



Waste and Servicing Strategy

Block A/B, Plot 11, First Street South, Manchester

Downing Living (Manchester) Limited Partnership Inc

Prepared by:

SLR (trading as Vectos (North) Limited)

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Basis of Report

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1.0 Introduction

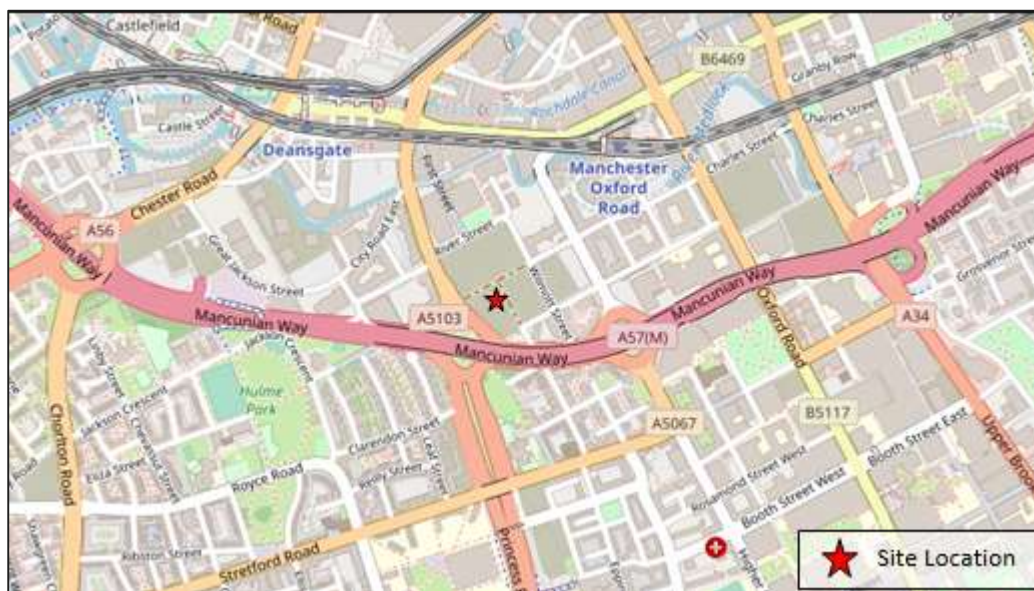
Background

- 1.1 SLR have been commissioned by Downing Living (Manchester) Limited Partnership Inc to provide a Waste and Servicing Strategy. This Strategy has been prepared in support of a planning application for widening the land uses of the commercial units within Blocks A and B, Plot 11, First Street South of the First Street Development Framework.
- 1.2 This application seeks to operate the approved commercial units at Block A and B under the following uses:
- Use Class E(a) – retail
 - Use Class E(b) – café/ restaurant
 - Use Class E(c) – professional services (i.e. hairdressers)
 - Use Class E(d) – gym

Site Location

- 1.3 The site is located within the jurisdiction of Manchester City Council (MCC) who act as both the local planning and highway authority. The site's location at a wider context is shown in **Figure 1.1**.

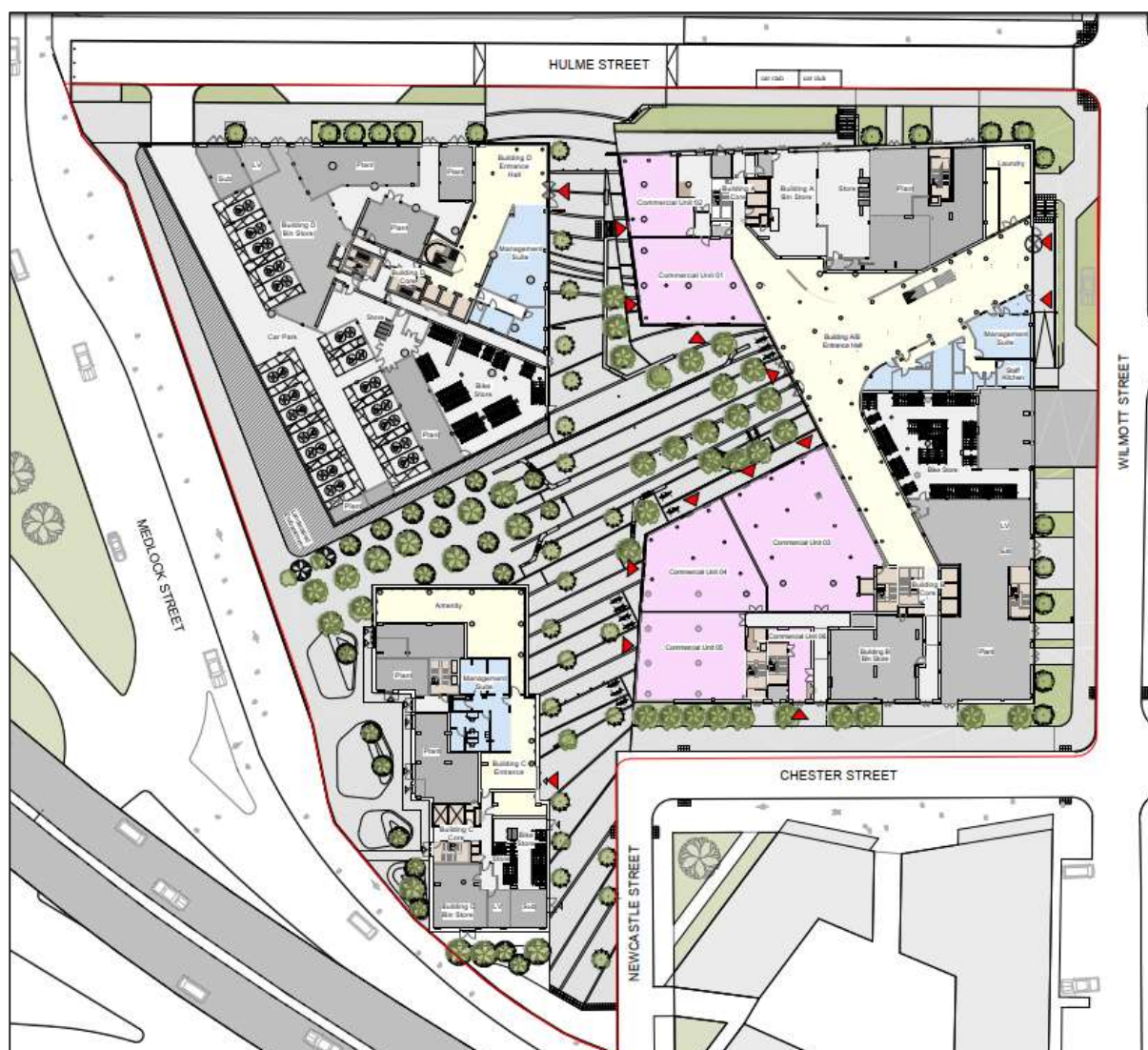
Figure 1.1: Site Location



- 1.4 The site is situated east of Block D, northwest of Block C, within Plot 11 of the First Street Development Framework, as shown in **Figure 1.2** where the commercial units are shown in pink.



