

WASTE & SERVICING STRATEGY

Renaker Build Limited

TRINITY ISLANDS MANCHESTER

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WASTE & SERVICING STRATEGY

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1 INTRODUCTION

Introduction

- 1.1 Renaker Build Ltd have commissioned Vectos to prepare a Waste & Servicing Strategy in support of the development known as Trinity Islands, Manchester.
- 1.2 The proposals are for a residential-led development with ancillary ground floor commercial uses, underground car parking and public realm.
- 1.3 The proposed development site comprises approximately 4.4 acres split into two parcels, known as Site C and Site D. The site is currently occupied by surface level car parking across both parcels.
- 1.4 Site C is approximately 2.2 acres in area and is bound by the River Irwell to the north, Trinity Way to west, Water Street to the south and a railway viaduct to the east. Site D comprises an area of approximately 2.2 acres and is bound by the River Irwell to the north and west, Regent Road to the south and Trinity Way to the east.
- 1.5 The proposed development site has previously operated as a car park providing parking for up to 645 vehicles and has also been used a construction compound for Network Rail when delivering the Ordsall Chord railway improvement scheme. The Site is bounded by the River Irwell to the north, Water Street to the east, the A6402 and A57 to the south and the River Irwell to the west.
- 1.6 An aerial image showing the approximate boundaries of the two development parcels is shown in **Figure 1.1**. On the plan is also indicated in yellow a road/footway link under Castlefield Bridge connecting the two Sites.

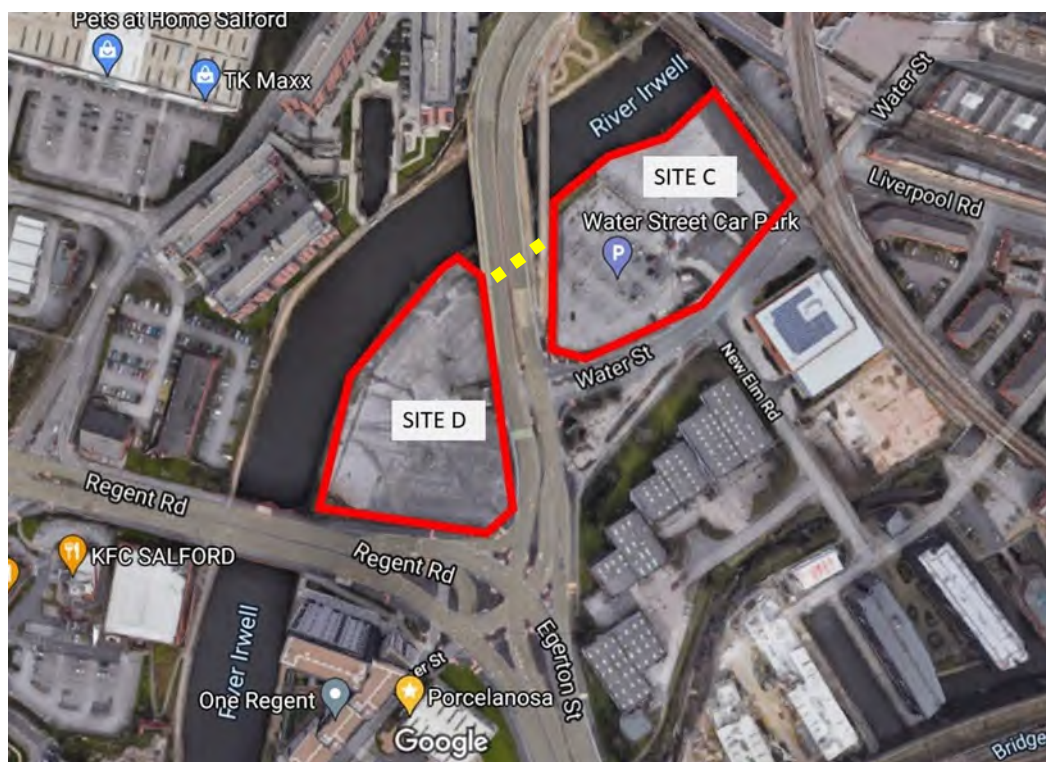


Figure 1.1 Proposed Development Site Location (Source: Google Maps)

- 1.7 Each Site can be developed independently, and it is quite possible that Sites C1 and D1 would be occupied while Sites C2 or D2 are being constructed.
- 1.8 This report forecasts the number of likely deliveries needed to serve the site and the arrangements for deliveries and sets out the policy context for waste management. It goes on to predict the various waste streams generated by occupiers of the development, the refuse storage provision and sets out the strategy for minimising waste generation and the collection of waste. The site lies in the City of Manchester and Manchester City Council (MCC) have provided guidance on refuse collection which will be referred to in this report.

