awnconsulting
A Trinity Consultants Company

The Tecpro Building,
Clonshaugh Business & Technology Park,
Dublin 17, Ireland.

T: + 353 1 847 4220
F: + 353 1 847 4257
E: info@awnconsulting.com
W: www.awnconsulting.com

OPERATIONAL WASTE MANAGEMENT PLAN FOR PROPOSED A RESIDENTIAL DEVELOPMENT

AT

42 A PARKGATE STREET, DUBLIN 8

Report Prepared For

Ruirside Development Limited

Report Prepared By

Chonaill Bradley, Principal Environmental Consultant

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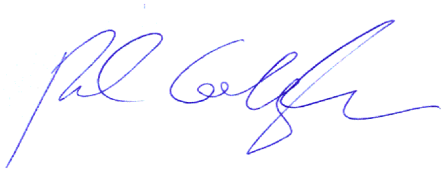
Signature		
Name	Chonaill Bradley	Fergal Callaghan
Title	Principal Environmental Consultant	Director
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1.0 INTRODUCTION

AWN Consulting Ltd. (AWN) has prepared this Operational Waste Management Plan (OWMP) on behalf of Ruirside Development Ltd. The proposed development seeks amendments to ABP Reg. Ref. 306569-20 (SHD 1) and 310567-21 (SHD 2), at No. 42A Parkgate Street, Dublin 8, including 40 no. 'Build To Rent' residential apartments replacing consented office floor area within the Block B2 office building.

This OWMP has been prepared to ensure that the management of waste during the operational phase of the proposed Development is undertaken in accordance with the current legal and industry standards including, the Waste Management Act 1996 as amended and associated Regulations [1], Environmental Protection Agency Act 1992 as amended [2], Litter Pollution Act 1997 as amended [3], the *'Eastern-Midlands Region (EMR) Waste Management Plan 2015 – 2021'* [4] , *the* Draft National Waste Management Plan for a Circular Economy (NWMPCE) (2023) [5] and Dublin City Council (DCC) 'Dublin City Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws' 2018 [6]. 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. The 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). 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.

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 2002 [7]. 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 Irelands 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 new 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 2022 [12] 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'* [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 *2020 National Waste Statistics web resource*, which is the most recent study published, along with the national waste statistics web resource (December 2022) reported the following key statistics for 2020:

- **Generated –** Ireland produced 3,210,220 t of municipal waste in 2020. This is a 4% increase since 2019. This means that the average person living in Ireland generated 645 kg of municipal waste in 2020.
- **Managed –** Waste collected and treated by the waste industry. In 2020, a total of 3,180,620 t of municipal waste was managed and treated.

- **Unmanaged –**Waste that is not collected or brought to a waste facility and is, therefore, likely to cause pollution in the environment because it is burned, buried or dumped. The EPA estimates that 29,600 t was unmanaged in 2020.
- **Recovered –** The amount of waste recycled, used as a fuel in incinerators, or used to cover landfilled waste. In 2020, around 84% of municipal waste was recovered – an increase from 83% in 2019.
- **Recycled –** The waste broken down and used to make new items. Recycling also includes the breakdown of food and garden waste to make compost. The recycling rate in 2020 was 41%, which is up from 37% in 2019.
- **Disposed –** 16% of municipal waste was landfilled in 2020. This is an increase from 15% in 2019.

2.2 Regional Level

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

The EMR Waste Management Plan 2015 – 2021 is the regional waste management plan for the DCC area which was published in May 2015. Currently the EMR and other regional waste management plans are under review and the Regional Waste Management Planning Offices have issued a Draft NWMPCE in June 2023.

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

- A 1% reduction per annum in the quantity of household waste generated per capita over the period of the plan;
- Achieve a recycling rate of 50% of managed municipal waste by 2020; and
- Reduce to 0% the direct disposal of unprocessed residual municipal waste to landfill (from 2016 onwards) in favour of higher value pre-treatment processes and indigenous recovery practices.

Municipal landfill charges in Ireland are based on the weight of waste disposed. In the Leinster Region, charges are approximately €130-150 per tonne of waste, which includes a €75 per tonne landfill levy introduced under the Waste Management (Landfill Levy) (Amendment) Regulations 2015.

The Draft 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.

Proposed National Targets

1a. (Residual Municipal Waste) 1% Reduction / person /year – Waste decline for landfill or recovery by thermal treatment.

2. (Contamination of Materials) 90% of Material in Compliance – Contamination of recycling and food waste with other materials

3a. (Reuse of Materials) 10kg Per person / year – Reuse of materials like cloths or furniture to prevent waste.

