

OPERATIONAL WASTE MANAGEMENT PLAN FOR A MIXED-USE DEVELOPMENT

CHERRY ORCHARD POINT - PHASE 2

Report Prepared For

The Land Development Agency

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Our Reference

CB/247501.00558WMR02



Date of Issue

28 January 2025

Document History

Document Reference		Original Issue Date	
CB/247501.00558WMR02		28 January 2025	
Revision Level	Revision Date	Description	Sections Affected

Record of Approval

Details	Written by	Approved by
Signature		
Name	Chonaiil Bradley	Fergal Callaghan
Title	Principal Environmental Consultant	Director
Date	28 January 2025	28 January 2025

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1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Operational Waste Management Plan (OWMP) on behalf of The Land Development Agency. The proposed development involves the construction of 137no. dwellings in a mix of houses, duplexes and own-door apartments and all ancillary accommodation including bike and bin stores and ESB substation. The proposed development also includes the provision of landscaped public open space. On lands at Cherry Orchard, Dublin 10 (known as Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019).

This OWMP has been prepared to ensure that the management of waste during the operational phase of the development is undertaken in accordance with the ABP GOP condition 19, current legal and industry standards including, the *Waste Management Act 1996* as amended and associated Regulations¹, *Environmental Protection Agency Act 1992* as amended², *Litter Pollution Act 1997* as amended³, the 'the National Waste Management Plan for a Circular Economy 2024 - 2030 (NWMPCE) (2024)'⁴ and the Dublin City Council (DCC) '*Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws*' 2018⁵. In particular, this OWMP aims to provide a robust strategy for the storage, handling, collection and transport of the wastes generated at site.

This OWMP aims to ensure maximum recycling, reuse and recovery of waste with diversion from landfill, wherever possible. This OWMP also seeks to provide guidance on the appropriate collection and transport of waste to prevent issues associated with litter or more serious environmental pollution (e.g. contamination of soil or water resources). This OWMP estimates the type and quantity of waste to be generated from the development during the operational phase and provides a strategy for managing the different waste streams.

At present, there are no specific national guidelines in Ireland 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.

2.0 OVERVIEW OF WASTE MANAGEMENT IN IRELAND

2.1 National Level

The Irish Government issued a policy statement in September 1998 titled as '*Changing Our Ways*'⁶ which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. A heavy emphasis was placed on reducing reliance on landfill and finding alternative methods for managing waste. Amongst other things, *Changing Our Ways* stated a target of at least 35% recycling of municipal (i.e. household, commercial and non-process industrial) waste.

A further policy document '*Preventing and Recycling Waste – Delivering Change*' was published in 2002⁷. This document proposed a number of programmes to increase recycling of waste and allow diversion from landfill. The need for waste minimisation at source was considered a priority.

This view was also supported by a review of sustainable development policy in Ireland and achievements to date, which was conducted in 2002, entitled '*Making Ireland's Development Sustainable – Review, Assessment and Future Action*'⁸. This document also stressed the need to break the link between economic growth and waste generation, again through waste minimisation and reuse of discarded material.

In order to establish the progress of the Government policy document *Changing Our Ways*, a review document was published in April 2004 entitled '*Taking Stock and*

*Moving Forward*⁹. Covering the period 1998 – 2003, the aim of this document was to assess progress to date with regard to waste management in Ireland, to consider developments since the policy framework and the local authority waste management plans were put in place, and to identify measures that could be undertaken to further support progress towards the objectives outlined in *Changing Our Ways*.

In particular, *Taking Stock and Moving Forward* noted a significant increase in the amount of waste being brought to local authority landfills. The report noted that one of the significant challenges in the coming years was the extension of the dry recyclable collection services.

In September 2020, the Irish Government published a policy document outlining a new action plan for Ireland to cover the period of 2020-2025. This plan, 'A Waste Action Plan for a Circular Economy'¹⁰ (WAPCE), was prepared in response to the 'European Green Deal' which sets a roadmap for a transition to a new economy, where climate and environmental challenges are turned into opportunities, replacing the previous national waste management plan "A Resource Opportunity" (2012).

The WAPCE sets the direction for waste planning and management in Ireland up to 2025. This reorientates policy from a focus on managing waste to a much greater focus on creating circular patterns of production and consumption. Other policy statements of a number of public bodies already acknowledge the circular economy as a national policy priority.

The policy document contains over 200 measures across various waste areas including circular economy, municipal waste, consumer protection and citizen engagement, plastics and packaging, construction and demolition, textiles, green public procurement and waste enforcement.

One of the first actions to be taken was the development of the Whole of Government Circular Economy Strategy 2022-2023 'Living More, Using Less' (2021)¹¹ to set a course for Ireland to transition across all sectors and at all levels of Government toward circularity and was issued in December 2021. It is anticipated that the Strategy will be updated in full every 18 months to 2 years.