Report Structure

- 1.9 Following this introductory chapter, this Waste & Servicing strategy considers the following:
- Chapter Two discusses the existing nature of the site;
 - Chapter Three outlines the development proposals;
 - Chapter Four presents the Delivery Strategy including the forecast of vehicle arrivals;
 - Chapter Five considers the Waste Management Strategy for the building, forecasting the Waste streams, recycling and waste collection procedures
 - Chapter Six presents a summary and conclusions to this report.

2 EXISTING CONDITIONS

Access & Parking

- 2.1 The site layout and the red line boundary is shown in **Dwg Z1-SHP-G100-PL-GRD-B58D01**.
- 2.2 Site D is currently accessed by vehicles and pedestrians from the Trinity Way and the Site C from Water Street. The existing site access for Site C is shown in **Figure 3.1** and for Site D in **Figure 3.2**.



Figure 3.1: Existing Access to Site C (Source: Google Earth)



- 2.3 The site as part of the Granada Studios operation previously attracted traffic movements. The site was well used by ITV employees, and this is reflected in the aerial view as shown in **Figure 3.3**. The site has in the recent past been used as a site compound for Network Rail's Ordsall Chord works and now Site C operates as a car park while Site D is barriered.



Figure 3.3: Aerial View of Car Parks While Used by ITV Granada Studios (Source: Bing Maps)

- 2.4 The two Sites are connected by a link underneath Castlefield Bridge which carries Trinity Way over the River Irwell, and the Applicant has rights of way over that link. The route has a height barrier of 2.4m but the clearance is around c.2.8m and this permits cars and smaller vans to cross from one side to the other, see **Figure 3.4** below.



3 DEVELOPMENT PROPOSALS

Introduction

- 3.1 The development of Trinity Islands involves the comprehensive redevelopment of the site to provide a residential development with supporting commercial uses.
- 3.2 The Trinity Islands proposals include:
- 1,950 residential apartments across four towers:
 - Site C1 414 apartments
 - Site C2 521 apartments
 - Site D1 532 apartments
 - Site D2 483 apartments
 - Circa 361sqm commercial floorspace
 - A total of 556 car parking spaces
 - A total 1,950 cycle spaces for residents plus 70 cycle spaces for visitors in the public realm
- 3.3 The general layout of the proposed development site is shown in **Dwg Z1-SHP-G100-PL-GRD-B5D801**.
- 3.4 The site access arrangements and changes to the public highway is shown in **Drawing VN211913-D103**.

4 SERVICING STRATEGY

Introduction

- 4.1 The proposed servicing arrangements for both Sites C and D are provided below.

Service Access Site C

- 4.2 Principal access to Site C is proposed to be taken from Water Street via two priority junctions. Each junction will provide two-way access into the basement car parking. The two accesses together will be linked through the site by a one-way servicing/ drop off route. This route will operate with a one-way system in place with access from the western junction and egress via the eastern junction. A parking bay intended for short-term use is to be provided alongside the internal link road on its western side. This route is expected to be used by smaller vans and couriers.
- 4.3 Site C1 also benefits from a service area to the north east side for larger or longer deliveries including refuse collection. The Tracking for a large 11.5m refuse vehicle accessing this space is shown in **Dwg VN211913-TR109** (see **Appendix A**).
- 4.4 Site C2 has its main service access located off the drop-off route. Larger vehicles are expected to reverse into the Service Yard. On exit from this service yard, the larger vehicle can turn right to rejoin Water Street. This manoeuvre will block some of the other movement to and from the car park, but it is only for a transitory moment. The manoeuvre of such vehicles is shown in **Dwg VN211913-TR110** (in **Appendix A**).
- 4.5 As described before there is a link connecting the two Sites under Castlefield Bridge and this is accessed through the C1 service yard but under the Bridge it can only be used by smaller vans and so this route is expected only to be used for servicing of some of the riverside land uses or for maintenance.

Service Access Site D

- 4.6 Service access for Site D will use the Trinity Way/ Water Street traffic signal entrance. Site D includes a drop off route for van and couriers via the front door and this route circulates around the Basement Parking Portal. The public realm includes some large wind barriers which the cars/vans need to pass under in order to access the drop off/pick up zone.
- 4.7 The larger vehicles accessing the service yard would make a right turn and to head north into the service yard area. The tracking of a large refuse vehicle accessing Site D1 service yard is shown in **Dwg VN211913-TR112** in **Appendix A**. It can be seen that on exit there is signal controlled stopline linked to the main traffic signals to ensure large vehicles egress when the main signals go green.
- 4.8 To access Site D2, service vehicles would reverse into Site D2. On exit they can navigate around the Basement Car Park structure and the wind barriers so that they then approach the signals. The tracking of this manoeuvre is shown in **Dwg VN211913-TR111** (in **Appendix A**). It can be seen that larger vehicles need to make a 3 point turn in order to pass underneath the wind barrier structure. Large vehicles would be timed to arrive early in the morning. Banksman would be on hand to assist and make sure that any such manoeuvres are made safely.

