



# OPERATIONAL WASTE MANAGEMENT PLAN

Castlelake SHD

Lands at Castlelake, Terrysland, Carrigwohill, Cork  
Prepared for BAM Property Ltd. – June 2022

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## 01 INTRODUCTION

A Planning Application is being lodged to an Bord Pleanála by BAM Property Ltd. for a Strategic Housing Development at Castlelake, Terrysland, Carrigtwohill, Co. Cork. The application site is positioned to the north-west of the centre of Carrigtwohill, comprised of a series of land parcels with a combined area of 18.30 hectares, 16.30 hectares of which are developable lands and accommodating 716 dwelling units distributed across the development as varying Character Areas.

The proposed development comprises a variety of residential accommodation in a number of built forms distributed throughout the development;

- 224 Detached, Semi-detached and Terraced two storey own-door access
- 284 Duplex Units with own door access and
- 208 Apartments - one to three bed units

The site lies north of the N25 motorway corridor and has both road frontage and main vehicular access road connections onto Station Road with two underpasses constructed along the northern boundary of the site to accommodate future development lands.

Access to the development will be via the existing main distributor road system in Castlelake to the south-west, Station Road to the east and the planned connector roads between these and the underpass to the north.

To the south of the application site are Castlelake Park. To the west is existing Castlelake housing adjoining the western boundary of this application.



## 02 PLANNING AND POLICY

The development at Castl lake, Terrysland, Carrigtwohill, adheres to Cork County Council provisions for Waste Management. Storage and collection of waste will be undertaken on site in accordance with the Cork County Development Plan 2022-2028<sup>a</sup> and the standard BS 5906:2005 Waste Code of Practice.

The European Commission's Circular Economy Action Plan: For a Cleaner More Competitive Europe<sup>b</sup> was adopted in 2020 and promotes a transition towards the principles of a circular economy, facilitating the use of materials at their highest value for as long as possible and then recycling or reusing them at the end of their service life with the end result being the generation of minimal waste.

The government's Waste Action Plan for a Circular Economy-Ireland's National Waste Policy 2020-2025<sup>c</sup> endorses this approach and aims to shift the focus of waste management away from waste disposal and treatment to ensure that materials and products remain in productive use for longer. This is aimed at preventing waste and supporting reuse through a policy framework that discourages the wasting of resources and rewards circularity.

Currently, Cork is part of the Southern Waste Region. The strategic vision of the Southern Region Waste Management Plan 2015-2021 is to rethink our approach to managing waste, by viewing our waste streams as valuable material resources, leading to a healthier environment and sustainable commercial opportunities for our economy. Particular emphasis is placed on preventing and designing out waste at the initial stage of any activity, thus achieving the highest level of the waste hierarchy, namely waste prevention.

The Southern Region Waste Management Office has commenced the process of drafting the next Waste Management Plan. This proposal supports the sustainable management of waste in line with the objectives of the Southern Region Waste Management Plan 2015-2021<sup>d</sup> and its successor. This proposal acknowledges that policies and objectives in relation to waste management in Cork County and are reflective of overarching EU, National and Regional policy and legislation.

The European Commission adopted the new circular economy action plan (CEAP)<sup>e</sup> in March 2020. It is one of the main building blocks of the European Green Deal, Europe's new agenda for sustainable growth. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss.

Measures that will be introduced under the new action plan aim to:

- make sustainable products the norm in the EU
- empower consumers and public buyers
- focus on the sectors that use most resources and where the potential for circularity is high such as: electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients
- ensure less waste
- make circularity work for people, regions and cities
- lead global efforts on circular economy

This Waste Management Plan is assembled in accordance with the amended Planning and Development Act 2000 and Section 22(10A) of the Waste Management Acts 1996-2008 as the objectives for waste recovery and disposal facilities within the development are outlined.

a Cork County Development Plan 2022-2028. ( Relevant Plan at time of lodging)

b The European Commission's Circular Economy Action Plan: For a Cleaner More Competitive Europe.  
Source: <https://ec.europa.eu/environment/circular-economy>

c A Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025.  
Source: <https://www.gov.ie/en/publication/4221c-waste-action-plan-for-a-circular-economy>

d Southern Region Waste Management Plan 2015 – 2021.  
Source: <http://southernwasteregion.ie/content/southern-region-waste-management-plan-2015-2021-associated-reports>

e Circular Economy Action Plan.  
Source: [https://ec.europa.eu/environment/strategy/circular-economy-action-plan\\_en#ecl-inpage-872](https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en#ecl-inpage-872)

### 03 WASTE DISPOSAL

#### 3.1 Housing and Duplex Units - Bin Strategy

Adequate storage, recycling and composting areas have been provided which accommodate the separation of waste for disposal.