The Circular Economy and Miscellaneous Provisions Act 2022¹² was signed into law in July 2022. The Act underpins Ireland's shift from a "take-make-waste" linear model to a more sustainable pattern of production and consumption, that retains the value of resources in our economy for as long as possible and that will to significantly reduce our greenhouse gas emissions. The Act defines Circular Economy for the first time in Irish law, incentivises the use of recycled and reusable alternatives to wasteful, single-use disposable packaging, introduces a mandatory segregation and incentivised charging regime for commercial waste, streamlines the national processes for End-of-Waste and By-Products decisions, tackling the delays which can be encountered by industry, and supporting the availability of recycled secondary raw materials in the Irish market, and tackles illegal fly-tipping and littering.

Since 1998, the Environmental Protection Agency (EPA) has produced periodic 'National Waste (Database) Reports' which as of 2023 have been renamed *Circular Economy and Waste Statistics Highlight Reports*¹³ detailing, among other things, estimates for household and commercial (municipal) waste generation in Ireland and the level of recycling, recovery and disposal of these materials. The 2021 National Circular Economy and Waste Statistics web resource, which is the most recent study published, along with the national waste statistics web resource (November 2023) reported the following key statistics for 2020:

- **Generated** – Ireland produced 3,170,000 t of municipal waste in 2021. This is a 1% decrease since 2020. This means that the average person living in Ireland generated 630 kg of municipal waste in 2021.
- **Managed** – Waste collected and treated by the waste industry. In 2020, a total of 3,137,000 t of municipal waste was managed and treated.
- **Unmanaged** – An estimated 33,000 tonnes of this was unmanaged waste i.e., not disposed of in the correct manner in 2021.
- **Recovered** – The amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In Ireland 42% of Municipal waste was treated by energy recovery through incineration in 2021.
- **Recycled** – Just over 1.3 million tonnes of municipal waste generated in Ireland was recycled in 2021, resulting in a recycling rate of 41 per cent. The recycling rate remains unchanged from 2020 and indicates that we face significant challenges to meet the upcoming EU recycling targets of 55% by 2025 and 65% by 2035.
- **Disposed** – The proportion of municipal waste sent to landfill also remains unchanged at 16% the same as 2020.
- **Reuse** – 54,800 tonnes of second-hand products we estimated by the EPA to have been reused in Ireland in 2021. The average annual Reuse rate per person in Ireland is 10.6 kg per person.

2.2 Regional Level

The development is located in the Local Authority administrative area of Dublin City Council (DCC).

The Eastern Midlands Region (EMR) Waste Management Plan 2015 – 2021, which previously governed waste management policy in the DCC area, has been superseded as of March 2024 by the NWMPCE 2024 – 2030, the new national waste management plan for Ireland.

The NWMPCE does not dissolve the three regional waste areas. The NWCPCE sets the ambition of the plan to have a 0% total waste growth per person over the life of the Plan with an emphasis on non-household wastes including waste from commercial activities and the construction and demolition sector.

This Plan seeks to influence sustainable consumption and prevent the generation of waste, improve the capture of materials to optimise circularity and enable compliance with policy and legislation.

The national plan sets out the following strategic targets for waste management in the country that are relevant to the development:

National Targets

- 1A. (Residual Municipal Waste) 6% Reduction in Residual Municipal Waste per person by 2030
- 2A. (Contamination of Materials) 90% of Material in Compliance in the Dry Recycling Bin
- 2B. (Material Compliance Residual) 10% per annum increase in Material Compliance in the residual bin. (90% by the end of 2030)
- 3A. (Reuse of Materials) 20kg Per person / year – Reuse of materials like cloths or furniture to prevent waste.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €140-160 per tonne of waste, which includes a €85 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2015.

The *Dublin City Development Plan 2022 – 2028*¹⁴ sets out a number of policies and objectives for Dublin City in line with the objectives of the National Climate Action Policy and emphasises the need to take action to address climate action across all sectors of society and the economy. In the waste sector, policy on climate action is focused on a shift towards a ‘circular economy’ encompassing three core principles: designing out waste and pollution; keeping products and material in use; and regenerating natural systems. Further policies and objectives can be found within the development plan.

