

**OPERATIONAL
WASTE MANAGEMENT PLAN**

FOR

**MARSHALL YARDS DEVELOPMENT COMPANY LTD
DIGITAL OFFICE CENTRE
BLOCK B, MAYNOOTH BUSINESS CAMPUS
Co. KILDARE**

RELATING TO A PROPOSED

LARGE-SCALE RESIDENTIAL DEVELOPMENT

AT

**BLESSINGTON
Co. WICKLOW**

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Ian Byrne MSc, MIOA, Dip Environmental & Planning Law

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1.0 INTRODUCTION

This document presents the Operational Waste Management Plan (OWMP) for the control, management and monitoring of waste associated with a proposed large-scale residential development at Blessington, Co. Wicklow.

The proposal is for a mixed-use development ranging in height from 1 No. to 5 No. storeys, principally comprising: 233 No. residential dwellings (24 No. 1-bed, 103 No. 2-bed, 94 No. 3-bed and 12 No. 4-bed); 36 No. 'later living' dwellings (12 No. 1-bed and 24 No. 2-bed); a medical centre; a pharmacy; and a café.

The **Objective of this Waste Management Plan** is to maximise the quantity of waste recycled by providing sufficient waste recycling infrastructure, waste reduction initiatives and waste collection and waste management information to the residents of the development.

The **Goal of this Waste Management Plan** is to achieve the following waste reduction and recycling targets detailed in the *National Management Plan for a Circular Economy 2024-2030*.

Target 1A	Achieve a 6% reduction in residual municipal waste by 2030
Target 2A	Achieve 90% compliance in the dry recycling bin by 2030
Target 2B	Achieve a 10% increase per annum in material compliance in the residual bin by 2030

The OWMP shall be integrated into the design and operation of the development to ensure the following:

- That sufficient waste management infrastructure is included in the design of the development to assist residents minimise the generation of mixed waste streams.
- That the principle of waste segregation at source is integrated into the development by the provision of 3-bin systems in all residential units
- That all waste materials generated by site activities are removed from site by appropriately permitted waste haulage contractors and that all wastes are disposed of at approved waste licensed / permitted facilities in compliance with the Waste Management Act 1996-2023 and all associated Waste Management Regulations.

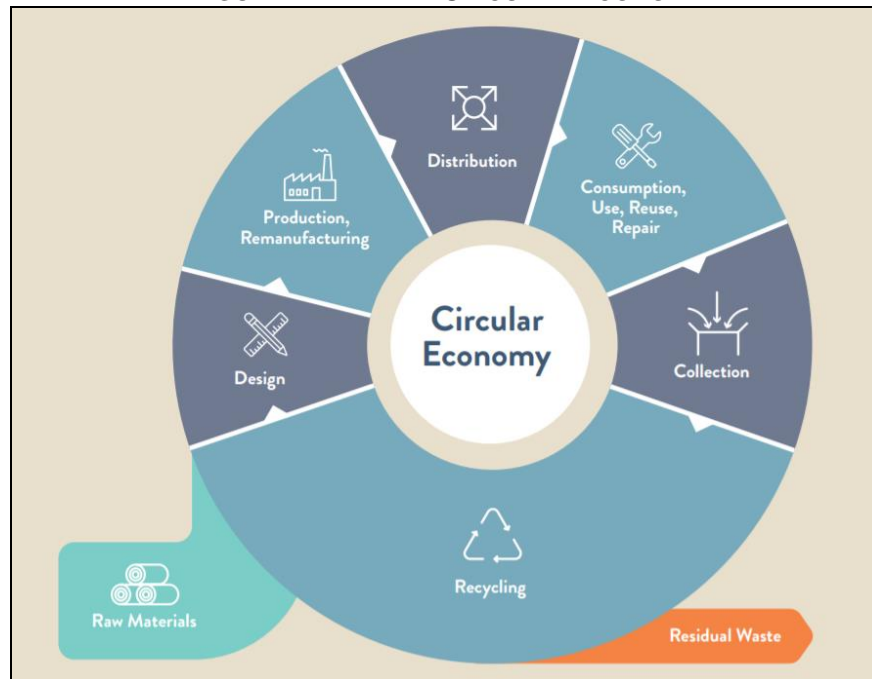
2.0 WASTE MANAGEMENT POLICIES AND GUIDANCE

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

This Operational Waste Management Plan has been prepared with regard to the *Waste Management Plan for a Circular Economy 2024-2030*. This is Ireland's national waste strategy published in March 2024 that will replace the existing regional waste management plans across provincial and local regional authorities and places the emphasis on more waste prevention and increased recycling, reusing and repair practices.