Typical Deliveries

4.9 The typical deliveries for Trinity Islands are as follows:

- Residential: Online Groceries, post /courier deliveries, occasional furniture deliveries.
- Site C Retail: retail products, food, drink, consumables, clothing, stationery and marketing materials. (catering supplies & sanitation if an F&B unit)

Proposed Goods Receipt Strategy

4.10 The proposed goods receipt strategy is described below.

- Deliverers/ drivers will be able to drop goods at the Parcel Store, so they are not delayed. Management protocols will be in place to ensure registration of the parcel and an intercom system will allow communication with the resident.
- Drivers can also take goods directly to the tenants/occupiers in which case they will have free access to the service corridors and goods lifts to take the goods to the tenant.
- Deliverers/Drivers will generally have their own material-handling equipment.

Delivery Forecasts

- 4.11 The estimated service vehicle generation have been based upon the service trips rates for the previous planning application on site applied to the revised scale of development. These trip forecasts for OGVs and LGVs are given below hour by hour in **Table 4.1** overleaf. As a definition OGVs are Heavy Goods Vehicles (HGVs) that are greater than 3.5tonnes and have a double axle to the rear and can include larger Transit van type vehicles. Where there is a forecast of say 0.5 vehicles per day that equates to one vehicle arriving every two days.
- 4.12 It can be seen that the maximum demand for OGVs in any of the service yard is only one or two per hour. These larger vehicles may take around 20 minutes to unload their goods or collect bins. It is expected that most deliveries would be regular, but the on-site management will need to ensure that arrivals are timed to avoid congestion in the yard.
- 4.13 It can be seen that the number of vans and courier deliveries is much higher. At the busiest times in the middle part of the day we might expect around 6-8 vans serving each building or on average one every 8-10 minutes.

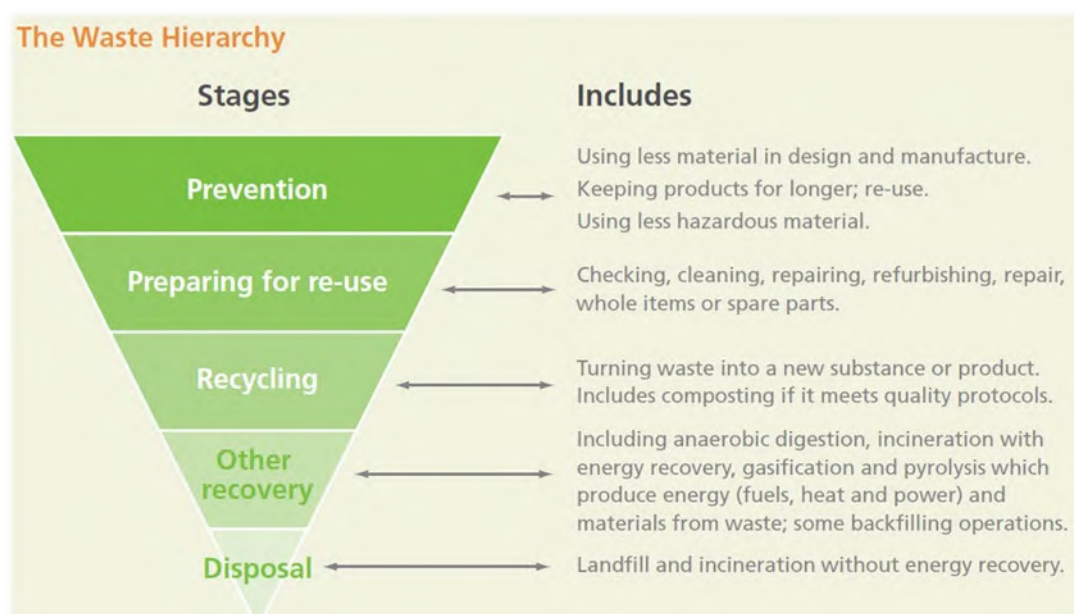
Table 4.1 Trinity Islands Service Delivery Movements

