Byrne Environmental
CONSULTING LTD

ENVIRONMENTAL MONITORING, ASSESSMENT & MANAGEMENT
Acoustics, Air Quality, Environmental Impact Assessment
& Waste Management Specialists

Red Bog, Skyrne Road, Dunshaughlin, Co. Meath
Tel/Fax: 01-8024001 Mobile: 086-8152252
Email: ian@byrneenvironmental.ie
Web: www.byrneenvironmental.ie

OPERATIONAL WASTE MANAGEMENT PLAN

FOR

DUFFY PROPERTY GROUP

RELATING TO A PROPOSED

LARGE SCALE RESIDENTIAL DEVELOPMENT

AT

KINSALE ROAD AND PEARSE ROAD CORK

8th April 2025

Ian Byrne MSc, MIOA, Dip Environmental & Planning Law

TABLE OF CONTENTS

1.0 INTRODUCTION

This document presents the Operational Waste Management Plan (OWMP) for the control, management and monitoring of waste associated with a proposed LRD on a site bounded by Pearse Road to the west, Kinsale Road to the east, Musgrave Park to the south and residential / commercial to the north. It shares road frontages on two sides, Pearse Road to the west and Kinsale Road to the east.

The proposed LRD consists of residential, retail, creche, management/maintenance office and ancillary uses.

The proposed development comprises 170 apartments made up of 51no. 1-bed apartments, 76no. 2-bed apartments and 31no. 3-bed apartments, 8 no. 2-bed townhouses 4no. 3-bed townhouses, 930m² retail, 250m² creche, 100m² management / maintenance offices, 140m^2 café arranged over 4 blocks on a site area of 1.2ha.

The masterplan is configured to provide permeability by the use of an east-west pedestrian route. This route connects the retail pedestrian area on Kinsale Road to the pedestrian entry point between blocks 1 and 2 on Pearse Road. To activate the pedestrian route, a café has been introduced mid-way along the route. This café overlooks the landscaped public area

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 Waste 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 the 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.

- That the Facilities Management Company will manage communal wastes storage areas and provide annual bulky waste collection services to facilitate all residents of the development.

2.0 WASTE MANAGEMENT GUIDANCE AND POLICIES

The OWMP has been prepared to demonstrate how the Operational Phase will comply with the following relevant legislation, relevant Best Practice Guidelines and Cok County Council's Waste Management Policies and Objectives.

- *Waste Management Acts 1996-2023.*
- *Waste Management (Collection Permit) (Amendment)(No.2) Regulations 2023 (SI No. 104 of 2023)*
- *The National Waste Management Plan for a Circular Economy 2024-2030.*
- *Cork County Development Plan 2022-2028*
- *Department of Housing, Local Government and Heritage (2022). Sustainable Urban Housing: Design Standards for New Apartments. Guidelines for Planning Authorities*

2.1 Cork County Development Plan 2022-2028 Waste Objectives

The Operational Waste Management Plan has been prepared in accordance with the relevant waste management objectives of the *Cork County Council Development Plan 2022 – 2028.*

Objective BE15-14 : Waste Prevention and Management

To support the policy measures and actins outlined in:

a A Waste Action Plan for a Circular Economy Irelands National Waste Policy 2020-2025 and Southern Region Waste Management Plan 2015 – 2021, or any successor plans (Note, the current *National Waste Management Plan for a Circular Economy 2024-2030,* adopted February 2024, supersedes the Southern Region Waste Management Plan).

b Support circular and climate resilient economy principles and associated strategic infrastructure, prioritising prevention, reuse, recycling and recovery, and to sustainably manage all types of waste by ensuring the provision of adequate waste recovery, recycling and disposal facilities for the county.

Chapter 15.12 Waste Management Assessments

15.12.17 In order to provide sustainable waste management practices, the County Council will normally require all development proposals to include on-site provision for the management of waste materials that are likely to be generated from the proposed use.

15.12.18 For small scale developments basic information of the proposed location of bins, composting etc will be required while a greater level of detail may be required for larger developments.