The *Waste Management Plan for a Circular Economy 2024-2030* intends to move Ireland toward a circular economy in which focus is shifted away from waste disposal, favouring circularity and sustainability by identifying and maximising the value of material through improved design, durability, repair and recycling. By extending the time resources are kept within the local economy, both environmental and economic benefits are foreseen.

FIGURE 1 THE CIRCULAR ECONOMY



The Waste Hierarchy

The OWMP complies with the waste hierarchy whereby waste prevention is the most preferred strategy. Where waste generation is unavoidable, re-use is the most preferred fate, followed by recycling and then energy recovery, with disposal (e.g. to landfill) being the least preferred fate.

It is the intention of the Applicant (Marshall Yards Development Company Limited) to ensure that the design and operation of the development conforms to the Waste Hierarchy.

FIGURE 2 THE WASTE HIERARCHY



Wicklow County Development Plan 2022 - 2028 Waste Management Policy and Objectives:

This OWMP has been prepared with regard to relevant waste management policies detailed in the *Wicklow County Development Plan 2022-2028* (It is noted that it refers to the *Eastern–Midlands Region Waste Management Plan 2015-2021* which has been superseded by the *National Management Plan for a Circular Economy 2024-2030* as detailed above in Section 2.0).

Chapter 15-Waste Management Plans states:

County Wicklow is part of the Eastern–Midlands Waste Region. The Eastern–Midlands Region Waste Management Plan (WMP) 2015-2021 provides the framework for solid waste management in the region and sets out a range of policies and actions to meet specified mandatory and performance-based targets. The WMP seeks to assist and support resource efficiency and waste prevention initiatives. A key WMP target is to achieve a 1% reduction per annum in the quantity of household waste generated per capita over the period of the WMP. In tandem, the WMP identifies measures to develop a circular economy whereby waste management initiatives are no longer confined to treating and disposing of waste, instead supporting initiatives that value waste as a resource or potential raw material. This Plan supports the move to a more circular economy as this will save resources, increase resource efficiency, and help to reduce carbon emissions. The successful implementation of circular economy principles will help to reduce the volume of waste that the County produces.

Chapter 15.3 specifies the following Solid Waste Management Objective which is relevant to the proposed development.

CPO 15.2 *To require all new developments, whether residential, community, agricultural or commercial to make provision for storage and recycling facilities (in accordance with the standards set out in Development & Design Standards of this plan).*

Wicklow County Development Plan 2022 - 2028 Development & Design Standards

2.3 Waste

2.3.1 Residential developments

- *The design and layout of all individual and multi house developments shall provide for on- site waste storage (including recyclables) and composting facilities.*
- *For traditional housing layouts, this will normally require the inclusion of sufficient space to the side or rear of a dwelling for the storage of waste, including up to 4 wheelie bins (recyclables, glass, organic and residual waste).*
- *For terraced houses (i.e. those units with no side laneways/gardens) wheelie bin enclosures may be provided to the front of houses, subject to the highest quality of location and design/construction that allows for full enclosure of all bins in such manner that bins are not visible from public areas and do not allow for the emission of odours; such structures must be shown and detailed at the application stage.*
- *For courtyard type developments and apartment developments (i.e. those developments that include houses with either no / limited private gardens), communal bin storage and composting areas shall be provided.*
- *In apartment developments, this may be in the form of grouped individual bins in car parking areas or a designated waste building.*
- *Waste storage areas shall be designed and screened so as not to cause any adverse visual impact on the proposed complex and located so as not cause noise impact.*

BS 5906:2005 Waste Management in Buildings-Code of Practice

This OWMP has been prepared with regard to *British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice* which provides guidance on methods of storage, collection, segregation for recycling and recovery for residential building.