Policies:

- *CA8 F: minimising the generation of site and construction waste and maximising reuse or recycling.*
- *CA23: The Circular economy: To support the shift towards the circular economy approach as set out in 'a Waste Action Plan for a Circular Economy 2020 to 2025, Ireland's National Waste Policy, or as updated.*
- *CA24: To have regard to existing Best Practice Guidance on Waste Management Plans for Construction and Demolition Projects as well as any future updates to these guidelines in order to ensure the consistent application of planning requirements.*
- *SI27: Sustainable Waste Management: To support the principles of the circular economy, good waste management and the implementation of best practice in relation to waste management in order for Dublin City and the Region to become self-sufficient in terms of resource and waste management and to provide a waste management infrastructure that supports this objective.*
- *SI28: To prevent and minimise waste generation and disposal, and to prioritise prevention, recycling, preparation for reuse and recovery in order to develop Dublin as a circular city and safeguard against environmental pollution.*
- *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.*
- *SI30: 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 2018 (or and any future updated versions of these guidelines produced during the lifetime of this plan).*

Objectives:

- *SIO14 Local Recycling Infrastructure: To provide for a citywide network of municipal civic amenity facilities/ multi-material public recycling and reuse facilities in accessible locations throughout the city in line with the objectives of the circular economy and 15 minute city.*
- *SIO16 Eastern-Midlands Region Waste Management Plan: To support the implementation of the Eastern-Midlands Regional Waste Management Plan 2015–2021 and any subsequent plans in order to facilitate the transition from a waste management economy towards a circular economy.*

The development site is located within the Park West – Cherry Orchard area. The *Park West – Cherry Orchard Local Area Plan 2019*¹⁵ identifies one specific objective (INF7)

in relation to waste management in the area, to *‘Ensure provision is made for recycling facilities within the LAP area, and in particular new provision within Park West’*.

2.3 Legislative Requirements

The primary legislative instruments that govern waste management in Ireland and applicable to the development are:

- Waste Management Act 1996, as amended;
- Environmental Protection Agency Act 1992 as amended;
- Litter Pollution Act 1997 as amended and
- Planning and Development Act 2000 as amended ¹⁶
- Circular Economy and Miscellaneous Provisions Act 2022.

These Acts and subordinate Regulations transpose the relevant European Union Policy and Directives into Irish law.

One of the guiding principles of European waste legislation, which has in turn been incorporated into the Waste Management Act 1996 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 through 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 disposal area, waste contractors will be employed to physically transport waste to the final waste disposal site.

It is, therefore, imperative that the residents and any facilities management undertake on-site management of waste in accordance with all legal requirements and that the operator of the development employ suitably permitted / licenced 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.

A collection permit to transport waste must be held by each waste contractor which is issued by the National Waste Collection Permit Office (NWCPO). Waste receiving facilities must also be appropriately permitted or licensed. Operators of such facilities cannot receive any waste, unless in possession of a Certificate of Registration (COR) or waste permit granted by the relevant Local Authority under the Waste Management (Facility Permit & Registration) Regulations 2007, as amended, or a Waste or Industrial Emissions (IE) Licence granted by the EPA. The COR / permit / licence held will specify the type and quantity of waste able to be received, stored, sorted, recycled, recovered and / or disposed of at the specified site.

2.3.1 Dublin City Council Waste Management Bye-Laws

The DCC “Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2018)” were brought into force in May 2019. These bye-laws repeal the previous Bye-Laws for the Storage, Presentation and Collection of Household and Commercial Waste. The bye-laws set a number of enforceable requirements on waste holders with regard to storage, separation and presentation of waste within the DCC administrative area. Key requirements under these bye-laws of relevance to the operational phase of the development include the following:

- Kerbside waste presented for collection shall not be presented for collection earlier than 5.00 pm on the day immediately preceding the designated waste collection day;

- All containers used for the presentation of kerbside waste and any uncollected waste shall be removed from any roadway, footway, footpath or any other public place no later than 10:00 am on the day following the designated waste collection day, unless an alternative arrangement has been approved in accordance with bye-law 2.3;
- Documentation, including receipts, is obtained and retained for a period of no less than one year to provide proof that any waste removed from the premises has been managed in a manner that conforms to these bye-laws, to the Waste Management Act and, where such legislation is applicable to that person, to the European Union (Household Food Waste and Bio-Waste) Regulations 2015; and
- Adequate access and egress onto and from the premises by waste collection vehicles is maintained.

The full text of the bye-laws is available from the DCC website.

2.4 Regional Waste Management Service Providers and Facilities

Various contractors offer waste collection services for the residential sector in the DCC region. Details of waste collection permits (granted, pending and withdrawn) for the region are available from the NWCPO.

As outlined in the regional waste management plan, there is a decreasing number of landfills available in the region. Only three municipal solid waste landfills remain operational and all are operated by the private sector. There are a number of other licensed and permitted facilities in operation in the region including waste transfer stations, hazardous waste facilities and integrated waste management facilities. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second in Poolbeg in Dublin.

The DCC Recycling Centre at Kylemore Park North, Ballyfermot, located c. 1.92km east of the development site, can be utilised by the residents of the development for other household waste streams. This centre can accept paper, glass, rigid plastic, batteries, Tetra Pak, batteries, light bulbs, waste mineral oil and oil filters. There will also be a proposed bring bank for glass bottles located on the southern end of the site. Its location can viewed in the appendix of this report.

