



Cambridge Halls, Manchester

Sustainability Services
Operational Waste Management Strategy
Stage 2
15299-WAT-XX-XX-RP-V-59017

April 2025

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This document has been prepared and checked in accordance with
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Revision	Status	Date	Prepared by	Checked by	Approved by
P01	S3	April 2025	Talia Levene Graduate Consultant	Ellie Booth Consultant	Emily Wingrove Head of Sustainability (Midlands) 
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Comments

P01 – Issued for comment.
C01 – Final issue.

Revision		Status	
Pnn	Preliminary (shared; non-contractual)	S1	Coordination
Cnn	Contractual	S2	Information
		S3	Review & Comment
		S4	Review & Authorise
		S5	Review & Acceptance
		A0, A1, An	Authorised & Accepted (n=work stage if applicable)

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We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

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1. INTRODUCTION

1.1 The Brief

Unite Students and Manchester Metropolitan University (the Applicant) have appointed Waterman Building Services Limited (WBS) to prepare an operational waste management strategy (OWMS) report to support the proposed redevelopment of Cambridge Halls of Residence (the Site). The Site is located on Cavendish Street, Manchester, M15 6TT within the administrative boundary of Manchester City Council (MCC).

1.2 The Proposed Development

This OWMS accompanies a full planning application for Phase 1 and Phase 2 of the redevelopment of Cambridge Halls of Residence. The description of the development is as follows:

“Demolition of existing halls of residence and erection of two buildings of 30 and 24 storeys above ground, plus basement and rooftop plant levels, comprising purpose-built student accommodation with internal and external rooftop communal amenity space (Sui Generis). Ground floor commercial and community uses (Flexible Use Classes E, F1 or F2). Hard and soft landscaping and associated highway works.”

1.3 The Site

The Site is currently occupied by a four-storey student accommodation building, constructed in 1998.

The Development will comprise of two buildings, Phase 1 and Phase 2, of 24 and 30 storeys respectively, both of which are predominantly purpose-built student accommodation (PBSA) with community and retail space situated across the ground and first floor.

A ground floor plan showing the arrangement of the proposed buildings is included in Appendix A.

The Applicant anticipates 1,101 bedrooms to be complete in Phase 1 by September 2029 and an additional 1,201 bedrooms in Phase 2 by September 2030.

1.3.1 PBSA Areas

The proposed 2,302 student accommodation units comprise the following clusters and studios across the two phases.

Table 1: Proposed student accommodation unit mix¹

Phase	Unit type	Number of units
Phase 1	Standard Clusters	1,007
	Accessible Clusters	60
	Studios	24
	Accessible Studios (23sqm)	5
	Accessible Studios (21sqm)	5
	Phase 1 Total	1,101

¹ Cartwright Pickard document titled 'Cambridge Halls Design & Access Statement' with document reference '998-CPA-ZZ-ZZ-RP-A-9029' dated April 2025.

Phase	Unit type	Number of units
Phase 2	Standard Clusters	421
	Accessible Clusters	22
	Studios	175
	Affordable Clusters	398
	Accessible Affordable Clusters	15
	Post-graduate Clusters	170
	Phase 2 Total	1,201
Grand Total		2,302

1.3.2 Retail and Community Areas

The scheme includes a retail area at ground floor level and a flexible community space (Use Class E/ F1) at ground and first floor levels.

Table 2: Retail and community areas

Use	Phase	Floor Level	Area (m²)
Retail	1	Ground	337.0
	2	Ground	482.9
Community	1	Ground	482.9
	2	First	312.5

1.4 Report Scope

The purpose of this OWMS is to detail how waste will be stored, managed, and collected when the development is complete. It outlines the types and volumes of waste predicted to arise. It sets out anticipated waste storage capacity requirements (bin numbers) for the proposed uses.

This document should be read in conjunction with other submission documents, including the Sustainability Statement.