The Department of Housing, Planning and Local Government – Sustainable Urban Housing: Design Standards for New Apartments

The development will include 3-bin waste segregation systems at source together with a communal waste storage area to serve the apartment block have been designed in compliance with *Section's 4.8 and 4.9 Refuse Storage of The Department of Housing, Planning and Local Government – Sustainable Urban Housing : Design Standards for New Apartments – Guidelines for Planning Authorities, 2022* as follows:

4.8 Provision shall be made for the storage and collection of waste materials in apartment schemes. Refuse facilities shall be accessible to each apartment stair/lift core and designed with regard to the projected level of waste generation and types and quantities of receptacles required. Within apartments, there should be adequate provision for the temporary storage of segregated materials prior to deposition in communal waste storage and in-sink macerators are discouraged as they place a burden on drainage systems.

4.9 The following general design considerations should be taken into account in the provision of 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.*

3.0 KEY ASPECTS TO ACHIEVE WASTE TARGETS

The OWMP is defined by the following stages of waste management with regard to the Circular Economy and the Waste Hierarchy:

Stage 1	Occupier Source Segregation
Stage 2	Occupier Deposit and Storage
Stage 3	Bulk Storage and On-Site Management
Stage 4	Off-Site Removal
Stage 5	End Destination of wastes

The Key Aspects that are designed into the development are:

- 3-Bin systems to encourage waste segregation at source
- Communal Bin Store to provide for Organic, Recyclable, Mixed Waste, Glass and WEEE waste storage
- Residents to be provided with a Bulky Waste collection service

4.0 WASTE SEGREGATION AT SOURCE IN RESIDENTIAL UNITS

The design of all dwellings shall include sufficient internal kitchen space for the segregation at source and storage of general unrecyclable waste, green recyclable waste and organic waste in a 3-bin system.

Image of typical Domestic kitchen 3 bin systems to segregate waste at source



5.0 HOUSE & OWN DOOR ACCESS APARTMENTS WASTE BINS

Individual houses and own door access apartments shall have a single grey mixed municipal waste 240 litre bin, a green 240 litre dry recyclable waste bin and a brown 110/240 litre organic waste bin which shall be stored within the curtilage of each house or contained within a bin screen to the front of the unit.

6.0 COMMUNAL WASTE STORAGE AREA

The Later Living apartments shall be served by an external communal waste storage area and shall include clearly visible guidelines on the appropriate segregation of different waste types.

Signage to inform residents of their obligations to reduce waste and segregate waste within the home and dispose of waste in the correct bulk bin will be clearly posted within each waste storage area.

A commercial non-domestic internal bin storage area will be located within the mixed-use building.

The communal waste storage area has been designed to include the following aspects:

- A defined pedestrian route shall be marked from the apartment buildings to the waste storage area.
- A non-slip surface shall be provided within the waste storage area.
- The waste storage areas shall be passively / mechanically ventilated.
- The waste storage area shall be fitted with sensor lighting.
- The waste storage area may be fitted with CCTV cameras and associated signage.
- The waste storage area shall be designed to provide safe access from the apartment units by mobility impaired persons.
- The waste storage area shall be no more than 50m from any apartment/duplex unit.
- A dedicated and clearly labelled area shall be provided in which mobility impaired persons may place wastes into receptacles at a lower level which will be subsequently transferred to the bulk storage bins on a weekly basis by the Facilities Management Company.
- The waste storage area shall include ground drainage to sewer to allow for its regular cleaning and disinfection.
- The Facilities Management Company shall engage a mobile bin cleaning service provider to clean waste bins as required.
- The communal waste storage area shall contain brown organic 240 litre waste bulk bins. Appropriate signage shall be placed on all brown bins informing residents of the exact nature of organic waste that can be placed in the bin. Signage will also state that all organic waste must be placed within biodegradable bags before placing in the bulk bin.

- The communal waste storage area shall contain a biodegradable waste bag dispenser which will facilitate and encourage residents of apartments and duplexes to separately segregate food and organic waste within their apartments in a dedicated bin.

Image of a typical communal waste storage area



A battery box and a WEEE Bin shall also be provided in the communal waste storage areas, an example of which is shown in the following image. This shall be managed by a specialist waste contractor who will be responsible for its routine collection.