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.*

2.3 Legislative Requirements

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

- Waste Management Act 1996, as amended;
- Environmental Protection Agency Act 1992, as amended;
- Litter Pollution Act 1997, as amended;
- Planning and Development Act 2000, as amended [15]; and
- Circular Economy and Miscellaneous Provisions Act 2022

These Acts and subordinate Regulations enable the transposition of 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 tenants and the proposed facilities management company undertake on-site management of waste in accordance with all legal requirements and 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 contactor 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 IE (Industrial Emissions) 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 bought 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 are all 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 facility in Poolbeg in Dublin.

There is a DCC civic amenity c. 2.79km to the south east of the development at Eamonn Ceannt Park, which can be utilised by the residents of the development for certain household waste streams. This centre can accept paper, cans, cardboard, batteries, WEEE, plastics, textiles, glass and flat glass. There is also a bring bank at the Tesco Metro Stoneybatter c. 1.01km to the north east where glass and textiles can be deposited.

The bottle bank located adjacent to the Dublin bicycle stand on the eastern side of the development will be relocated to a new position, which will be agreed with DCC at a later date.

A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all waste/IE licenses issued are available from the EPA.

3.0 DESCRIPTION OF THE PROJECT

3.1 Location, Size and Scale of the Development

The proposed development seeks amendments to ABP Reg. Ref. 306569-20 (SHD 1) and 310567-21 (SHD 2), at No. 42A Parkgate Street, Dublin 8, including:

- 40 no. 'Build To Rent' residential apartments (30 no. 2-bed/4 person & 10 no. 2-bed/3 person units from 1st to 8th floors inclusive, each unit with private 'winter garden' and/or balcony), replacing consented office floor area (over 6 floors) within the Block B2 office building.
- Co-working and community space at ground floor level, replacing consented café/restaurant at Block B1.
- Ancillary internal private residential communal amenity area at mezzanine level, including lobby, residents' lounge and fitness area, replacing consented co-working space at Block B2.
- And all ancillary and associated site, structural and landscape works proposed to tie amended Block B2 in with the consented development, including:
    - Design adjustments at the interface of proposed Block B2 with the consented Block A tower building and Block B1, including increase in roof parapet height (by 1.0m):
    - Amendments to landscaping at roof level of consented Block B2 and part of Block B1 to accommodate proposed changes to roof levels associated with Block B2 change of use.
    - Changes to the northern Parkgate Street façade of consented Block B2 to suit residential use and accommodate external private amenity (wintergardens & balconies).

- Changes to the southern internal façade of consented Block B2 to suit residential use and accommodate external private amenity (balconies).
- 20 no. additional visitor bicycle spaces within consented public realm at surface level.
- Reconfiguration of floor plan and Increase in floor area of consented basement/undercroft at Block B1, to accommodate additional ancillary residential bicycle storage.
- Reconfiguration of ground and mezzanine floors of consented Block B1 to accommodate the proposed residential amenities and additional ancillary refuse, circulation, plant and non-residential back of house areas.

3.2 Typical Waste Categories

The typical non-hazardous and hazardous wastes that will be generated at the proposed 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 in small quantities which will need to be managed separately including:

- Green/garden waste may be generated from internal plants or 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.) ;
- Lightbulbs;
- Textiles (rags);
- Waste cooking oil (if any generated by the residents;
- Grease/waste water from passive grease trap (if one installed);
- Furniture (and from time to time other bulky wastes); and
- Abandoned bicycles.

Wastes should 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* [16] and *Hazardous Waste List* [17] were published by the European Commission. In 2002, the EPA published a document titled the *European Waste Catalogue and Hazardous Waste List* [18], which was a condensed version of the original two documents and their subsequent amendments. This document has recently been replaced by the EPA '*Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous'* [19] applicable from 5th July 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 EPA National Waste Database.

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

Waste Material	LoW/EWC 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*
Table 3.1 Typical Waste Types Generated and LoW Codes

4.0 ESTIMATED WASTE ARISINGS

A waste generation model (WGM) developed by AWN has been used to predict waste types, weights and volumes arising from operations within the proposed 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

Waste generated from the shared amenity space has been included in the waste figures for the residential units and will be stored within the residential waste bins.

The estimated waste generation for the development for the main waste types are presented in Table 4.1, below.

Waste type	Waste Volume (m^3/week)
	Residential Block B2
Organic Waste	0.69
DMR	4.74
Glass	0.13
MNR	3.15
Total	**8.72**

Table 4.1 Estimated waste generation for the proposed development for the main waste types

BS5906:2005 Waste Management in Buildings – Code of Practice [20] 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;*
- *The Draft NWMPCE (2023);*
- *Dublin City Council Development Plan 2022 – 2028 (Appendix 7)*
- DCC *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) [21].