1.5 Exclusions and Limitations

This report was undertaken in accordance with a scope of works agreed between WBS and the Applicant.

The benefit of this report is made to Unite Students and Manchester Metropolitan University.

WBS has endeavoured to assess all information provided to it during this work but makes no guarantees or warranties as to the accuracy or completeness of this information.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at the Site.

2. POLICY, GUIDANCE AND STANDARDS

The following policy, guidance, and standards were considered in developing this OWMS.

2.1 The Building Regulations 2010 Approved Document H²

This Approved Document provides practical guidance. It sets out the requirements of Schedule 1 and Regulation 7 of the Building Regulations 2010 (SI 2010/2214) for England and Wales. Requirement H6, “Solid Waste Storage” specifies:

- “(1) Adequate provision shall be made for storage of solid waste.
- (2) Adequate means of access shall be provided:
 - (a) for people in the building to the place of storage
 - (b) from the place of storage to a collection point [...]

Requirement H6 stipulates waste storage should be designed and sited so as not to be prejudicial to health or local amenity.

2.2 British Standard 5906:2005³

This British Standard (BS 5906:2005) is a Code of Practice for methods of storage, collection, segregation for recycling and recovery, and on-site treatment of waste. This standard relates to residential and non-residential buildings and healthcare establishments. It is applicable to new buildings, refurbishments and conversions of residential and non-residential buildings, including but not limited to retail and offices. It expands upon the legal requirements set out in The Building Regulations 2010, Approved Document H, requirement H6 as above. BS 5906:2005 advises that:

“Designers should consider:

- easy and safe access for waste producers, including older persons or persons with disabilities;
- easy and safe access for collectors and collection vehicles;
- location and space (including avoidance of opportunity to cause nuisance or injury);
- protection against animal scavenging of waste;
- aesthetics of the development;
- noise (e.g. glass handling);
- ease of maintenance, including cleaning;
- robust construction;
- safety from fire risk and smoke;
- lighting;
- ventilation;

- sound insulation; and
- special requirements (e.g. separate storage and collection provisions for healthcare waste and bulky waste).”

The document then goes on to provide specific guidance to enable calculations of storage capacity, issues to consider for different building types or occupiers, and design considerations for waste storage and handling areas. BS also recommends the maximum distances waste collection operatives should have to manoeuvre bins e.g., 10m for four wheeled bins or 15m for two wheeled bins.

2.3 Building Research Establishment (BRE)

2.3.1 BRE’s Environmental Assessment Method

The Building Research Establishment’s Environmental Assessment Method (BREEAM) process evaluates the procurement, design, construction, and operation of a development against targets that are based on performance benchmarks. It is applicable to non-domestic buildings only.

The Applicant is targeting a BREEAM rating of “Excellent” for all assessments under the BREEAM UK New Construction Version 6.1 manual⁴.

The manual advises on allocating waste storage provision for non-domestic uses. It recommends the following provisions for recyclable wastes as a minimum:

- at least 2m² per 1,000m² of net floor area for buildings < 5,000m².
- a minimum of 10m² for buildings ≥ 5,000m²; and
- an additional 2m² per 1,000m² of net floor area where catering is provided (with an additional minimum of 10m² for buildings ≥ 5,000m²).

The net floor area should be rounded up to the nearest 1,000m². We recommend a similar allocation is made for residual waste.

The BREEAM assessment is targeting the operational waste credit Wst 03 which requires the provision of:

- dedicated space for segregating and storing recyclable waste. The space should be clearly labelled, accessible to all future users, and of an appropriate capacity;
- equipment where appropriate for “consistent and large amounts of operational waste generated”, such as static compactors, balers, or space for storing food waste; and
- a water outlet near organic waste storage facilities for cleaning and hygiene purposes.