15.12.19 For commercial, industrial and multiple residential proposals, effective waste management should be incorporated into building design and layout e.g. specific provisions should be made for segregated space to allow for the separation of waste consistent with the type of development in question. Sufficient waste storage for the type of development proposed shall be provided. It shall be of a high-quality design and shall be suitably located to encourage households and commercial users to maximise recycling and composting whilst avoiding on street storage of waste bins. For apartments specific provisions should be made for segregated space to allow for the separation of waste consistent with the type of development in question.

15.12.21 Consideration should be given to the provision of individual composting facilities for self-build projects. For large scale developments of a suitable scale, consideration should also be given to the provision of group composting facilities

15.12.22 For mixed-use large-scale developments consideration should be given to the provision of ‘bring centres’. If considered at an early stage this could ensure the ‘bring centre’ is well designed, suitably sited and integrated into the development reducing

issues around anti-social behaviour. It is noted that a greater level of detail may be required for larger developments.

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

The OWMP has been prepared with regard to *BS 5906* which provides guidance on methods waste volume calculation, storage, collection, segregation for recycling and recovery for residential buildings.

2.3 *Department of Housing, Local Government and Heritage (2022). Sustainable Urban Housing: Design Standards for New Apartments. Guidelines for Planning Authorities*

The OWMP has been designed with regard to *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 which is reproduced below.*

Refuse Storage
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

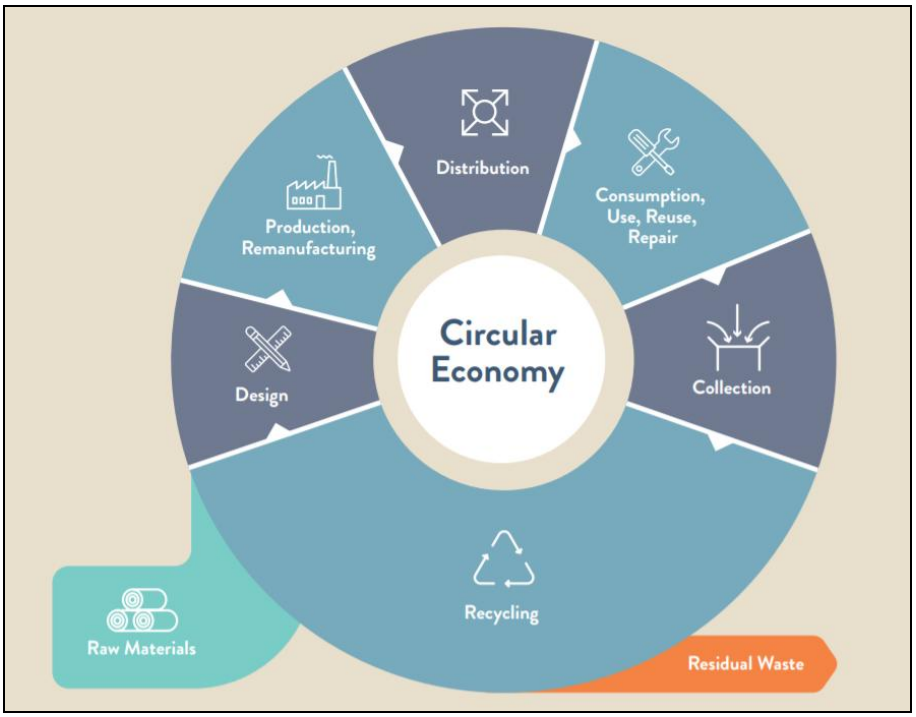
The Key Aspects that are designed into the development are:

- 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 THE CIRCULAR ECONOMY

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 *National 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.



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 (Duffy Property Group) to ensure that the design and operation of the development conforms to the Waste Hierarchy.

5.0 DEPOSIT RETURN SCHEME

The Deposit Return Scheme (DRS) is an initiative by the Irish government to reduce waste and encourage recycling. It is a programme to give financial incentives for the return of plastic bottles, cans, and glass bottles to collect points. The DRS promotes a circular economy where waste is reduced and will further encourage the correct segregation of domestic recyclable waste. This scheme further assists in the segregation of recyclable plastic bottles and aluminium cans and their diversion from mixed un-segregated waste streams.

