



SECTION 73

WASTE STRATEGY

JANUARY 2023 v2

The Waste Strategy comprises an updated Waste Pro-Forma followed by a fully updated Waste Management Strategy, prepared by WSP.

Appendix E Proforma for Planning Applications



MANCHESTER
CITY COUNCIL

Planning Application – Waste Management Strategy

Planning Application Number:

Date Submitted:

Estimated volumes and types of waste produced by the development

Low Rise Domestic

Waste Types	Capacity Required (litres)	Number of Bins required	Confirm what is to be provided
General refuse	240	1 x 240 litre bin	
Pulpable Recycling	140 / 240	1 x 140 litre bin 1 x 240 litre bin	
Mixed Recycling	140 / 240	1 x 140 litre bin 1 x 240 litre bin	
Garden Waste	240	1 x 240 litre bin	
Food Waste	23	1 x 23 litre caddy	

High Rise Apartment Developments

Waste Types	(V) Volume of Waste Generated	Capacity Required (litres)	Number of 1100litre bins required	Number of Bins proposed by applicant
General refuse	$V = N \times 110$ $213 \times 110 =$	$V =$ 23,430	$V / 1100 =$ 21.3	22
Pulpable Recycling	$V = N \times 55$ $213 \times 55 =$	$V = 8,745$ 11,715	$V / 1100 = 7.95$ 10.7	11
Mixed Recycling	$V = N \times 55$ $213 \times 55 =$	$V = 8,745$ 11,715	$V / 1100 = 7.95$ 10.7	11
Food Waste	$V = N \times 5$ $213 \times 5 =$	$V = 795$ 1,065	$V / 240 = 3.3125$ 4.4	5

*N = Number of Apartments

Commercial Developments

Please state number and capacities of bins you propose, showing calculations where appropriate. Please ensure collection frequencies are included

Block A	Block B
1. General Waste - 4 No. 1,100 litre Eurobins (Daily Collection)	1. General Waste - 5 No. 1,100 litre Eurobins (Every Other Day Collection)
2. Pulpable Waste - <i>Collected as mixed recycling.</i>	2. Pulpable Waste - <i>Collected as mixed recycling.</i>
3. Mixed Recycling - 11 No. 1,100 litre Eurobins (Daily Collection)	3. Mixed Recycling - 15 No. 1,100 litre Eurobins (Every Other Day Collection)
4. Glass - 5 No. 240 Wheeled Bins (Daily Collection)	4. Glass - 3 No. 240 Wheeled Bins (Twice Weekly Collection)
5. Food Waste - Glass - 5 No. 240 Wheeled Bins (Daily Collection)	5. Food Waste - Glass - 3 No. 240 Wheeled Bins (Twice Weekly Collection)
Storage capacity calculations are detailed in the waste strategy report.	Storage capacity calculations are detailed in the waste strategy report.

~~Has~~ / will a contract be obtained with a licenced waste carrier?	Yes
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Mixed Use Developments

Are the stores for residential and commercial separate from each other?	Yes
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Internal Stores (Residential and Commercial)

Please provide details of internal stores / segregation of waste and recycling.

Each residential property will be provided with a segregated waste bin which will be fixed into an appropriate kitchen unit. In each commercial unit, the respective tenant will be responsible for designing and providing sufficient internal segregated refuse and recycling storage space within the unit as part of their fit out; this will be the first point of waste disposal for waste generated within the units prior to it being transported to the main commercial waste storage area in each building.

Storage Areas for Waste Containers (Residential and Commercial)

Please provide details of container stores, attaching plans if appropriate.

The main residential waste store(Block A only) is located at basement level and provides sufficient space to accommodate the required number of bins as detailed in this pro-forma and the waste management strategy report. The main commercial waste stores (Blocks A and B) for are located at basement level and provides sufficient space to accommodate the required number of bins as detailed in this pro-forma and the waste management strategy.
--

Ensure all bins in the store are accessible	Yes
Ensure recycling facilities are as easy to access as general refuse	Yes

Please confirm details of waste store ventilation and hygiene / cleaning proposals

Ventilation -	The waste store will be designed in accordance with BS 5906:2005 (Section 8.5 - Ventilation).
Hygiene -	The waste store will be designed in accordance with BS 5906:2005 which details the following: 8.7 Cleansing Arrangements should be made for cleansing of the chamber with water, providing a hose union tap, in agreement with the local water authority and the Environment Agency. Drainage should be by means of a trapped gully connected to the foul sewer. The floor of the chamber should have a suitable fall towards the drainage point. Gullies should be so positioned as not to be in the track of container trolley wheels. Rainfall or other surface water should not be allowed to flow into the chamber (see 8.3).

Please provide details of who will be responsible for placing the bins at the collection point and returning them to the store / property promptly e.g. resident / management company

Household Waste

FM will bring residential bins from Block A only up to the service yard on collection day where they will be presented for collection. The councils collection operatives will access bins from the presentation point and return them to the presentation point once emptied. FM will be responsible for transporting bins back down to the basement level waste store once emptied.

Commercial Waste

FM will bring commercial bins from Blocks A and B up to the service yard on collection day where they will be presented for collection. The councils collection operatives will access bins from the presentation point and return them to the presentation point once emptied. FM will be responsible for transporting bins back down to the basement level waste store once emptied.

Further details can be found in the waste strategy report.

Please ensure that you have completed this form in accordance with our GD04 Waste Storage and Collection Guidance for New Developments



St. Michaels Propco Ltd

ST MICHAEL'S, JACKSON'S ROW

Waste Management Strategy





St. Michaels Propco Ltd

ST MICHAEL'S, JACKSON'S ROW

Waste Management Strategy

TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70101665

OUR REF. NO. REV03

DATE: JANUARY 2023

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QUALITY CONTROL

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Prepared by	Matthew Venn	Matthew Venn	Matthew Venn	Matthew Venn
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Checked by	Mick Fanning	Dhiran Chauhan	Dhiran Chauhan	Dhiran Chauhan
Signature				
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Signature				
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1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1. St. Michaels UK Propco Limited (hereinafter referred to as 'the Applicant') is seeking to construct a major development proposal known as St Michael's, Jackson's Row, Manchester, UK.
- 1.1.2. The planning application for the development was originally registered in January 2017, revised in November 2017 and granted planning permission on 20 June 2018. It was subsequently amended under Section 73 on 26 June 2020 and under Section 96a on 1 December 2020. Works to implement the Approved Development were undertaken in April 2021 and completed on 12th of that month. Changes to the Approved Development were then sought by way of a Section 73 application in October 2021, which was subsequently amended under Section 96a consent on 23 May 2022 (reference: 133317/NMC/2022) and Section 96a consent on 4 November 2022 (reference: 134638/NMC/2022).
- 1.1.3. Further changes to the Approved Development are now sought by way of a Section 73 application to account for the removal of the approved synagogue from the Building A, the provision of office accommodation and amendments to the residential accommodation schedule.
- 1.1.4. This Waste Management Strategy addendum has been prepared to consider the proposed changes to the proposed scheme and outlines the amended waste management strategy and is submitted in support of the Section 73 application.

1.2 REPORT STRUCTURE

- 1.2.1. This report is set out in the following format:
 - **Section 1: Introduction**
 - **Section 2: Management of Operational Waste – Residential (Block A)** – provides an estimate of waste arising and outlines the plan which will be adopted to manage residential wastes once operational.
 - **Section 3: Management of Operational Waste – Commercial (Block A)** – provides an estimate of waste arising and outlines the plan which will be adopted to manage commercial wastes generated within Block A once operational.
 - **Section 4: Management of Operational Waste – Commercial (Block B)** – provides an estimate of waste arising and outlines the plan which will be adopted to manage commercial wastes generated within Block B once operational.
 - **Section 5: Summary & Conclusions**

2 MANAGEMENT OF OPERATIONAL WASTE – RESIDENTIAL (BLOCK A)

2.1 INTRODUCTION

2.1.1. This section details the strategy which will be adopted to manage the waste arising from the residential dwellings once operational.