More information about the BREEAM assessment process, including Wst 03, is included in the Applicant’s BREEAM Pre-Assessment reports (document references: 15299-WAT-XX-XX-RP-V-59002, 15299-WAT-XX-XX-RP-V-59004, 15299-WAT-XX-XX-RP-V-59005, and 15299-WAT-XX-XX-RP-V-59006).

² GOV.UK (2010) “The Building Regulations 2010, Drainage and Waste Disposal” H6 Solid Waste Storage, 2015 edition, page 53. Available at www.gov.uk/government/publications/drainage-and-waste-disposal-approved-document-h (accessed 23 April 2025).

³ British Standard BS 5906:2005: Waste management in buildings – Code of practice, December 2005 Revision, Committee reference B/508/1.

⁴ BREEAM UK New Construction Version 6.1 Technical Manual - SD5079– Issue: 2.0.

2.4 Our Waste, Our Resources: A Strategy for England, 2018⁵

This Strategy sets out how the Government will preserve material resources by minimising waste, promoting resource efficiency and moving towards a circular economy in line with the 25 Year Environment Plan.

Chapter 3 of the Strategy, titled 'Recovering Resources and Managing Waste' sets a target for at least 65% of municipal waste by weight to be recycled by 2035, with no more than 10% ending up in landfill. An overarching commitment of working towards eliminating food waste to landfill by 2030 has also been set.

2.5 Simpler Recycling in England 2024⁶

The Simpler Recycling in England policy states: *"The new default requirement for most households and workplaces will be 4 containers for:*

- *residual (non-recyclable) waste*
- *food waste (mixed with garden waste if appropriate)*
- *paper and card*
- *all other dry recyclable materials (plastic, metal and glass)*

These may be various container types, including bags, bins or stackable boxes.

This is the government's maximum default requirement and is not expected to increase in the future. However, councils and other waste collectors will still have the flexibility to make the best choices to suit local need. This is a sensible, pragmatic approach to the collection of materials for every household and business in England."

The implementation timelines for "Simpler Recycling" are:

- *"by 31 March 2025, businesses and relevant non-domestic premises in England will need to arrange for the collection of the core recyclable waste streams, with the exception of garden waste (glass, metal, plastic, paper and card, and food waste)*
- *by 31 March 2026, local authorities will be required to collect the core recyclable waste streams from all households in England. This includes introducing weekly food waste collections for most homes, unless a transitional arrangement applies*
- *by 31 March 2027, kerbside plastic film collections from businesses and relevant non-domestic premises, and households will be introduced"*

2.6 Manchester City Council Planning Policy and Guidance

2.6.1 Domestic Waste and Recycling Service Standard, April 2024⁷

This guidance details Manchester City Council's (MCC's) service standard for the provision of domestic recycling and refuse collections.

Regarding the appropriate type, size and number of containers required, specific guidance has been provided for PBSA use:

- Wherever operationally possible, refuse and recyclable material must be stored in, and collected from communal containers.
- Only in circumstances where it is operationally unsafe, uneconomic, or inefficient, or where there are exceptional circumstances in relation to a particular property (or particular residents at a property), will alternative methods of storage and collection be offered.
- All appropriate containers must be presented at the designated collection point on the scheduled day of collection. If the designated collection point is within the grounds of a property, it is the responsibility of the property owner or management company to arrange appropriate access before collections can be made.
- MCC will assess the number of containers required for a specific area taking into account the proportion of waste disposed of that can be recycled. It is likely to include:
 - 1,100 litre blue bin for paper, card and cartons. Collected every two weeks (minimum).
 - 1,100 litre brown bin for glass, cans and plastic bottles. Collected every two weeks (minimum).
 - 240 litre green bin for food waste. Collected every two weeks (minimum).
 - 1,100 litre black bin for any other household waste that cannot be recycled. Collected every two weeks (minimum).
- It is the responsibility of the property owner to find appropriate space for the location of these containers.

