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Bakers Hall Student Accommodation

Operational Waste Management Plan

20 January 2026

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Executive Summary

Wave Dynamics was engaged by Bakers Forge Properties to undertake an Operational Waste Management Plan (OWMP) for Bakers Hall Student Accommodation Rochestown Ave, Woodpark, Dun Laoghaire, Co. Dublin.

The development is comprised of no.300 bedspaces of student accommodation arranged in no.2 blocks which range in height from part no.4 to part no.6 storeys over part lower ground floor level with no.2 retail units to include a reception area, fitness studio, common spaces, meeting rooms, staffrooms, offices, a study room and a cinema room. The proposed development also includes the demolition of the Baker's Corner Building located in the northwestern corner of the subject site and construction of a replacement public house.

Operational Waste Management Plan

This Operational Waste Management Plan (OWMP) has been developed to demonstrate that the Proposed Development at Bakers Hall, will be designed and managed to provide residents with waste management infrastructure. The goal is to minimise the generation of residual waste while maximising opportunities for segregating and recycling the waste produced by the development.

Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development.

The waste management strategy outlined in this report ensures that there is adequate storage capacity for the various types of segregated waste produced by the residential development. Following the guidelines in British Standard 5906:2005, which addresses waste management in buildings, the typical weekly waste generation was calculated. This calculation confirms that sufficient and appropriate waste storage capacity will be available for the development when it reaches full occupancy.

All recyclable materials will be separated at the source to minimise costs for waste contractors and maximise the diversion of materials from landfills. This effort contributes to the targets outlined in the National Waste Management Plan for a Circular Economy (NWMPCE) for 2024-2030. Following this Operational Waste Management Plan (OWMP) will also ensure that waste management practices at the development comply with the Dún Laoghaire-Rathdown County Council (DLRCC) Segregation, Storage, and Presentation of Household & Commercial Waste Bye-Laws 2019.

Additional recommendations have been provided. These recommendations may be used to further help contribute towards achieving current and long-term national and DLRCC targets for waste minimisation, re-use and recycling.

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1 Introduction

Wave Dynamics was engaged by Bakers Forge Properties to undertake an Operational Waste Management Plan (OWMP) for Bakers Hall Student Accommodation Rochestown Ave, Woodpark, Dun Laoghaire, Co. Dublin.

The principal aim of this Operational Waste Management Plan (OWMP) is to demonstrate how the Proposed Development has considered sustainable methods for waste management during its operation. This Plan has been prepared in-line with the current legal and industry standards including, the Waste Management Act 1996 as amended, Environmental Protection Agency Act 1992 as amended, Litter Pollution Act 1997 as amended, , the National Waste Management Plan for a Circular Economy 2024 - 2030 and has been prepared with the following principles and objectives in mind:

- To contribute towards achieving current and long-term national and local targets for waste minimisation, recycling and re-use;
- To comply with all legal requirements for handling operational waste;
- To achieve high standards of environmental performance with respect to waste management; and
- To provide users of the proposed development with convenient, clean and efficient waste systems that enhances the operation of the buildings and promote high levels of recycling.

The key aims of this OWMP are to:

- Provide estimations on the anticipated waste generation within the proposed development;
- Provide a strategy for the management of the anticipated waste generation within the proposed development, from the point where waste is generated to the point where it is collected for off-site treatment;
- Ensure that occupants can easily segregate recyclables and are encouraged to do so;
- Allow waste to be disposed of easily, and be stored and collected in an efficient and discreet manner;
- Ensure that the Proposed Development has adequate facilities and space to adapt to any future waste management trends and practices; and
- Ensure that national and local targets, as well as all client waste management aims and aspirations, are met.

This operational waste management plan (OWMP) may be updated during detailed design and when the development is occupied to incorporate any changes in legislation and also to incorporate any changes and improvements in management technique.

Appendix A of this OWMP outlines the proposed development plans.

1.1 Statement of Competence

This report was completed by Shannon Doherty, a Senior Consultant at Wave Dynamics. Shannon has over 12 years' experience working on major residential, infrastructure, energy and brownfield/greenfield development projects in the UK and Ireland. His qualifications include; BSc (Hons) in Music Technology, Diploma in Acoustics and Noise Control (Institute of Acoustics), ANC Certificate of Competence in Sound Insulation Testing. Shannon is a member of the Institute of Acoustics. In addition to his work in Acoustics Shannon is part of the NOAL team with WDA. He has extensive experience in producing Construction Environmental Management Plans (CEMPS), Waste Management Plans (WMP) Emergency Response Plans (ERP), Decommissioning and Aftercare Plans for Wind and Solar, Air Quality Impact Assessments, Odour Assessments and Artificial Lighting Impact Assessments. Shannon has completed environmental plans for major residential, infrastructure, energy and brownfield/greenfield development projects in the UK and Ireland.

2 Proposed Development

This Operational Waste Management Plan (OWMP) is for Bakers Hall Student Accommodation Rochestown Ave, Woodpark, Dun Laoghaire, Co. Dublin. The proposed development is as follows:

The development is comprised of no.300 bedspaces of student accommodation arranged in no.2 blocks which range in height from part no.4 to part no.6 storeys over part lower ground floor level with no.2 retail units to include a reception area, fitness studio, common spaces, meeting rooms, staffrooms, offices, a study room and a cinema room. The proposed development also includes the demolition of the Baker's Corner Building located in the northwestern corner of the subject site and construction of a replacement public house.

Figure 1 below illustrates the proposed development plans.



Figure 1: Proposed Development Plans

3 Waste Management in Ireland

The following section gives an overview of the main policy drivers for waste management in Ireland. It details the broad legislative context from the European Union (EU) and national legislation and considers how these are brought together to provide the main framework for an integrated waste management network.

In the preparation of this OWMP the National legislation and guidelines listed in this document were consulted and followed where applicable. In addition, the requirements of the Regional and Local policies have been adhered to in the provision of waste management facilities at the development and the estimated quantities of waste generated and for which the provision of storage is required have been based on the British Standard 5906:2005 Waste Management in Buildings – Code of Practice.

3.1 Policy and Legislation

Irish waste policy is grounded on the European Union's concept of a waste management hierarchy. The European Union's waste management hierarchy is a series of waste management options, presented in decreasing order of environmental and economic desirability. The hierarchy states that the preferred option is prevention, followed by re-use, recycling, recovery, with the least desirable option being landfill. The overall intent of these policy statements is to move Irish waste management away from disposal and towards the more favoured options higher up the hierarchy and ultimately to achieve the full transition to a Circular Economy.

3.1.1 European Directives

Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste - the basic concepts related to waste management, such as definitions of waste, recycling and recovery. The Directive explains when waste ceases to be waste and becomes a secondary raw material, and how to distinguish between waste and by-products. The Directive outlines the requirement that waste be managed without endangering human health and harming the environment. The Directive introduces the "polluter pays principle" and the "extended producer responsibility". It incorporates provisions on hazardous waste and includes recycling and recovery targets to be achieved by 2020. Article 4 sets out the waste hierarchy which prioritises waste management options to reduce and manage waste ranking from waste avoidance, as the preferred option, followed by resource recovery and as a final option, safe disposal of waste. This waste hierarchy is shown below in Figure 2.



Figure 2: Waste Hierarchy

2000/532/EC: Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste - the Directive seeks to provide a clear and concise definition of hazardous waste while also setting out the requirements for the management and permitting of hazardous waste recovery and disposal facilities.

Directive (EU) 2018/850 of the European Parliament and of the Council of 30 May 2018 amending Directive 1999/31/EC on the landfill of waste - sets out the technical standards that all landfill disposal site must meet in the future in terms of improved and consistent operation and ensuring environmental protection. It is intended to prevent or reduce the adverse effects of the landfilling of waste on the environment, in particular on surface water, groundwater, soil, air and human health.

Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) – aims to increase recovery rates for waste/scrap items, and to reduce the quantities of this waste stream consigned to landfill. Producers of WEEE are responsible for the recovery of End of life equipment deemed a priority waste by the EU.

Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage – The purpose of the Directive is to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage. It is aimed at preventing environmental damage by forcing industrial polluters to pay prevention and remediation costs.