6.0 WASTE SEGREGATION AT SOURCE IN RESIDENTIAL UNITS

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

Figure 1 Images of typical Domestic kitchen 3 bin systems to segregate waste at source

7.0 APARTMENT COMMUNAL WASTE STORAGE AREAS

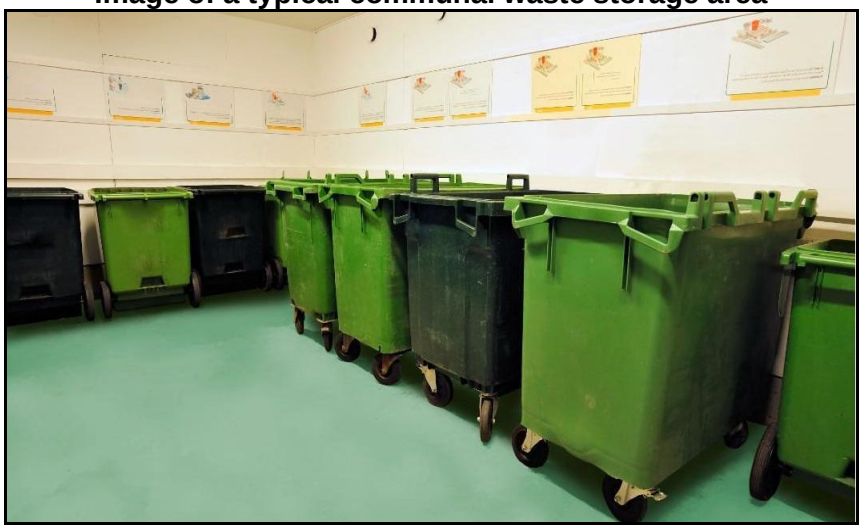
The apartment blocks shall be served by communal waste storage areas and shall include clearly visible guidelines on the appropriate segregation of different waste types.

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.

The communal waste storage area shall be 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 shall 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 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.

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

8.0 DOMESTIC WASTE VOLUME TO BE GENERATED

The volume of domestic 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.*

BS 5906:2005 states that 70 litres of waste are generated per bedroom per week with an allowance of an additional 30 litres per unit per week.

Table 1 Total weekly domestic waste generation

Scenario	#	Factor	Weekly Waste litres
Bedrooms	324	70 Litres per week / bedroom	22,680
Units	170	30 litres per week / unit	5,100
Total Weekly Domestic Waste			27,780

9.0 APARTMENT COMMUNAL WASTE STORAGE AREA DESIGN

The Apartment Blocks shall have communal bin storage areas which shall be of sufficient size to house the required number of 1100 & 240 litre bulk bins, WEEE Cages and Glass bins as detailed in Tables 2-5 below.

The area of a standard 1100 litre bulk bin is 1.7m^2.
The area of a standard 240 litre glass / brown bin is 0.43m^2.

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 2 Block 1 Bin Store

BIN STORE Block 1	Volume	# Bins	Bin area m2	Total Bin area	Bin capacity L
Grey MMW	1100	2	1.7	3.4	2200
Green Dry Recyclable	1100	2	1.7	3.4	2200
Brown Organic	240	3	0.43	1.29	720
Glass	240	2	0.43	0.86	480
WEEE Cage	240	1	0.43	0.43	240
Combined bin area				9.38	
Contingency factor to allow free movement			1.5	14.07	
Capacity volume of bins L					5840
Weekly volume of waste L					4680
Bin Sore Designed Area m2				33	
Bin Sore Required Area m2				14	
Bin Store excess area m2				19	

Table 3 Block 2 Bin Store

BIN STORE Block 2	Volume	# Bins	Bin area m2	Total Bin area	Bin capacity L
Grey MMW	1100	2	1.7	3.4	2200
Green Dry Recyclable	1100	2	1.7	3.4	2200
Brown Organic	240	3	0.43	1.29	720
Glass	240	2	0.43	0.86	480
WEEE Cage	240	1	0.43	0.43	240
Combined bin area				9.38	
Contingency factor to allow free movement			1.5	14.07	
Capacity volume of bins L					5840
Weekly volume of waste L					5240
Bin Sore Designed Area m2				40	
Bin Sore Required Area m2				14	
Bin Store excess area m2				26	