Image of WEEE & Battery Recycling Cage



The communal waste storage area shall also contain glass recycling bins. This will allow glass to be diverted away from general waste.

Image of Glass Recycling Bin



7.0 APARTMENT COMMUNAL WASTE STORAGE AREA DESIGN

The Apartment Block has been designed to accommodate a communal bin storage area which shall be of sufficient size to house the required number of 1100 litre bulk bins as detailed in Table 1 below.

The area of a standard 1100 litre bulk bin is 1.7m².

The area of a standard 240 litre glass / brown bin is 0.43m².

To allow free access to the bins and provide sufficient space for their movement and to provide contingency capacity, the required bin store area = bin floor area x 1.5.

Table 1 Communal Bin Store Minimum Area Requirements

Apartment Block	Minimum Bin Storage Area (m²) (Area provided)
Domestic Waste	21 (23)
Commercial Waste	9 (10)

The communal domestic bin store and commercial bin store as designed exceed the minimum area requirements thus contingency space is available.

8.0 CAFÉ WASTE MANAGEMENT

Commercial waste generated by the Cafe shall be managed by the operators of the Unit who shall engage a commercial waste contractor to collect waste generated.

Waste shall be stored within a dedicated, separate and lockable commercial waste area at ground level and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste. Glass bins and WEEE cages shall also be provided in the bin store.

9.0 PHARMACY WASTE MANAGEMENT

Commercial waste generated by the Pharmacy shall be managed by the operators of the Unit who shall engage a commercial waste contractor to collect waste generated.

Commercial Wastes shall be stored within a dedicated, separate and lockable commercial waste area at ground level and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste. Glass bins and WEEE cages shall also be provided in the bin store.

Pharmaceutical wastes shall be stored in a secure area within the Pharmacy.

Typical Waste Pharmaceutical / Medicine Bins



10.0 HEALTH CENTRE WASTE MANAGEMENT

The Health Centre will generate both commercial and clinical wastes.

Commercial Wastes shall be stored within a dedicated, separate and lockable commercial waste area at ground level and shall be segregated into grey (mixed waste), green (dry recyclable), brown (organic) and cardboard packaging waste. Glass bins and WEEE cages shall also be provided in the bin store.

Clinical wastes shall be stored in a secure area within the Health Centre. Images of clinical waste storage bins and containers are presented below. Clinical wastes shall be collected by appropriately permitted specialist waste collection contractors.

Typical Internal Clinical Waste Bins



11.0 AMENITY AREAS WASTE MANAGEMENT

Waste generated in the external amenity areas and spaces shall be managed by the Facilities Management Company who shall ensure there are sufficient 3-bin systems located in each area for easy and clear segregation of waste, an example of which is shown below.

Image of external amenity areas waste segregation recycling bin system



12.0 WASTE MANAGEMENT DUTIES OF THE FACILITY MANAGEMENT COMPANY

Waste Management & Record Keeping

The Facilities Management Company shall maintain a weekly register detailing the quantities and breakdown of general mixed domestic waste, recyclable waste and organic waste wastes removed from the apartment aspect of the development. Supporting documentation shall be provided by the Waste Collection Contractor on a monthly basis. This will allow for waste recycling targets to be tracked to achieve the 2030 90% recycling target.

The Facilities Management Company shall prepare an annual information report for all apartment residents detailing the quantities and waste types generated by the development for the previous year. The report shall include reminder information on the correct segregation at source procedures and the correct placement of wastes in the waste storage area. Other aspects of ongoing waste management continuous improvement shall also be stated.

Annual Bulky Waste Collections

The Facilities Management Company may provide a bulky waste collection and transport service to all residents of the development on an annual basis which will allow residents to have bulky items such as appliances and furniture removed from their houses and apartments and transported to a licenced facility. This initiative will also reduce the potential for illegal waste collections and fly-tipping in the local area.

13.0 WASTE QUANTITIES TO BE GENERATED

The volume of waste that will be generated during the full occupancy of the development have been calculated with regard to *British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice*.

British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice states that 70 litres of waste are generated per bedroom per week with an allowance of an additional 30 litres per unit per week.

The subject development includes 354 no. bedrooms in 233 no. residential units. The total domestic waste generated per week is detailed in Table 2.