- Bin stores have been provided at the rate of three bins per house / duplex unit.
- All house and Duplex units have been provided with securely enclosed bin stores located to the front or to the side/rear of the units in dedicated store areas.

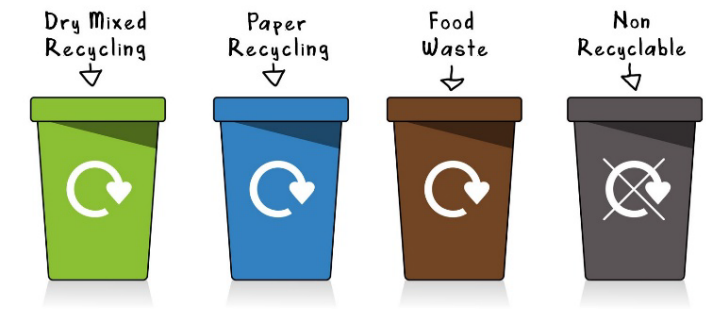


Bin Storage Design Intent - House and Duplex Units

#### 3.2 Apartments – Bin Strategy

Residents of the apartments will be required to segregate their waste into the following main waste categories within their own apartment units:

- Dry Mixed Recyclables;
- Mixed Non-Recyclables;
- Organic waste; and
- Glass.



The residents will be required to provide and maintain appropriate waste receptacles within their units to facilitate segregation at source of these waste types. The location of the bins within the units will be at the discretion of the residents. As required, the residents will need to bring these segregated wastes from their apartments to the main residential Waste Storage Area (WSA) located at ground level typically.

The main residential WSA has been appropriately sized to accommodate the estimated waste arisings for the residential units based on a weekly collection frequency and the provision of the appropriate waste management equipment, correctly laid out and efficiently managed.

*See Section 3.3 Waste Calculation Assumptions for calculation method and the calculated bin provision for Apartment 07 as example.*

As it is assumed that all waste will be delivered by householders to Ground level communal refuse stores, design measures have been taken to ensure the ease and safety of this delivery.

*See Section 3.4 Waste Collection - Apartments for Refuse Room locations and Collection point for Apartment 07 as example.*



### 03 WASTE DISPOSAL

#### 3.3 Waste Calculation Assumptions - Apartment Buildings

- Occupancy rates are assumed to be 2 persons per one bed apartments, 4 persons per 2 bed apartment and 6 persons per 3 bed apartment.
- Household waste will be source separated into recyclables, residual, and organic wastes. Wheeled bins will be available in waste storage rooms also for WEEE and waste glass.
- It is assumed that approximately 60% of waste generated will be dry mixed recyclables. 30% of waste generated will be residual waste, and 10% of waste generated will be organic waste. The waste management system will be flexible to allow for increases in the proportion of source segregated recyclables and reduction of residual wastes in the future. This includes the European Commission's 70% target for re-use and recycling of waste by 2030.<sup>1</sup>
- Once weekly waste collection per waste type of residential & other waste is assumed for the purpose of these calculations.
- It is assumed that all waste will be delivered by householders to basement level communal waste stores. Communal waste rooms will be located in each podium basement for each building block, representing one communal waste room per two blocks.
- The EPA reported a household waste generation rate per capita of 321kg per annum for 2017, the most recent year for which published data is available.<sup>2</sup>
- Density of 0.21 tonnes/m<sup>3</sup> or 0.21 tonnes/1000 litres for waste calculations.

#### Calculation - Apartment 07

A calculation of the Waste Category Split, Waste Estimation and the resulting Waste Provision Bin requirements for Apartment Building 07 is demonstrated in the adjacent table. The calculated figure of 9 no. 1100ltr and 7 no. 240ltr bin provision is provided for within the building layout and distributed across 2 no. Refuse rooms positioned at ground floor.



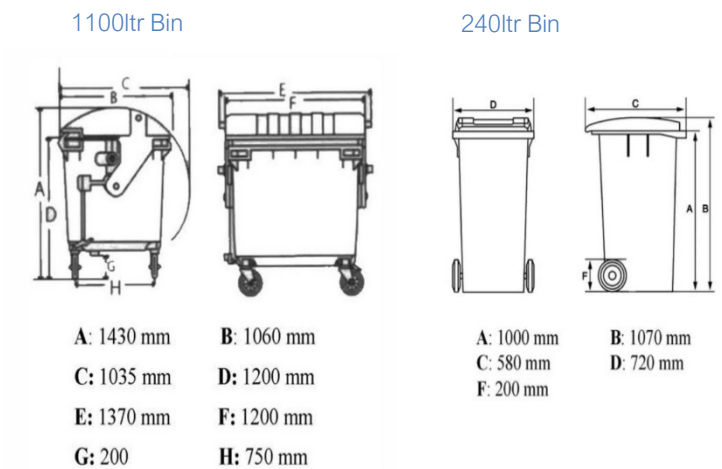
Summary							
Waste Type	Building	Apartment No.	Refuse Room	Collection Point	MSW Waste Estimation (ltr)	MSW Waste Provision (ltr)	Additional Provisions
Residential	Apartment 7	76	RFA7-1 / 2	A	8274	9760	1820