2.6.2 Waste Storage and Collection Guidance for New Developments, September 2023⁸

This guidance contains minimum standards for planners, architects, developers and property managers to assist in planning and designing systems for the storage and collection of refuse, and for recycling facilities in domestic and commercial properties. The guidance is intended to assist the creation of successful waste management strategies as well as compliance with Building Regulations Approved Document H (as amended 2013) entitled 'Drainage & Waste Disposal'.

Specific guidance for waste and recycling containers in PBSA is as follows:

- The space provided needs to be able to accommodate multiples of the containers required (see Figure 1 below). Space to manoeuvre and access containers individually must also be provided. The plan will need to show how these can be manoeuvred by building staff to be presented for emptying, and all bins can be accessed by residents.

Guidance on storage areas for waste containers is as follows:

- Stores should have permanent signage that promotes recycling and outlines what should go in each bin.
- A clear route to the kerbside presentation point should be provided and a presentation area should be established for at least 50% of all containers.

⁵ HM Government document titled "OUR WASTE, OUR RESOURCES: A STRATEGY FOR ENGLAND", available here <https://assets.publishing.service.gov.uk/media/5c18f11740f0b60bbe0d827/resources-waste-strategy-dec-2018.pdf> (accessed 23 April 2025), dated 2018.

⁶ DEFRA (2024) 'Simpler Recycling in England: policy update'. Published 29 November 2024. Available at <https://www.gov.uk/government/publications/simpler-recycling-in-england-policy-update/simpler-recycling-in-england-policy-update> (accessed 09 April 2025).

⁷ Manchester City Council document titled "Domestic Waste and Recycling Service Standard", available here https://www.manchester.gov.uk/download/downloads/id/29452/domestic_waste_and_recycling_service_standard_-_april_2024.pdf (accessed 09 April 2025), dated 2024.

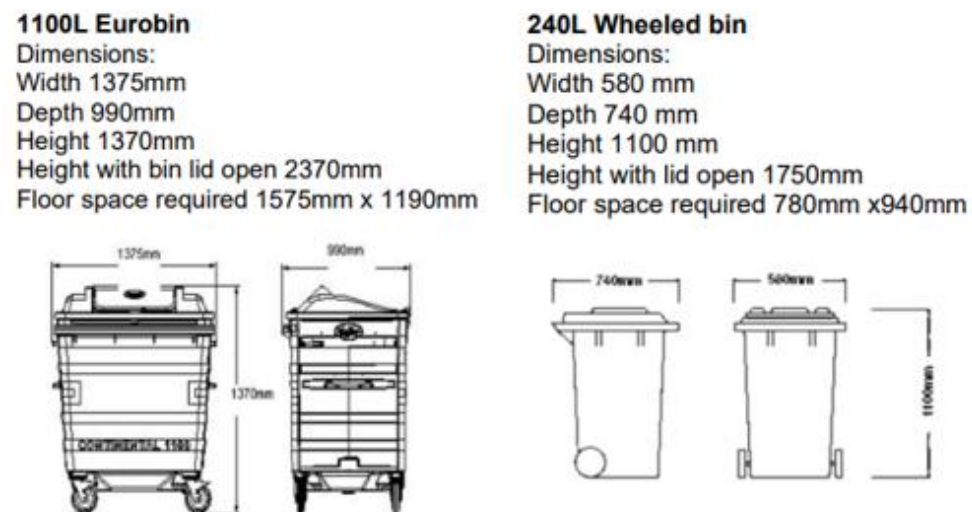
⁸ Manchester City Council document titled "Waste Storage and Collection Guidance for New Developments", version 7, available here https://www.manchester.gov.uk/download/downloads/id/29119/gd04_waste_storage_and_collection_guidance_for_new_developments_v7_sept_2023.pdf (accessed 09 April 2025), dated 2023.