Service Vehicle Trips	Site C1				Site C2				Site D1				Site D2			
	OGVs		LGVs		OGVs		LGVs		OGVs		LGVs		OGVs		LGVs	
Time Range	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP	ARR	DEP
06:00-07:00																
07:00-08:00	0.5	1.8	1	4	0.6	2.1	1	5	0.5	2.1	1	5	0.5	1.9	1	5
08:00-09:00	0.4	0.4	2	2	0.5	0.5	2	2	0.5	0.5	2	2	0.5	0.5	2	1
09:00-10:00	1.3	1.3	2	2	1.6	1.6	2	3	1.6	1.6	2	3	1.4	1.4	2	2
10:00-11:00	1.0	1.4	4	4	1.1	1.6	5	5	1.1	1.6	5	5	1.0	1.4	4	5
11:00-12:00	0	0	3	4	0	0	4	5	0	0	4	5	0	0	3	4
12:00-13:00	1.2	0.8	6	4	1.6	1.0	8	4	1.6	1.1	8	4	1.4	1.0	7	4
13:00-14:00	0.4	0.8	5	5	0.5	1.0	6	6	0.5	1.1	6	6	0.5	1.0	5	5
14:00-15:00	0.8	0.4	3	4	1.0	0.5	4	5	1.1	0.5	4	5	1.0	0.5	3	4
15:00-16:00	0.5	0.5	2	2	0.5	0.5	2	2	0.5	0.5	2	2	0.5	0.5	2	2
16:00-17:00	0.1	0.5	3	4	0.0	0.5	4	5	0.0	0.5	4	5	0.0	0.5	4	5
17:00-18:00	0.5	0.5	1	1	0.5	0.5	1	1	0.5	0.5	1	1	0.5	0.5	1	0
18:00-19:00	0.1	0.1	1	1	0	0	1	1	0	0	1	1	0	0	1	1
19:00-20:00			0	0			0	0			0	0			0	0
20:00-21:00			0	0			0	0			0	0			0	0
21:00-22:00			0	0			0	0			0	0			0	0
22:00-23:00																
23:00-24:00																
Daily Trip Rates:	7	8	34	37	8	10	40	44	8	10	40	44	7	9	36	40

5 WASTE MANAGEMENT STRATEGY

Introduction

- 5.1 Trinity Islands falls within the City of Manchester and MCC have published guidance on the design and management of buildings to produce waste management strategies that maximise the amount of waste that is recycled. To achieve high recycling rates, it states 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.
- 5.2 Central Government's strategy for minimising waste generation and its transfer to landfill is most simply described according the 'Waste Hierarchy' as shown below. 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 Trinity Islands can help meet the government's aspirations.



- 5.3 The waste collection would be overseen by the management company for Trinity Islands, and they would appoint a licenced waste carrier to remove the waste. The management company would have responsibility to ensure the internal and external areas are kept clean and to move the bins in coordination with the occupiers. Refuse store areas would also be subject to appropriate ventilation.
- 5.4 All new developments must meet the requirements of Part H6 of the Building Regulations 2000 (solid waste storage) which states:

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.

- 5.5 MCC publishes Guidance on the Waste Storage and Collection (GD04) and the advice in that document has been incorporated into this strategy.

Residential Waste Forecast

- 5.6 Waste storage requirements for residential use have been calculated using a rule of thumb used by MCC of 110 litres of waste per apartment per week and this is broadly consistent with the British Standard BS5906:2005.

Retail Waste Forecast

- 5.7 Trinity Islands will have a relatively small area (331m²) of flexible commercial space. It is expected that this is a small convenience store for residents but could include other land uses types such as a food and beverage outlet. Under BS 5906-2005 it is forecast that retail space, will produce 10 litres of waste per square metre of floor area per week.
- 5.8 The waste forecast for Trinity Islands is shown overleaf in **Table 5.1**.

Waste Management Strategy

- 5.9 Residents would use a waste chute to deposit their rubbish. At the base of the chute there will be an automated tri-separator to segregate waste. There would therefore be three waste streams created and these would be colour coded to help management and compliance. One waste stream would be for general residual waste including food waste and one for dry recyclables and one for pulpable paper and card. The dry recyclables waste stream can include the following:

Mixed Glass; Plastic Bottles; Foil, Food Tins; Drink Cans.

- 5.10 It is expected that 50% of the material would be General Refuse including food waste 25% Dry Recyclable Waste, and 50% pulpable waste.
- 5.11 On every floor there is a waste chute and occupiers would take the rubbish to the chute. Residents would be briefed on use of the chute and the need for correctly separating waste for recycling. At the waste chute they would press a button depending on which type of waste is to be deposited.
- 5.12 An example of a waste chute is provided in **Figure 5.1**.



Figure 5.1: Three Way Waste Chute Panel

Table 5.1 Waste Generation & Recycling Rates

Trinity Islands 08.11.21 (v3)
Waste Forecast Based on Area Schedule Z1-SHP-F900-SC-XX-0002

vectos.