Figure 1.2: Location of Block A and B



Application History

- 1.5 The wider site's proposals, inclusive of Buildings A, B, C and D, was granted planning consent by MCC in March 2021, this included planning permission for the commercial units within Block's A and B (Application Reference: 125573/FO/2019). The proposal supplied an approved Waste and Servicing Strategy that was prepared by Vectos now formerly known as SLR for the whole development.
- 1.6 The scheme for Block's A and B is now to be updated to further apply for planning permission to widen the specific uses within the approved commercial units, ensuring a mixed-use community is delivered.



Proposed Development

- 1.7 The proposed development within Block's A and B will comprise of six commercial units on ground floor level and a health and wellbeing gym space on the first-floor level.
- 1.8 The indicative floor area of each unit is described below:
- Block A: Ground Floor Total Gross Floor Area of 325sq.m;
 - Block B: Ground Floor Total Gross Floor Area of 896sq.m;
 - Block B: First Floor Total Gross Floor Area of 360sq.m; and
 - Total Gross Floor Area of 1,581sq.m.

Scope of Report

- 1.9 This strategy establishes the means of recycling and the material generated. As such, it sets out the policy context for waste management, forecasts waste generated, the number of refuse containers required, frequency of collection, management, and oversight of the waste strategy.
- 1.10 The servicing element of the strategy sets out the movement of vehicles to and from the buildings and includes a calculation of the number of expected deliveries, a servicing strategy for goods to be delivered to the occupiers, along with the general management of servicing areas.

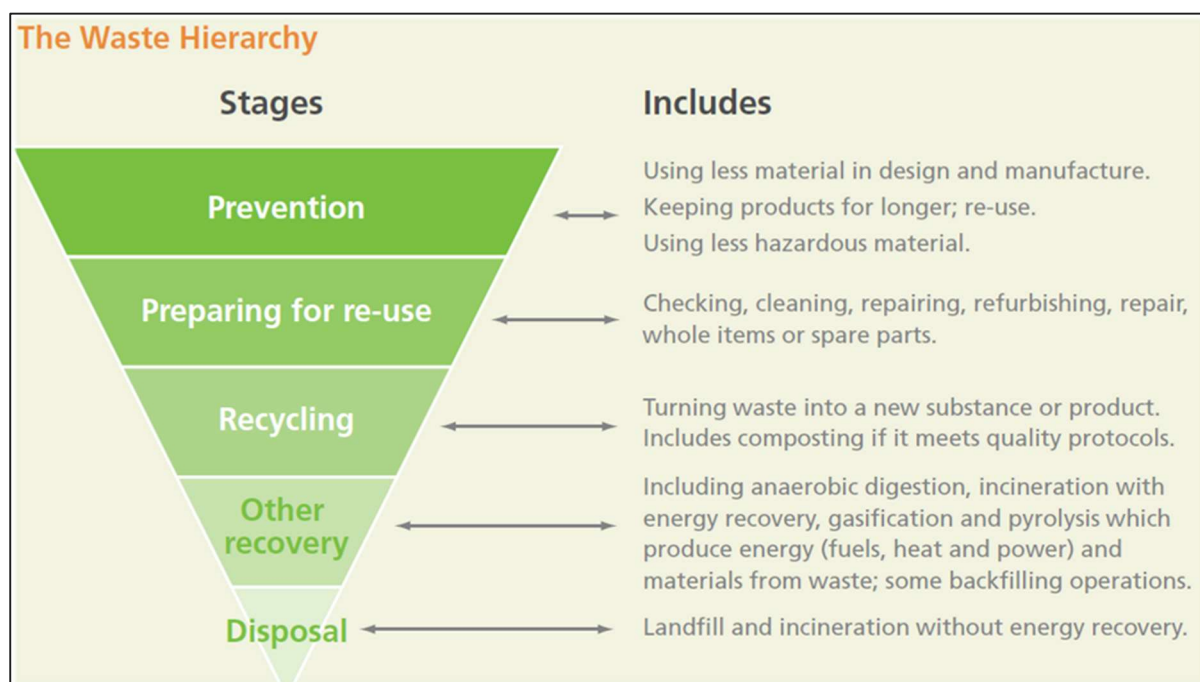


2.0 Policy Context

Waste Management Guidance

- 2.1 Central Government's strategy for minimising waste generation and its transfer to landfill is most simply described according to the 'Waste Hierarchy' as shown in **Figure 2.1**.

Figure 2.1: Waste Hierarchy



- 2.2 To achieve high recycling rates, it is stated that all refuse should be separated at source and stored off the highway in purpose-built refuse stores minimising the distance to collection, thus reducing the opportunity for spillage.
- 2.3 In accordance with Section 34 of the Environmental Protection Act 1990, the on-site management has a legal 'Duty of Care' to ensure that waste is securely stored and disposed of legally. The Waste England and Wales (Amendment) Regulations 2012 has introduced changes and updates that affect both waste producers and waste management companies alike. These include the need to separate wastepaper, metal, plastic, and glass in different waste streams.
- 2.4 Interventions are needed in all stages of the process to minimise waste going to landfill. The minimisation of waste and recycling interventions by occupiers and the management company for the site can help meet the Government's aspirations.
- 2.5 Waste collection is to be overseen by the on-site management company for at the development / the currently appointed licenced waste carrier to remove the waste. The building management team have the responsibility to ensure both the internal and external areas are kept clean and to move the refuse containers, with the refuse store is subject to appropriate ventilation.



- 2.6 All new developments must meet the requirements of Part H6 of the Building Regulations 2000 (solid waste storage) which states:
- Adequate means of storing solid waste shall be provided; and
 - Adequate means of access should be provided for people in the building to the place of storage, and, from the place of storage to a collection point agreed by the waste collection authority.
- 2.7 To demonstrate compliance with regulations, a Waste Transfer Note is required when waste is collected by the Waste Carrier, which may be provided electronically. Many carriers are also able to provide Environmental Reports to inform on the waste management performance. If volumes of waste are greater than 20 kilograms, then such waste needs to be stored in a labelled container and collected by a licensed carrier and records kept.

Manchester City Council Waste Guidance

- 2.8 Manchester City Council's GD04 document 'Waste Storage and Collections for New Developments' provides guidance on the likely waste volumes for a series of land uses. This was published in September 2017 (Version 6).
- 2.9 Therefore, in the interests of presenting a reflective waste forecast, the information contained in the GD04 document has been utilised to inform strategy of the weekly generation according to MCC's guidelines where applicable. It is however noted that the proposals are for purpose-built student accommodation and are not reflective of a typical apartment building in waste generation terms.