Refuse collection vehicle operatives must not be required to wheel a container more than 10 meters to the collection vehicle. The paths between the stores to the collection point must:

- be a minimum width of 1.54 metres
- be free from kerbs / steps / excessively steep gradients
- have solid foundations
- be suitably paved with a smooth continuous finish
- have dropped kerbs installed where the path meets the roadway
- have parking restrictions, clearways and / or signage to deter obstructive parking

The dimensions for the containers required are detailed below:

Figure 1: Standard Container Dimensions



Source: 'Appendix A: Container Dimensions' from 'GD 04 Waste Storage and Collection Guidance for New Developments' MCC (Sept 2023)

As per Appendix D of the guidance, the design of storage areas should allow for easy, horizontal removal of the containers, over smooth, continuous surfaces. This includes the following:

- Doorways should provide at least 1.3m clearance (including thickness of doors)
- A walkway at least 1.3m wide should be provided within the store that allows access to each of the individual containers and ensures that an individual container can be removed from the store without the need to move any other containers.
- The horizontal distance that occupants will be required to travel to waste storage areas from their apartments should not exceed 30m, in line with the Building Regulations 2002, Part H.
- The floor and walls of waste stores must be constructed in materials that are impervious and easily kept clean. Where appropriate, a trapped gully and water supply should be provided to facilitate washing down.

2.6.3 Informal Guidance

Advice from MCC was sought by email. Confirmation was obtained that the following recommended bin capacities for PBSA use from the MCC 'Waste Storage and Collection Guidance for New Developments' (see Section 2.6.2) are based on a fortnightly collection frequency:

- 55 litres per room for general waste,
- 22 litres per room for pulpable recycling,
- 22 litres per room for commingled recycling,
- 5 litres per room for food waste.

3. OPERATIONAL WASTE MANAGEMENT STRATEGY

3.1 Overview

The proposed development seeks to provide 2,302 PBSA units. The proposed PBSA units will be arranged across two blocks, with 1,101 bedrooms to be built in Phase 1 and an additional 1,201 bedrooms in Phase 2. Ground floor retail space will be provided in Phase 1 alongside community space on the ground and first floors in Phase 2.

The proposed PBSA, retail and community spaces are anticipated to produce a range of pulpable recycling (paper and card), commingled recycling (other mixed dry recyclables), food waste and general waste.

Bulky waste (such as fridges, mattresses, broken furniture, etc.) will be removed by the operator or their contractors as and when required. Therefore, bulky waste storage and management has not been considered further in this OWMS.

A wheeled bin-based solution is proposed for the four waste streams, with separate refuse areas to be provided for PBSA, retail and community uses. The location and arrangements of the bin stores is shown on the ground floor plan in Appendix A.

Refuse collection vehicles (RCVs) will stop at four collection points on Cambridge Street, Boundary Street, Higher Chatham Street and Lower Chatham Street to service the bins, as shown on the RCV tracking plan in Appendix B.

Waste from the PBSA is to be collected by private waste collection contractor(s) twice a week. Higher volumes of waste will arise during student check in and check out periods, so extra collections can be arranged with the waste collection contractor(s) to suit these needs.

Retail and community waste will be collected by private waste collection contractor(s) at appropriate frequencies.

3.2 PBSA Waste Strategy

3.2.1 Estimated Storage Requirements

The design supports the separate collection of four waste streams: pulpable recycling, commingled recycling, food waste, and general waste.

As per the Student Housing Management Plan in the Design & Access Statement (DAS)⁹, Unite will provide adequate recycling facilities to aid separation of waste by the students.

Waste storage capacity requirements for the proposed PBSA has been calculated using the DAS accommodation schedule¹⁰, MCC waste storage requirements, and relevant guidance including Simpler Recycling. Requirements are summarised in the table below and assume:

- Waste will be stored within the following containers (as per the MCC guidance):
 - 1,100 litre Eurobins for general waste, pulpable recycling (paper and card) and commingled recycling (other MDR); and
 - 240 litre bins for food waste.
- All four waste streams will be collected twice a week.