Table 2 Total weekly Domestic waste generation

Scenario	#	Factor	Weekly Waste litres
Residential Bedrooms	616	70 Litres per week / bedroom	24,780
Residential Units	265	30 litres per week / unit	6,990
Total Weekly Domestic Waste			31,770

The predicted non-domestic commercial waste generated per week is detailed in Table 3.

Table 3 Total Weekly Commercial waste generation

Scenario	Sq.m	Weekly Waste Generated
Medical Centre	224	4600 litres per week
Pharmacy	115	2200
Cafe	60	3300

14.0 WASTE STREAMS TO BE GENERATED

Table 4 details the range of waste types and their associated LoW Code from Chapter 20 of the EPA Publication *Waste Classification, List of Waste & determining if Waste is Hazardous or Non-hazardous* that shall be generated during the operational phase of the development.

Table 4 Domestic and Commercial Waste Waste Types

Chapter 20 Municipal wastes (Household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	
20 01 01	Paper and Cardboard
20 01 02	Glass
20 01 08 A	Biodegradable kitchen and canteen waste
20 01 13*	Solvents
20 01 21*	Florescent tubes
20 02 25	Edible oil and fat
20 01 28	Paint, inks adhesives and resins
20 01 30	Detergents
20 01 33*	Batteries and accumulators
20 01 35* A, B C, D	Discarded electrical and electronic equipment containing hazardous components
20 01 36 A, B C, D	Discarded electrical and electronic equipment
20 01 39	Plastics
20 01 40 C	Metals
20 03 01 A	Municipal mixed residual household waste
20 03 01 D	Municipal mixed dry recyclables household waste
20 03 07 A	Bulky Household Waste
20 01 31*	Cytotoxic and cytostatic medicines
20 01 32	Medicines other than those mentioned in 20 01 31*