Table 4 Block 3 Bin Store

BIN STORE Block 3	Volume	# Bins	Bin area m2	Total Bin area	Bin capacity L
Grey MMW	1100	4	1.7	6.8	4400
Green Dry Recyclable	1100	4	1.7	6.8	4400
Brown Organic	240	4	0.43	1.72	960
Glass	240	2	0.43	0.86	480
WEEE Cage	240	1	0.43	0.43	240
Combined bin area				16.61	
Contingency factor to allow free movement			1.5	24.915	
Capacity volume of bins L					10480
Weekly volume of waste L					9740
Bin Sore Designed Area m2				44	
Bin Sore Required Area m2				25	
Bin Store excess area m2				19	

Table 5 Block 4 Bin Store

BIN STORE Block 4	Volume	# Bins	Bin area m2	Total Bin area	Bin capacity L
Grey MMW	1100	4	1.7	6.8	4400
Green Dry Recyclable	1100	4	1.7	6.8	4400
Brown Organic	240	3	0.43	1.29	720
Glass	240	2	0.43	0.86	480
WEEE Cage	240	1	0.43	0.43	240
Combined bin area				16.18	
Contingency factor to allow free movement			1.5	24.27	
Capacity volume of bins L					10240
Weekly volume of waste L					8120
Bin Sore Designed Area m2				35	
Bin Sore Required Area m2				24	
Bin Store excess area m2				11	

10.0 WASTE STREAMS TO BE GENERATED

Table 6 details the range of waste types and their associated LoW Code from Chapter 20 of the EPA 2018 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 6 Domestic 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 electonic equipment containing hazardous components
20 01 36 A, B C, D	Discarded electrical and electonic 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 recyclablesl household waste
20 03 07 A	Bulky Household Waste

11.0 LOCAL CIVIC AMENITY CENTRE

The closest Civic Amenity (Recycling) Centre is located on the R605 next to the Kinsale Community Hospital. Residents will be able to bring various waste types to these recycling facilities.

The range of wastes accepted include:

- Glass
- Plastic
- Cardboard
- Textiles

12.0 WASTE COLLECTION STRATEGY

Bulk waste bins shall be collected directly from the bin stores and returned immediately thereafter collection.

Waste Collection Contractors will have valid Waste Collection Permit Numbers displayed on all waste collection vehicles in accordance with and operate in compliance with the *Waste Management (Collection Permit) (Amendment)(No.2) Regulations 2023 (SI No. 104 of 2023).*

Should the WEEE waste stream be generated, the Facilities Management Company shall ensure that collection shall be conducted with the *European Recycling Platform* compliance scheme for the Local Authority area.

Image of bin transport from bin stores to collection point

13.0 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 reduction and recycling targets defined in the *National Waste Management Policy for a Circular Economy 2024-2030* to be tracked to achieve the following:

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 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.

14.0 CRECHE WASTE MANAGEMENT

Waste generated by the creche shall be managed by the operators of the creche who shall engage a commercial waste contractor to collected waste generated.

Waste shall be stored within a dedicated creche waste bin storage area within the curtilage of the Creche.

The volume of domestic 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.*

BS 5906:2005 states that 70 litres of waste are generated per bedroom per week and this factor has been considered to conservatively calculate the waste volume generated by the creche on a weekly basis. This value is reduced to 50 litres per week as the creche only operates 5-days per week. Thus, it is calculated that each child and staff member will generate up to 10 litres of waste per day. The creche will have 18 no. children and 7 no. staff.

Table 7 below details the weekly waste generation volume for the Creche.