A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all Waste / Industrial Emissions Licenses issued are available from the EPA.

3.0 DESCRIPTION OF THE DEVELOPMENT

3.1 Location, Size and Scale of the Development

The proposed development (GFA of c. 13,280sqm) involves the construction of 137no. dwellings in a mix of houses, duplexes and own-door apartments ranging in height from 2 to 3 storeys comprising 31no. two-bed units (9no. two-bed three-person and 22no. two-bed four-person) and 106no. three-bed units (13,015 sqm total residential floor area), and all ancillary accommodation including bike and bin stores and ESB substation (265sqm total GFA). The proposed development also includes the provision of 2,133sqm landscaped public open space, in addition to 2,050sq.m of public open space as consented under the Phase 1 permission (Bord. Ref: ABP-318607-23). The total public open space provided for Phase 2 totals 4,183 sqm (12.34% of the net site/development area (3,390ha) of Phase 2 lands). Communal open space for the duplex and apartment units is provided across three dedicated communal amenity

areas (602sq.m in total area) with private open space to serve the proposed units to be delivered through a mixture of rear gardens and terraces.

The proposed development will also involve the provision of 141no. car parking spaces at curtilage and street level throughout the development, of which 7no. are accessible spaces and 71no. EV charging points (representing 50% of the total parking spaces). A total of 306no. bicycle parking spaces, of which 18no. are visitor spaces accommodated through a mixture of bike stores and external cycle parking stands. A total of 7no. motorbike parking spaces are also provided. Vehicular, pedestrian and cycle access routes to serve the proposed development are provided via the consented Phase 1 entrance to the east of the site along Park West Avenue with further connections provided to the north and to the south to the approved Phase 1 scheme. Provision is also made for the installation of a signalised access junction with associated traffic lights and below ground infrastructure and the relocation of bus stop and shelter along Park West Avenue. The need to provide a signalised junction requires minor alterations to the entrance to the development including adjustment to the paving as previously approved under the Phase 1 scheme (no further amendments to that permission are proposed under this application.) The proposed development also includes the provision of off-street cycle lanes along Park West Avenue that will provide direct connectivity to the Rail Station to the southeast and Cherry Orchard Park to the east.

The development will also provide for all associated ancillary site development works including site clearance, boundary treatment, associated public lighting, internal roads and pathways, bin and bike stores, ESB substation, hard and soft landscaping, play equipment, and all associated works and infrastructure to facilitate the development including connection to foul and surface water drainage and water supply..

3.2 Typical Waste Categories

The typical non-hazardous and hazardous wastes that will be generated at the development will include the following:

- Dry Mixed Recyclables (DMR) - includes waste paper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – food waste and green waste generated from internal plants / flowers;
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste.

In addition to the typical waste materials that will be generated at the development on a daily basis, there will be some additional waste types generated less frequently / in smaller quantities which will be managed separately including:

- Drink Cans and Bottles (Deposit Return Scheme)
- Green / garden waste may be generated from internal plants / flowers and external landscaping;
- Batteries (both hazardous and non-hazardous);
- Waste electrical and electronic equipment (WEEE) (both hazardous and non-hazardous);
- Printer cartridges / toners;
- Chemicals (paints, adhesives, resins, detergents, etc.);
- Light bulbs;
- Textiles;
- Waste cooking oil (if any generated by the residents or commercial tenants);
- Furniture (and, from time to time, other bulky wastes); and

- Abandoned bicycles.

Wastes will be segregated into the above waste types to ensure compliance with waste legislation and guidance while maximising the re-use, recycling and recovery of waste with diversion from landfill wherever possible.

3.3 European Waste Codes

In 1994, the *European Waste Catalogue* ¹⁸ and *Hazardous Waste List* ¹⁹ were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List* ²⁰, which was a condensed version of the original two documents and their subsequent amendments. This document has been replaced by the EPA '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous*' ²¹ (2018). This waste classification system applies across the EU and is the basis for all national and international waste reporting, such as those associated with waste collection permits, CORs, permits and licences and the EPA National Waste Database.

Under the classification system, different types of wastes are fully defined by a code. The List of Waste (LoW) codes for typical waste materials expected to be generated during the operation of the development are provided in Table 3.1, below.