2.2 WASTE GENERATION MODEL

2.2.1. To maintain consistency with the Approved Development and subsequent amendments, estimated residential waste volumes have been quantified based on waste generation metrics for waste arisings obtained from Manchester City Council's (MCC) GD04 *Waste Storage and Collection Guidance for New Developments guidance document Version 2.00* ('the Guidance').

2.2.2. The metrics used to quantify the estimated total residential waste arising are detailed in **Table 2-1**.

Table 2-1 - MCC's Waste Metrics

Waste Stream	Metric (Litres)	Collection Frequency
Refuse	110 litres per unit	Weekly
Pulpable Recycling	55 litres per unit	Fortnightly
Dry Mixed Recycling (DMR)	55 litres per unit	Fortnightly
Organic Waste	5 litres per unit	Weekly

2.2.3. **Table 2-2** provides a summary of the accommodation schedule for the Proposed Development.

Table 2-2 - Summary of Accommodation Schedule

Description	Dwellings (No.)
Residential	213

2.2.4. **Table 2-3** outlines the total estimated residential waste arising, based on MCC's waste metrics in **Table 2-1** and the accommodation schedule summarised in **Table 2-2**.

Table 2-3 - Estimated Waste Arisings

Description	Number of Dwellings	Waste Type	Waste Generation (Litres)
Residential	213	Refuse	23,430
		Pulpable Recycling	11,715
		DMR	11,715
		Organic Waste	1,065
Total	213	-	47,925

2.3 PROPOSED WASTE MANAGEMENT STRATEGY

- 2.3.1. The proposed residential waste management strategy has been prepared to provide a high-quality service to the tenants, whilst also complying with the Guidance.
- 2.3.2. The residential waste strategy has been split into the following sections:
- Individual Residential Dwellings (**Section 2.4**); and
 - Proposed Building Waste Strategy (**Section 2.5**).

2.4 INDIVIDUAL RESIDENTIAL DWELLINGS

- 2.4.1. Each residential dwelling will be provided with a segregated waste bin, which will be fixed into an appropriate kitchen unit.
- 2.4.2. **Figure 2-1** shows an example of a commercially available segregated kitchen bin.

Figure 2-1 - Example of Segregated Kitchen Bin Unit¹



¹ Hafele: <https://www.hafele.co.uk/en/product/pull-out-waste-bin-vs-envi-space-xx-pro-bin-515-600mm-lva/50317304/?MasterSKU=0000002f0000ea0f00030023>

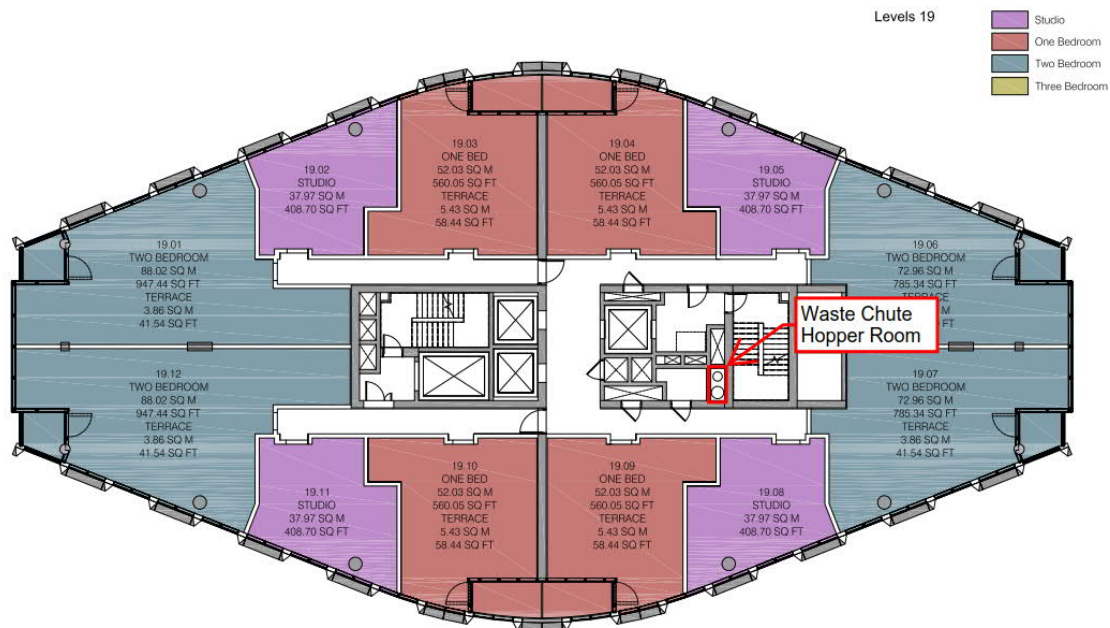
- 2.4.3. The segregated waste bin shown in **Figure 2-1** includes the following bin capacities:
- Refuse – 35 litres;
 - Pulpable Paper – 35 litres; and
 - Dry Mixed Recyclables – 21 litres.
- 2.4.4. The proposed segregated waste bin will be fitted into a single kitchen unit with a minimum width of 600mm.
- 2.4.5. In addition, a 23-litre food caddy will be provided for organic waste.

2.5 PROPOSED BUILDING WASTE STRATEGY

- 2.5.1. This section outlines the waste management strategy for the residential dwellings within the Proposed Development.
- 2.5.2. It is proposed that a waste chute will be provided within the residential service core. The waste chute will incorporate a tri-separator to segregate refuse, pulpable recycling and food waste; the proposed system will provide waste chute hoppers on each residential floor. The waste chute will be positioned to ensure that the maximum horizontal distance from residents' apartment front doors to the waste chute hopper is no more than 30m, as required by the Guidance.
- 2.5.3. In addition to the chute, 50 litre bins will be located in the waste chute hopper rooms on each residential floor to collect Dry Mixed Recyclables (DMR). The on-site Facilities Management (FM) team will be responsible for regularly monitoring and emptying these bins and transferring them to the main waste store in the basement via the lifts.
- 2.5.4. Suitable signage, compliant with the Guidance, will be provided within the waste chute hopper rooms above the loading hoppers on each floor, to provide guidance on which materials can be recycled.

The location of the waste chute hopper rooms are shown in **Figure 2-2**. The waste chute hopper rooms are in the same location on all residential floors.

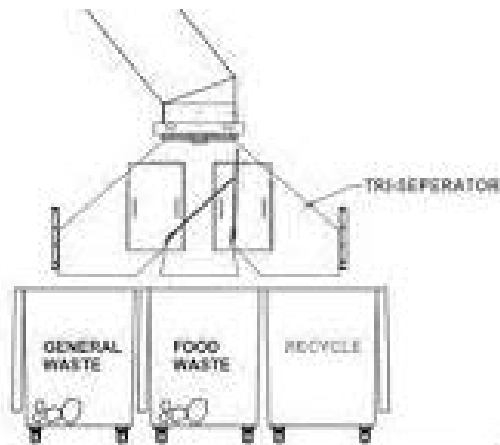
Figure 2-2 - Waste Chute Hopper Rooms



Source: Bowler James Brindley Architect; L19-40 Mix & Areas V2

- 2.5.5. The waste chute hopper rooms will be designed to the standards outlined in BS5906:2005 Waste management in buildings – Code of practice. In summary, the facilities should include the following:
- All surfaces sealed with a suitable wash proof finish (vinyl, tiles etc.);
 - All surfaces easy to clean; and
 - Suitable lighting and ventilation.
- 2.5.6. The proposed chute system will comprise a 600mm diameter stainless steel chute which incorporates a 'tri-separator' system similar to those provided by Hardall International. The proposed chute system will include a one-hour fire resistant hopper door on each residential floor, a fire shutter with a fusible link at basement level and an automatic self-cleaning system.
- 2.5.7. **Figure 2-3** shows a schematic layout of a waste chute system with a tri-separator.