- 29% of the waste storage capacity will be allocated to pulpable recycling, 29% to commingled recycling, 35% to general waste, and 7% to food waste in line with Waste Strategy for England¹¹ targets.

Detailed waste storage capacity calculations are presented in Appendix C.

Table 3: PBSA waste storage capacity requirements

Bin complement required for collection twice per week					
Phase	General waste	Pulpable recycling	Commingled recycling	Food waste	Total and type
1	11No. 1,100L	9No. 1,100L	9No. 1,100L	10No. 240L	29No. 1,110L and 10No. 240L
2	12No. 1,100L	10No. 1,100L	10No. 1,100L	10No. 240L	32No. 1,110L and 10No. 240L
Total	23No. 1,100L	19No. 1,100L	19No. 1,100L	20No. 240L	61No. 1,110L and 20No. 240L

3.2.2 Role of Facilities Management

The PBSA will benefit from the presence of a Facilities Management (FM) team. The FM team will oversee the storage and collection of waste including:

- Taking the bags of waste and recycling from the communal kitchens to the ground floor bin stores.
- Rotating bins in stores between collections to ensure there is always accessible storage capacity for each waste stream.

3.2.3 Collection

Waste from the PBSA will be collected by private waste collection contractor(s) twice a week. A copy of the waste collection timetable will be located in each flat with instructions for the separation of recyclables.

Students will take bags of waste and recycling from their bedrooms to the ground floor bin stores, as shown on the plan in Appendix A.

On collection day, FM will be responsible for dragging the bins from the ground floor stores to external holding areas and returning empty bins back to their original positions within the stores. The FM team will “shuttle” the bins back and forth while the waste is loaded into the refuse collection vehicle.

In line with MCC guidance, clear routes from the bin stores to the kerbside presentation points have been provided. The external presentation areas will provide adequate space for at least 50% of all containers to be held at one time. RCV operatives will service bins from the presentation areas, these areas will all be located within 10 metres of one of the RCV stopping points, as shown on the RCV tracking plan in Appendix B.

RCVs will access the Site from the West on Cambridge Street and travel around the Site boundary, stopping at four collection points. The first refuse collection point is on Cambridge Street, followed by stops on Boundary

⁹ Cartwright Pickard document titled ‘Cambridge Halls Design & Access Statement’ with document reference ‘998-CPA-ZZ-ZZ-RP-A-9029’ dated April 2025.
¹⁰ Cartwright Pickard document titled ‘Cambridge Halls Design & Access Statement’ with document reference ‘998-CPA-ZZ-ZZ-RP-A-9029’ dated April 2025.

¹¹ HM Government document titled “OUR WASTE, OUR RESOURCES: A STRATEGY FOR ENGLAND”, available here [Our waste, our resources: a strategy for England](#) (accessed 09 April 2025), dated 2018.

Street, Higher Chatham Street, and Lower Chatham Street. The RCV will then reverse at the end of Lower Chatham Street, before returning to Cambridge Street via Higher Chatham Street and Boundary Street.

3.3 Retail and Community Spaces Waste Strategy

3.3.1 Estimated Storage Requirements

The proposed retail area at ground floor level and flexible community space (Use Class E/ F1) at ground and first floor levels will each have a dedicated bin store at ground floor level.

The design supports the separate collection of four non-residential waste streams: general waste, pulpable recycling (paper and card), commingled recycling (other MDR) and food waste.

Given exact retail and community use has not been determined at this stage and therefore likely waste arisings cannot be estimated, a minimum of four bins, one for each waste stream, will be provided in both the retail and community bin stores in order to satisfy Simpler Recycling guidance (see Section 2.5).