RESIDENTIAL WASTE FORECASTS				
RESIDENTIAL APARTMENTS C1				
Number of Units	=	414		
Weekly Waste Forecast				
MCC Waste Forecast (110 litres per Apartment per Week)	=	45540 litres per week		
GD04 Bin Storage Requirement of 0.43 sqm per apartment	=	178 sqm		
Recycling Streams				
* Based on MCC rule of Thumb				
	Waste Recycling %	General Refuse (inc Organic)	Paper/ Card	Plastic/ Metal/ Glass
		50%	25%	25%
	Litres per Week	22770	11385	11385
	Bin Lifts Per Week	21	11	11
				Total
				45540
RESIDENTIAL APARTMENTS C2				
Number of Units	=	521		
Weekly Waste Forecast				
MCC Waste Forecast (110 litres per Apartment per Week)	=	57310 litres per week		
GD04 Bin Storage Requirement of 0.43 sqm per apartment	=	224 sqm		
Recycling Streams				
* Based on MCC rule of Thumb				
	Waste Recycling %	General Refuse (inc Organic)	Paper/ Card	Plastic/ Metal/ Glass
		50%	25%	25%
	Litres per Week	28655	14328	14328
	Bin Lifts Per Week	27	14	14
				Total
				57310
RESIDENTIAL APARTMENTS D1				
Number of Units	=	532		
Weekly Waste Forecast				
MCC Waste Forecast (110 litres per Apartment per Week)	=	58520 litres per week		
GD04 Bin Storage Requirement of 0.43 sqm per apartment	=	229 sqm		
Recycling Streams				
* Based on MCC rule of Thumb				
	Waste Recycling %	General Refuse (inc Organic)	Paper/ Card	Plastic/ Metal/ Glass
		50%	25%	25%
	Litres per Week	29260	14630	14630
	Bin Lifts Per Week	27	14	14
				Total
				58520
RESIDENTIAL APARTMENTS D2				
Number of Units	=	483		
Weekly Waste Forecast				
MCC Waste Forecast (110 litres per Apartment per Week)	=	53130 litres per week		
GD04 Bin Storage Requirement of 0.43 sqm per apartment	=	208 sqm		
Recycling Streams				
* Based on MCC rule of Thumb				
	Waste Recycling %	General Refuse (inc Organic)	Paper/ Card	Plastic/ Metal/ Glass
		50%	25%	25%
	Litres per Week	26565	13283	13283
	Bin Lifts Per Week	25	13	13
				Total
				53130
Site C1 Commercial Space (A1/A2/A3/A4) Assume Retail				
RETAIL - Convenience Store				
BS5906:2005 10 litres per sqm per week				
Area	230 sqm	@	10 litres per sqm per week	
		=	2300 Litres of Waste per Week	
Recycling Streams				
* Based on WRAP Waste Ratios				
	Waste /Recycling	General Refuse (inc Organic)	Paper/ Card	Plastic/ Metal/ Glass
		50%	25%	25%
	Litres Per Week	1150	575	575
	Bin Lifts Per Week (1100litre)	2	1	1
				Total
				2300
Site C2 Commercial Space (A1/A2/A3/A4) Assume Retail				
RETAIL - Convenience Store				
BS5906:2005 10 litres per sqm per week				
Area	90 sqm	@	10 litres per sqm per week	
		=	900 Litres of Waste per Week	
Recycling Streams				
* Based on WRAP Waste Ratios				
	Waste /Recycling	General Refuse (inc Organic)	Paper/ Card	Plastic/ Metal/ Glass
		50%	25%	25%
	Litres Per Week	450	225	225
	Bin Lifts Per Week (1100litre)	1	1	1
				Total
				900

- 5.13 As shown in **Figure 5.2**, at the bottom of the waste chute there would be a Waste Tri-Separator and three Eurobins one for general waste, one for dry recyclables and one pulpable. There would be a 3 way deflector to direct the waste to the relevant bin and this is controlled by the button pressed by the occupier above. The management company would monitor the bins with an alarm system in place as well as CCTV as they fill and replace them with empty bins according to demand.
- 5.14 With the use of the Tri-Separator and the movement of bins by management, it is not proposed that residents would have access to the Bin Store. However, there is provision to collect foodwaste in a separate bin store for that purpose in Buildings C1, C2 and D1. This allows residents to bring the waste down the lift in appropriate food caddies.
- 5.15 The commercial waste will be transported by their staff to the adjacent bin stores.

