007) as amended.*

*Waste Management: Changing Our Ways, The Department of the Environment and Local Government, 1998.*

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*European Waste Catalogue, European Commission, 2002.*

*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous, Environment Protection Agency, 2018.*

*Sustainable Urban Housing: Design Standards for New Apartments”, Department of Housing, Planning and Local Government, July 2023.*

*Waste Management in Buildings – Code of Practice, British Standard, BS 5906:2005, 2005.*

*Mobile Waste and Recycling Containers Part 1: Containers with 2 wheels with a capacity up to 400 l for comb lifting devices — Dimensions and design, British Standard, BS EN 840-1:2012, 2012.*

*Mobile waste containers. Containers with four wheels with a capacity from 750 l to 1700 l with flat lid(s), for wide trunnion or BG-and/or wide comb lifting devices. Dimensions and design, British Standard, BS EN 840-4:1997, 1997.*

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