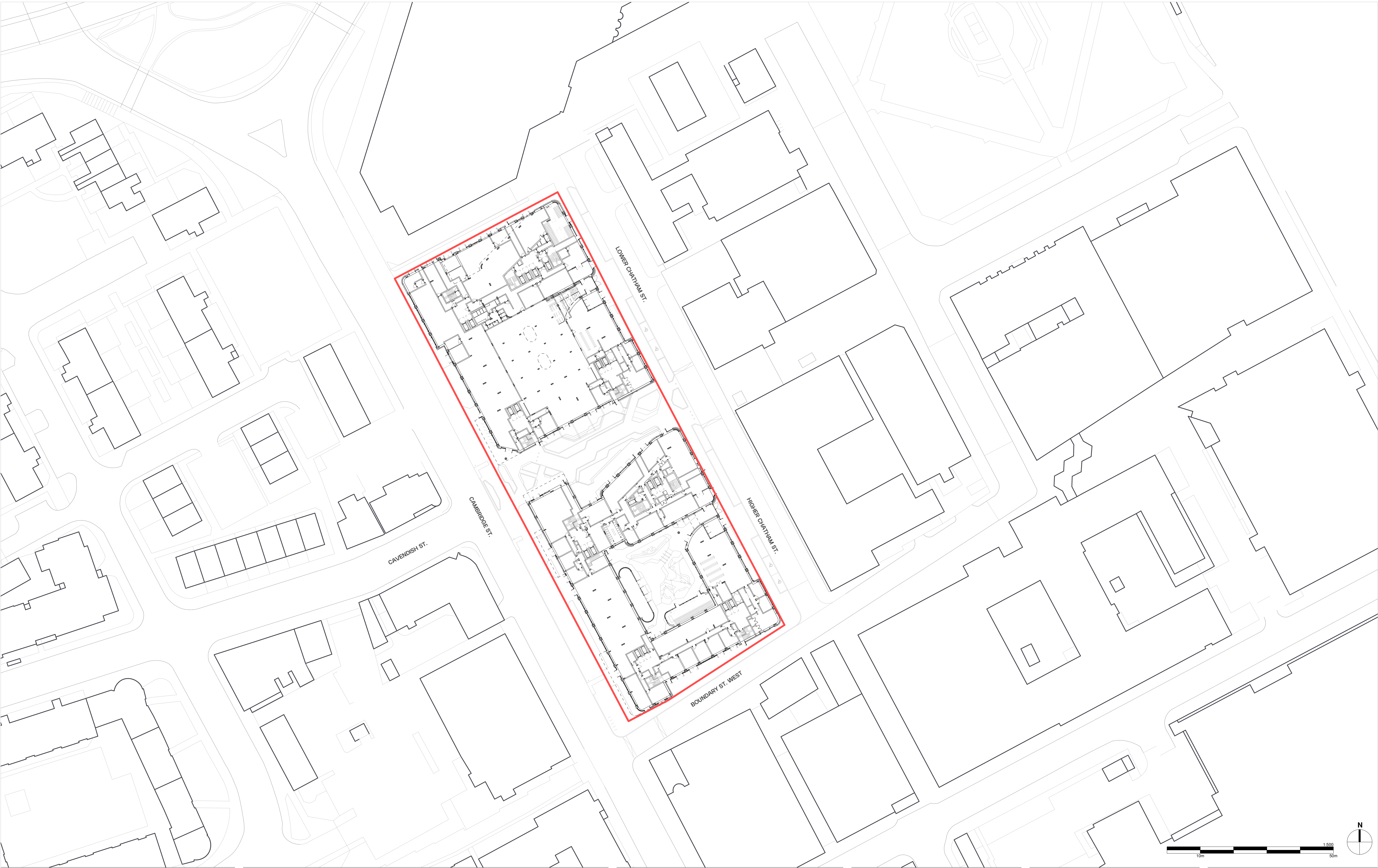
Specific arrangements for the storage, management, and collection of waste from the retail and community spaces will be determined during detailed design, with additional bin stores incorporated at a later date for these uses if required.

3.3.2 Collection

Waste from the retail and community spaces will be collected by private waste collection contractor(s) at appropriate frequencies, with specific arrangements for collection to be determined during detailed design.