3.1.2 National Waste Policy

The Department of Housing, Planning and Local Government is responsible for waste policy and legislation at the national level in Ireland. A considerable part of the national policy is influenced by initiatives from the European Union (EU). These initiatives typically come into effect through European Directives, as listed above, which are then integrated into Irish law via our own legislative processes. The national waste management policy in Ireland is outlined in the following policy documents:

- Waste Management Changing our Ways, 1998;
- Preventing and Recycling Waste: Delivering Change, 2002;
- Taking Stock and Moving Forward, 2004;
- A Resource Opportunity – Waste Management Policy in Ireland, 2012; and
- A Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025; September 2020

The national waste policy currently in place, titled "A Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025," was released in September 2020. This policy outlines various measures and actions for each aspect of waste management, along with compliance and enforcement strategies regarding applicable waste legislation. A significant shift in this new policy is the emphasis on the production chain rather than solely on waste disposal. The document features over 200 measures that cover diverse areas such as Circular Economy, Municipal Waste, Consumer Protection and Citizen Engagement, Plastics and Packaging, Construction and Demolition, Textiles, Green Public Procurement, and Waste Enforcement. The key objectives of the current Action Plan are as follows;

- To shift the focus away from waste disposal and treatment by ensuring that the useful lifetime of materials and products is prolonged;
- To shift the burden of environmental responsibility for disposable goods to the producer;
- To ensure that measures for supporting sustainability are fostered.

The existing legal framework is centred around the Waste Management Act of 1996 and the Environment (Miscellaneous Provisions) Act of 2011, which serve as the primary means for implementing national waste policy. Additional regulations are found in the Circular Economy Act. The Circular Economy and Miscellaneous Provisions Act of 2022 supports Ireland's transition from a "take-make-waste" linear approach to a more

sustainable model of production and consumption, ensuring that resources maintain their value within our economy for as long as possible.

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.

3.2 Regional Level

The proposed development is located in the Local Authority administrative area of Dún Laoghaire-Rathdown County Council.

Until recently waste management planning in Ireland had been divided into three different regions namely, Eastern-Midlands, Southern and Connacht-Ulster regions, with each region led by a Regional Waste Management Planning Office with its respective Waste Management Plan.

The Eastern-Midlands Region includes the local authorities of Dublin City, Dún Laoghaire-Rathdown, Fingal, South Dublin, Kildare, Louth, Laois, Longford, Meath, Offaly, Westmeath and Wicklow.

As of March 2024, the Eastern Midlands Region (EMR) Waste Management Plan 2015 – 2021 has been superseded by the Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025, which establishes a single, national plan to guide waste management in Ireland, moving towards a circular economy. Although the Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025 has replaced previous regional waste management plans, it has not dissolved the three regional waste areas.

The Waste Action Plan for a Circular Economy: Ireland's National Waste Policy 2020-2025 aims to promote sustainable consumption, reduce waste generation, enhance material capture to optimise circularity, and ensure compliance with relevant policies and legislation. The national plan outlines the following strategic targets for waste management in the country that are pertinent to its development;

- (Residual Municipal Waste) 6% Reduction in Residual Municipal Waste per person by 2030
- (Contamination of Materials) 90% of Material in Compliance in the Dry Recycling Bin
- (Material Compliance Residual) 10% per annum increase in Material Compliance in the residual bin. (90% by the end of 2030)
- (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.

3.2.1 Dún Laoghaire-Rathdown County Development Plan 2022-2028

The Dún Laoghaire-Rathdown County Development Plan 2022 – 2028 sets out a number of policies for the Dún Laoghaire-Rathdown area in line with the objectives of the waste management plan. Proposed waste policies with a particular relevance to the development are as follows:

Policy Objective EI11: Resource Management "It is a Policy Objective to implement the Eastern-Midlands Region Waste Management Plan 2015-2021 and subsequent plans, in supporting the transition from a waste management economy towards a circular economy, to enhance employment and increase the value recovery and recirculation of resources. Underpinning this objective is the requirement to conform to the European Union and National Waste Management Hierarchy of the most favoured options for waste as illustrated below subject to economic and technical feasibility and Environmental Assessment. (Consistent with RPO 10.25 of the RSES)."

Policy Objective EI12: Waste Management Infrastructure, Prevention, Reduction, Reuse and Recycling (Circular Economy approach) "To ensure new developments are designed and constructed in line with the Council's Guidelines for Waste Storage Facilities" Dún Laoghaire-Rathdown County Council released a Guidance Note in February 2020,"Guidance Notes for Waste Management in Residential and Commercial Developments". This document sets out requirements for Common Waste Storage Areas design, Waste related requirements within Residential Units, Initial Waste Management, and Waste Collection systems.

Policy Objective EI13: Hazardous Waste It is a Policy Objective to adhere to the recommendations of the 'National Hazardous Waste Management Plan 2014-2020' and any subsequent plan, and to co-operate with other agencies, to plan, organise, authorise and supervise the disposal of hazardous waste streams, including hazardous waste identified during construction and demolition projects.

3.2.2 Dún Laoghaire-Rathdown County Council Segregation, Storage, and Presentation of Household & Commercial Waste Bye-Laws 2019

The Dún Laoghaire-Rathdown County Council (Storage, Presentation and Segregation of Household and Commercial Waste) Bye-Laws (2019) were bought into force on the 1st of February 2020. These Bye-laws repeal the previous DLRCC waste Bye-laws. The Bye-laws set a number of enforceable requirements on waste holders with regard to storage, separation and presentation of waste within the DLRCC functional area. Key requirements under these Bye-laws of relevance to the development include the following:

- Kerbside waste presented for collection shall not be presented for collection earlier than 6.00 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 10:00am on the day following the designated waste collection day, unless an alternative arrangement has been approved in accordance with bye-law 4;
- 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.

Provisions affecting Multi-user Buildings, Apartment Blocks, etc.:

A management company, or another person if there is no such company, who exercises control and supervision of residential and/or commercial activities in multiunit developments, mixed-use developments, flats or apartment blocks, combined living/working spaces or other similar complexes shall ensure that;

a) Separate receptacles of adequate size and number are provided for the proper segregation, storage and collection of recyclable kerbside waste, residual kerbside waste and food waste,
b) The receptacles referred to in paragraph (a) are located both within any individual apartment and at the place where waste is stored prior to its collection,
c) Any place where waste is to be stored prior to collection is secure, accessible at all times by tenants and other occupiers and is not accessible by any other person other than an authorised waste collector,

d) Written information is provided to each tenant or other occupier about the arrangements for waste separation, segregation, storage and presentation prior to collection,
e) An authorised waste collector is engaged to service the receptacles referred to in this section of these bye-laws, with documentary evidence, such as receipts, statements or other proof of payment, demonstrating the existence of this engagement being retained for a period of no less than two years. Such evidence shall be presented to an authorised person within a time specified in a written request from either that person or from another authorised person employed by Dún Laoghaire-Rathdown County Council,
f) Receptacles for kerbside waste are presented for collection on the designated waste collection day,
g) Adequate access and egress onto and from the premises by waste collection vehicles is maintained.

The full text of the Waste Bye-Laws is available from the Dún Laoghaire-Rathdown County Council website.

4 Guidelines and Standards

4.1 Design Standards for New Apartments

The Department of Housing, Planning and Local Government published the "Sustainable Urban Housing: Design Standards for New Apartments - Guidelines for Planning Authorities" in 2015, with updates released in 2018, December 2020, and December 2022. These guidelines establish standards for apartment development, focusing on design quality safeguards that include internal space standards for one-, two-, and three-bedroom apartments, as well as requirements for internal storage and amenity spaces.

The guidelines mandate the provision of facilities for the storage and collection of waste materials in apartment complexes. Refuse facilities should be easily accessible to each apartment's stairwell or lift core and designed to accommodate the anticipated level of waste generation, including the types and quantities of containers required. Within the apartments, there should be sufficient space for the temporary storage of segregated materials before they are deposited in communal waste storage areas. Additionally, the use of in-sink macerators is discouraged, as they can impose additional strain on drainage systems. The guidelines outline several general design considerations that should be taken into account when providing refuse storage facilities:

- Sufficient communal storage area to satisfy the three-bin system for the collection of mixed dry recyclables, organic waste and residual waste;
- In larger apartment schemes, consideration should also be given to the provision of separate collection facilities for other recyclables such as glass and plastics;
- Waste storage areas must be adequately ventilated so as to minimise odours and potential nuisance from vermin/flies and taking account the avoidance of nuisance for habitable rooms nearby;
- Provision in the layout for sufficient access for waste collectors, proximity of, or ease of access to, waste storage areas from individual apartments, including access by disabled people;
- Waste storage areas should not present any safety risks to users and should be well-lit;
- Waste storage areas should not be on the public street, and should not be visible to or accessible by the general public. Appropriate visual screening should be provided, particularly in the vicinity of apartment buildings;
- Waste storage areas in basement car parks should be avoided where possible, but where provided, must ensure adequate manoeuvring space for collection vehicles;
- The capacity for washing down waste storage areas, with wastewater discharging to the sewer.