Table 3.1 Typical Waste Types Generated and LoW Codes

Waste Material	LoW Code
Paper and Cardboard	20 01 01
Plastics	20 01 39
Metals	20 01 40
Mixed Non-Recyclable Waste	20 03 01
Glass	20 01 02
Biodegradable Kitchen Waste	20 01 08
Oils and Fats	20 01 25
Textiles	20 01 11
Batteries and Accumulators*	20 01 33* - 34
Printer Toner/Cartridges*	20 01 27* - 28
Green Waste	20 02 01
WEEE*	20 01 35*-36
Chemicals (solvents, pesticides, paints & adhesives, detergents, etc.) *	20 01 13*/19*/27*/28/29*30
Fluorescent tubes and other mercury containing waste*	20 01 21*
Bulky Wastes	20 03 07

* Individual waste type may contain hazardous materials

4.0 ESTIMATED WASTE ARISING

A waste generation model (WGM) developed by AWN has been used to predict waste types, weights and volumes expected to arise from operations within the development. The WGM incorporates building area and use and combines these with other data, including Irish and US EPA waste generation rates.

The estimated quantum / volume of waste that will be generated from the residential units has been determined based on the predicted occupancy of the units.

The estimated waste generation for the development for the main waste types is presented in Tables 4.1, 4.2 and 4.3, below.

Table 4.1 *Estimated Waste Generation for the Development*

Waste Type	Waste Volume (m ³ / week)			
	Block 1 Residential Units (Combined)	Block 2 Residential Units (Combined)	Block 3 Residential Units (Combined)	Block 4 Residential Units (Combined)
Organic Waste	0.22	0.07	0.07	0.07
DMR	1.52	0.51	0.51	0.51
Glass	0.04	0.01	0.01	0.01
MNR	0.80	0.27	0.27	0.27
Total	2.58	0.86	0.86	0.86

Table 4.2 *Estimated Waste Generation for the Development*

Waste Type	Waste Volume (m ³ / week)		
	Block 5 Residential Units (Combined)	Block 6 Residential Units (Combined)	Block 7 Residential Units (Combined)
Organic Waste	0.07	0.07	0.07
DMR	0.51	0.51	0.51
Glass	0.01	0.01	0.01
MNR	0.27	0.27	0.27
Total	0.86	0.86	0.86

Table 4.3 *Estimated Waste Generation for the Development*

Waste Type	Waste Volume (m ³ / week)	
	2 Bedroom House (Individual)	3 Bedroom House (Individual)
Organic Waste	0.02	0.02
DMR	0.11	0.13
Glass	>0.00	>0.00
MNR	0.07	0.08
Total	0.20	0.23

BS5906:2005 Waste Management in Buildings – Code of Practice ²² has been considered in the calculations of waste estimates. AWN's modelling methodology is based on recently published data and data from numerous other similar developments in Ireland and is based on AWN's experience, it provides a more representative estimate of the likely waste arisings from the development.

5.0 WASTE STORAGE AND COLLECTION

This section provides information on how waste generated within the site will be stored and collected. This has been prepared with due consideration of the site layout as well as best practice standards, local and national waste management requirements, including those of DCC. In particular, consideration has been given to the following documents:

- *BS 5906:2005 Waste Management in Buildings – Code of Practice,*
- *EMR Waste Management Plan 2015 – 2021;*

- *Dublin City Council Development Plan 2022 – 2028*;
- Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2018); and
- *DoHLGH, Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (2023)* ²³.

Shared Waste Storage Areas

Six (6 no.) shared Waste Storage Areas (WSAs) have been allocated in the design of this development for the duplex units. The locations of all Waste Storage Areas (WSAs) can be viewed on the drawings submitted with the planning application under separate cover and in the appendices of this report

Individual Waste Storage Areas

Houses will have their own individual bins and WSAs allocated to them. These individual WSA will be allocated at the front of the unit in a shielded bin store. The locations of Individual WSAs can be seen in Appendix of this plan.

Using the estimated waste generation volumes in Tables 4.1, above, the waste receptacle requirements for MNR, DMR, organic waste and glass have been established for the WSAs. It is envisaged that DMR, MNR, organic and glass waste will be collected on a weekly basis.

Waste Storage Requirements

Estimated waste storage requirements for the operational phase of the development are detailed in Table 5.1, below. The WSAs have been appropriately sized to accommodate the weekly waste requirements for waste receptacles.

Table 5.1 *Waste storage requirements for the development*

Area/Use	Bins Required			
	MNR ¹	DMR ²	Glass	Organic
Block 1&2 Shared WSA	1 x 1100 L	1 x 1100 L 2 x 240L	1 x 120 L	1 x 240 L
Block 1&3 Shared WSA	1 x 1100 L	1 x 1100 L 2 x 240L	1 x 120 L	1 x 240 L
Block 4 Shared WSA	2 x 240 L	1 x 1100 L	1 x 120 L	1 x 120 L
Block 5 Shared WSA	2 x 240 L	1 x 1100 L	1 x 120 L	1 x 120 L
Block 6 Shared WSA	2 x 240 L	1 x 1100 L	1 x 120 L	1 x 120 L
Block 7 Shared WSA	2 x 240 L	1 x 1100 L	1 x 120 L	1 x 120 L
Individual Units	1 x 240 L	1 x 240 L	Bottle Bank	1 x 240 L

Note: 1 = Mixed Non-Recyclables

2 = Dry Mixed Recyclables

The waste receptacle requirements have been established from distribution of the total weekly waste generation estimate into the holding capacity of each receptacle type. Waste storage receptacles as per Table 5.1, above, (or similar appropriate approved containers) will be provided by the operator of the development in the WSAs.