Figure 2-3 - Waste chute schematic (tri-separator)



- 2.5.8. The waste chute will discharge into the main waste store at basement level.
- 2.5.9. **Table 2-4** summarises the number of bins that will be provided under the waste chute outlets in the main waste store.

Table 2-4 - Waste Chute Bin Requirements

1,100 Litre Refuse Bin (No.)	1,100 Litre DMR Bin (No.)	240 Litre Organic Waste Bin (No.)
1	1	1

- 2.5.10. **Figure 2-4** below shows the location of the waste chute within the main waste store.

Figure 2-4 - Waste Chute Location (Basement Level)



Source: Hodder+Partners, Basement B1 Plan, Drawing Number: S73-120, Rev P01

- 2.5.11. Based on the estimated levels of waste generation detailed in **Table 2-3**, **Table 2-5** summarises the types and total number of bins that will be provided in the main waste store.

Table 2-5 - Main Waste Store Bin Requirements

Description	1,100 Litre Refuse Bin (No.)	1,100 Litre DMR Bin (No.)	1,100 Litre Pulpable Recycling Bin (No.)	240 Litre Organic Waste Bin (No.)
Main Waste Store	22	11	11	5

2.5.12. Dimensions of the bins are provided in **Table 2-6**.

Table 2-6 – Bin Dimensions

Description	Width (mm)	Depth (mm)	Height (mm)
1,100 Litre Bin	1,375	990	1,370
240 Litre Bin	580	740	1,100

- 2.5.13. The main waste store will provide sufficient space to accommodate the volume of waste arising from the residential units.
- 2.5.14. MCC's Waste Storage and Collection Guidance for New Developments (Version: 6.00) includes a requirement for 0.43 sqm of space per apartment for the calculation of communal waste storage. For consistency with the Approved Development, Version: 2.00 of the guidance has been used for the development of this Waste Management Strategy.
- 2.5.15. To confirm, the main waste store has a floor area of approximately 130sqm, which exceeds the Version 6.00 requirement ($213 \times 0.43 \text{ sqm} = 91.59 \text{ sqm}$). Suitable space has been provided to allow for the manoeuvring of containers in the main waste store.
- 2.5.16. **Figure 2-5** shows the location and layout of the main waste store.

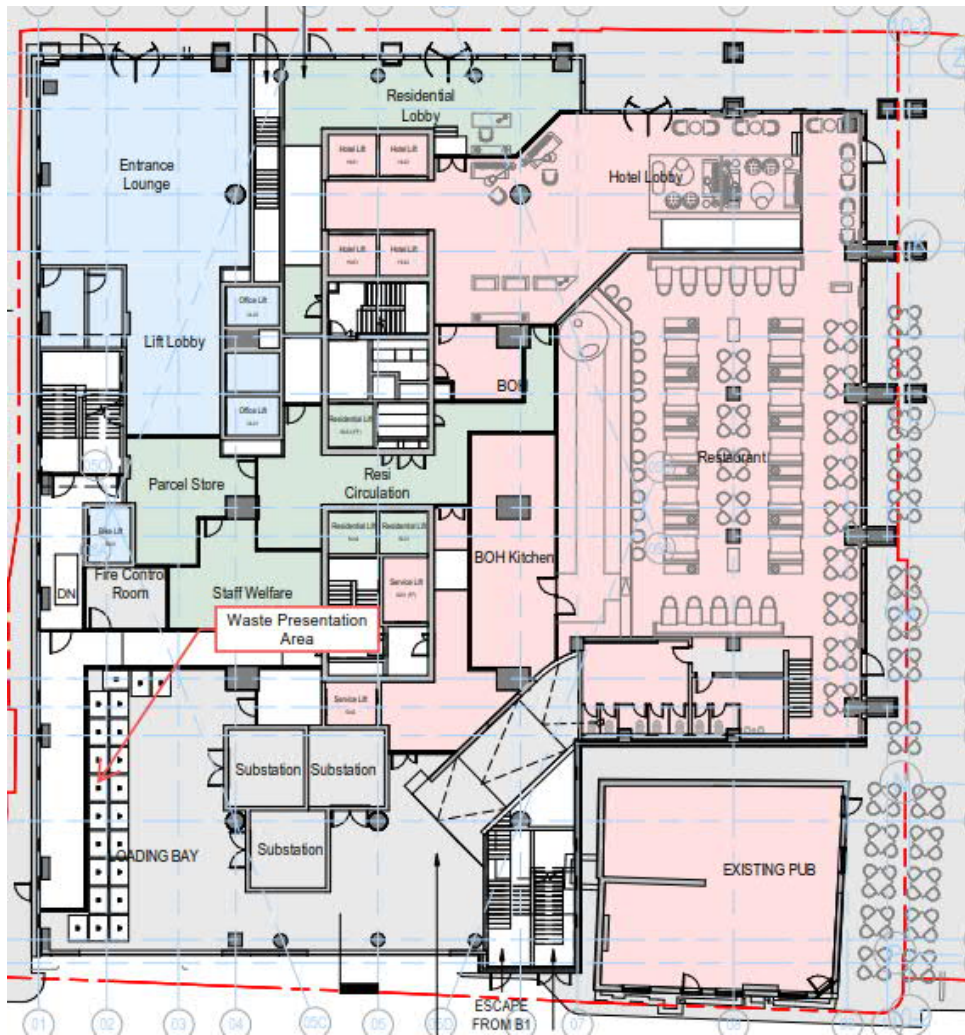
Figure 2-5 - Main Residential Waste Store



Source: Hodder+Partners, Basement B1 Plan, Drawing Number: S73-120, Rev P01

- 2.5.17. The main waste store should be designed to BS5906:2005 standards. In summary, the facilities should include the following:
- A suitable water point in close proximity to allow washing down;
 - All surfaces sealed with a suitable wash proof finish (vinyl, tiles etc.);
 - All surfaces easy to clean;
 - Suitable floor drain; and
 - Suitable lighting and ventilation.
- 2.5.18. The waste chute room and the main waste store will be managed by the on-site FM team who will be responsible for regularly monitoring them and for exchanging full and empty bins as required.
- 2.5.19. As the main waste store is located at basement level, the FM team will transport the relevant bins to the waste presentation area located at ground floor level within the loading bay on Bootle Street via the car park ramp using a suitable electrical tug.
- 2.5.20. **Figure 2-6** shows the location of the waste presentation point.