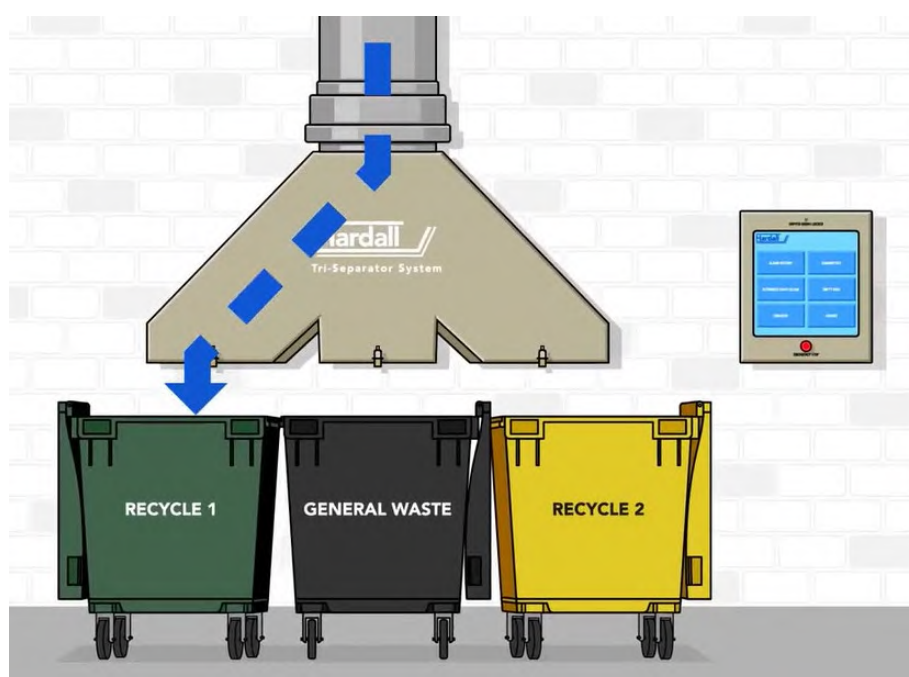


Figure 5.2 Tri-Separator in Bin Store

Waste Storage – Residential

- 5.16 The Waste Storage for the residential land use provided is given below and in **Figures 5.3-5.6** overleaf. On these plans we have indicated in **RED** the location of the Waste Chute. The three bins adjacent to that chute would lie under the Tri-Separator.

Bin Store Size

Site C1	130sqm c. 40x1100litre bins + 4x360litre food bins
Site C2	163sqm c. 52x1100litre bins + 5x360litre food bins
Site D1	142sqm c. 52x1100litre bins + 4x360litre food bins
Site D2	150sqm c. 51x1100litre bins + 4x360litre food bins