3.0 Waste Strategy

Introduction

- 3.1 This section of the report outlines the strategy for managing waste. Waste forecasts are made for various land uses as well as the refuse storage provision and subsequent waste transfer strategy.
- 3.2 The land use class does allow flexibility within Class E and given this we apply a waste generation forecast based on an expected range of occupiers. However, as some land uses generate much more waste than others we also apply a sensitivity test assuming that each commercial unit is occupied by the highest generating land use.
- 3.3 The land uses that are expected to come forward included retail, a café, a restaurant, a professional services use such as a hairdressers and a gym.
- 3.4 The alternative scenario presented as a sensitivity test considers that all of the commercial units are occupied by the land use in Class E that generates the largest volumes of waste which in this case is a restaurant use. Restaurants can generate up to around 10 times more waste than the other land uses within Class E.

Waste Forecasts Assumed Expected Land Uses

- 3.5 As described in **Section 1**, the proposed development comprises commercial units on ground floor level with a total GIA of 1,221sq.m floorspace and space located on the first floor with a total GIA of 360sq.m, 1,581sqm in total.
- 3.6 The waste forecast for a balanced land use scenario is based on the following land uses.
 - Unit 2: 208m² and Unit 4: 108m² for E(a) retail
 - Unit 1: 100 covers and Unit 3: 185 covers for E(b) café/ restaurant;
 - Unit 5: 185m² of E(c) professional services e.g. hairdressers; and
 - Unit 6: 360m² of E(d) gym use (plus decked area).
- 3.7 The assumptions used in forecasting the likely waste volumes are largely derived from a combination of MCC's guidance GD04, British Standard 5906:2005 complemented with the client's own experience at other similar developments, nationally published rates and SLRs own surveys.
- 3.8 Where a restaurant/café is considered the rate is based on the number of covers. MCC's guidance has a waste storage of 1500 litres per 20 diners and the British Standard 5906:2005 of 75 litres per cover per week. In this case we have calculated the number of covers based on the floor area using typical industry standard rates of 1.4sqm per cover within the dining area which in turn occupies approximately two thirds of the gross floor area.



Retail Waste Forecast

- 3.9 For an E(a) retail land use the waste generation per week is based on the BS5906:2005 rate of 10 litres per square metre per week. It is assumed that Retail Units 2 (208m²) and Unit 4 (108m²) are used for retail then it will generate the following waste volumes as below:

$$\text{Unit 2 } 208\text{m}^2 \times 10 = 2,080 \text{ litres of waste per week}$$

$$\text{Unit 4 } 108\text{m}^2 \times 10 = 1,080 \text{ litres of waste per week}$$

Restaurant/Cafe Forecast

- 3.10 Based on industry standard floor area calculations it is assumed that Unit 1 would offer around 100 covers and Unit 3 around 185 covers.
- 3.11 Using the BS5906:2005 for reference, Unit 1 is assumed to generate the following waste forecasts:

$$\text{Unit 1 } 100 \text{ covers} \times 75 = 7,500 \text{ litres of waste per week}$$

$$\text{Unit 3 } 185 \text{ covers} \times 75 = 13,875 \text{ litres of waste per week}$$

Professional Service Forecast (assumed Hairdressers)

- 3.12 For an E(c) professional service use this will follow the general Retail rate of 10 litres per square metre per week and is set out below:

$$\text{Unit 5 } 185\text{m}^2 \times 10 = 1,850 \text{ litres of waste per week}$$

Gym Forecast

- 3.13 Using observations of other gym spaces, an assumption of 4 litres per square metre per week has been used to calculate the forecast waste for a E(d) gym use. The rate is set out below:

$$\text{Unit 6 (First Floor) } 360\text{m}^2 \times 4 = 1,440 \text{ litres of waste per week}$$



Waste Recycling Proportions-Assumed Expected Land Uses

- 3.14 Waste stream proportions for each unit have followed an assumed expected scenario of the likely land uses on site.
- 3.15 The recycling proportions and associated waste generation for each unit are set out in **Table 3.1**. In this the daily waste generation includes as degree of robustness to allow for peaks in generation.

Table 3.1: Recycling Proportions – Assumed Land Use Scenario

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	750	3000	1650	2100	7500
Litres for Daily Collection	150	600	330	420	1500
Unit 2: 208m ²	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	100%
Litres for Weekly Collection	1040		520	520	2080
Litres for Daily Collection	208		104	104	416
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	1388	5550	3053	3885	13875
Litres for Daily Collection	278	1110	611	777	2775
Unit 4: 108m ²	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	100%
Litres for Weekly Collection	540		270	270	1080
Litres for Daily Collection	108		54	54	216
Unit 5: 185m ²	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	Total
Litres for Weekly Collection	925		463	463	1850
Litres for Daily Collection	185		93	93	370
Unit 6: 360m ² +Decked Area	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	200%
Litres for Weekly Collection	720		360	360	1440
Litres for Daily Collection	144		72	72	288



Waste Forecast Sensitivity Test - Assumed Worst Case

- 3.16 A restaurant land use is the worst-case scenario for generating waste under the flexible Land Use Class E. Therefore, under this scenario we assumed that all the commercial land uses are occupied by restaurants. As before, the number of covers assumed is based on the assumed dining floor area equivalent to around two thirds of the overall gross floor area and a rate of one dining space every 1.4m². The number of covers per unit is given below:

Unit 1: Land Use Class E (b) 100 covers

Unit 2: Land Use Class E (b) 110 covers

Unit 3: Land Use Class E (b) 185 covers

Unit 4: Land Use Class E (b) 60 covers

Unit 5: Land Use Class E (b) 95 covers

Unit 6: Land Use Class E (b) 185 covers

Restaurant/Cafe Forecast

- 3.17 Applying the weekly waste forecast for restaurants of 75 litres per cover per week gives the following calculations.

Unit 1 100 covers x 75 = 7,500 litres of waste per week

Unit 2 110 covers x 75 = 8,250 litres of waste per week

Unit 3 185 covers x 75 = 13,875 litres of waste per week

Unit 4 60 covers x 75 = 4,500 litres of waste per week

Unit 5 95 covers x 75 = 7,125 litres of waste per week

Unit 6 185 covers x 75 = 13,875 litres of waste per week



Waste Recycling Proportions-Sensitivity Test Worst Case

- 3.18 Waste stream proportions for each unit under this worst-case scenario of restaurant land use is given in **Table 3.2**. As well as the weekly forecast we set out the Daily Collection rates.