4.2 Waste Management Obligations

Currently, there are no specific guidelines in Ireland for the preparation of Operational Waste Management Plans (OWMPs). As a result, this document refers to national and regional waste policies, legislation, and other relevant guidelines. The Waste Management Act follows the "polluter pays" principle, meaning that the waste producer is responsible for any pollution incidents that may occur due to the improper transport of the waste they generate. Therefore, it is essential for waste producers to ensure that all waste contractors they hire comply with legal requirements regarding waste transport and disposal.

When appointing a waste contractor for the development, the Facilities Management Company must ensure that the chosen waste contractor has a valid waste transport permit. A contractor is not allowed to accept any waste at their site unless they possess a waste permit granted by a local authority under the Waste Management (Permit) Regulations, 1998, or a waste license issued by the Environmental Protection Agency (EPA).

This permit specifies the types of waste that a contractor is licensed to receive, store, sort, and recycle at their site. The Facilities Management Company appointed to oversee the development will be responsible for implementing all aspects of the Operational Waste Management Plan as outlined in this report.
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 Licence granted by the EPA.

4.3 Regional Waste Management Service Providers and Facilities

Several contractors provide waste collection services for the residential sector in the Dún Laoghaire-Rathdown County Council region. Information about waste collection permits—whether granted, pending, or withdrawn—can be obtained from the National Waste Collection Permit Office (NWCPO). According to the Eastern Midlands Region (EMR) Waste Management Plan for 2015-2021, the number of landfills available in the region is decreasing. Currently, only three municipal solid waste landfills are operational, all of which are managed by the private sector. In addition, there are various other licensed and permitted facilities in the region, including waste transfer stations, hazardous waste facilities, and integrated waste management facilities.

Thermal treatment facilities are waste management systems that use high temperatures to process waste, reducing its volume, destroying harmful substances, and potentially generating energy. These facilities employ various methods like incineration, pyrolysis, and other thermal technologies to manage different types of waste, including municipal and industrial. There are two existing thermal treatment facilities, one in Duleek, Co. Meath and a second in Poolbeg in Dublin.

There is a Civic Amenity / recycling centre, located c. 3.5 km southwest of the development site at Ballyogan Recycling Park, Ballyogan Road, Carrickmines, Dublin 18, which can be utilised by the residents of the development for other household waste streams, while a bottle bank can be found at Ballyogan Recycling Park. A copy of all CORs and waste permits issued by the Local Authorities are available from the NWCPO website and all Waste Licenses issued are available from the EPA.

5 Typical Waste Categories

5.1 Definition of Waste

The definition of "waste" comes from Article 3(1) of the revised European Waste Framework Directive (WFD) (2008/98/EC). According to this directive, waste is defined as “any substance or object which the holder discards or intends or is required to discard.” The term “discard” encompasses not only the disposal of a substance or object but also its recovery and recycling. Determining whether something is considered waste involves evaluating all relevant circumstances, such as the nature of the material, how it was produced, and its intended use. This assessment should also consider the aims of the WFD, which seeks to protect human health and the environment from harmful effects associated with the collection, transport, treatment, storage, and disposal of waste.

5.2 Waste Type

At a strategic level the key waste streams produced on site can be classified as:

- Inert – wastes that will not cause adverse effects to the environment when disposed of, or do not decompose and they have no potentially hazardous content when placed in a landfill. Examples of inert wastes are rocks, concrete, mortar, glass, uncontaminated soils and aggregates.
- Non-Hazardous – wastes that will decompose when buried resulting in the production of methane and carbon dioxide. Examples of non-hazardous wastes include timber, paper and cardboard.
- Hazardous – wastes that are harmful to human health or the environment (for example, pollution of watercourses) if they are incorrectly contained, treated or disposed of. Hazardous wastes may have one or more of the following properties: explosive, corrosive, flammable, highly flammable, infectious, oxidising or sensitising.

5.2.1 Operational Waste from the Proposed Development

The proposed development will generate residential and non-residential waste. The typical non-hazardous and hazardous wastes that will be generated will include the following:

- Dry Mixed Recyclables (DMR) - is defined as a collection of solid waste materials that can be stored and collected in one waste receptacle or in separate waste receptacles to increase recycling value. Includes wastepaper (including newspapers, magazines, brochures, catalogues, leaflets), cardboard and plastic packaging, metal cans, plastic bottles, aluminium cans, tins and Tetra Pak cartons;
- Organic waste – organic waste is defined as waste that is organic in nature and comprises mainly of food, be it cooked or uncooked, from kitchens and other catering establishments and is generally classified as putrescible;
- Glass; and
- Mixed Non-Recyclable (MNR)/General Waste - this is the residual waste that is the remaining waste material after separate diversion of waste components though reduction, reuse, recycling and food waste collections.

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);
- Drink Cans and Bottles (Deposit Return Scheme)
- 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 or crèche tenants);
- Furniture (and from time to time other bulky wastes); and
- Abandoned bicycles.

Wastes should be separated into the specified types to ensure compliance with waste legislation and guidance while maximising the reuse, recycling, and recovery of waste, diverting it from landfill wherever possible.

5.3 List of Waste Codes

In 1994, the European Commission introduced the European Waste Catalogue and the Hazardous Waste List. In 2002, the EPA published a document summarising these resources, which has since been replaced by the 2018 publication, "Waste Classification – List of Waste & Determining if Waste is Hazardous or Non-Hazardous." This classification system is used across the EU for waste reporting related to collection permits, Certificates of Registration (CORs), and the EPA National Waste Database.

In the classification system, various types of waste are defined by specific codes. The List of Waste (LoW) codes for typical waste materials anticipated during the operation of the proposed development are outlined in Table 1.

Table 1: Typical Waste Typed Generated and Associated LoW Codes

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

** Individual waste type may contain hazardous materials*

The most common wastes remain Mixed Dry Recyclables, Organic Waste, Mixed Non-Recyclables, and Glass. The other wastes will be produced in small quantities and can be disposed at civic amenity centres.

5.4 Waste Management

Once a substance has become waste it will remain waste until it has been fully recovered and no longer poses a potential risk to the environment or human health. From that moment onwards, the material ceases to be waste, and it is no longer subject to the same legislative controls.

This applies to waste used as aggregate or construction material in civil engineering applications and to exceed topsoil's and sub-soils which need to be moved off-site. Waste recovery can be achieved when such waste is incorporated into a road, building or other infrastructure works, or in the case of inert waste, after processing if such a process is conducted following the criteria specified in the relevant quality protocols. The principal objective of sustainable resource and waste management is to use material resources more efficiently, where the value of products, materials and resources are maintained in the economy for as long as possible and the generation of waste is minimised.

To achieve resource efficiency there is a need to move from a traditional linear economy to a circular economy as illustrated in Figure 3.