Residential

Using the estimated figures in Table 4.1, The Resident's glass bins will be collected on a weekly basis, the organic bins will be collected twice weekly, while DMR and MNR will be collected on a three times a week basis.

Using the estimated waste generation volumes in Table 4.1, the waste receptacle requirements for MNR, DMR, organic waste and glass have been established for the Waste Storage Area (WSA). These are presented in Table 5.1.

Area/Use	Bins Required			
	MNR*	DMR**	Organic	Glass
Block B2 Residential WSA	1 no. 1100L	2 no. 1100L	2 no. 240L	1 no. 240L

*Note: * = Mixed Non-Recyclables*
*** = Dry Mixed Recyclables*

***Table 5.1** Weekly waste storage requirements for the proposed development*

Facilities management will supply all residents with a document that shall clearly state the methods of source waste segregation, storage, reuse and recycling initiatives that shall apply within the development.

The waste receptacle requirements have been established from distribution of the total weekly waste generation estimate into the holding capacity of each receptacle type.

The waste receptacle requirements have been established from distribution of the total weekly waste generation estimates 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 facilities management company 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 facilities management personnel and 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 5.2. 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, mixed dry recyclable, glass and mixed non-recyclable waste will be provided in the WSAs prior to first occupation of the development i.e. prior to the first unit being occupied.

This Plan will be provided to each resident from first occupation of the development i.e. once the first 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 waste into the following main waste streams:

- DMR;
- MNR;
- Organic Waste; and
- Glass.

Segregated bins for DMR, MNR, organic waste and glass will be provided within the kitchens of the units. Additional bins for segregation of DMR and MNR will also be provided in the common areas, where appropriate. Residents will be required to segregate their waste as above into the provided receptacles.

No food macerators will be installed within any area of the building.

An example of a potential 3 bin storage system is provided in figure 5.3 below.

Figure 5.3 Example three bin storage system to be provided within the development design

All bins/containers will be clearly labelled and colour coded to avoid cross contamination of the different waste streams. Signage will be posted on or above the bins to show which wastes can be put in each bin.

As required, the residents will bring waste from within their units to the dedicated WSA. Residents on the floors above ground level will use the lifts or stairs of their building to bring waste to the ground floor. Residents will be provided with access fobs/key/code by the facilities management company to access the WSA. Building cleaning staff will bring waste from within the common areas to the WSA as required.

Larger segregated waste receptacles (as per Table 5.1) will be provided by the building management company in the WSA. Receptacles will also be labelled, and colour coded to avoid cross contamination.

Other waste materials such as batteries, printer toner/cartridges and WEEE may be generated infrequently in the student accommodation areas. Residents will be required to identify suitable temporary storage areas for these waste items themselves 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 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/licensed facilities only.

All waste from the development will be collected by the waste contractor from either the shared loading area to the north of Block A on Parkgate Street or the internal path adjacent to Block B2. Facilities management or the waste contractor (depending on the agreement) will be in responsible for moving waste receptacles from the residential WSA to their collection location. A Road sweep analysis

The facility management or waste contractor will ensure that empty bins are promptly returned to the WSA after collection/emptying.

It is recommended that bin collection times/days are staggered to reduce the number of bins required to be emptied at once and the time the waste vehicle is onsite. 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.

Green/garden waste

Green/garden waste may be generated from gardens, external landscaping and internal plants / flowers. Green waste generated from landscaping of external areas will be removed by external landscape contractors. Green waste generated from gardens internal plants / flowers can be placed in the organic waste bins.

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 / recycling 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 civic amenity / 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 / recycling centre.

Chemicals (solvents, pesticides, paints, adhesives, resins, detergents, etc)

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 should be brought to a civic amenity / recycling centre.

Light Bulbs

Light bulbs generated by residents should be taken to the nearest civic amenity / recycling centre for appropriate storage and recovery / disposal.

Textiles
Where possible, waste textiles should 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 / recycling centre or placed in the organic bin.

Furniture (and other bulky wastes)
Furniture and other bulky waste items (such as carpet, etc.) may occasionally be generated by the residents. If residents wish to dispose of furniture, this can be brought a civic amenity / recycling 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 should be donated to charity if they arise.