Table 7 Creche weekly domestic waste generation

Scenario	#	Factor	Weekly Waste litres
Children	18	50 Litres per week	900
Staff	7	50 Litres per week	350
Total Weekly Creche Waste			1,250

Table 8 Creche Bin Store

BIN STORE Creche	Bin Volume L	# Bins	Bin area m2	Total Bin area m2	Bin Capacity L
Grey MMW	1100	1	1.7	1.7	1100
Green Dry Recyclable	1100	1	1.7	1.7	1100
Brown Organic	240	1	0.43	0.43	240
Glass	240	1	0.43	0.43	240
Combined bin area				4.26	
Contingency factor to allow free movement			1.5	6.39	
Capacity volume of bins L					2680
Weekly volume of waste L					1250
Bin Sore Designed Area m2				13.8	
Bin Sore Required Area m2				6.39	
Bin Store excess area m2				7.41	

15.0 RETAIL WASTE MANAGEMENT

The volume of retail waste that will be generated has been calculated with regard to *British Standard BS 5906:2005 Waste Management in Buildings-Code of Practice.*

BS 5906:2005 states that 10 litres/week of waste may be generated per m^2 of retail space.

Table 9 Total weekly Retail/Café waste generation

Unit	Waste/week/m^2	Retail Space m^2	Total Weekly Waste litres
Retail	10	930	9,300
Cafe	10	140	1,400
Total	10	1070	10,700

Table 10 Retail Bin Store

BIN STORE Retail & Café	Bin Volume L	# Bins	Bin area m2	Total Bin area m2	Bin Capacity L
Grey MMW	1100	5	1.7	8.5	5500
Green Dry Recyclable	1100	5	1.7	8.5	5500
Brown Organic	240	5	0.43	2.15	1200
Glass	240	2	0.43	0.86	480
WEEE	240	1	0.43	0.43	240
Combined bin area				20.44	
Contingency factor to allow free movement			1.5	30.66	
Capacity volume of bins L					12920
Weekly volume of waste L					10700
Bin Sore Designed Area m2				39	
Bin Sore Required Area m2				31	
Bin Store excess area m2				8	

16.0 INTERNAL AREAS WASTE MANAGEMENT

Multi-bin waste segregation systems will be located within the management office and internal spaces which shall be managed by the Facilities Management Company.