APPENDICES

A. Ground Floor and Site Wide Plans and Drawings



Notes
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Drawing Revisions		
Date:	Rev:	Note:
23.04.25	P01	Planning Issue

Check:
JB

Key:
— Site Planning Boundary

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Client Unite Students and Manchester Metropolitan University	Drawing Title Site Plan - Proposed
Project 998 Cambridge Halls	Scale 1:500 @ A1
Building Name Cambridge Halls	Drawing Created Feb. 2025
Drawing Original Size A1	Revision P01
Drawing No. 998-CPA-ZZ-00-DR-A-0112	

CAMBRIDGE ST.

BOUNDARY ST. WEST

HIGHER CHATHAM ST.

LOWER CHATHAM ST.



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Drawing Revisions
Date: 23.04.25 Rev: P01 Note: Planning Issue

Key:
— Site Planning Boundary

Client
Unite Students and Manchester Metropolitan University

Drawing Title
Planning - Floor Plan - Ground Floor

Project
998 | Cambridge Halls

Scale
1:200 @ A1

Drawing Created
Feb. 2025

Building Name
Cambridge Halls

Revision
P01

Drawing Original Size
A1

Drawing No.
998-CPA-ZZ-00-DR-A-0221

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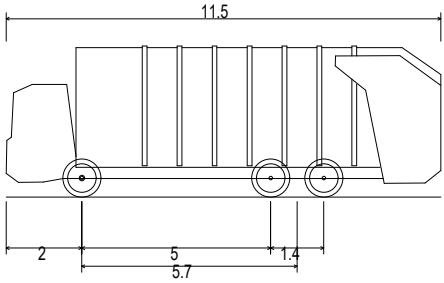
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B. RCV Tracking Plan

Appendices



Manchester Refuse Vehicle
Overall Length 11.500m
Overall Width 2.500m
Overall Body Height 4.000m
Min Body Ground Clearance 0.368m
Track Width 2.450m
Lock to lock time 4.00s
Wall to Wall Turning Radius 9.695m

Key

Indicative collection point

A	25/04/25	RJM	AF	AF
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Rev	Date	By	Chkd	Appd
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Client
Unite Students &
Manchester Metropolitan University

Project Title
MMU Cambridge Halls

Drawing Title
Refuse Vehicle
Swept Path Analysis

Scale at A1 NTS
Role Transport
Suitability - For Information

Arup Job No 303452-00	Rev A
---------------------------------	-----------------

Name
303452-00-SK-004

C. Waste Storage Capacity Calculations

Operational waste storage capacity calculations (bin numbers)

PBSA – Phase 1

Waste Types	Number of bedrooms	Capacity required per bedroom per fortnight (L)	Capacity required per bedroom per four days (L)	Total capacity required (L)	Number of equivalent bins required
General Waste	1,101	36	10	11,450	11No. 1,110L
Pulpable recycling	1,101	30	9	9,548	9No. 1,110L
Commingled recycling	1,101	30	9	9,548	9No. 1,110L
Food waste	1,101	7	2	2,170	10No. 240L

PBSA – Phase 2

Waste Types	Number of bedrooms	Capacity required per bedroom per fortnight (L)	Capacity required per bedroom per four days (L)	Total capacity required (L)	Number of equivalent bins required
General Waste	1,201	36	10	12,490	12No. 1,110L
Pulpable recycling	1,201	30	9	10,415	10No. 1,110L
Commingled recycling	1,201	30	9	10,415	10No. 1,110L
Food waste	1,201	7	2	2,367	10 No. 240L

The above PBSA waste storage capacity calculations are based on the assumptions listed in Section 3.2.1.

We are Waterman, where every project matters

We deliver progressive, sustainability-driven environmental and engineering consultancy services across every sector. We think differently, and we’re harnessing our collective expertise to deliver greener, healthier and well-connected communities, networks and built environments.

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