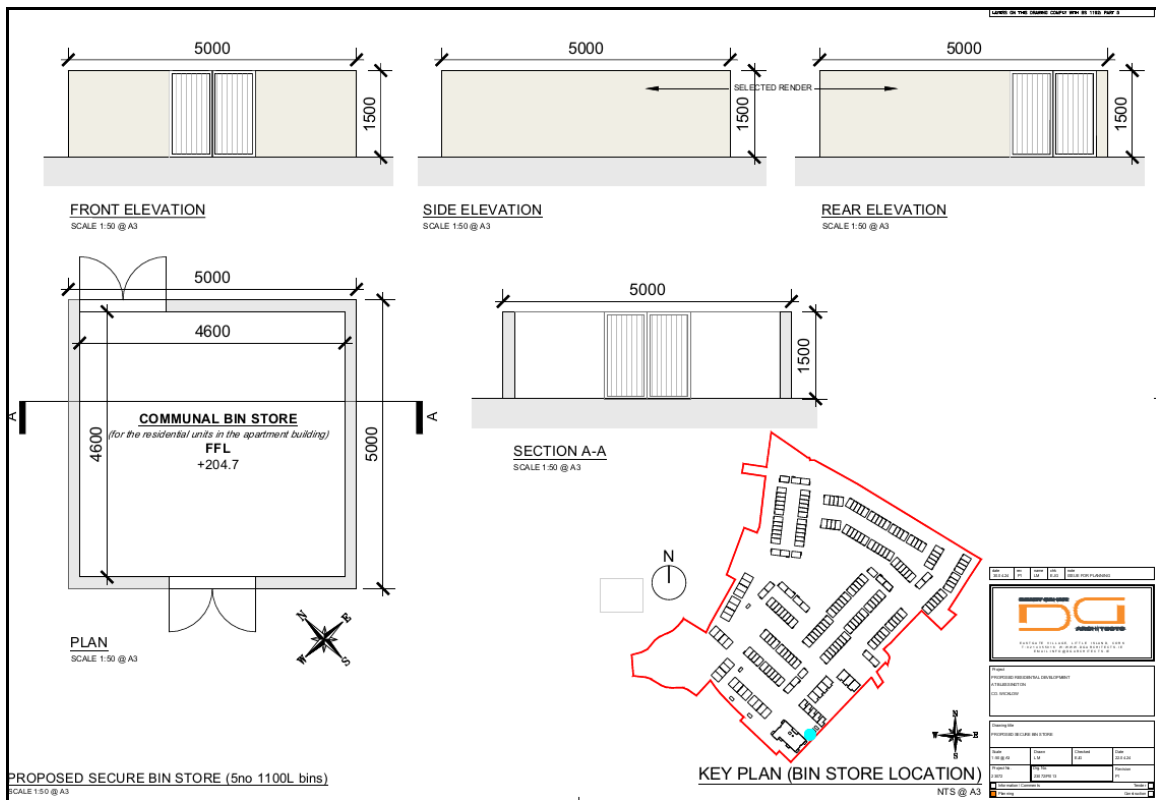
15.0 WASTE COLLECTION STRATEGY

Bins in the apartment's communal bin store will be collected directly from the bin store by the waste collection contractors. Emptied bins shall be immediately returned to the bin store.

House residents will be provided by kerbside bin collections.

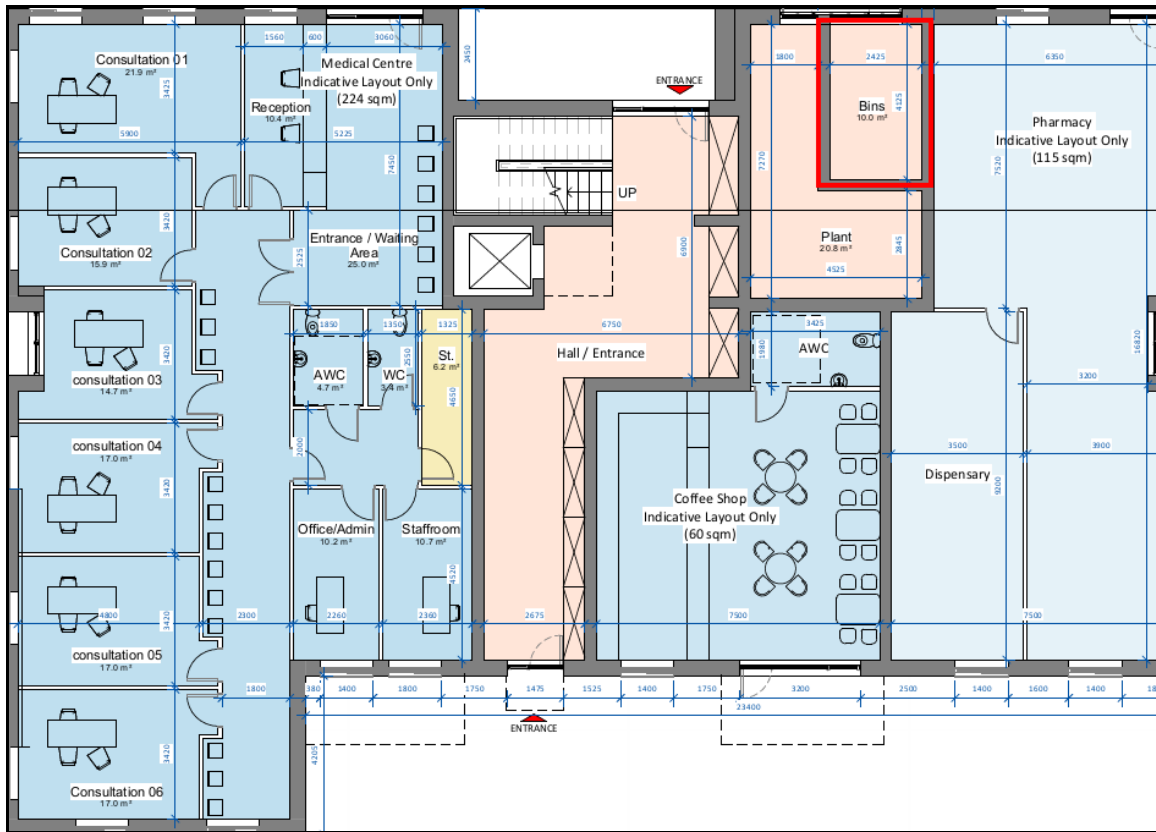
APPENDIX I

External Apartment Communal Bin Store Location



APPENDIX II

Internal Commercial Waste Bin Store Location



APPENDIX III

House Bin Screens