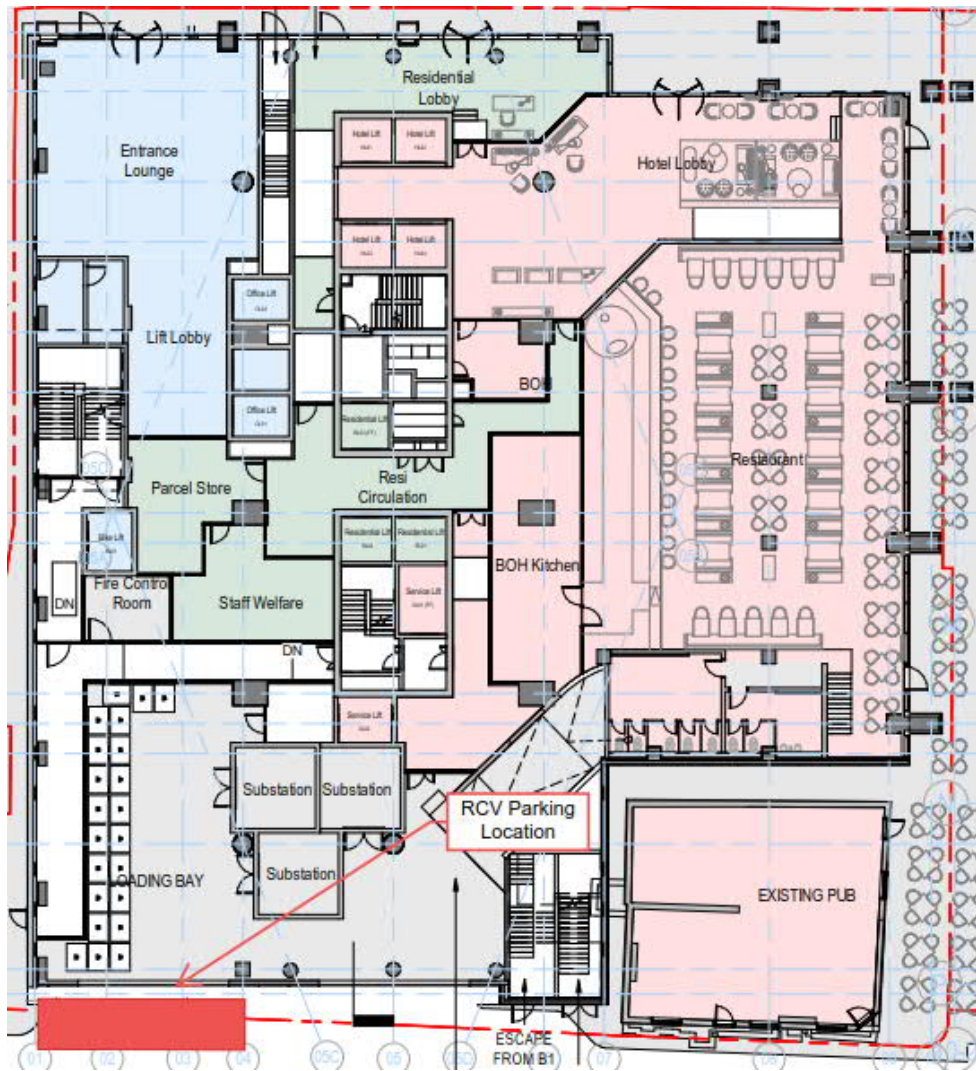
Figure 2-6 - Location of Waste Presentation Area



Source: Hodder+Partners, Ground Floor GA Plan, Drawing Number: S73-121, Rev P01

- 2.5.21. Due to the large number of bins requiring collection, it is assumed that refuse will be collected on a different day to DMR, pulpable recycling and organic wastes.
- 2.5.22. As both commercial and residential wastes will be collected from the waste presentation area, the FM team will ensure that bins containing commercial and residential wastes are not presented at the same time – i.e. a strict management system will be in place to ensure that collections of commercial and residential wastes do not take place at the same time.
- 2.5.23. It is proposed that MCC's waste collection contractor will collect the waste from the waste presentation area located within the loading bay on Bootle Street.
- 2.5.24. The location of where the Refuse Collection Vehicle (RCV) will temporarily park adjacent to the loading bay is shown in **Figure 2-7**.

Figure 2-7 - RCV Parking Location



Source: Hodder+Partners, Ground Floor GA Plan, Drawing Number: S73-121, Rev P01

2.5.25. Once the bins have been emptied, the FM team will be returned to the main waste store.

2.6 BULKY WASTE

- 2.6.1. Space will be provided for the storage of bulky waste. This sizing and location of this space will be determined post planning and should be conditioned as part of the planning approval process.
- 2.6.2. The on-site FM team will assist the residents with moving their bulky waste from their dwellings to the bulky waste store, following proof of arranging a collection with MCC. It should be noted that residents can have one free collection of up to three items a year. However, removal of additional items is a paid service.
- 2.6.3. When sufficient bulky waste has accumulated in the bulky waste store, the on-site FM team will arrange collection through MCC or another licenced waste management contractor.

3 MANAGEMENT OF OPERATIONAL WASTE – COMMERCIAL (BLOCK A)

3.1 INTRODUCTION

- 3.1.1. This chapter outlines the strategy that will be adopted to manage the waste arisings from the commercial areas within the Proposed Development once operational.
- 3.1.2. It should be noted that the existing Sir Ralph Abercromby pub has not been included in the waste model as it has been assumed that waste generation will remain the same and its current waste storage and collection arrangements will not change.

3.2 WASTE GENERATION MODEL

- 3.2.1. **Table 3-1** details the commercial areas within the Proposed Development (Building A).

Table 3-1: Commercial Areas

Use	Area (Sqm)	Rooms (No.)
Hotel	n/a	162
Office	7,151	n/a

- 3.2.2. Estimated waste generation levels have been based on the following metrics (**Table 3-2**).

Table 3-2: Commercial Waste Generation Metrics

Use	Waste	Source
4/5 Star Hotel	Volume per Bedroom [350 Litres] x Number of Bedrooms	British Standard BS5906:2005 Waste management in buildings – Code of practice.
Office	2,600 Litres per 1,000m ² gross floor area.	The Guidance

- 3.2.3. Based on the use classes and areas details in **Table 3-1** above and the waste generation metrics detailed in **Table 3-2**, **Table 3-3** summarises the estimated weekly waste generation levels for the Proposed Development.

Table 3-3: Estimated Weekly Waste Generation

Use Type	Total Waste Generation per Week	Waste Stream*	Total Waste (Litres/Week)
Hotel	56,700	Refuse	28,350*
		Recycling	28,350*
		Glass	3,402*
		Food Waste	3,969*
Office	18,593	Refuse	9,296*
		Recycling	9,296*
		Glass	n/a*
		Food Waste	n/a*
TOTAL (Litres/Week)	75,293		83,964*
* Based on the same assumptions as the original planning application - 50% Refuse and 50% Recycling with an extra over allowance of 7% food waste and 6% glass.			

3.3 COMMERCIAL WASTE MANAGEMENT STRATEGY (PLOT A)

- 3.3.1. The commercial occupier(s) will be required to provide interim waste stores within their premises as part of their fit-out.
- 3.3.2. The individual commercial occupiers' interim waste stores should have sufficient capacity to allow refuse and recycling to be segregated. The size / capacity of the waste store(s) should be sufficient to accommodate the volumes of waste generated by the occupiers' business activities and the frequency that they will transfer their waste to their main commercial waste stores located at basement level 1.
- 3.3.3. Based on the estimated waste generation levels in **Table 3-3**, **Table 3-4** summarises the number and types of bins required within each of the commercial waste storage areas based on a **daily waste collection frequency**.

Table 3-4: Number and Types of Bins

Waste Stream	Volume (Litres) *	Collection Frequency	Type of Bin	Quantity (No.)
HOTEL				
Refuse	8,100	Daily	1,100 litre Eurobin	8**
Recycling	8,100		1,100 litre Eurobin	8
Glass	972		240 litre wheeled bin	5
Food Waste	1,134		240 litre wheeled bin	5
OFFICE				
Refuse	2,656	Daily	1,100 litre Eurobin	3**
Recycling	2,656		1,100 litre Eurobin	3
Glass	n/a		240 litre wheeled bin	n/a
Food Waste	n/a		240 litre wheeled bin	n/a
* Based on the provision of two days waste storage capacity.				
** Refer to Table 3-5 .				

- 3.3.4. Due to the large number of bins that will need to be presented for collection on a daily basis, the bins containing refuse will be compacted using a bin compactor.
- 3.3.5. An example of a suitable bin compactor is shown in **Figure 3-1**.

Figure 3-1 - Example Bin Compactor²



- 3.3.6. Based on a compaction ratio of 3:1, **Table 3-5** details the number and types of bins that will be provided to store refuse.