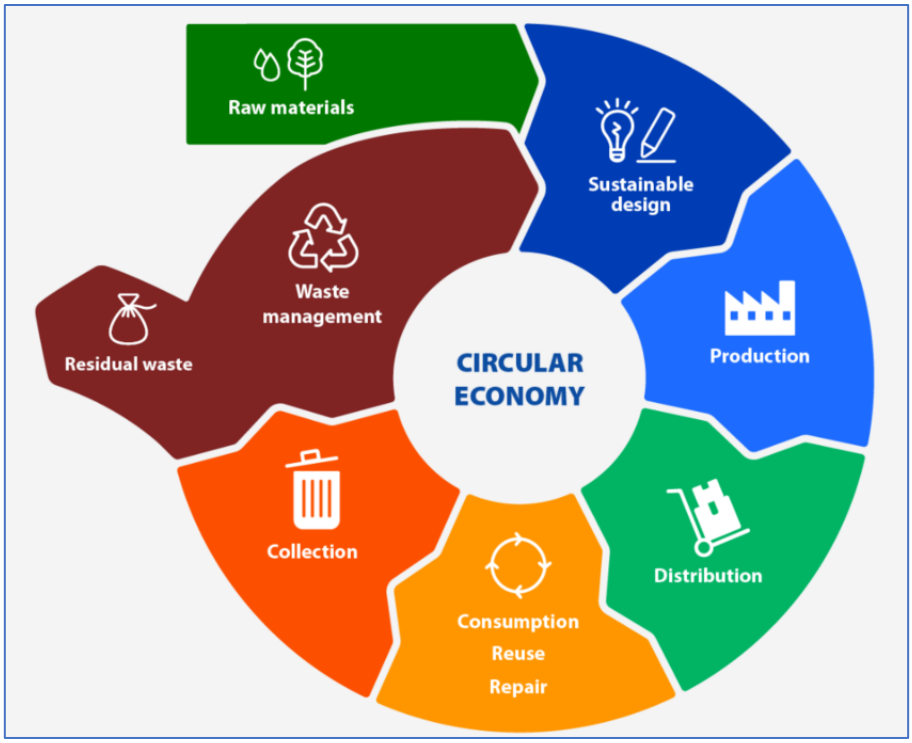


Figure 3: Circular Economy

6 Estimated Waste Arisings

British Standard 5906:2005 Waste Management in Buildings – Code of Practice covers methods of storage, collection, segregation for recycling and recovery, and on-site treatment of waste from residential and non-residential buildings and healthcare establishments. It is applicable to new buildings, refurbishments and conversions of residential and non-residential buildings, including but not limited to retail and offices. It sets out typical weekly waste arisings for various types of buildings, as outlined in Table 2.

Table 2: Typical Waste Arisings

Typical Weekly Waste Arisings			
Building Type	**Weekly Waste Calculation**	**Example**	**Weekly Waste Arisings (Litres)**
Dwelling (not HMO) This estimate assumes residential purposes only; if the dwelling is also used for any non-domestic purposes, the relevant arisings should be separately estimated and planned for.	70L per bedroom + 30L per dwelling	3-bedroom house	240
House in Multiple Occupation	100L per bedroom + 60L per dwelling	3-bedroom house	360
Office	50L per employee	10 employees	500
Shopping Centre	10L per sqm of sales area	25,000 sqm sales area	250,000
Fast Food Outlet	5L per sale	45,000 sales per week	225,000
Department Store	10L per sqm of sales area	3,700 sqm	37,000
Restaurant	75L per dinning space	30 dining spaces	2,250
4/5 Star Hotel	350L per bedroom	370 bedrooms	129,500
2/3 Star Hotel	250L per bedroom	100 bedrooms	25,000
1 Star Hotel/ B&B	150L per bedroom	5 bedrooms	750
Supermarket (small – sales area up to 1500sqm)	100L per sqm of sales area	800 sqm sales area	80,000
Supermarket (large – sales area more than 1500sqm)	150L per sqm of sales area	2,000 sqm sales area	300,000
Industrial Unit	5L per sqm of floor area	2,000 sqm floor area	10,000
School	2,500L per 100 pupils	700 pupils	17,500

For the purposes of the waste storage calculations, the waste will be segregated and stored into three main designated waste streams namely mixed dry recyclables, organic food waste and residual waste. When using volume as the unit measurement for waste arisings, it is considered that a 60:25:10:5 split[1] between mixed dry recyclables, residual waste, organic waste and glass waste is a best estimate fit for waste breakdown for the proposed development and typical residential living. The above equation can be used to estimate the waste arisings for each of the different residential types based on the number of bedrooms present in the dwelling unit. Sections 6.1 and 6.2 below outline the estimated volume of waste that will be generated each week by each of the residential units based on the number of bedrooms per unit.

6.1 Waste Arisings

While British Standard 5906:2005, a code of practice for waste management in buildings, does not mandate a specific waste calculation for individual student accommodation units, it provides guidance on predicting waste quantities and designing appropriate storage solutions. While individual residential spaces are generally not

[1] Public House uses a waste split of 50:10:10:30

subject to the same detailed waste management regulations as larger developments, understanding the principles outlined in BS 5906:2005 and any relevant council regulations can help determine appropriate waste storage solutions for each accommodation unit, which in turn helps determine appropriate storage capacity and collection frequencies for the proposed development. Based on the latest drawings and information currently available, the proposed development will consist of the following;

- no.300 student bedspaces, divided between studios and clusters of three, six, seven, eight and nine bedroom units and spread across no.2 blocks.

In addition to the following project components;

- Block A
  - Retail Space ; Floor Area approx. 239.5m^2
  - Public House ; Floor Area approx. 272.3m^2
- Block B;
  - Retail; approx. 126.1m^2
  - Total ground floor communal/facility/office space; approx. 359.6m^2.

British Standard 5906:2005, code of practice for waste management in buildings was used to estimate the weekly volume of waste generated by the student accommodation units and all other waste generating facilities associated with the project using the methodology outlined in Table 2 above and a typical waste split of a 60:25:10:5[2]. Assuming full occupancy rates for all units, the waste arisings for the proposed development has been calculated as shown in Sections 6.1.1 – 6.1.5 below.

6.1.1 Student Accommodation Units

The Proposed Development will consist of no.300 bedspace student accommodation units divided into studio units and clusters of 3,6,7,8 and 9 units and spread across no.2 blocks. The accommodation units will consist of the following;

- 11 Studio Units;
- No.4 x 3 units clusters;
- No.3 x 6 unit clusters;
- No.22 x 7 unit clusters;
- No.12 x 8 unit clusters; and
- No.1 x 9 unit cluster.

Table 3 illustrates the weekly estimated main waste generated by the student accommodation units.

Table 3: Estimated Main Waste Generation Breakdown for Student Accommodation Units

Waste Stream	Approximate Waste Volume Split (litres/week)					
	Studio	3 Bedroom Cluster	6 Bedroom Cluster	7 Bedroom Cluster	8 Bedroom Cluster	9 Bedroom Cluster
DryR (60%)	60	144	270	312	354	396
NonR (25%)	25	60	112.5	130	147.5	165
Organic (10%)	10	24	45	52	59	66
Glass (5%)	5	12	22.5	26	29.5	33
Total	**100**	**240**	**450**	**520**	**590**	**660**

Assuming full occupancy rates for all student accommodation units across both blocks, the waste arisings have been calculated as shown in Table 4.

[2] Public House uses a waste split of 50:10:10:30

Table 4: Total Estimated Main Waste Generation Volume for Student Accommodation Units Per Week

Waste Stream	Approximate Waste Volume Split (litres/week)					
	No.11 x Studio	No.4 x 3 Bedroom Cluster	No.3 x 6 Bedroom Cluster	No.22 x 7 Bedroom Cluster	No.12 x 8 Bedroom Cluster	No.1 x 9 Bedroom Cluster
DryR (60%)	660	576	810.00	6864	4248	396
NonR (25%)	275	240	337.5	2860	1770	165
Organic (10%)	110	96	135	1144	708	66
Glass (5%)	55	48	67.5	572	354	33
Total	**1100**	**960**	**1350**	**11440**	**7080**	**660**

The total waste arisings for the combined student units has been calculated and outlined in Table 5 below.

Table 5: Total Estimated Main Waste Generation Volume for All Student Accommodation Units Per Week

Waste Stream	Approximate Total Waste Volume Split (litres/week)
	No.300 Units
DryR (60%)	13554.0
NonR (25%)	5647.50
Organic (10%)	2259.00
Glass (5%)	1129.50
Total Litres	**22590**

In total, the student accommodation units alone will produce approximately 22,590 litres of waste per week.

6.1.2 Block A: Retails Unit & Public House

Block A will consist of a Retail Unit A measuring approx. 239.5m^2 floor area and a public house, with a floor area of 272.3m^2. British Standard 5906:2005, code of practice for waste management in buildings was used to estimate the weekly volume of waste generated by the retail unit and public house. The required bin storage capacity is calculated based on the floor area of the individual space. BS:5906:2005 indicative figure of weekly waste arising for commercial areas of 5 litres per square metre floor area (m^2). The percentage waste calculations for the public house have been altered to take into account the large quantity of glass that will be generated. Table 6 illustrates the weekly estimated main waste generated by retail unit A and the public house.