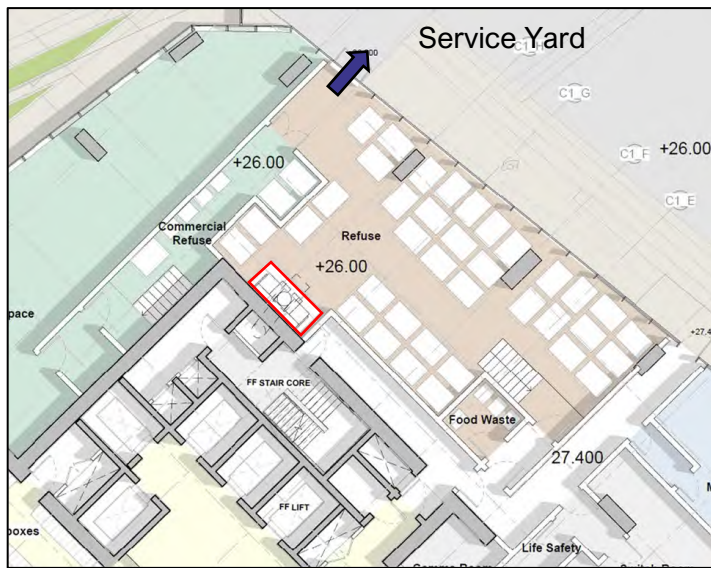


Figure 5.3 Site C1 Residential Bin Store

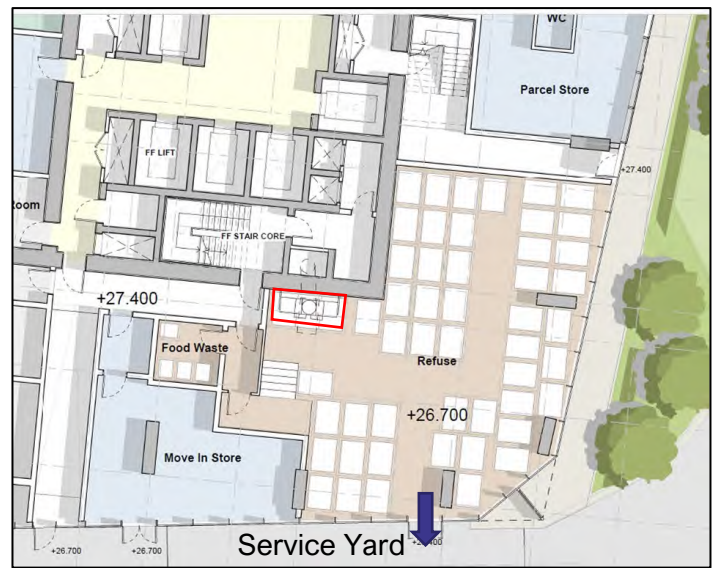


Figure 5.4 Site C2 Residential Bin Store

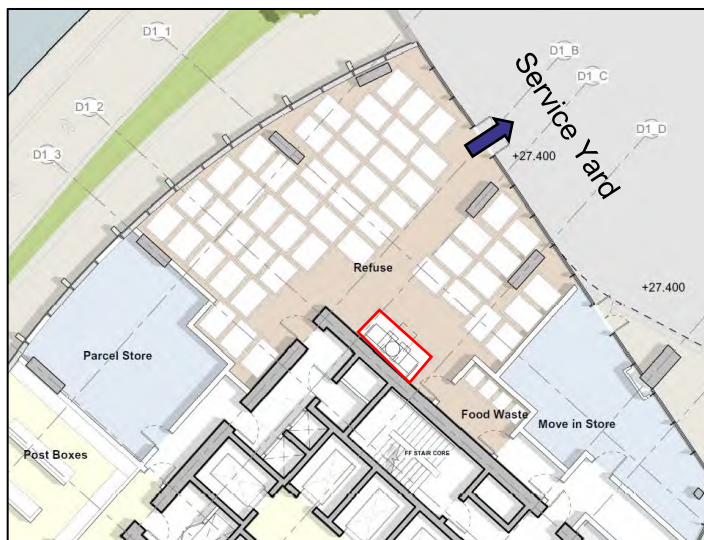


Figure 5.5 Site D1 Residential Bin Store

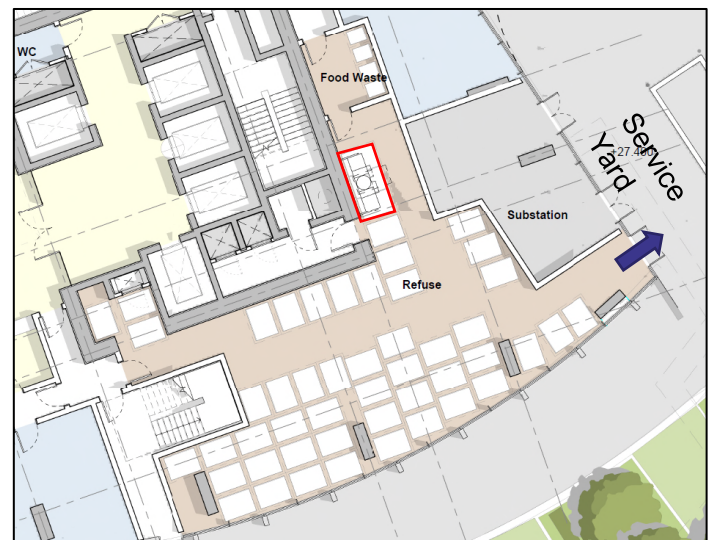


Figure 5.6 Site D2 Residential Bin Store

- 5.17 It is noted that the bin store sizing is less than the MCC Guidance GD04. However as this development will be one of the highest density apartment developments in Manchester, we have engaged with the Environmental Health Officers (EHO) of MCC to get their feedback on how to manage the large volumes of waste.