Table 3.2: Recycling Proportions – Sensitivity Test Worst Case Scenario

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	750	3000	1650	2100	7500
Litres for Daily Collection	150	600	330	420	1500
Unit 2: 110 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	825	3300	1815	2310	8250
Litres for Daily Collection	165	660	363	462	1650
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	1388	5550	3053	3885	13875
Litres for Daily Collection	278	1110	611	777	2775
Unit 4: 60 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	450	1800	990	1260	4500
Litres for Daily Collection	90	360	198	252	900
Unit 5: 95 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	713	2850	1568	1995	7125
Litres for Daily Collection	143	570	314	399	1425
Unit 6: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	1388	5550	3053	3885	13875
Litres for Daily Collection	278	1110	611	777	2775



4.0 Refuse Storage, Collection and Transfer Routes

Refuse Storage Requirements - Assumed Expected Land Uses

- 4.1 It is proposed that each commercial unit would store their waste within their own demise. We do not know the layout of each commercial unit but in general we can say that each unit will store waste for one general waste Stream and at least 2 recyclable waste streams. There could well be further waste streams to divert additional waste from the General Waste stream depending on the nature of the operation.
- 4.2 The number of bins depends on the frequency of collection. In summary it is assumed that there is a daily collection although we have allowed for some headroom to account for peak days. The types of bin can vary depending on the scale of unit and type of waste being collected. As the waste is being stored internally it is assumed that 240litre bins are the most efficient means of storing waste although for larger volumes it may be more efficient to use a Eurobin and where this is practical we have indicated that below.

Table 4.1: Refuse Storage Bin Requirements – Assumed Expected Land Uses

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	150	600	330	420
240litre Bin Storage	1	3		
Eurobin Storage				1
Unit 2: 208m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	208		104	104
240litre Bin Storage	1		1	1
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	278	1110	611	777
240litre Bin Storage	2	5		2
Eurobin Storage				1
Unit 4: 108m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	108		54	54
240litre Bin Storage	1		1	1
Unit 5: 185m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	185		93	93
240litre Bin Storage	1		1	1
Unit 6: 360m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	144		72	72
240litre Bin Storage	1		1	1



Refuse Storage Requirements–Sensitivity Test - Worst Case

- 4.3 Under this sensitivity test the waste is again assumed to be stored within their own demise. With organic waste there is a limit on the size of waste bin available and without processing it is assumed that this is stored in 240 litre wheeled bins.
- 4.4 Assuming a daily collection (with some headroom) the forecast bin storage requirement is given below in **Table 4.2**. It can be seen that in some units it is more efficient space wise to use a Eurobin for the recyclables and this is shown where this is practical.

Table 4.2: Refuse Storage Bin Requirements – Assumed Expected Land Uses

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	150	600	330	420
240litre Bin Storage	1	3		
Eurobin Storage				1
Unit 2: 208m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	208		104	104
240litre Bin Storage	1		1	1
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	278	1110	611	777
240litre Bin Storage	2	5		2
Eurobin Storage				1
Unit 4: 108m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	108		54	54
240litre Bin Storage	1		1	1
Unit 5: 185m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	185		93	93
240litre Bin Storage	1		1	1
Unit 6: 360m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	144		72	72
240litre Bin Storage	1		1	1



Collection Frequency

- 4.5 It is assumed that for all commercial units, waste is collected on a Daily basis.

Waste Transfer Routes

- 4.6 This section of the report details both the internal and external waste transfer routes that will be used to manoeuvre waste at Block's A and B of the different land uses, be it depositing waste in the refuse store or collecting waste via a refuse collection vehicle.

Internal Waste Transfer Routes

- 4.7 The gym on the first floor will need to manoeuvre their waste internally by using the lift or stairs to the west of the first floor and onto the ground floor where they will route onto Chester Street. **Figure 4.1** and **Figure 4.2** reveals the waste transfer start from the goods lift and end route on ground floor level.

Figure 4.1: Internal Waste Transfer Route – First Floor Unit 6

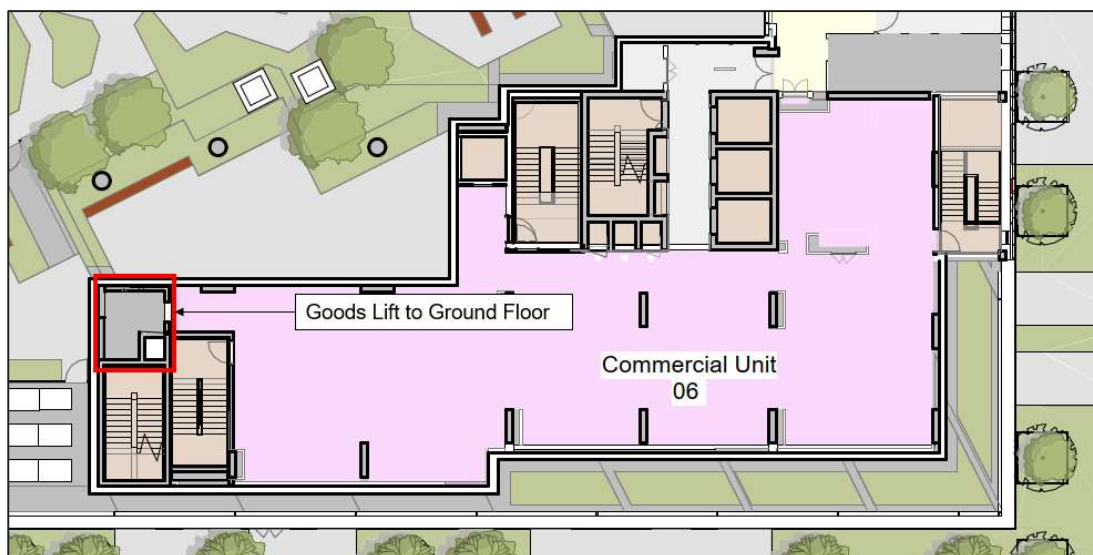
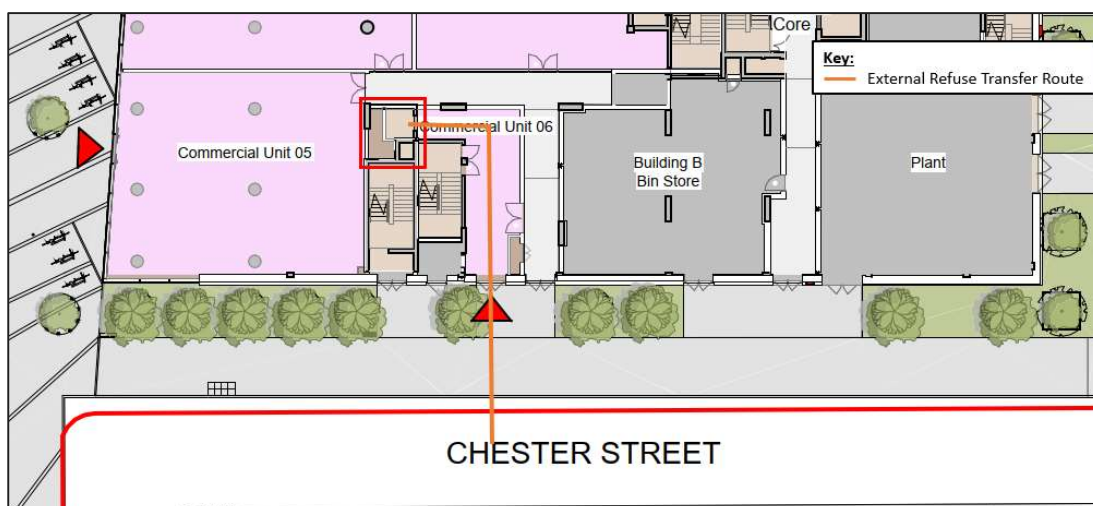