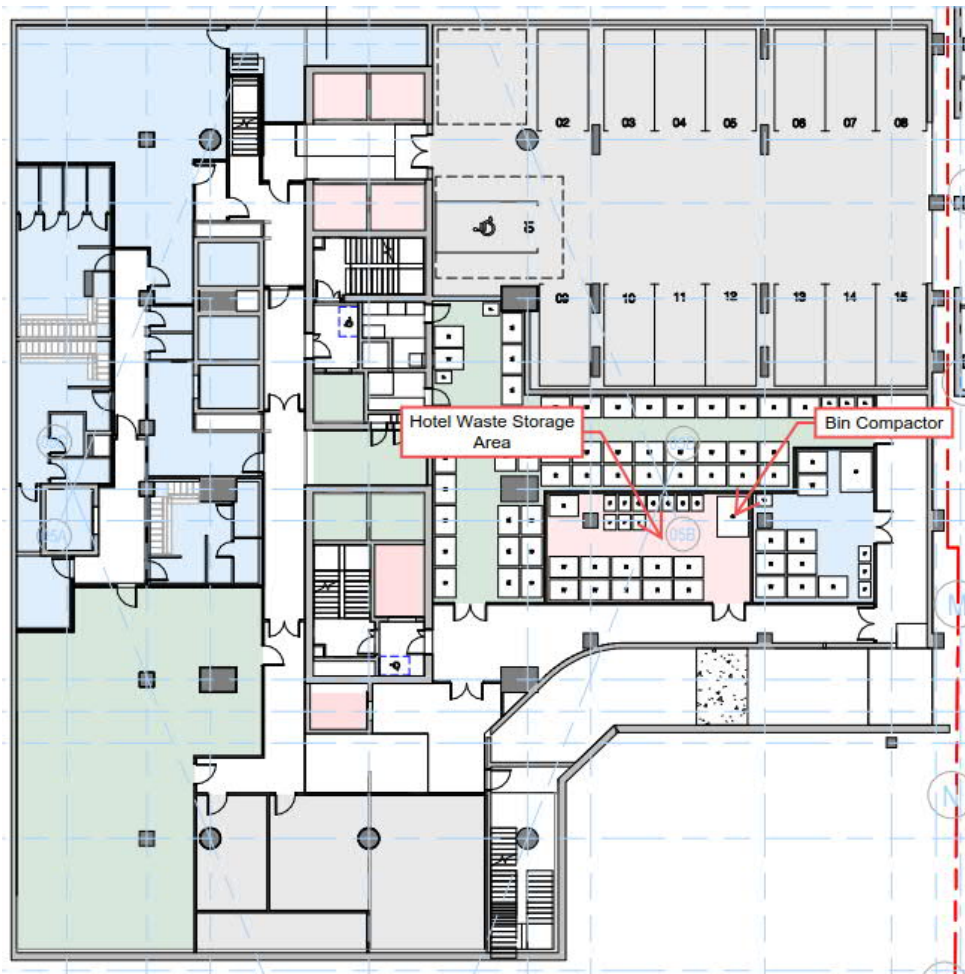
Table 3-5 – Refuse Bin Requirements (Compaction)

Source	Uncompacted Volume (Litres)	Compaction Ratio	Compacted Volume (Litres)	Bin Type	Quantity (No.)
4/5 Star Hotel	8,100	3:1	2,700	1,100 Litre Eurobin	3
Office	2,656		885		1

- 3.3.7. The location of the hotel waste storage area is shown in **Figure 3-2**.

² Bergmann: <https://www.bergmandirect.co.uk/rotary-balers-and-waste-compactors>

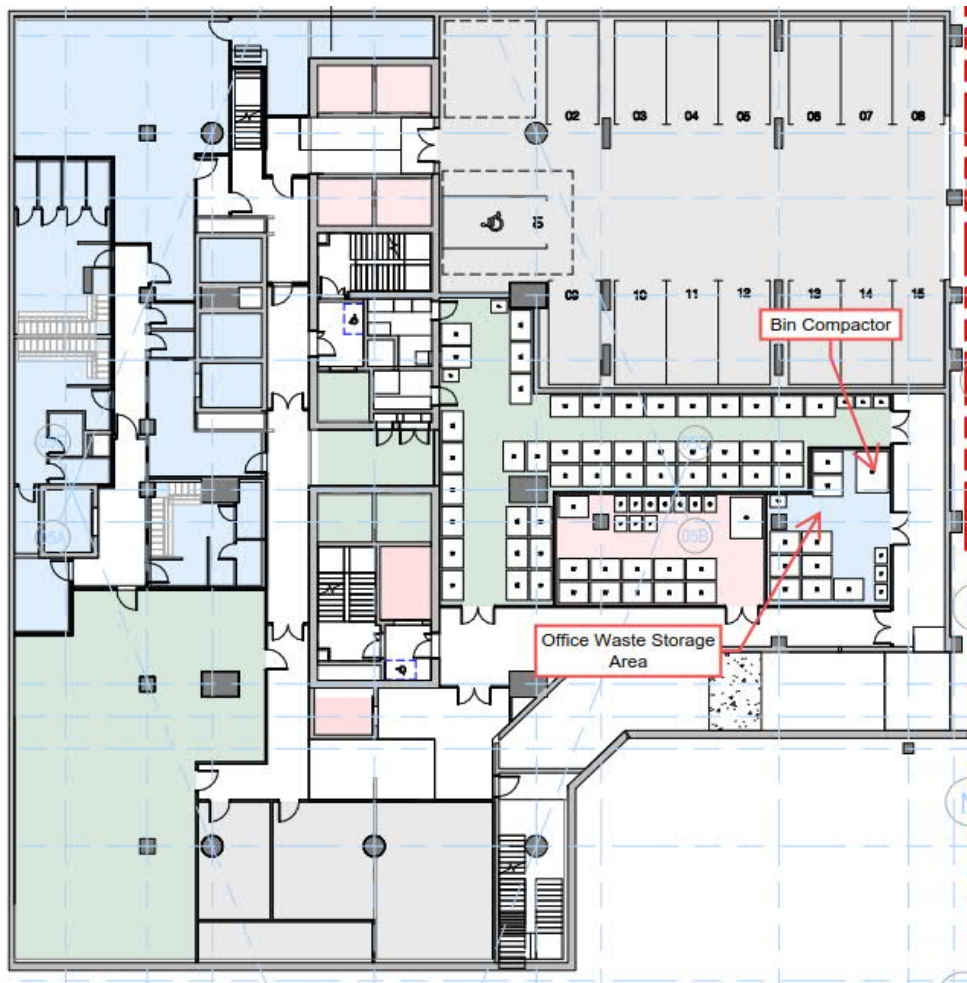
Figure 3-2: Hotel Waste Storage Area Location