Municipal Solid Waste (MSW) Estimation							
Apartment Type	Occupancy	Number	Total Population	Waste/Annum *(kg)	Waste/Annum ** (m3)	Waste/Week (m3)	Waste/Week (ltr)
1 Bed	2	23	46	14766	70.31	1.35	1350
2 Bed	4	41	164	52644	250.69	4.82	4812
3 Bed	6	12	72	23112	110.06	2.12	2113
<b>Total:</b>		<b>76</b>	<b>282</b>	<b>90522</b>	<b>431.06</b>	<b>8.29</b>	<b>8274</b>

Assumptions  
 \* 321 kg/person/annum  
 \*\* 210 kg/m<sup>3</sup>

Waste Category Split					
Waste Type	%	Waste/Week (ltr)	1100ltr Bin No.	240ltr Bin No.	Total Waste Provision (ltr)
Municipal Solid Waste (MSW)	100%	8274			
Dry mixed recyclables	60%	4965	5		5500
Residual Waste	30%	2482	3		3300
Organic Waste	10%	827		4	960
<b>Subtotal:</b>			<b>8</b>	<b>4</b>	<b>9760</b>
Additional Waste Provisions					
Glass Recycling				3	720
WEE			1		1100
<b>Subtotal:</b>			<b>1</b>	<b>3</b>	<b>1820</b>
<b>Total :</b>			<b>9</b>	<b>7</b>	<b>11580</b>

Waste Calculation Table - Apartment 07



1 Towards a Circular Economy. Source: [https://ec.europa.eu/commission/presscorner/detail/en/MEMO\\_14\\_450](https://ec.europa.eu/commission/presscorner/detail/en/MEMO_14_450)  
 2 Household Waste Statistics for Ireland. Source: <https://www.epa.ie/publications/monitoring--assessment/waste/national-waste-statistics/Household-Waste-2017-data.pdf>

### 03 WASTE DISPOSAL

#### 3.4 Waste Collection - Apartment Buildings

There are numerous private contractors that provide household and commercial waste collection in the area. All waste contractors servicing the proposed development must hold a valid waste collection permit for the specific waste types collected. All waste collected must be transported to registered, permitted and/or licensed facilities only.

Each apartment building has 1-2 Refuse Stores located at the ground floor located in close proximity to the circulation stairs and building entrances for ease of accessibility. See below Figure 01 Refuse Store Locations

Each Building has in turn been allocated a refuse collection point. These designated areas are easily accessed by each refuse rooms. The bins will be conveyed by personnel nominated by the building management company to the collection point. Refuse truck turning zones, will help to prevent traffic congestion during weekly and fortnightly collections. See below Figure 02 Capacity Layout - Typical Refuse Store



Figure 01: Refuse Store Locations and Refuse Collection Point Ground Floor Apartment 07

### 04 THE CRÈCHE FACILITY

The Crèche tenant will be required to segregate their waste into the following waste categories within their unit;

- Dry Mixed Recyclables;
- Mixed Non-Recyclables;
- Organic waste; and
- Glass.

The crèche unit will store their waste within their own unit. Suitably sized bins should be strategically located within the unit as required by the tenant to facilitate segregation at source of these waste types.



All waste receptacles used should comply with the IS EN 840 2012 standard for performance requirements of mobile waste containers and should be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Graphical signage should be posted above or on the bins to show exactly which wastes can be put in each. If there is food preparation carried out by the crèche tenant, organic waste from kitchen should be collected in bins as close to food preparation area as possible.

Based on the recommended bin requirements, it is anticipated that dry mixed recyclables, mixed non-recyclables and organic waste will be collected on a weekly basis and glass collected less frequently as required. Other waste materials such as batteries, WEEE, light bulbs and cooking oil (if generated) will be generated less frequently and in smaller quantities.

The crèche tenant will be required to store any of these wastes in appropriate receptacles within their own unit pending collection by a waste contractor.

The crèche tenant or personnel nominated by the building management company will be responsible for conveying the crèche bins to the collection point at building perimeter.