Figure 4.2: Internal Waste Transfer Route – First Floor Unit 6 to Chester Street



External Waste Transfer Route

- 4.8 The waste transfer routes for the commercial units are given in **Figure 4.3** below. These routes are step free.
- 4.9 Each commercial unit will have their waste taken out by the waste operatives or by the Commercial Unit staff and under the direction of the Building Management team. They will have responsibility to ensure the collections happen efficiently, that refuse is not left on street for long periods waiting for collection and that the transfer routes are kept clean. After collection bins would be returned immediately afterwards,

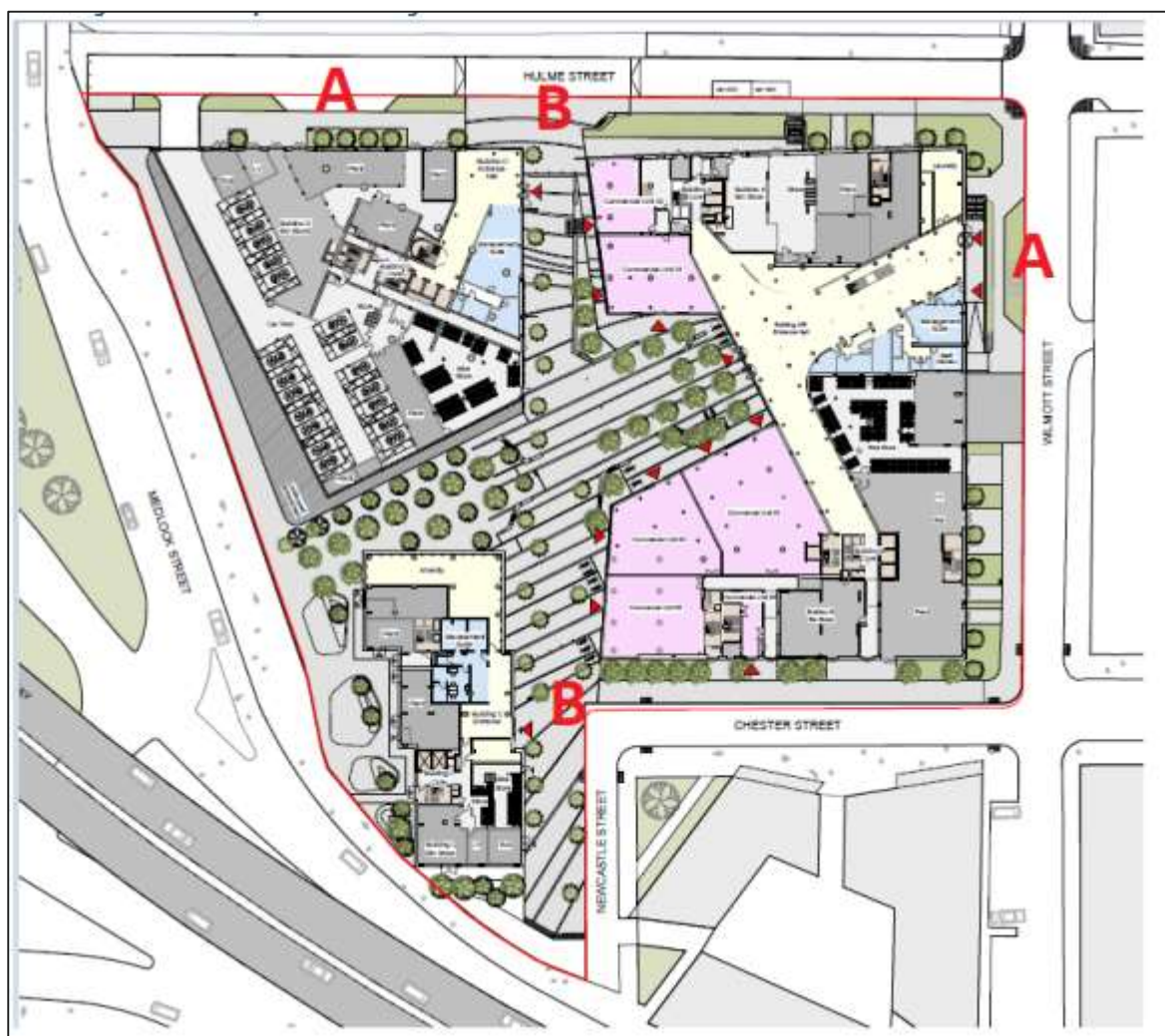
Figure 4.3: External Waste Transfer Route



Waste Collection

- 4.10 Waste will be collected by a large refuse vehicle (11.85m). It is expected that this vehicle would collect waste from Building's C and D as well as A and B of the wider site, as part of a joint collection route. A refuse vehicle will be able to travel along Hulme Street, Wilmot Street and Chester Street. A new service layby will be created on Hulme Street and Wilmott Street with refuse turning areas on Hulme Street and Chester Street.
- 4.11 The locations of the service layby locations are shown in **Figure 4.4** with the laybys marked 'A' and refuse vehicle turning areas at locations marked 'B'. In addition to this the refuse vehicles can pick up waste from the kerb on Hulme Street or Chester Street.

Figure 4.4: Development Servicing Areas



- 4.12 Waste Collections would be made between the hours of 0700-2000 to minimise the implications on residents.



Waste Proforma

- 4.13 MCC require that a Waste Proforma be prepared to support the planning application. Using the information presented in this report, this has been completed and is provided in **Appendix B**.



5.0 Summary and Conclusion

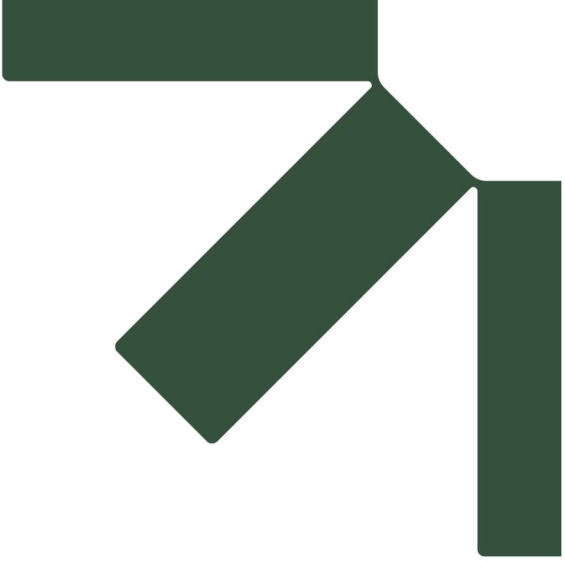
Summary

- 5.1 This report has set out a Waste and Servicing Strategy for the planning application to widen the land uses of the approved commercial units within Blocks A and B, Plot 11, First Street South of the First Street Development Framework.
- 5.2 The application site comprises of six commercial units on ground floor level and first floor level with the following floor areas:
- Block A: Ground Floor Total Gross Floor Area of 325sq.m;
 - Block B: Ground Floor Total Gross Floor Area of 896sq.m;
 - Block B: First Floor Total Gross Floor Area of 360sq.m; and
 - Total Gross Floor Area of 1,581sq.m.
- 5.3 The commercial units have been assessed by using an assumed expected land use situation and then also with a worst-case scenario for waste generation. The worst-case scenario in this case is a Restaurant use. This approach shows the flexibility in waste generation in order to ensure maximum flexibility.
- 5.4 This report has established the likely waste generation for the commercial space proposed uses and associated refuse storage provision. A recycling strategy is also incorporated within the strategy and sufficient servicing provision has been demonstrated.