Source: Hodder+Partners, Basement B1 Plan, Drawing Number: S73-120, Rev P01

3.3.8. The location of the office waste storage area is shown in **Figure 3-3**.

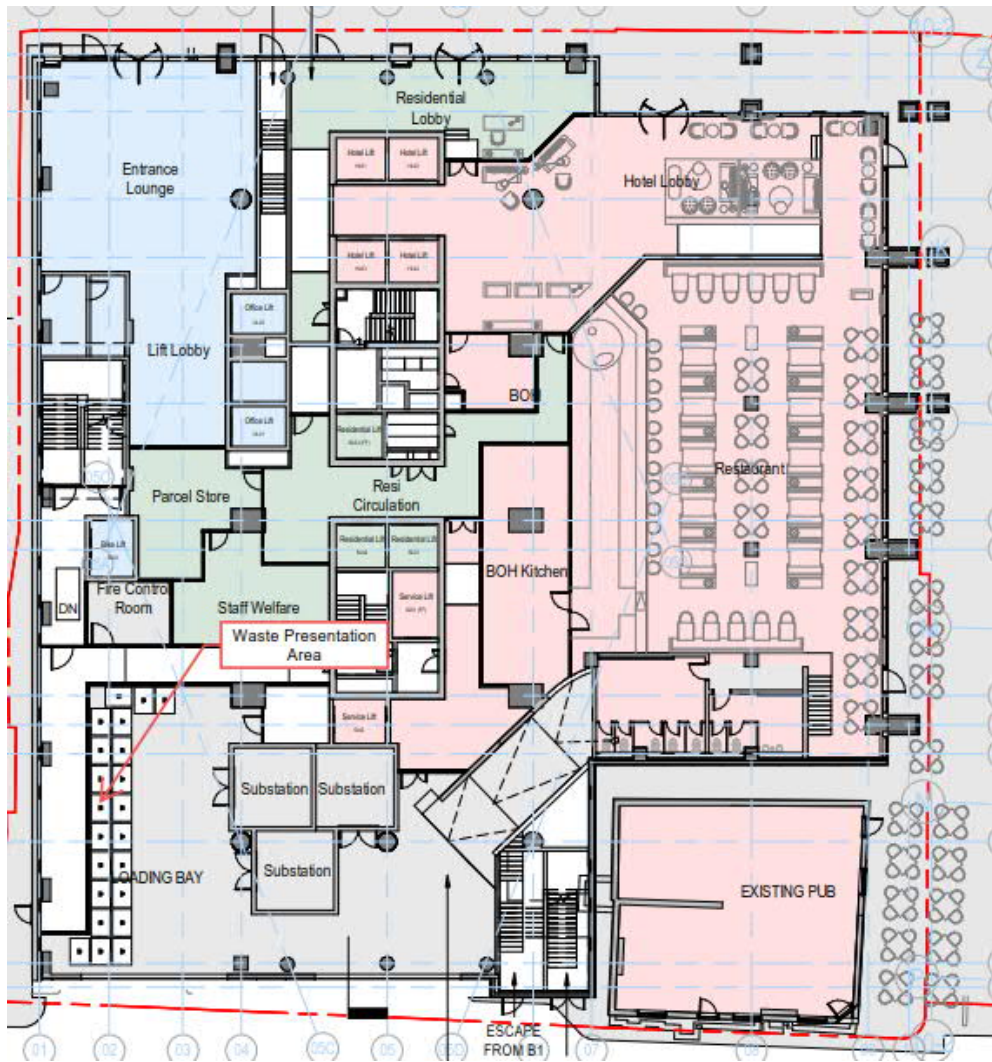
Figure 3-3: Office Waste Storage Area Location



Source: Hodder+Partners, Basement B1 Plan, Drawing Number: S73-120, Rev P01

- 3.3.9. The commercial waste storage areas will be designed in accordance with British Standard *BS5906:2005 Waste Management in buildings - Code of practice*.
- 3.3.10. It is proposed that the wastes from the hotel and offices are managed by the on-site FM team who will transport the bins from both waste storage areas via the car park ramp to the waste presentation area located in the loading bay on Bootle Street at ground floor level.
- 3.3.11. The location and layout of the waste presentation area is shown in **Figure 3-4**.

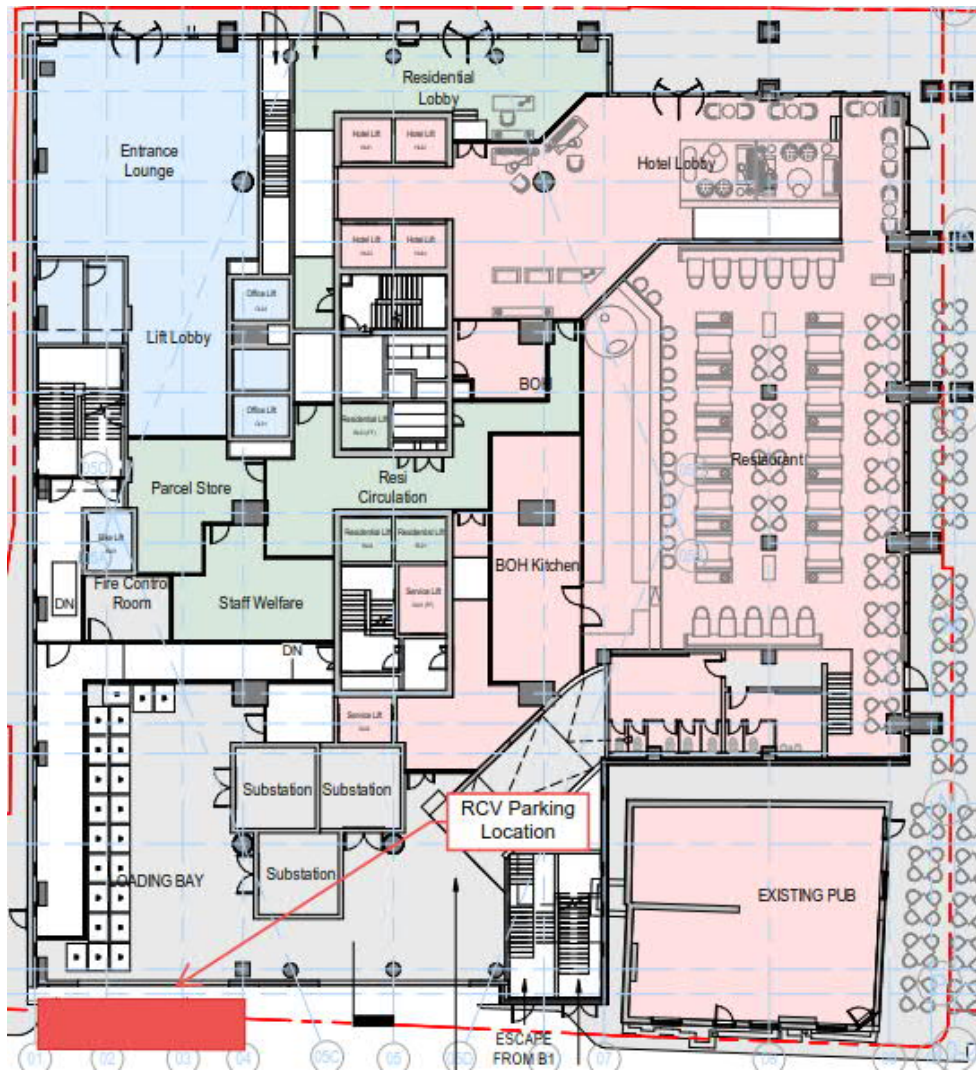
Figure 3-4: Waste Presentation Area



Source: Hodder+Partners, Ground Floor GA Plan, Drawing Number: S73-121, Rev P01

- 3.3.12. As both commercial and residential wastes will be collected from the waste presentation area, the FM team will ensure that bins containing commercial and residential wastes are not presented at the same time – i.e. a strict management system will be in place to ensure that collections of commercial and residential wastes do not take place at the same time.
- 3.3.13. The appointed commercial waste contractor will park their RCV immediately outside of the loading bay and will collect the bins directly from the presentation area. The commercial waste bins will not be presented on-street for collection.
- 3.3.14. The location of the RCV parking area is shown in **Figure 3-5**.

Figure 3-5: RCV Parking Location



Source: Hodder+Partners, Ground Floor GA Plan, Drawing Number: S73-121, Rev P01

- 3.3.15. Once the bins have been emptied, the FM team will return them to the appropriate waste storage area.

4 MANAGEMENT OF OPERATIONAL WASTE – COMMERCIAL (BLOCK B)

4.1 INTRODUCTION

4.1.1. This section details the strategy which will be adopted to manage the waste arising from the commercial floor areas in Block B once operational.

4.2 WASTE GENERATION MODELLING

4.2.1. **Table 4-1** summarises the assumed uses and the areas of each of the commercial spaces within Block B.

Table 4-1: Commercial Areas

Use	Area (Sqm)
Office	22,729
Retail / Food and Drink Units Ground Floor	857
Roof Terrace Retail/ Food and Drink	450

4.2.2. Estimated waste generation levels have been based on the following metrics (**Table 4-2**).

Table 4-2: Commercial Waste Generation Metrics

Use	Waste	Source
Office	2,600 Litres per 1,000m ² Gross Floor Area.	The Guidance
Retail / Food and Drink Units Ground Floor	1,500 Litres per 20 Cover	
Roof Terrace Retail/ Food and Drink	1,500 Litres per 20 Cover	

4.2.3. Based on the use classes and areas details in **Table 4-1** above and the waste generation metrics detailed in **Table 4-2**, **Table 4-3** summarises the estimated weekly waste generation levels for the Proposed Development.