Table 6: Estimated Main Waste Generation Breakdown for Block A: Retail Unit and Public House

Approximate Waste Volume Split per 100 litres/week	
Waste Stream Block A Retail Unit	**Public House Waste Stream**
DryR (60%)	DryR (50%)
NonR (25%)	NonR (10%)
Organic (10%)	Organic (10%)
Glass (5%)	Glass (30%)

Based on weekly waste arising for commercial areas of 5 litres per square metre floor area (m^2), the total waste arisings for Retail Unit A and the Public House have been calculated as shown in Table 7. Calculated waste

arisings for the Retail Unit A ad the Public House are indicative. The purpose of the commercial waste calculations is for the allocation of space based on estimated waste generation for typical retail uses.

Table 7: Total Estimated Main Waste Generation Volume for Block A: Retail Unit and Public House Per Week

Approximate Total Waste Volume Split (litres/week)			
Block A Retail Unit		**Public House**	
DryR (60%)	719	DryR (50%)	681
NonR (25%)	299	NonR (10%)	136
Organic (10%)	120	Organic (10%)	136
Glass (5%)	60	Glass (30%)	408
Total	**1198**	**Total**	**1362**

In total, the block A retail unit will produce approximately 1,198 litres of waste per week, with the block A public house producing approximately 1,362 litres of waste per week.

Note these waste arising figures are based on British Standard 5906:2005 Waste Management in Buildings – Code of Practice calculations using typical waste arisings associated with commercial units. These indicative figures are based on the total floor area of the unit and are subject to change depending on the type of commercial tenant that occupies the unit.

6.1.3 Block B: Retail Unit and Total Communal/Facilities Area

Block B will consist of the Retail Unit B, with a floor area of approx. 126.1m^2. It will also accommodate various tenant amenities such as office space, communal/lounge areas, cinema, gym, canteen and laundry, all combining to give a total floor area of approx. 359.6m^2. British Standard 5906:2005, code of practice for waste management in buildings was used to estimate the weekly volume of waste generated by the retail unit and the project facilities listed. The required bin storage capacity is calculated based on the floor area of the individual space. BS:5906:2005 indicative figure of weekly waste arising for commercial areas of 5 litres per square metre floor area (m^2).

Table 8 illustrates the weekly estimated main waste generated by the retail unit B (floor area 126.1m^2) and various tenant amenities listed, with the amenity space totalling a surface floor area of approx. 359.6m^2.

Table 8: Estimated Main Waste Generation Breakdown for Block B: Retail Unit and Communal/Facilities Area

Approximate Waste Volume Split per 100 litres/week	
Waste Stream Block B Retail Unit	**Waste Stream Block B Communal/Facilities Area**
DryR (60%)	DryR (60%)
NonR (25%)	NonR (25%)
Organic (10%)	Organic (10%)
Glass (5%)	Glass (5%)

Based on weekly waste arising for commercial areas of 5 litres per square metre floor area (m^2), the total waste arisings for Retail Unit B and the tenant amenities area have been calculated as shown in Table 9. The purpose of the commercial waste calculations is for the allocation of space based on estimated waste generation for typical retail uses.

Table 9: Total Estimated Main Waste Generation Volume for Block B: Retail Unit and Communal/Facilities Area

Waste Stream	Approximate Total Waste Volume Split (litres/week)	
	Block B Retail Unit	Block B Communal/Facilities Area
DryR (60%)	378.3	1078.8
NonR (25%)	157.6	449.5
Organic (10%)	63.1	179.8
Glass (5%)	31.5	89.9
Total	**630.5**	**1798.0**

In total, the block B retail unit will produce approximately 630.5 litres of waste per week, with the block B communal/facilities area producing approximately 1,798 litres of waste per week.

Note these waste arising figures used for the retail space are based on British Standard 5906:2005 Waste Management in Buildings – Code of Practice calculations using typical waste arisings associated with commercial units. These indicative figures are based on the total floor area of the unit and are subject to change depending on the type of commercial tenant that occupies the unit.

6.2 Total Weekly Waste Arisings

The British Standard 5906:2005 Waste Management in Buildings – Code of Practice was used to determine the total amount of waste produced by the proposed development assuming full occupancy rates of all units. It is therefore estimated that a total of 27,577.5 litres (approx. 28m^3) of the main waste types will be generated by the proposed development on a weekly basis once full occupancy has been reached.
Table 10 outlines the estimated total weekly waste arisings associated with the proposed development.

Table 10: Total Estimated Waste to be Generated

Total Generated Waste Litres/Week (100%)						
Waste Stream	**Student Accommodation Units**	**Block A Retail Unit**	**Public House**	**Block B Retail Unit**	**Block B Communal/ Facilities Areas**	**Total Generated Waste**
DryR (60%)	13554.0	719	680.8[1]	378.3	1078.8	16410.4
NonR (25%)	5647.5	299	136.2[1]	157.6	449.5	6690.2
Organic (10%)	2259.0	120	136.2[1]	63.1	179.8	2757.8
Glass (5%)	1129.5	60	408.5[1]	31.5	89.9	1719.3
Total Litres/Week	**22590.0**	**1198**	**1361.5[1]**	**630.5**	**1798.0**	**27577.5**

1) Based on 50%, 10%, 10%, 30% waste split.

In total, blocks A and B will produce approximately 27,577.5 litres (27.5m^3)of waste per week.

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

- Bulky wastes – including furniture, carpets, mattresses;
- Waste electrical and electronic equipment (WEEE);
- Batteries;

- Textiles – clothes or soft furnishings;
- Light bulbs or fluorescent tubes;
- Chemicals – old medicines, paints, detergents; and
- Waste oil - cooking oil.

Waste electrical and electronic equipment (WEEE)

It is assumed the proposed development may occasionally generate small quantities of E waste (WEEE). The management company should establish designated area for collecting e-waste, ensuring safe storage of items containing hazardous materials and partner with authorised WEEE recycling facilities for proper collection, dismantling, and recycling of e-waste.

7 Waste Storage Facilities

This section outlines the procedures for storing waste generated within the development. It has been prepared with careful attention to the proposed site layout and adheres to best practice standards as well as local and national waste management requirements including those of Dún Laoghaire-Rathdown County Council.

7.1 Waste Storage Area (WSA)

The proposed development will have no.1 designated waste storage areas for student accommodation and communal/facility spaces, located internally within Block B. The no.2 retail units and the public house will each assign their own independent waste storage areas.

7.1.1 WSA 01

WSA 01 is a shared Waste Storage Area (WSA) for residents of both Block A and Bock B to use. It is located on the ground floor of Block B and will serve as the waste storage area for waste generated by the student accommodation units and communal/facilities areas **only**. Waste Storage Area 01 will have restricted entry, allowing access only to authorised residents, facilities management personnel, and licensed waste contractors. Individuals seeking entry must use an access key / code or an electronic fob to unlock the door. These access controls are in place to ensure the security and proper management of the waste storage facilities. It is important to note that the residents in blocks C, D and E bear the responsibility of transporting their segregated waste materials to their designated waste storage area. They must ensure that waste is disposed of in the proper receptacles as outlined by the waste management guidelines. This process helps maintain an organised and efficient waste management system within the development. Figure 4 below illustrates the location of the Block B Waste Storage Area (WSA 01).



Figure 4: Waste Storage Area 01

To accommodate waste generated by the student accommodation units and communal/facilities areas only, WSA 01 will require no.1 commercial bin compactor/press, no.2 x 1100L bins and no.1 x 770L for DryR waste, no.1 x 1100L bin for NonR waste, no.10 x 240L organic waste bins and no.2 x 660L bins for glass. Residents are responsible for taking their segregated waste materials to the designated waste storage area and disposing of them in the appropriate waste receptacles. A breakdown of the waste storage requirement for WSA is outlined below.