Conclusion

- 5.5 It is concluded that the forecast deliveries, waste management and refuse collection proposed is appropriate for this scale of development and that servicing and waste collection activities can be undertaken in an efficient manner.





Appendix A MCC Waste Proforma

Waste and Servicing Strategy

Block A/B, Plot 11, First Street South, Manchester

Downing Living (Manchester) Limited Partnership Inc

SLR Project No.: VN232684

15 December 2023

Appendix E Proforma for Planning Applications



MANCHESTER
CITY COUNCIL

Planning Application – Waste Management Strategy (v7.00 from September 2023)

Planning Application Number: Not available at this stage of the application.

Date Submitted: December 2023.

Estimated volumes/ m² required by the development

Low Rise Domestic

Waste Types	Capacity Required (litres)	Number of bins required per household	Confirm what is to be provided
General refuse	140 / 240	Not Applicable	Not Applicable
Pulpable Recycling	140 / 240	Not Applicable	
Mixed Recycling	140 / 240	Not Applicable	
Garden Waste	140 / 240	Not Applicable	
Food Waste	23	Not Applicable	

Commercial Development

Please state the number of bins you propose, showing calculations when appropriate.

Waste Calculations and Assumptions

The proposed development comprises of six commercial units on ground floor level with a total GIA of 1,221sqm floorspace and on the first floor with a GIA of 360sqm giving a total of 1581sqm.

There is flexibility as to how these units can be laid out and the type of occupier that would operate from there and this means that there could be a wide variation in waste generation. We therefore make a waste forecast based on a expected occupation of the commercial units and then a forecast based on a worst case scenario where every unit is occupied by a Restaurant, the highest generating land use in this category.

Assumed Expected Land Use

The end use of these commercial units is unknown at this stage but will comprise of Land Use Class E (a), (b), (c) and (d). Given the flexibility for Land Use Class E it is proposed to present an assumed expected land use occupation as below for retail, café/ restaurant, professional space, and gym units comprising the following:

- Unit 2: 208m² and Unit 4: 108m² for E(a) retail
- Unit 1: 181m² and Unit 3: 366m² for E(b) café/ restaurant;
- Unit 5: 185m² of E(c) professional services e.g. hairdressers; and
- Unit 6: 360m² of E(d) gym use.

Retail

Assumed generation of waste for an E(a) retail use based on a rate of 10 litres per square metre per week. This is based on a rate for retail centres given in BS5906:2005 and is set out below for the two units:

Unit 2: $108\text{m}^2 \times 10 = 1,080$ litres of waste per week

Unit 4: $208\text{m}^2 \times 10 = 2,080$ litres of waste per week

Café / Restaurant

Using the BS5906:2005 for reference, the calculation for a café / restaurant is 75 litres per week per cover. To calculate the number of covers for both E(b) café / restaurant use units, the Unit 1's dining floor area will consist of 181m^2 and Unit's 3 is 366m^2 . from this we apply two thirds of the GIA as dining area and the number of covers is based on a calculation of 1.4sqm per cover. It is assumed that for Unit 1 there will be approximately 100 covers and for Unit 3, 185 covers and the waste calculation is given below:

Unit 1 100 covers $\times 75 = 7,500$ litres of waste per week

Unit 3 185 covers $\times 75 = 13,875$ litres of waste per week

Professional Service (Hairdresser Assumed)

For an E(c) professional service use this will follow the rate of 10 litres per square metre per week and is set out below:

$185\text{m}^2 \times 10 = 1,850$ litres of waste per week

Gym

Using observations of other gym spaces, an assumption of 4 litres per square metre per week has been used to calculate the forecast waste for a E(d) gym use. The rate is set out below:

$360\text{m}^2 \times 4 = 1440$ litres of waste per week

The gym on the first floor could be classed as a resident's amenity space which means that the expected waste will be stored initially with the unit's own demise but will then be transferred daily through a waste chute into the resident's main bin store.

Waste Forecast Sensitivity Test - Assumed Worst Case

In the worst case scenario the Restaurant Land use is the highest generation use and here as before, the number of covers assumed is based on the assumed dining floor area equivalent to around two thirds of the overall gross floor area and a rate of one dining space every 1.4sqm .

Unit 1: Land Use Class E (b) 100 covers

Unit 2: Land Use Class E (b) 110 covers

Unit 3: Land Use Class E (b) 185 covers

Unit 4: Land Use Class E (b) 60 covers

Unit 5: Land Use Class E (b) 95 covers

Unit 6: Land Use Class E (b) 185 covers

Applying the weekly waste forecast for restaurants of 75 litres per cover per week gives the following calculations.

Unit 1 100 covers $\times 75 = 7,500$ litres of waste per week

Unit 2 110 covers x 75 = 8,250 litres of waste per week

Unit 3 185 covers x 75 = 13,875 litres of waste per week

Unit 4 60 covers x 75 = 4,500 litres of waste per week

Unit 5 95 covers x 75 = 7,125 litres of waste per week

Unit 6 185 covers x 75 = 13,875 litres of waste per week

Waste Recycling Proportions Assumed Expected Land Uses

Waste stream proportions for the expected for retail, café / restaurant, professional service, and gym/well being land uses is given in the Table below.

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	750	3000	1650	2100	7500
Litres for Daily Collection	150	600	330	420	1500
Unit 2: 208m²	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	100%
Litres for Weekly Collection	1040		520	520	2080
Litres for Daily Collection	208		104	104	416
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	1388	5550	3053	3885	13875
Litres for Daily Collection	278	1110	611	777	2775
Unit 4: 108m²	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	100%
Litres for Weekly Collection	540		270	270	1080
Litres for Daily Collection	108		54	54	216
Unit 5: 185m²	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	Total
Litres for Weekly Collection	925		463	463	1850
Litres for Daily Collection	185		93	93	370
Unit 6: 360m² +Decked Area	General Refuse /Organic		Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	50%		25%	25%	200%
Litres for Weekly Collection	720		360	360	1440
Litres for Daily Collection	144		72	72	288

Waste Recycling Proportions Assumed Worst Case Land Uses

Waste stream proportions Assuming all the units are occupied as restaurants is given in the Table below.