Table 4-3 - Estimated Weekly Waste Generation

Use Type	Total Waste Generation per Week	Waste Stream*	Total Waste (Litres/Week)
Office	59,095	Refuse	29,548
		Recycling	29,548
		Glass	n/a
		Food Waste	n/a
Retail / Food and Drink Units Ground Floor	10,712**	Refuse	5,356
		Recycling	5,356
		Glass	643
		Food Waste	750
Roof Terrace Retail/ Food and Drink	5,625**	Refuse	2,813
		Recycling	2,813
		Glass	338
		Food Waste	394
TOTAL (Litres/Week)	75,432		77,559
* Based on the same assumptions of the original planning application - 50% Refuse and 50% Recycling with an extra over allowance of 7% food waste and 6% glass. ** Based on one cover per 6m².			

4.3 COMMERCIAL WASTE MANAGEMENT STRATEGY (PLOT B)

- 4.3.1. The commercial occupier(s) will be required to provide interim waste stores within their premises as part of their fit-out.
- 4.3.2. The individual commercial occupiers' interim waste stores should have sufficient capacity to allow refuse and recycling to be segregated. The size / capacity of the waste store(s) should be sufficient to accommodate the volumes of waste generated by the occupiers' business activities and the frequency that they will transfer their waste to the communal main commercial waste store located at basement level 1.
- 4.3.3. Based on the estimated waste generation levels in **Table 4-3**, **Table 4-4** summarises the number and types of bins required within each of the commercial waste storage area to store based on a collection frequency of **every other day for refuse and recyclables, and twice weekly for food waste and glass**.

Table 4-4: Number and Types of Bins

Waste Stream	Volume (Litres)	Collection Frequency	Type of Bin	Quantity (No.)
Refuse	37,717	Every Other Day*	1,100 litre Eurobin	15***
Recycling	37,717		1,100 litre Eurobin	15
Glass	981	Twice Weekly**	240 litre wheeled bin	3
Food Waste	1,144		240 litre wheeled bin	3
* Based on the provision of three days waste storage capacity.				
** Based on the provision of four days waste storage capacity.				
*** Refer to Table 4-5 .				

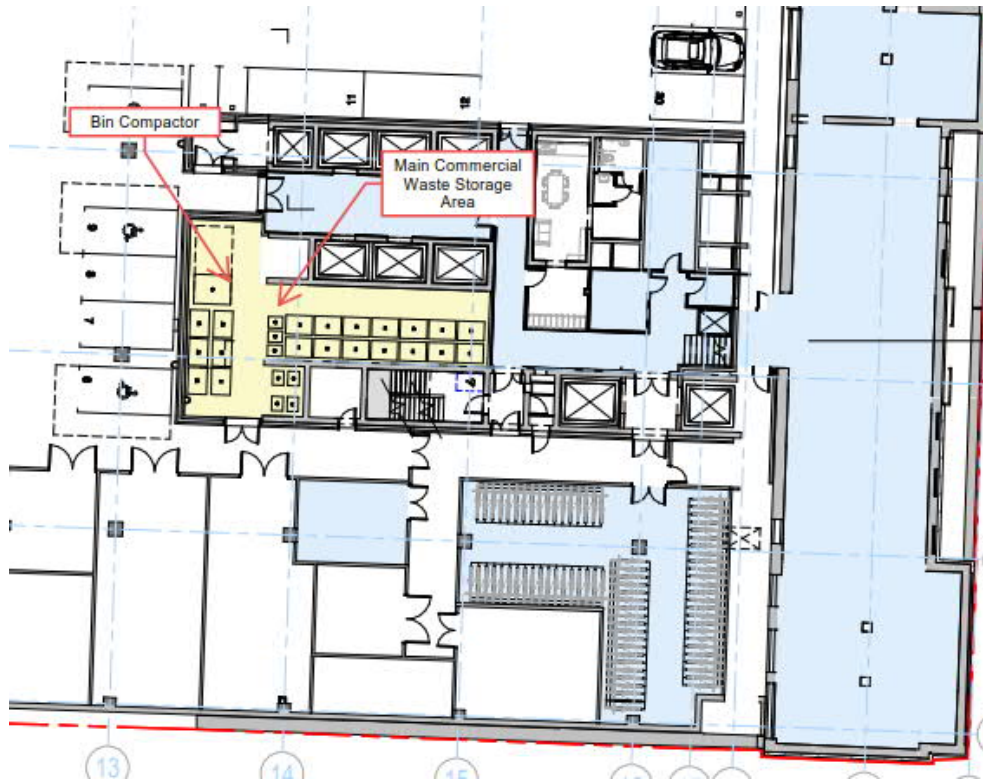
- 4.3.4. Due to the large number of bins that will need to be presented for collection, the bins containing refuse will be compacted using a bin compactor.
- 4.3.5. An example of a suitable bin compactor is shown in **Figure 3-1**.
- 4.3.6. Based on a compaction ratio of 3:1, **Table 4-5** details the number and types of bins that will be provided to store refuse.

Table 4-5 – Refuse Bin Requirements (Compaction)

Uncompacted Volume (Litres)	Compaction Ratio	Compacted Volume (Litres)	Bin Type	Quantity (No.)
16,164	3:1	5,388	1,100 Litre Eurobin	5

- 4.3.7. The location of the communal main waste storage area is shown in **Figure 4-1**.

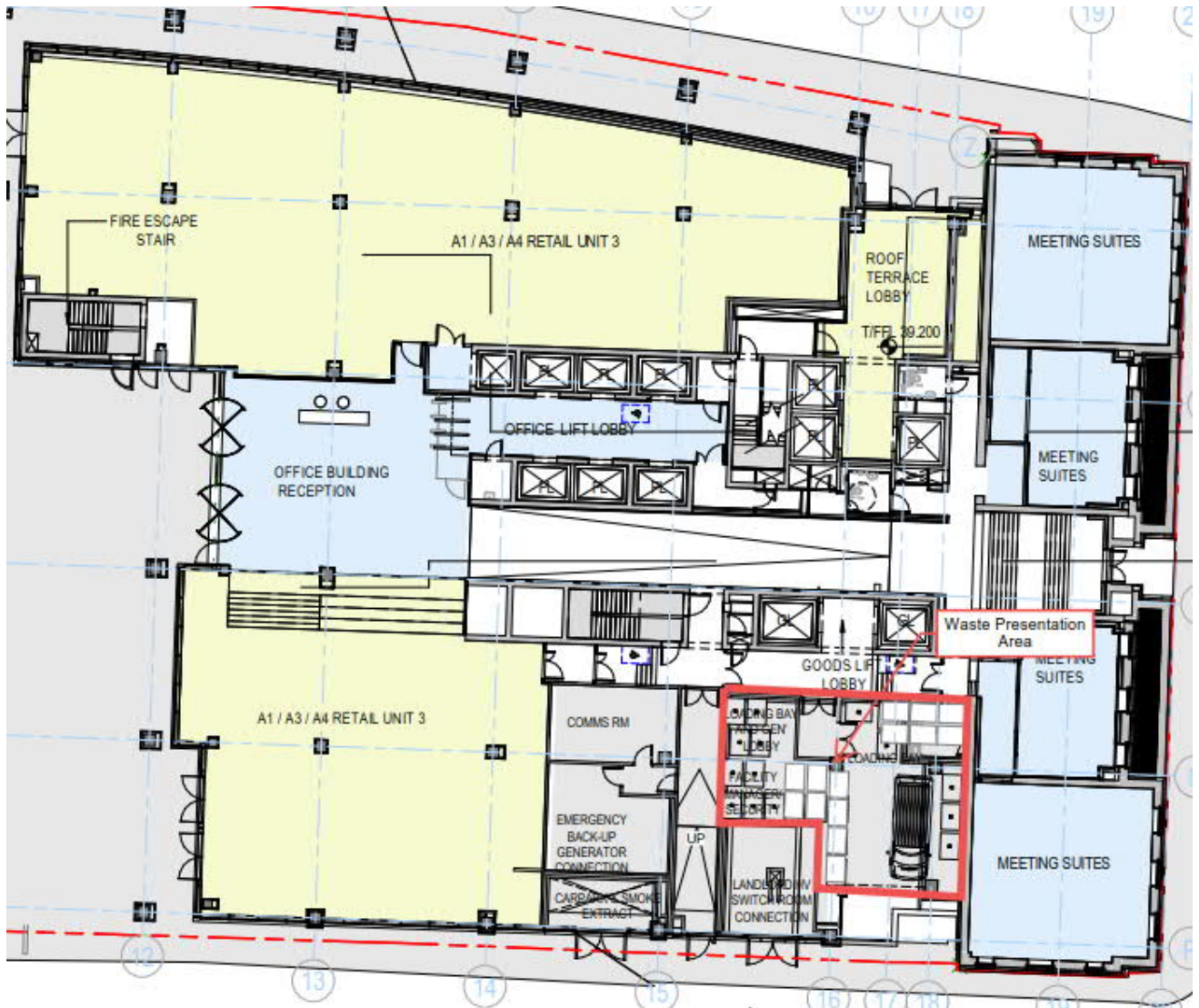
Figure 4-1: Communal Main Waste Storage Area Location (Block B)