- For the Student Accommodation Units and Communal/Facilities Areas **only,** the following waste will be generated weekly.
    - DryR: 14,632.8 litres
    - NonR: 6,097 litres

  - Organic: 2,438.8 litres
  - Glass: 1,219.4 litres

- With a twice weekly collection of DryR and NonR waste, these waste estimates can be halved, equalling;
  - DryR: 7,316.4 litres
  - NonR: 3,048.5 litres
  - Organic: 2,438.8 litres
  - Glass: 1,219.4 litres

- With these weekly waste estimates and the use of a bin compactor/press which will achieve a significant compaction ratio of 3:1 minimum, the following bin allocations are required;
  - DryR: no.2 x 1100L for compactor/press, no.1 x 770L
  - NonR: no.1 x 1100L
  - Organic: no.10 x 240L
  - Glass: no.2 x 660L

Bin Compactor/Press

The PEL1100 Bin Compactor/Press reduces the number of waste collections required. Businesses using 1100 litre wheelie bins for handing general and recycling waste, will see significant savings on costs – and space. Site Managers/Facilities Managers often oversee the operation to ensure efficiency, safety compliance, and proper maintenance. Information on the proposed bin press/compactor is provided in Figure 5.



Figure 5:PEL Bin Compactor/Press

Using a Bin Compactor/Press

- ✓ **Loading**: Waste is placed into the 1100-litre bin.
- ✓ **Compaction**: The bin is then placed into or under the bin press. A hydraulic compactor head or a lifting and pressing mechanism compresses the waste into a smaller volume.
- ✓ **Waste Volume Reduction**: This process can achieve a significant compaction ratio, such as 3:1, meaning three times the volume of waste can fit into one bin.

Bin Compactor/Press Features

- ✓ Features mounted wheels within the small footprint so it can be easily moved to the source waste.
- ✓ Incorporates a two-handed operational management system making it a safe and easy machine to use.
- ✓ The hydraulic compactor head integrated into the PEL1100BC will compact up to three bins into one bin, generating savings of up to 66% on bin collection charges.
- ✓ A solar-powered option and integrated weight measurement technology are also available as optional extras.
- ✓ The PEL 1100 Bin Compactor/Press is primed and finished with a hard-wearing powder topcoat, for a highly durable surface

Bin Compactor/Press Benefits

- ✓ Creates space by reducing waste volume into a 1100 litre bin.
- ✓ Generates savings across General and Recycling waste disposal costs.
- ✓ Lowers your carbon footprint by reducing waste collections.
- ✓ Ensures a cleaner and safer back-of-house for management and staff

7.1.2 Retail Units WSA

Each of the no.3 commercial units will have their own independent storage area. Depending on the type of commercial tenant that occupies each unit, the waste percentage breakdown, number and type of waste receptacles required will vary. Once a commercial tenant has taken lease of a retail unit, they will put in place a waste management plan bespoke to their own commercial needs.

Indicative waste arisings calculations outlined in Section 6 of this report estimates that each retail WSA will need to accommodate as a minimum the following number of waste receptacles;

Block A Retail

- No.1 x 1100L DryR
- No.2 x 240L NonR
- No.1 x 240L Organic
- No.1 x 140L Glass

Block B Retail

- No.1 x 1100L DryR
- No.1 x 240L NonR
- No.1 x 240L Organic
- No.1 x 140L Glass

Note, these waste receptacle figures are based on British Standard 5906:2005 Waste Management in Buildings – Code of Practice calculations using typical waste arisings associated with commercial units. These indicative figures are based on the total floor area of the unit and are subject to change depending on the type of commercial tenant that occupies the unit.

7.1.3 Public House WSA

The public house will have its own independent storage area. Once a commercial tenant has taken lease of the unit, they will put in place a waste management plan bespoke to their own commercial needs, dependant on the services they will provide.

Indicative waste arisings calculations outlined in Section 6 of this report estimates that the public house WSA will need to accommodate as a minimum the following number of waste receptacles;

- No.1 x 1100L DryR
- No.1 x 240L NonR
- No.1 x 240L Organic
- No.2 x 240L Glass

Note, these waste receptacle figures are based on British Standard 5906:2005 Waste Management in Buildings – Code of Practice calculations using typical waste arisings associated with commercial units. These indicative figures are based on the total floor area of the unit and are subject to change depending on the type of commercial tenant that occupies the unit.

7.1.4 Commercial Waste Storage Areas

This OWMP establishes a framework to ensure that future commercial tenants, though currently unidentified, comply with all relevant Irish laws and local mandates.

Mandatory Commercial Segregation (The Three-Bin System)

As of 2026, all commercial tenants are legally required to use a **three-bin system** provided by their authorised waste collector.

- **Mixed Dry Recyclables:** Paper, cardboard, plastic, and metals.
- **Bio-waste (Food Waste):** All food waste must be segregated and collected separately.
- **Residual Waste:** Only non-recyclable materials.
- **Pricing Incentive:** Collectors must ensure that the cost for recyclable and bio-waste collection is lower than for residual waste to incentivise segregation.

Tenant Duty of Care & Record Keeping

Tenants must assign an authorised waste contractor who holds a valid permit from the National Waste Collection Permit Office (NWCPO).

- Evidence of Engagement: Tenants must retain documentary evidence (e.g., receipts or waste transfer notes) of their waste service for at least two years.
- Waste Weighing: Since July 2023, collectors must weigh all commercial waste and provide this data to the tenant.

DLRCC Bye-Law Compliance (Storage & Presentation)

To meet the DLRCC Bye-Laws 2019 requirements, the OWMP should specify:

- Internal Storage: Each unit must have sufficient space for the internal segregation of the three mandatory streams before they are moved to the primary storage area.
- Secure External Storage: Waste containers must be stored within the curtilage of the premises and kept secure to prevent access by unauthorised persons.
- Presentation Times: Waste cannot be presented for collection before 6:00 pm the evening before the collection day.
- Container Removal: Emptied bins must be removed from public areas no later than 10:00 am the day after collection.
- Litter Prevention: Occupiers are responsible for maintaining the immediate vicinity of their premises free of litter.

7.2 Waste Storage Requirements for the Development

The predicted waste storage requirements for the proposed development is presented in Table 11. This table shows the allocation of waste receptacle storage that will be required to accommodate all the waste that will be generated by the development when operating at full capacity, as was presented in Table 10. Mixed non-recyclable waste, dry mixed recyclable waste and organic waste will be collected weekly by the nominated waste contractor. Waste glass should be stored separately and taken to the nearest bottle bring bank. Using the estimated waste generation volumes outlined in Section 6, the waste receptacle requirements for the proposed development has been established. All waste types will be collected on a weekly basis. Waste receptacle requirements are presented in Table 11.

Table 11: Total Waste Storage Requirements for the Proposed Development

WSA Requirements for Each Area	Waste Receptacles Required for Weekly Storage				
	Bin Compactor/Press	**DryR**	**NonR**	**Organic**	**Glass**
Student Accommodation Block B Communal/Facilities Area	No.1 x PEL1100 Bin Compactor/Press	No.2 x 1100L No. x 770L	No.1 x 1100L	No.10 x 240L	No.2 x 660L
Retail Unit A	N/a	No.1 x 1100L	No.2 x 240L	No.1 x 240L	No.1 x 140L
Retail Unit B	N/a	No.1 x 1100L	No.1 x 240L	No.1 x 240L	No.1 x 140L
Public House	N/a	No.1 x 1100L	No.1 x 240L	No.1 x 240L	No.2 x 240L
Total	**No.1 x PEL1100 Bin Compactor/Press**	**No.5 x 1100L No.1 x 770L**	**No.5 x 1100L**	**No.13 x 240 L**	**No.6 x 240L**

7.3 Waste Storage Area (WSA) Design

The WSAs 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 with a recommended 6-10 air changes per hour for a mechanical system for internal WSA's;
- The waste storage areas will be fitted with sensor lighting – a minimum Lux rating of 400 is recommended;
- The waste storage areas will be designed to provide safe access from the units for all persons;
- 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 waste receptacles ;
- Be fitted with suitable power supply for power washers;
- Have a sloped floor to a central foul drain for waste receptacles washing run-off;
- Have appropriate signage placed above and on waste receptacles indicating correct use;
- Have access for potential control of vermin, if required; and
- Be fitted with CCTV for monitoring.

The facilities management company and residents must ensure that the WSA's are maintained in good condition, in full compliance with the Dún Laoghaire-Rathdown County Council Waste Bye-Laws. It is essential that everyone takes responsibility for adhering to these standards.