Image of internal waste segregation bin system

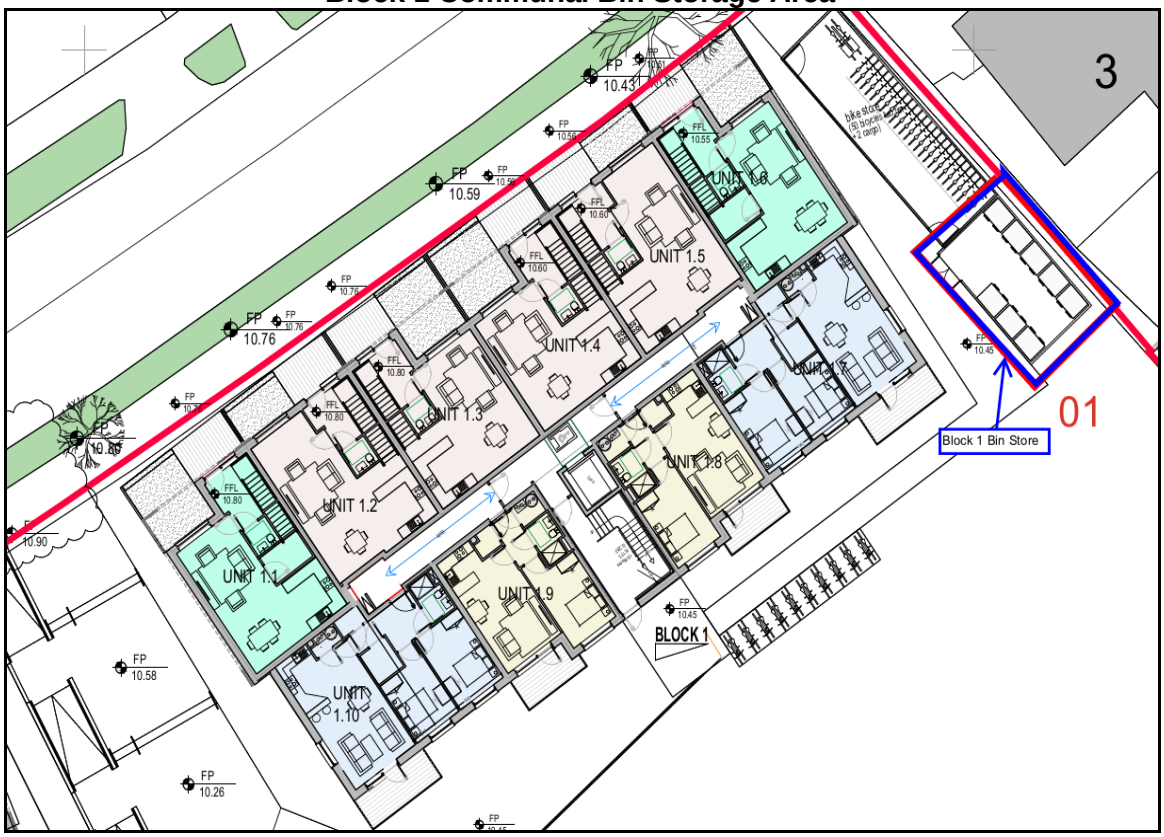
17.0 EXTERNAL AREAS WASTE MANAGEMENT

Waste generated in the external areas and playground 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.

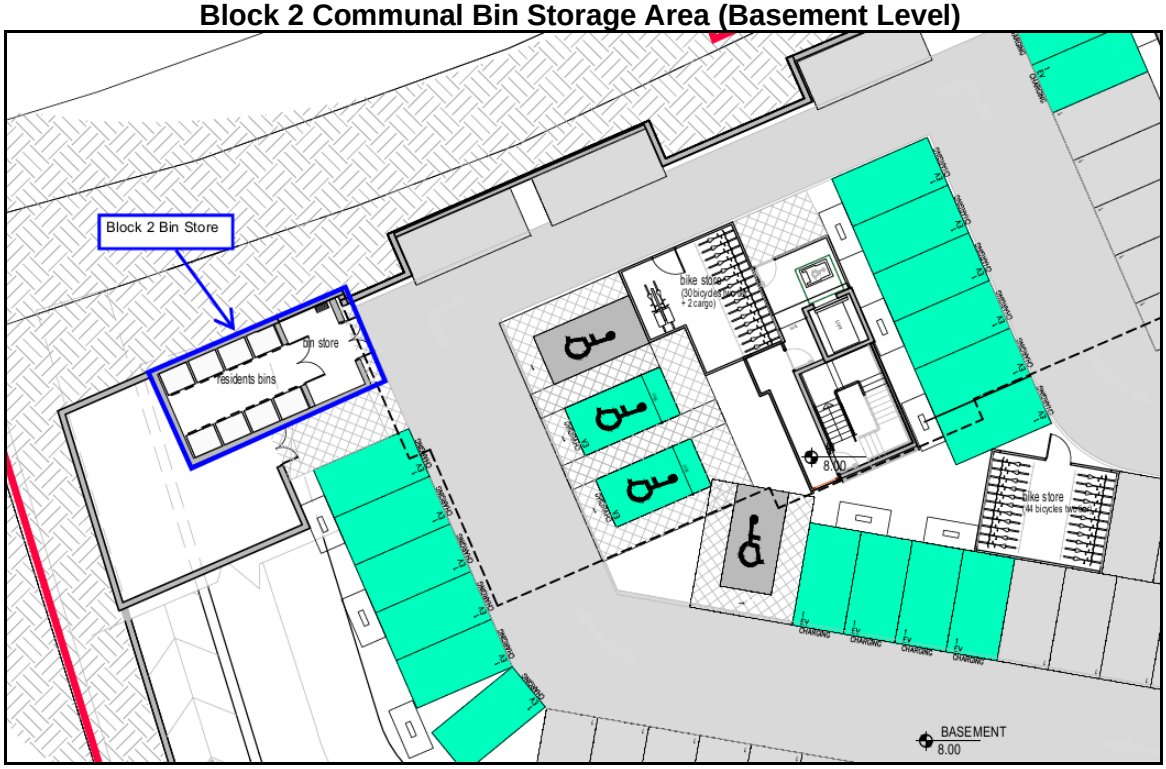
Image of external amenity areas waste segregation bin system