As outlined in the current Dublin City Development Plan, it is preferable to use 1,100 L wheelie bins for waste storage, where practical. However, in the case of organic and glass waste, it is considered more suitable to use smaller waste receptacles due to the weight of bins when filled with organic and glass waste. The use of 240 L bins, as recommended in Table 5.1, will reduce the manual handling impacts on the waste contractor employees.

The types of bins used will vary in size, design and colour dependent on the appointed waste contractor. However, examples of typical receptacles to be provided in the WSAs are shown in Figure 5.1. All waste receptacles used will comply with the SIST EN 840-1:2020 and SIST EN 840-2:2020 standards for performance requirements of mobile waste containers, where appropriate.



Figure 5.1 Typical waste receptacles of varying size (240 L and 1100 L)

Receptacles for organic, DMR, glass and MNR waste will be provided in the WSAs prior to first occupation of the development i.e. prior to the first residential unit unit being occupied.

This Plan will be provided to each resident and commercial tenant from first occupation of the development i.e. once the first residential unit is occupied. This Plan will be supplemented, as required, by the property management company with any new information on waste segregation, storage, reuse and recycling initiatives that are subsequently introduced.

5.1 Waste Storage – Residential Units

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

- Organic waste;
- DMR;
- Glass; and
- MNR

Provision will be made in all residential units to accommodate 3 no. bin types to facilitate waste segregation at source. An example of a potential 3 bin storage system is provided in figure 5.2 below.



Figure 5.2 Example three bin storage system to be provided within the unit design

Residents will be required to take their segregated waste materials to their designated communal or individual WSA and deposit their segregated waste into the appropriate bins. The locations of the residential WSAs are illustrated in the drawings submitted with the planning application under separate cover, and in Appendices of this report.

Each bin / container in the residential WSAs will be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Signage will be posted above or on the bins to show exactly which waste types can be placed in each bin. Access to the residential WSAs will be restricted to authorised residents, operator of the development and waste contractors by means of a key or electronic fob access.

Other waste materials such as textiles, batteries, printer toner/cartridges, waste cooking oil and WEEE may be generated infrequently by the residents. Residents will be required to identify suitable temporary storage areas for these waste items within their own units and dispose of them appropriately. Further details on additional waste types can be found in Section 5.3.

5.2 Waste Collection

There are numerous private contractors that provide waste collection services in the Dublin City area. All waste contractors servicing the development must hold a valid waste collection permit for the specific waste types collected. All waste collected must be transported to registered / permitted / licensed facilities only.

Bins from the shared waste storage areas development will be brought to a collection area by the waste contractor prior to collection. Residents in houses with their own individual waste receptacles will be required to take their waste receptacles to the curb or to designated staging/collection points. The locations of the collection areas for each WSA are shown in Appendix of this report. Bins will be returned to the WSAs immediately following collection. The locations of the collection areas are such that they will not obstruct traffic or pedestrians (allowing a footway path of at least 1.8m, the space needed for two wheelchairs to pass each other) as is recommended in the Design Manual for Urban Roads and Streets (2022) ²³. A tracking exercise for waste vehicles can be found in Appendix 1 of this report.

Suitable access and egress has been provided to enable the bins to be moved easily from the WSAs to the waste collection vehicles on the appropriate days. Waste will be collected at agreed days and times by the nominated waste contractors.

All waste receptacles will be clearly identified as required by waste legislation and the requirements of the DCC *Waste Bye-Laws*. Waste will be presented for collection in a manner that will not endanger health, create a risk to traffic, harm the environment or create a nuisance through odours or litter.

It is recommended that bin collection times are staggered to reduce the number of bins required to be emptied at once and the time the waste vehicle is on-site. This will be determined during the process of appointment of a waste contractor.

5.3 Additional Waste Materials

In addition to the typical waste materials that are generated on a daily basis, there will be some additional waste types generated from time to time that will need to be managed separately. A non-exhaustive list is presented below.

Deposit Return Scheme

Most drinks containers can be recycled via the deposit return scheme, such as bottles, cans and tins made from plastic, aluminium or steel can be returned once they are between 150ml and 3 litres in size and have the Re-turn logo on them.