7.4 Waste Storage in Residential Properties

All residents will be required to segregate their waste into the following main waste categories within their own properties:

- Organic waste;
- DryR;
- NonR; and
- Glass

Provision will be made in all residential units to accommodate no.2 60L free standing Bins (for DryR & NonR), no.1 10L Plastic box to go under sink for glass and no.1 7L Vented Caddy for Organic Waste. An example of a potential 3 bin storage system is provided in Figure 6 below.



Figure 6: Example 60l Freestanding Bin

Residents must take their segregated waste materials to their own designated waste storage area and deposit their waste in the appropriate waste receptacles .

7.5 Waste Storage Receptacles

Typical waste storage receptacles, as shown in Figure 7 (or other approved containers), will be supplied by the facilities management company in the shared residential waste storage areas (WSAs). Each individual house is responsible for contacting a waste contractor to obtain the appropriate waste storage receptacles. These receptacles will be provided by the waste contractor for each specific unit. The types of waste receptacles utilised will vary in size, design, and colour based on the selected waste contractor. It is essential that all waste containers comply with the performance requirements specified in the SIST EN 840-1:2020 and SIST EN 840-2:2020 standards for mobile waste containers, as required.



Figure 7: Typical Waste Receptacles of Varying Size

7.5.1 What goes in Each Bin?

Green Bin

- Paper and cardboard
- Food tins
- Drink cans
- Tetra-Pak cartons (e.g. milk, soup and juice cartons)
- Hard plastics (e.g. mineral , water and detergent bottles)
- Soft plastics (e.g. crisp packets, plastic bags)

Black Bin

- Soiled food packaging
- Bathroom waste
- Nappies
- Animal waste
- Cold ashes
- Aerosols
- Takeaway coffee cups
- Used candles

Brown Bin

- Coffee grounds and filters
- Cooked and raw foods
- Dairy products
- Eggs and eggshells
- Fruit, vegetables and peelings
- Tea leaves and tea bags
- Meat, bones and fish
- Hedge clippings, twigs and branches (max. 2 inches in diameter)
- Leaves, plants, weeds and grass.

Receptacles for organic waste, mixed dry recyclables, glass, and mixed non-recyclable waste will be readily available in the shared Waste Storage Areas (WSAs) before anyone occupies the first residential unit. Every resident will receive this WMP upon moving in. Furthermore, the facilities management company will proactively update the WMP as necessary, incorporating any new information on waste segregation, storage, reuse, and recycling initiatives that are introduced over time.

7.6 Polluter Pays Principle

The polluter pays principle is applied to the student accommodation units through a centrally managed but individually funded waste management system. All residential waste generated within the development will be deposited by residents into designated, clearly labelled waste receptacles located within the shared waste storage area at the ground floor of block B. Waste will be segregated in accordance with Dún Laoghaire-Rathdown County Council requirements (e.g. residual, recycling, and organic waste).

A facilities management company, acting on behalf of the residents, will engage a licensed waste collection operator authorised to operate within the Dún Laoghaire-Rathdown County Council area to collect residential waste from the shared waste storage area on a twice-weekly basis.

The cost of waste management, including collection and disposal, will be recovered directly from residents through service charges or management fees apportioned to each residential unit. In this way, each household contributes financially to the disposal of the waste it generates, ensuring compliance with the polluter pays principle while avoiding cross-subsidisation by non-residential or external parties.

Tenants of commercial units shall be responsible for assigning and managing their own respective waste storage areas. Upon occupying a retail unit, the lessee is required to implement a bespoke waste management plan and appoint a permitted waste collector appropriate for their specific business activities.

8 Waste Collection

There are numerous private contractors that provide waste collection services in the Dún Laoghaire-Rathdown County Council 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.

The facilities management company will put in place an agreement to ensure DryR and NonR waste receptacles are compacted and pressed prior to collection. DryR and NonR waste will be collected on a **twice weekly basis**, with organic waste and glass collected on a weekly basis.

Waste receptacles from the WSA will be collected by waste contractors directly from the WSA and brought to the waiting refuse collection vehicles. The empty waste receptacles will then be returned to the WSA immediately after collection. Suitable access and egress have been provided to enable the waste receptacles to be moved easily from the WSA to the waste collection vehicles on the appropriate days. Collection from WSA 01 is illustrated in Figure 8 below.

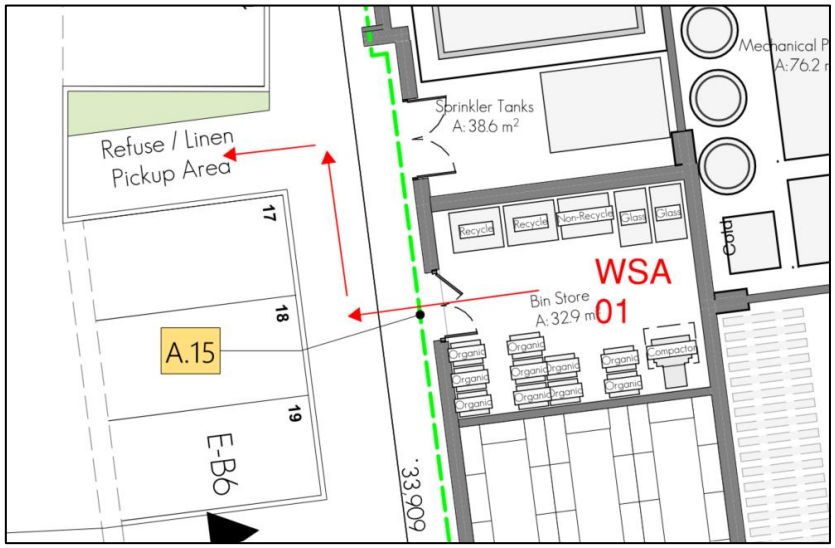


Figure 8: Refuse Vehicle Waste Collection Point

All waste receptacles should be clearly identified as required by waste legislation and the requirements of the Dún Laoghaire-Rathdown County Council 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 waste collection times are staggered to reduce the number of waste receptacles 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.
Waste will be collected at agreed days and times by the nominated waste contractors The frequency of the waste collection will be agreed with the Waste Contractor and will be reviewed when the subject development is fully occupied and as waste management trends evolve.

The building management company, in collaboration with the waste management contractor, will take on the responsibility of transporting the waste receptacles from the designated waste storage areas (WSAs) to the refuse vehicle collection point. Alternatively, these items may be taken to the nearest road for temporary storage until they can be collected.

Proper coordination between the facilities management and waste contractor is essential to ensure timely and safe transport of waste materials. Additionally, all safety and operational protocols must be followed to minimise disruption and maintain cleanliness throughout the area.

9 Management of Additional Waste

Some additional waste will be generated infrequently from the site during the operational phase of the proposed development. These types of materials will require separate management and outlined in the following non-exhaustive list.

Green Waste

Green waste from gardening activities, like trimming and pruning, can be disposed of in organic waste receptacles designed for biodegradable materials. If there's a large quantity of green waste, it's best to hire a professional landscape contractor for proper and eco-friendly disposal, following local regulations.

Batteries

A take-back service for waste batteries, including rechargeable ones, has been established to comply with S.I. No. 283/2014 - the EU (Batteries and Accumulators) Regulations 2014 as amended. Consumers can return used batteries to local civic amenity centres or retailers selling the same type for free, regardless of where they were purchased. This initiative promotes responsible recycling and provides easy access to safe disposal options.

Deposit Return Scheme

Most beverage containers are eligible for recycling through the deposit return scheme. This includes bottles, cans, and tins made from plastic, aluminium, or steel. To qualify for return, containers must be between 150 ml and 3 litres in size and must prominently display the Re-turn logo.
At the shops you can either return the containers:

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

If a shop lacks a reverse vending machine (RVM) but sells containers with the Re-turn logo, it may allow manual returns unless a take-back exemption applies. RVM locations can be found on the Re-turn website (www.re-turn.ie).

Waste Electrical and Electronic Equipment (WEEE)

The WEEE Directive (Directive 2002/96/EC) and Waste Management Regulations aim to promote the recycling of electronic and electrical equipment. Consumers can bring their waste equipment to local recycling centres or return it to retailers within 15 days when purchasing new, similar items. Retailers must also collect WEEE within 15 days of delivering a new item, provided it is disconnected, safe, and accessible for collection.

Printer Cartridge / Toners

Residents have the option to return used printer cartridges and toners to the respective suppliers at no charge. Additionally, these items can be disposed of at local civic amenity centres, where they will be managed for proper recycling or disposal.