APPENDIX I

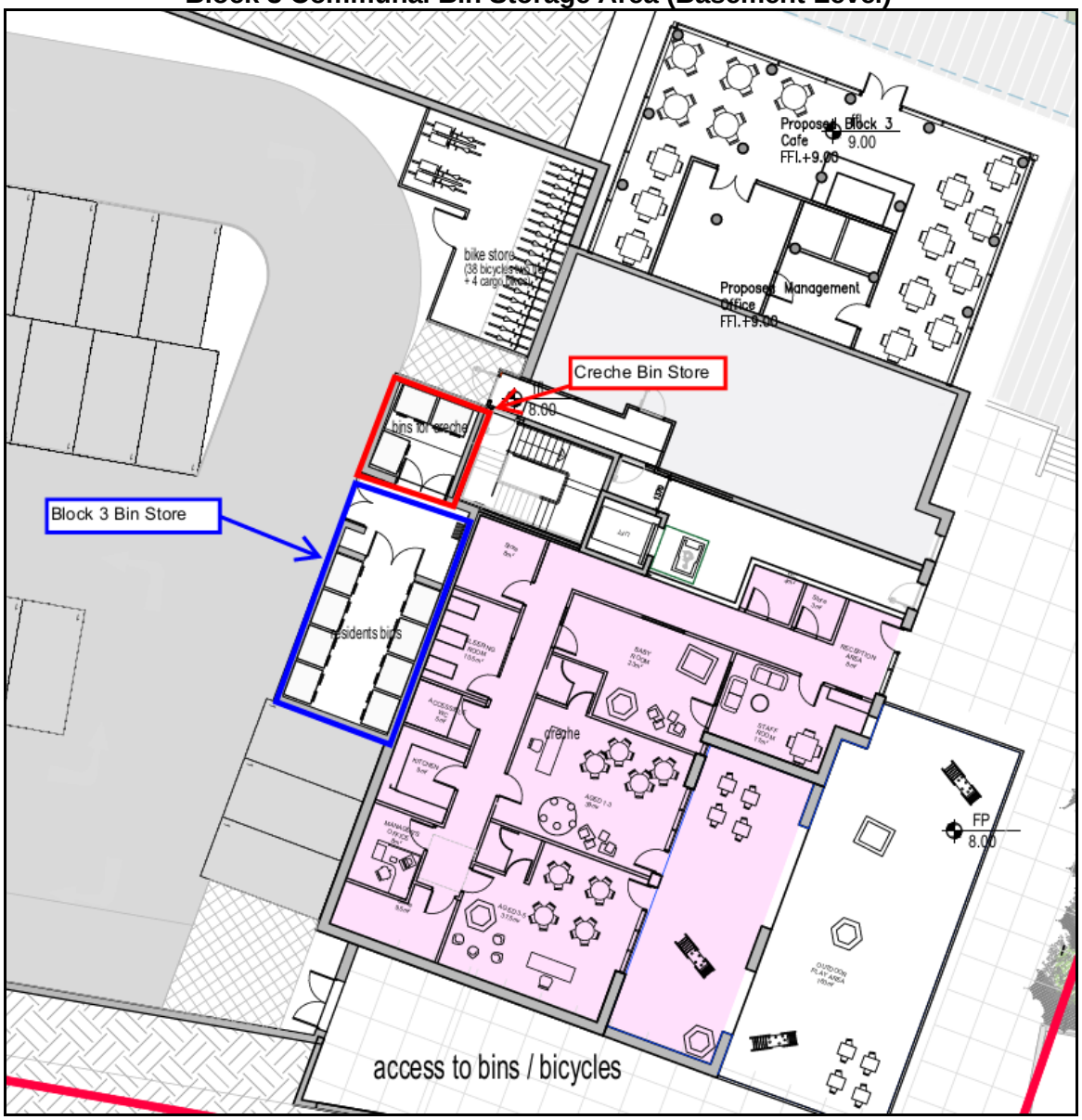
Block 1 Communal Bin Storage Area



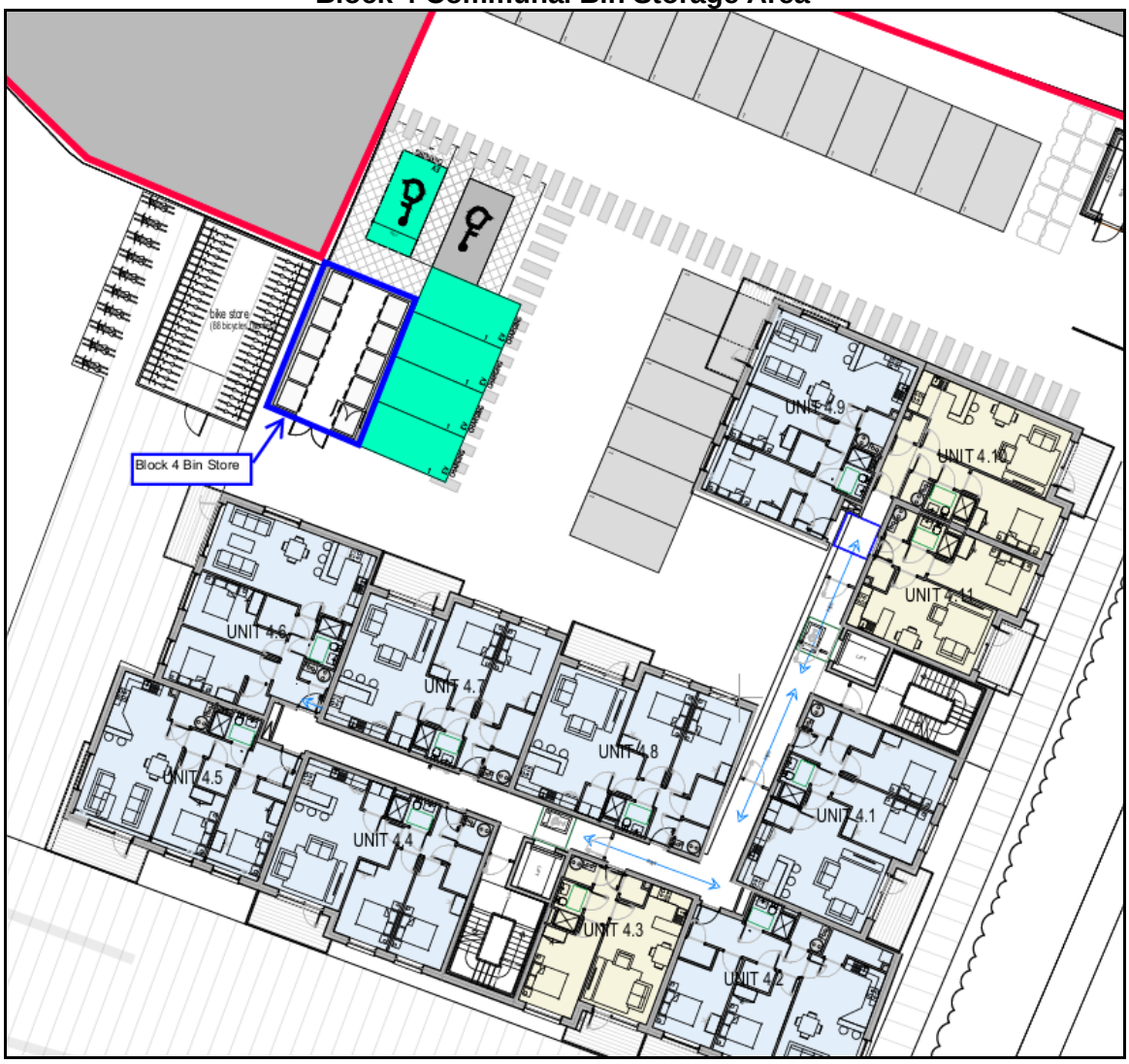
Block 2 Communal Bin Storage Area (Basement Level)



Block 3 Communal Bin Storage Area (Basement Level)



Block 4 Communal Bin Storage Area



Block 3 Creche Unit Commercial Bin Storage Area (Basement Level)

Block 4 Retail Unit Commercial Bin Storage Area