At the shops you can either return the containers:

- Using a Reverse Vending Machine (RVM)
- Manually in the shop

If a shop does not have a RVM but they sell containers with the Re-turn logo, the shop may allow you to manually return containers in store, unless they have a take back exemption.

Locations of RVM machines can be found via the Re-turn website (www.re-turn.ie)

Green Waste

Green waste may be generated from internal plants / flowers. Green waste generated from internal plants / flowers or external landscaping will be placed in the organic waste bins. If substantial green waste is produced by commercial tenants it will be removed by a landscape contractor.

Batteries

A take-back service for waste batteries and accumulators (e.g. rechargeable batteries) is in place in order to comply with the S.I. No. 283/2014 - European Union (Batteries and Accumulators) Regulations 2014, as amended. In accordance with these regulations, consumers are able to bring their waste batteries to their local civic amenity centre or can return them free of charge to retailers which supply the equivalent type of battery, regardless of whether or not the batteries were purchased at the retail outlet and regardless of whether or not the person depositing the waste battery purchases any product or products from the retail outlet.

Waste Electrical and Electronic Equipment (WEEE)

The WEEE Directive (Directive 2002/96/EC) and associated Waste Management (WEEE) Regulations have been enacted to ensure a high level of recycling of electronic and electrical equipment. In accordance with the regulations, consumers can bring their waste electrical and electronic equipment to their local recycling centre. In addition, consumers can bring back WEEE within 15 days to retailers when they purchase new equipment on a like for like basis. Retailers are also obliged to collect WEEE within 15 days of delivery of a new item, provided the item is disconnected from all mains, does not pose a health and safety risk and is readily available for collection.

Printer Cartridge / Toners

Waste printer cartridge / toners generated by residents can usually be returned to the supplier free of charge or can be brought to a civic amenity centre.

Chemicals

Chemicals (such as solvents, paints, adhesives, resins, detergents, etc) are largely generated from building maintenance works. Such works are usually completed by external contractors who are responsible for the off-site removal and appropriate recovery / recycling / disposal of any waste materials generated.

Any waste cleaning products or waste packaging from cleaning products that are classed as hazardous (if they arise) generated by the residents will be brought to a civic amenity centre.

Light Bulbs

Waste light bulbs (fluorescent, incandescent and LED) may be generated by lighting at the commercial units. Light bulbs generated by residents will be taken to the nearest civic amenity centre for appropriate storage and recovery / disposal.

Textiles

Where possible, waste textiles will be recycled or donated to a charity organisation for reuse. The residents will be responsible for disposing of waste textiles appropriately.

Waste Cooking Oil

If the residents generate waste cooking oil, this can be brought to a civic amenity centre or placed in the organic bin.

Furniture & Other Bulky Waste Items

The collection of bulky waste will be arranged, as required by the residents. If residents wish to dispose of furniture, this can be brought a civic amenity centre.

Abandoned Bicycles

Bicycle parking areas are planned for the development. As happens in other developments, residents sometimes abandon faulty or unused bicycles, and it can be difficult to determine their ownership. Abandoned bicycles will be donated to charity if they arise or facilities management will arrange collection by a licensed waste contractor.

5.4 Waste Storage Area Design

The shared WSAs will be designed and fitted-out to meet the requirements of relevant design standards, including:

- Be fitted with a non-slip floor surface;
- Provide suitable lighting – a minimum Lux rating of 400 is recommended;
- Be easily accessible for people with limited mobility;
- Be restricted to access by nominated personnel only;
- Be supplied with hot or cold water for disinfection and washing of bins;
- Be fitted with suitable power supply for power washers;
- Have a sloped floor to a central foul drain for bins washing run-off;
- Have appropriate signage placed above and on bins indicating correct use;
- Have access for potential control of vermin, if required; and
- Be fitted with CCTV for monitoring.

The operator of the development, commercial tenants and residents will be required to maintain the resident bins and storage areas in good condition as required by the DCC Waste Bye-Laws.

6.0 CONCLUSIONS

In summary, this OWMP presents a waste strategy that addresses all legal requirements, waste policies and best practice guidelines and demonstrates that the required storage areas have been incorporated into the design of the proposed Development.

Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development. All recyclable materials will be segregated at source to reduce waste contractor costs and ensure maximum diversion of materials from landfill, thus contributing to the targets set out in the NWMPCE.