Chemicals

Chemicals, such as solvents, paints, adhesives, resins, and detergents, are often produced during building maintenance work. These tasks are usually carried out by external contractors, who are responsible for the off-site removal and proper recovery, recycling, or disposal of any waste materials generated. Residents should bring any waste cleaning products or hazardous waste packaging from cleaning products (if they arise) to a civic amenity centre for appropriate disposal.

Light Bulbs

Residents are advised to transport used light bulbs to the nearest civic amenity centre for appropriate storage and disposal.

Textiles

Residents are encouraged to recycle waste textiles or donate them to charitable organisations for reuse. It is the responsibility of residents to ensure the proper disposal of waste textiles.

Waste Cooking Oil

If the residents generate waste cooking oil, this can be brought to a civic amenity centre.

Furniture & Other Bulky Waste Items

Residents may occasionally generate bulky waste items, including furniture and carpets. If they wish to dispose of such items, they can bring them to a civic amenity centre.

Abandoned Bicycles

Bicycle parking areas will be included in the development plan. Residents may occasionally abandon defective or unused bicycles, making ownership identification difficult. Abandoned bicycles should ideally be donated to charity, or facilities management may arrange for collection by a licensed waste contractor.

9.1 Facility Management Responsibilities

It shall be the responsibility of the facilities management company to ensure that all domestic waste generated by residents is managed to ensure correct storage prior to collection by an appropriately permitted waste management company.

Facilities management will provide the following:

- Provision of a Waste Management Plan document, prepared by the Facilities Management Company to all residential units, which shall clearly state the methods of source waste segregation, storage, reuse and recycling initiatives that shall apply to the management of the proposed development;
- Provision and maintenance of appropriate graphical signage to inform residents of their obligation to reduce waste, segregate waste and in the correct bin;
- Preparation of an annual waste management report for all residential units;
- Designation of access routes to common waste storage areas to ensure safe access from the apartment units by mobility impaired persons;
- Provision of an appropriately qualified and experienced staff member, who will be responsible for all aspects of waste management at the proposed development; Daily inspection of waste storage areas and signing of a daily check list, which shall be displayed within the area; and Maintenance of a weekly register, detailing the quantities and breakdown of wastes collected from the proposed development and provision of supporting documentation by the waste collector to allow tracking of waste recycling rates.
- To ensure the effective operation of a waste compactor/press for dry and recyclable waste, the Facilities Management (FM) company should implement;
    - Personnel Roles & Responsibilities: The FM company must assign Designated Compactor Operators who are trained and competent. Their daily responsibilities include:
    - Access Control: Ensuring only authorised personnel use the equipment.
    - Loading Management: Monitoring waste streams to prevent contamination (e.g., ensuring organic or hazardous waste does not enter the dry/recyclable press).
    - Cycle Management: Operating the press cycles to maximise space and efficiency.

10 Recommendations

This section outlines recommendations that can be used to help contribute towards achieving current and long-term national and Dún Laoghaire-Rathdown County Council targets for waste minimisation, re-use and recycling.

Implementation

The subject development will appoint a fully Licenced Waste management company to manage the waste disposal process. All documentation, such as licenses, waste transfer notes will be made available to the management company and a record will be held on site.

Bulk Items

The management company will arrange for waste collection for bulk items from the apartment and duplex units on an annual basis which will allow residents to have heavy items such as electrical appliances and furniture collected and transported to a licenced facility. This initiative should also reduce the potential for illegal waste collections and fly-tipping in the local area.

Pest Management

A pest control operator will be designated as necessary to oversee pest management during the operational phase of this development. All waste generated within the premises will be stored in sealed waste receptacles, both within individual units and in the designated Waste Storage Area (WSA). These receptacles will be meticulously maintained to prevent leaks, odours, and pest infestations. The WSA will be equipped with access to hot and cold water, a drainage point, and will undergo regular inspections by facilities management to mitigate pest-related issue.

Record Keeping

The management company shall maintain a comprehensive weekly register that details the quantities and classifications of general waste, recyclable waste, and organic waste collected from the development. Additionally, the waste collection contractor will provide supporting documentation on a regular basis.
For each load of waste collected, the following information will be documented: the date of collection, the type of waste, the quantity of waste in that load, and the signature of an authorised representative of the company. Furthermore, the management company will compile an annual report for the apartment units that presents the quantities and types of waste generated by the development during the preceding year. This report will also include guidelines on the proper procedures for waste segregation at the source, as well as the correct placement of waste within the designated storage area.

11 Conclusion

This Operational Waste Management Plan (OWMP) has been developed to demonstrate that the Bakers Hall Student Accommodation, Rochestown Ave, Woodpark, Dun Laoghaire, Co. Dublin, will be designed and managed to provide residents with waste management infrastructure. The goal is to minimise the generation of residual waste while maximising opportunities for segregating and recycling the waste produced by the development.

Waste management within the Development has the following aims:

- To contribute towards achieving current and long-term government and Dún Laoghaire-Rathdown County Council targets for waste minimisation, re-use and recycling;
- To allow that all legal requirements for handling and management of waste during operation of the Development are complied with; and
- To provide occupants with convenient, clean and efficient waste management systems that enhance the operation of the buildings and promote high levels of recycling.
- Implementation of this OWMP will ensure a high level of recycling, reuse and recovery at the development.

The waste management strategy outlined in this report ensures that there is adequate storage capacity for the various types of segregated waste produced by the development. Following the guidelines in British Standard 5906:2005, which addresses waste management in buildings, we calculated the typical weekly waste generation. This calculation confirms that sufficient and appropriate waste storage capacity will be available for the development when it reaches full occupancy.

All recyclable materials will be separated at the source to minimise costs for waste contractors and maximise the diversion of materials from landfills. This effort contributes to the targets outlined in the National Waste Management Plan for a Circular Economy (NWMPCE) for 2024-2030. Following this Operational Waste Management Plan (OWMP) will also ensure that waste management practices at the development comply with the Dún Laoghaire-Rathdown County Council Waste Bye-Laws.

Additional recommendations have been provided. These recommendations may be used to further help contribute towards achieving current and long-term national and Dún Laoghaire-Rathdown County Council targets for waste minimisation, re-use and recycling.

Appendix A- Block A & Block B Ground Floor Plans



THIS DRAWING IS FOR PLANNING PERMISSION PURPOSES ONLY. FURTHER DRAWINGS AND STUDIES WILL BE REQUIRED FOR CONSTRUCTION AND TO ENSURE COMPLIANCE WITH RELEVANT BUILDING REGULATIONS AND STANDARDS.

Rev	Ch	Change Name	Date
P05	Ch-149	Issued for Comments	12/01/2026

Planning Amendments Key

A.01	A 4 storey over ground extension of c. 436 sqm to the rear / courtyard elevation of Block A to provide for an additional 12 no. student accommodation units.
A.02	The reconfiguration of permitted internal circulation and communal amenity spaces to provide for 10 no. additional student accommodation units within Block A.
A.05	Relocation of a switch room and substation to the north-eastern corner of Block A.
A.07	Amendment of the permitted entrance to provide for a recessed entrance arrangement to the permitted licenced premises in Block A.
A.14	Relocation of the permitted bike shelter to the east elevation of Block B. The number of bicycle parking spaces remains unchanged.
A.15	Minor elevation alterations to eastern and western elevations of Block B to account for relocation of permitted internal building services.
A.18	Reconfiguration of the central open space area to provide for 30 no. car park spaces and accessible EV spaces

N

DRAFT

Draft Planning Drawings	BD	POT	POT	12/01/2026	P05
Revision Description	drn.	ckd.	apr.	date.	rev.

Client: Bakers Forge Properties Ltd.
Project: Student Accomodation
Site: Rochestown Ave, Dún Laoghaire, Co. Dublin
Title: Proposed Ground Floor Plan

meitheal architects

RIAI Practice Member | Practice Accreditation Irish Architect | ASAP Member/Studio | G3 | P

Project Architect: LH
A1 Sheet Scale:

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Drawing Series 11000 - Plans

Project	Orig.	Volume	Level	Type	Role	Number	Rev
231005	MA	XX	00	DR	A	11010	P05

BIMcloud: meithealarchitects - BIMcloud Software as a Service/231005 Bakers Forge/231005-DES-003Monday 12 January 2026