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	750	3000	1650	2100	7500
Litres for Daily Collection	150	600	330	420	1500
Unit 2: 110 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	825	3300	1815	2310	8250
Litres for Daily Collection	165	660	363	462	1650
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	1388	5550	3053	3885	13875
Litres for Daily Collection	278	1110	611	777	2775
Unit 4: 60 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	450	1800	990	1260	4500
Litres for Daily Collection	90	360	198	252	900
Unit 5: 95 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	713	2850	1568	1995	7125
Litres for Daily Collection	143	570	314	399	1425
Unit 6: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass	Total
Waste Stream Proportion	10%	40%	22%	28%	100%
Litres for Weekly Collection	1388	5550	3053	3885	13875
Litres for Daily Collection	278	1110	611	777	2775

Collection Frequency

The number of bins that are to be stored based on a daily collection with some headroom to allow for peak days.

Bin Storage Requirements

It is proposed that each commercial unit would store their waste within their own demise. We do not know the layout of each commercial unit but in general we can say that each unit will store waste for one general waste Stream and at least 2 recyclable waste streams. There could well be further waste streams to divert additional waste from the General Waste stream depending on the nature of the operation.

The types of bin can vary depending on the scale of unit and type of waste being collected. As the waste is being stored internally it is assumed that 240litre bins are the most efficient means of storing waste although for larger volumes it may be more efficient to use a Eurobin and where this is practical we have indicated that below.

Waste Storage - Assumed Expected Land Uses

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	150	600	330	420
240litre Bin Storage	1	3		
Eurobin Storage				1
Unit 2: 208m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	208		104	104
240litre Bin Storage	1		1	1
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	278	1110	611	777
240litre Bin Storage	2	5		2
Eurobin Storage				1
Unit 4: 108m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	108		54	54
240litre Bin Storage	1		1	1
Unit 5: 185m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	185		93	93
240litre Bin Storage	1		1	1
Unit 6: 360m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	144		72	72
240litre Bin Storage	1		1	1

Waste Storage Requirements – Assumed Worst Case Sensitivity Test

Unit 1: 100 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	150	600	330	420
240litre Bin Storage	1	3		
Eurobin Storage				1
Unit 2: 208m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	208		104	104
240litre Bin Storage	1		1	1
Unit 3: 185 Covers	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	278	1110	611	777
240litre Bin Storage	2	5		2
Eurobin Storage				1
Unit 4: 108m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	108		54	54
240litre Bin Storage	1		1	1
Unit 5: 185m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	185		93	93
240litre Bin Storage	1		1	1
Unit 6: 360m ²	General Refuse	Organic	Paper / Card	Plastic / Metal / Glass
Daily Waste Generation	144		72	72
240litre Bin Storage	1		1	1

Has / will a contract be obtained with a licensed waste carrier?
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Mixed Use Developments

Are the stores for residential and commercial separate from each other?

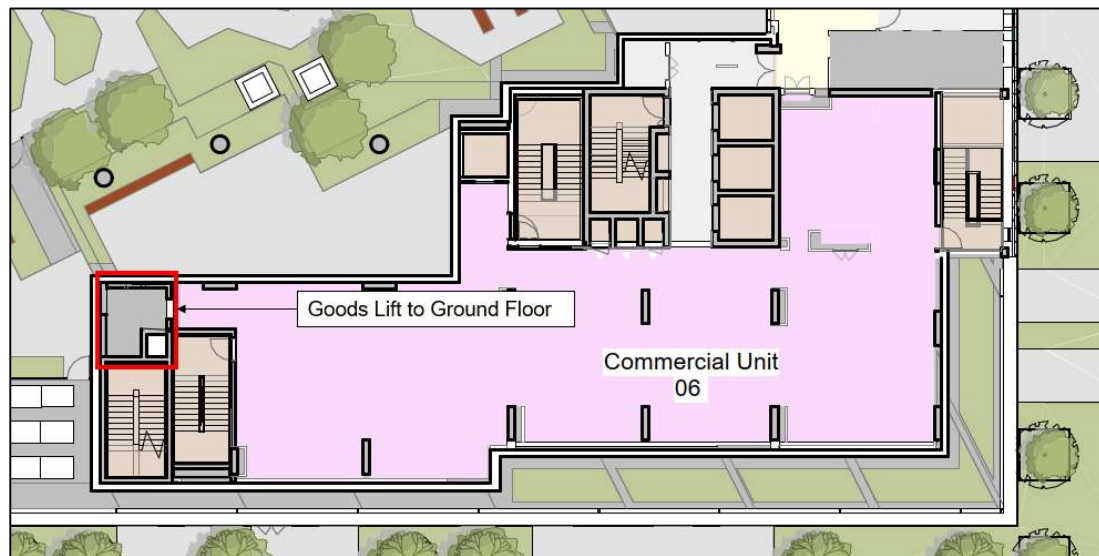
Yes

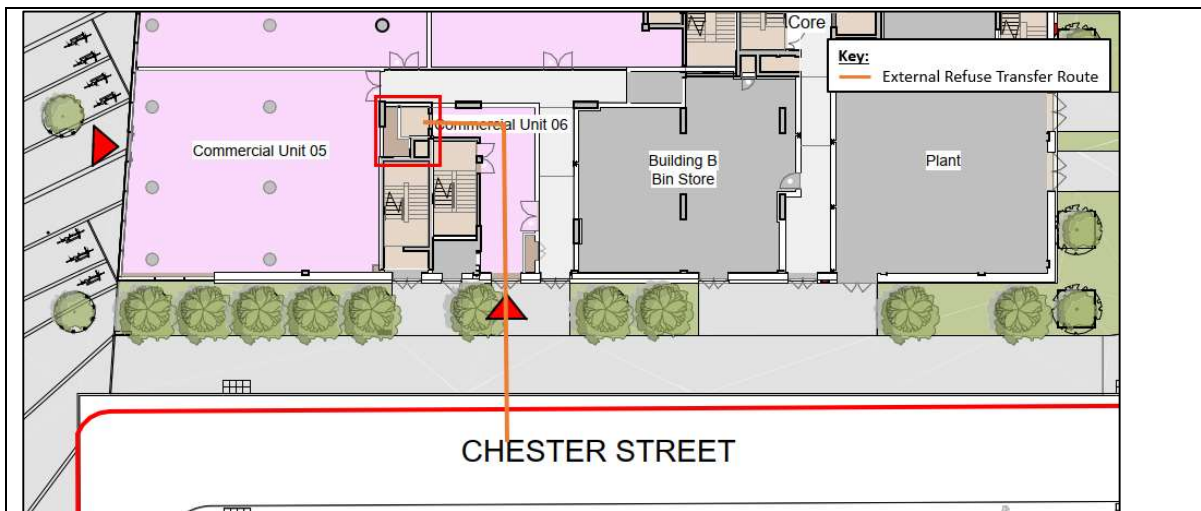
Internal Stores

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

Internal Waste Transfer Routes

The gym on the first floor will need to manoeuvre their waste internally by using the lift or stairs to the west of the first floor and onto the ground floor where they will route onto Chester Street. The images below reveal the waste transfer start from the goods lift and end route on ground floor level.