Source: Hodder+Partners, Basement B1 Plan, Drawing Number: S73-120, Rev P01

- 4.3.8. The commercial waste storage areas will be designed in accordance with British Standard *BS5906:2005 Waste Management in buildings - Code of practice*.
- 4.3.9. It is proposed that the wastes from the communal main waste storage area are managed by the on-site FM team who will transport the bins via the goods lifts to the waste presentation area located in the loading bay on Bootle Street at ground floor level.
- 4.3.10. It is proposed that the bins containing refuse and recycling will be collected on different days of the week to those containing glass and food waste.
- 4.3.11. The location and layout of the waste presentation area showing the bins containing refuse and recycling is shown in **Figure 4-2**.

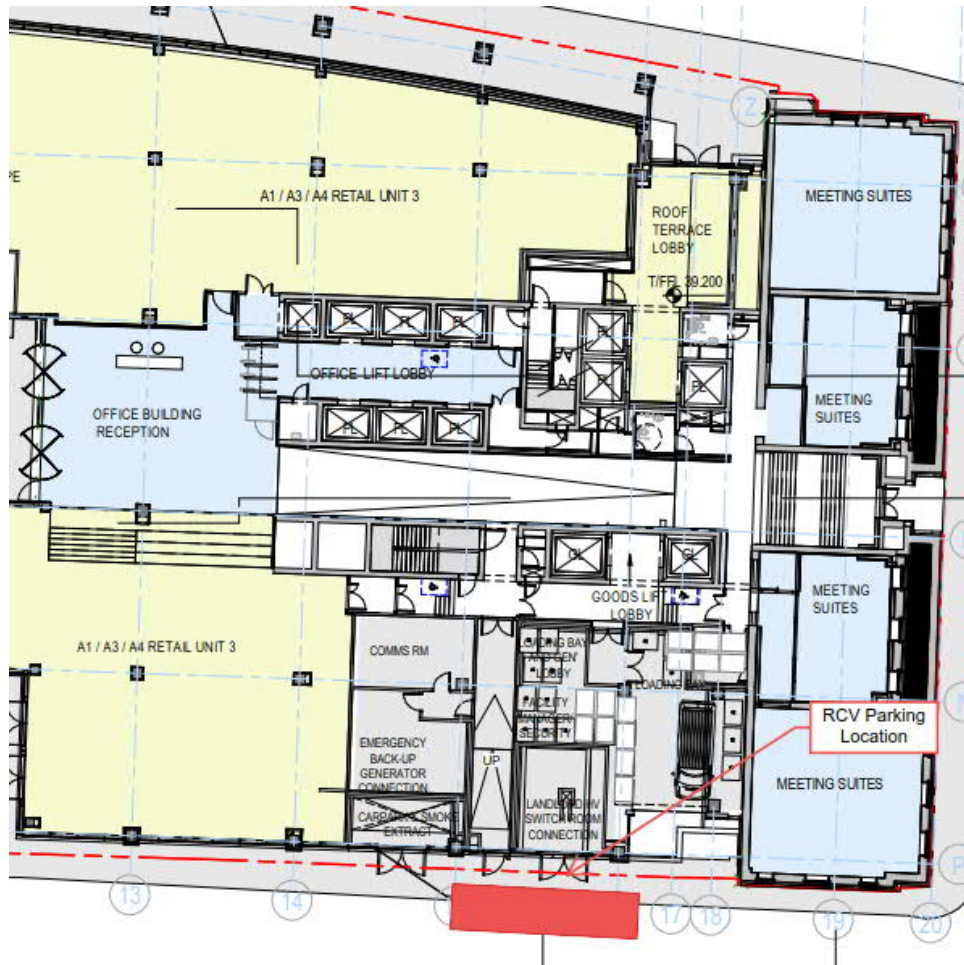
Figure 4-2: Waste Presentation Area



Source: Hodder+Partners, Ground Floor GA Plan, Drawing Number: S73-121, Rev P01

- 4.3.12. The appointed commercial waste contractor will park their RCV immediately outside of the loading bay and will collect the bins directly from the presentation area. The commercial waste bins will not be presented on-street for collection.
- 4.3.13. The location of the RCV parking area is shown in **Figure 4-3**.

Figure 4-3: RCV Parking Location



Source: Hodder+Partners, Ground Floor GA Plan, Drawing Number: S73-121, Rev P01

- 4.3.14. Once the bins have been emptied, the FM team will return them to the appropriate waste storage area.

5 SUMMARY AND CONCLUSIONS

5.1 SUMMARY

RESIDENTIAL WASTE

- 5.1.1. Each residential dwelling will incorporate sufficient internal waste storage containers to promote the separation of recycling at source.
- 5.1.2. Bin numbers have been quantified using residential waste generation metrics detailed within the Guidance.
- 5.1.3. A waste chute system incorporating a tri-separator at its based will be deployed in the Proposed Development. Refuse, pulpable recycling and organic waste will be managed via the waste chute. Dry Mixed Recycling (DMR) will be deposited into 50 litre bins located within the waste chute hopper rooms which will be transferred to the main waste store in the basement by the on-site Facilities Management (FM) team. The waste chute will discharge into the main waste store at basement level.
- 5.1.4. The on-site FM team will be responsible for managing the waste chute hopper rooms and the main waste store.
- 5.1.5. On collection days, the FM team will transport the relevant bins from the main waste store to the waste presentation area at ground floor level.
- 5.1.6. MCC's waste collection contractor will collect the waste from the waste presentation area.
- 5.1.7. Once the bins have been emptied the FM team will return them to the main waste store.

COMMERCIAL WASTE

- 5.1.8. Each tenant will be responsible for designing and providing sufficient internal waste storage space as part of their fit-out. This will be the first point of waste disposal for waste generated within the units.
- 5.1.9. The commercial tenants' staff or their FM team will be responsible for transporting waste from their respective tenanted areas to the appropriate commercial waste store.
- 5.1.10. The FM team will be responsible for managing all of the commercial waste stores. This includes transporting bins from each commercial waste storage area to the nominated waste presentation area at ground floor level prior to collection.
- 5.1.11. The appointed commercial waste management contractor will collect the waste from the waste presentation area.
- 5.1.12. Once the bins have been emptied the FM team will return them to the main waste store.

5.2 CONCLUSION

- 5.2.1. This Waste Management Strategy has taken into account the need to lessen the overall impact of waste generation through recycling of materials from the operational phase.
- 5.2.2. The Proposed Development meets the requirements of relevant waste policy and follows applicable guidance.



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