5.4 Waste Storage Area Design

The residential WSA should be designed and fitted-out to meet the requirements of relevant design Standards, including:

- Be fitted with a non-slip floor surface;
- Provide ventilation to reduce the potential for generation of odours;
- Provide suitable lighting – a minimum Lux rating of 400 is recommended;
- Appropriate sensor controlled lighting;
- Be easily accessible for people with limited mobility;
- Be restricted to access by nominated personnel only;
- Have appropriate graphical and written signage placed above and on bins indicating correct use;
- 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 access for potential control of vermin, if required;
- Robust design of doors to bin area incorporating steel sheet covering where appropriate; and,
- Be fitted with CCTV for monitoring.

The facilities company will be required to maintain the waste 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 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 *EMR Waste Management Plan 2015 – 2021 and the draft 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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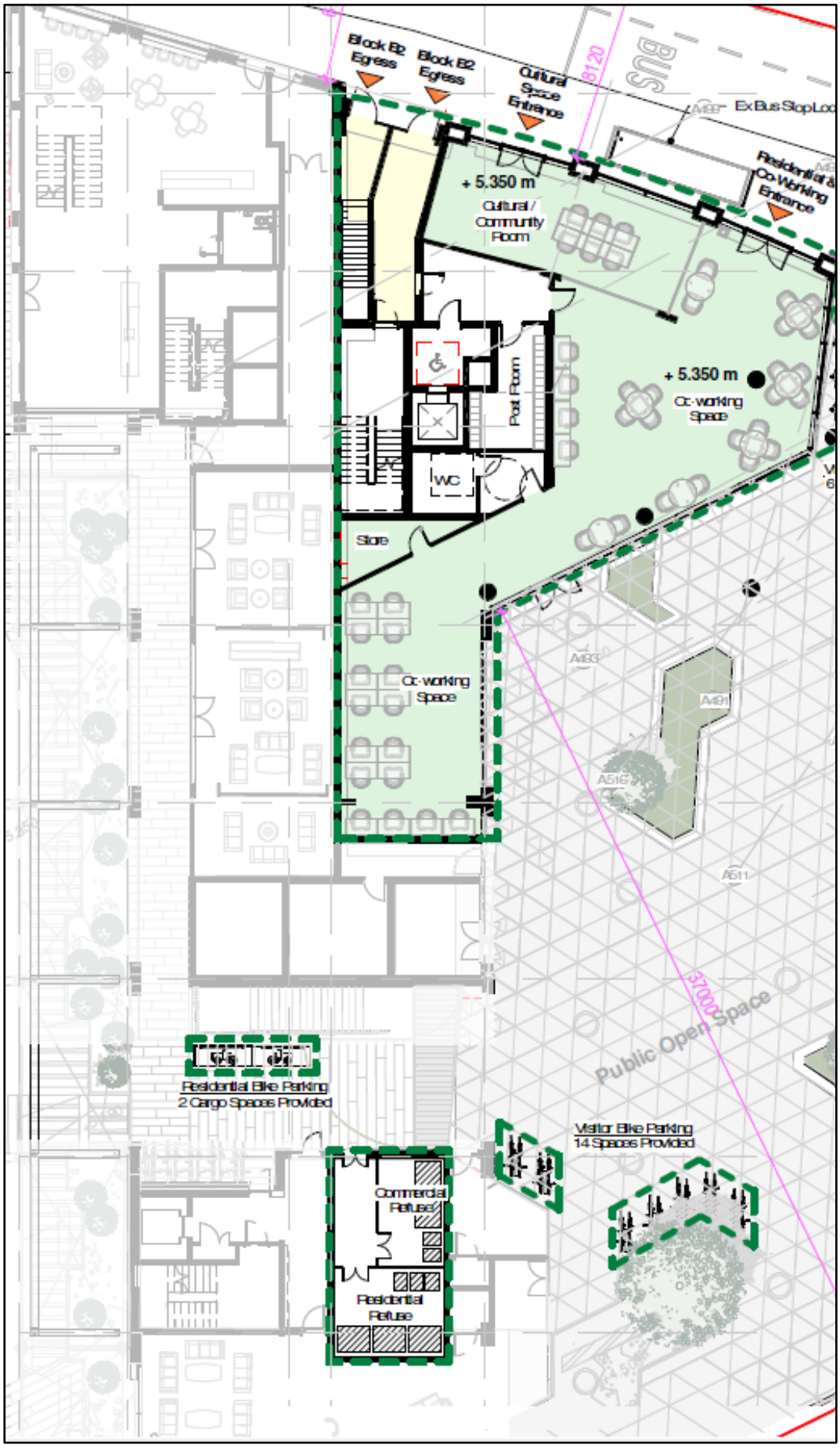
WASTE STORE LOCATION



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