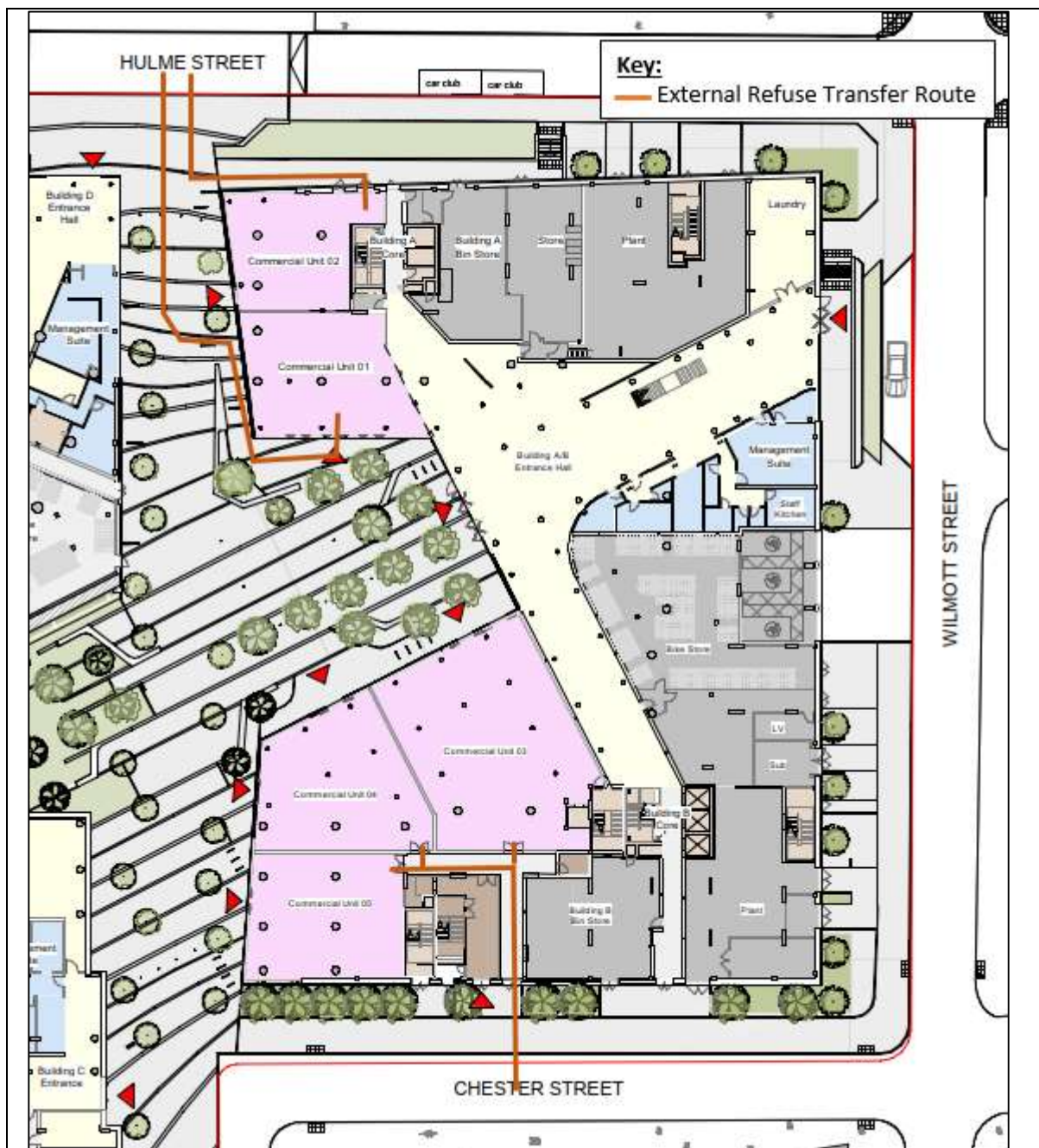




External Waste Transfer Route

The waste transfer routes for the commercial units are given in the image below. These routes are step free.

Each commercial unit will have their waste taken out by the waste operatives or by the Commercial Unit staff and under the direction of the Building Management team. They will have responsibility to ensure the collections happen efficiently, that refuse is not left on street for long periods waiting for collection and that the transfer routes are kept clean. After collection bins would be returned immediately afterwards.



Waste will be collected by a large refuse vehicle (11.85m). It is expected that this vehicle would collect waste from Building's C and D as well as A and B of the wider site, as part of a joint collection route. A refuse vehicle will be able to travel along Hulme Street, Wilmott Street and Chester Street. A new service layby will be created on Hulme Street and Wilmott Street with refuse turning areas on Hulme Street and Chester Street as described in the Transport Statement. Refuse vehicles can pull up alongside the kerb on Hulme Street and Chester Street.

Storage Areas for Waste Containers (Residential and Commercial)

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

Each commercial units and land use are assumed to store their waste within their own demise; however we do not know the layout of each commercial unit. We can say that each unit will store waste for one General Waste Stream and at least 2 recyclable waste streams. There could well be further waste streams to divert additional waste from the General Waste stream depending on the nature of the operation.

Waste from the Commercial Units will be stored in leak proof 240litre wheeled bins or Eurobins if more efficient to ensure that bags of waste are not left on street.

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

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

Ventilation – It will be ensured that the refuse store will be appropriately ventilated.

Hygiene – Refuse containers will be of construction, kept in sound condition, and will be easily cleaned / disinfected. Adequate facilities will be used for storing and disposing waste. The refuse store will be managed in a way that enables them to be kept clean. Waste will be disposed of in a hygienic and environmentally friendly way, in accordance with legislation. The waste will therefore not be a direct or indirect source of contamination (e.g. touching surfaces that food is prepared on, or attracting pests).

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.

On-site management will ensure this strategy works day-to-day and as such will be responsible for ensuring the refuse store / designated waste collection point are accessible on collection days. They will also wheel refuse containers to the and from the collection point on collection days.

Waste Collections would be made between the hours of 0700-2000 to minimise the implications on residents.

Please ensure that you have attached:

Detailed plans of waste stores – Yes, please see the Waste and Servicing Strategy.	☒
Location plans showing stores – Yes, please see the plans contained in the Waste and Servicing Strategy.	☒
Location plans showing the proposed collection point and the route the collection vehicle will take - Yes, please see the Waste and Servicing Strategy.	☒

Please ensure that you have completed this form in accordance with our GD04 Waste Storage and Collection Guidance for New Developments – Yes, this has been ensured along with the Waste and Servicing Strategy.



Making Sustainability Happen