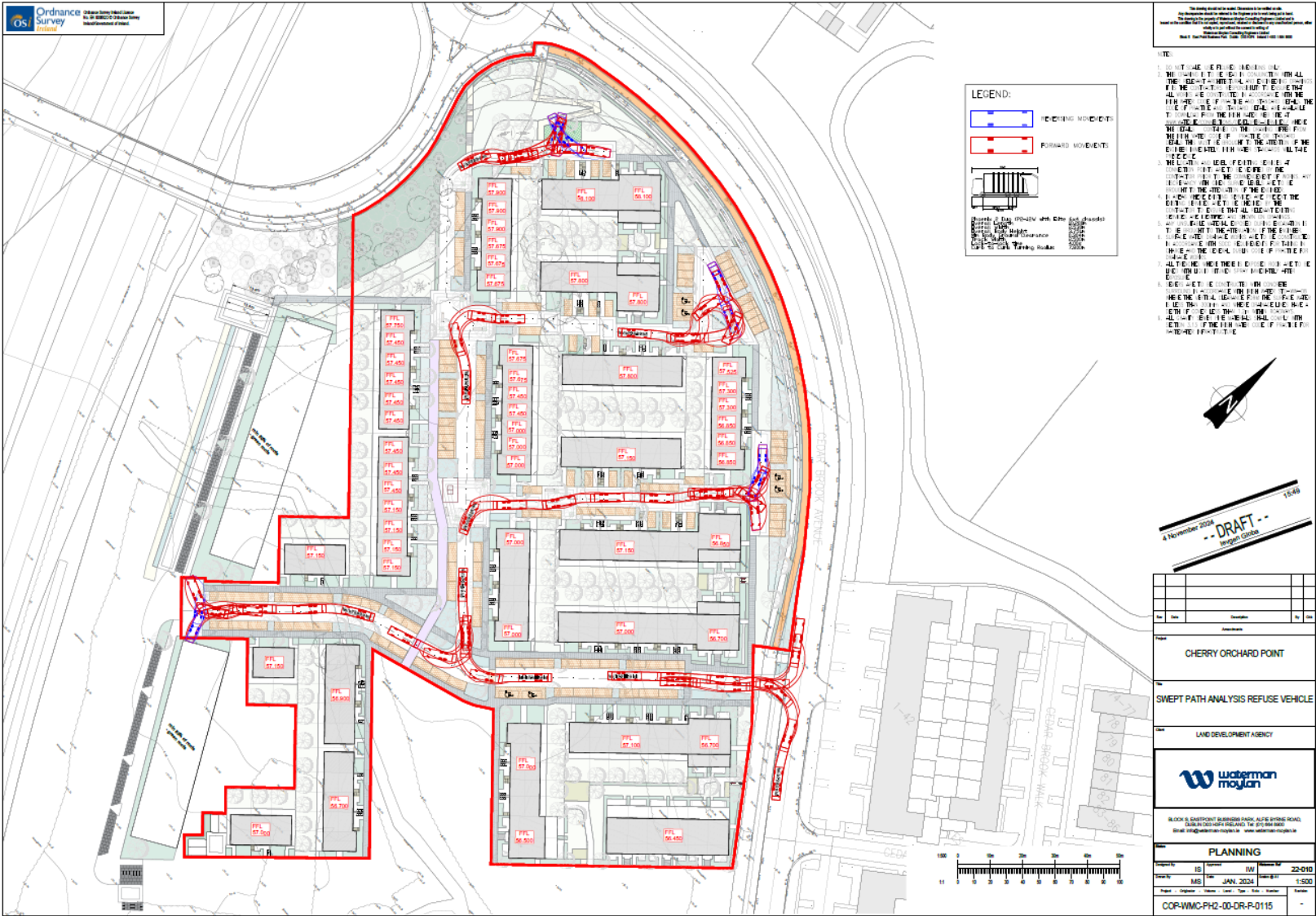
Adherence to this plan will also ensure that waste management at the development is carried out in accordance with the requirements of the DCC Waste Bye-Laws.

The waste strategy presented in this document will provide sufficient storage capacity for the estimated quantity of segregated waste. The designated areas for waste storage will provide sufficient room for the required receptacles in accordance with the details of this strategy.

7.0 REFERENCES

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13. *Circular Economy and Miscellaneous Provisions Act 2022*
14. DCC, *Dublin City Development Plan 2022-2028 (2022)*. Planning and Development Act 2000 (S.I. No. 30 of 2000) as amended
15. DCC, *Park West – Cherry Orchard Local Area Plan (2019)*.
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17. Hazardous Waste List - Council Decision 94/904/EC (as per Council Directive 91/689/EEC).
18. EPA, *European Waste Catalogue and Hazardous Waste List (2002)*
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20. BS 5906:2005 *Waste Management in Buildings – Code of Practice*.
21. Department of Housing Local Government and Heritage (DoHLGH), *Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities (2023)*.
22. DoHLGH, *Design Manual for Urban Roads and Streets (2019)*

8.0 APPENDIX 1: VEHICLE TRACKING EXERCISE FOR REFUSE TRUCK



9.0 APPENDIX 2: LOCATION OF WASTE STORAGE AREAS AND COLLECTION AREAS