- ## Waste Storage – Commercial

- Site C2** **16sqm c. 2x1100litre bins + 2x360litre food bins**

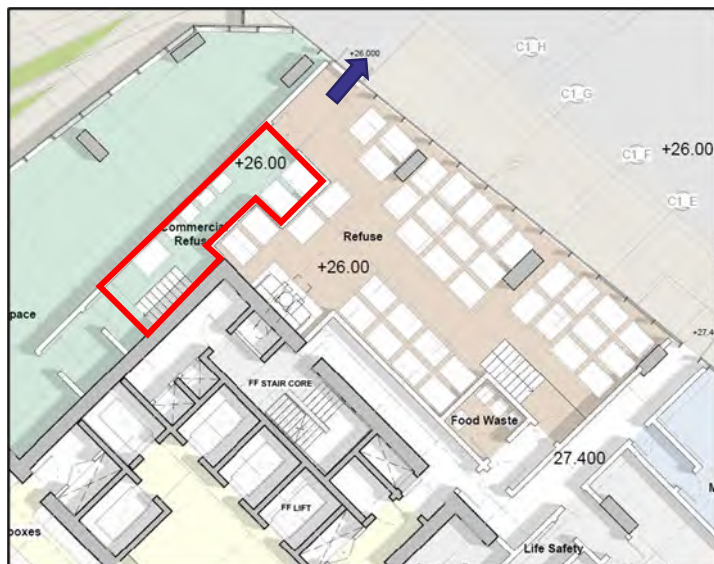


Figure 5.7 Site C1 Commercial Bin Store

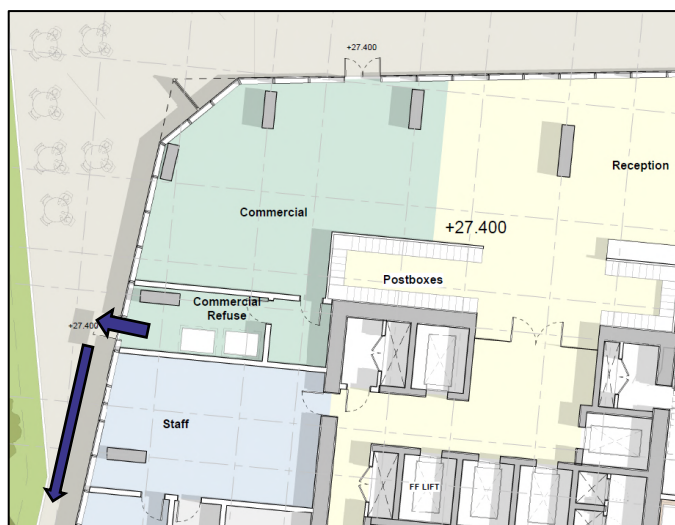


Figure 5.8 Site C2 Commercial Bin Store

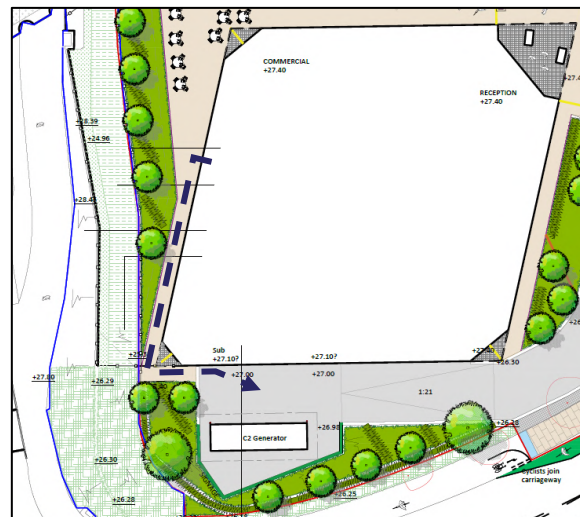


Figure 5.9 C2 Commercial Bin Transfer Route

Bin Transfer & Collections

- 5.22 It can be seen from **Figures 5.3-5.6** that the main residential and C1 Commercial bin stores are immediately adjacent to the respective Service Yards making transfer easy and convenient. All these routes are step free with wide doors enabling transfer of bins easy and efficient.
- 5.23 It can be seen that Site C2 bin store is located away from the Service Yard. The transfer of these bins is indicated below in **Figure 5.9** above.
- 5.24 Refuse collections would be made early in the morning and here the management company for Trinity Islands would arrange that the bins are brought to the loading bay prior to the refuse lorry's arrival. The bins would then be returned to storage immediately afterwards.
- 5.25 As these are very large developments the frequency of collection has been discussed with the Environmental Health Officers of Manchester City Council. They have
- 5.26 MCC require that a Waste Pro-Forma be prepared to support the planning application. This has been completed and is presented in **Appendix B**. This document also describes the routes to get the bins from the basement stores to the collection point.

6 CONCLUSIONS

- 6.1 This document sets out the Waste Management and Servicing strategy for Trinity Islands. It has calculated the service vehicle generation for the various uses within the building and the goods receipt strategy.
- 6.2 The document also calculates the likely waste generation for each of the buildings, the recycling strategy and the storage requirements for bins. It describes how these will be collected and the movements of vehicles to access those.
- 6.3 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 can be undertaken in an efficient manner.

Drawings

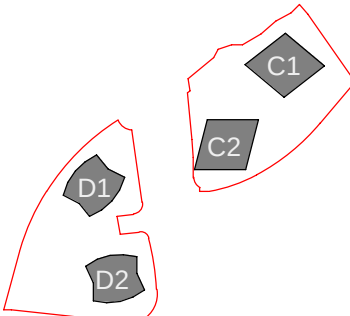


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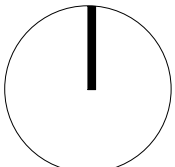
All dimensions to be checked on
site by contractor.

Contractor to report any dimensional
discrepancies, errors or omissions
prior to commencing on site.

 Site boundary



NORTH



Rev	Date	Description
P01	2021-10-29	Planning Issue



Project Title
Trinity Islands
Trinity Way
Manchester

Status
Planning Issue

Drawing Title
Z1 Site Wide
Site Location Plan

Project No 10364	Scale 1 : 1250@ A1
Revision 10364-Z1-SHP-G000-PL-GRD-B58D01 P01	



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All dimensions to be checked on
site by contractor.

Contractor to report any dimensional
discrepancies, errors or omissions
prior to commencing on site.

Residential FOH

Commercial

Staff

BOH

Refuse

Amenity

Terrace

NORTH

Rev	Date	Description
P01	2021-10-29	Planning Issue

Project Title
Trinity Islands
Trinity Way
Manchester

Status
Planning Issue

Drawing Title
Z1 Site Wide
Ground Level Plan

Project No
10364

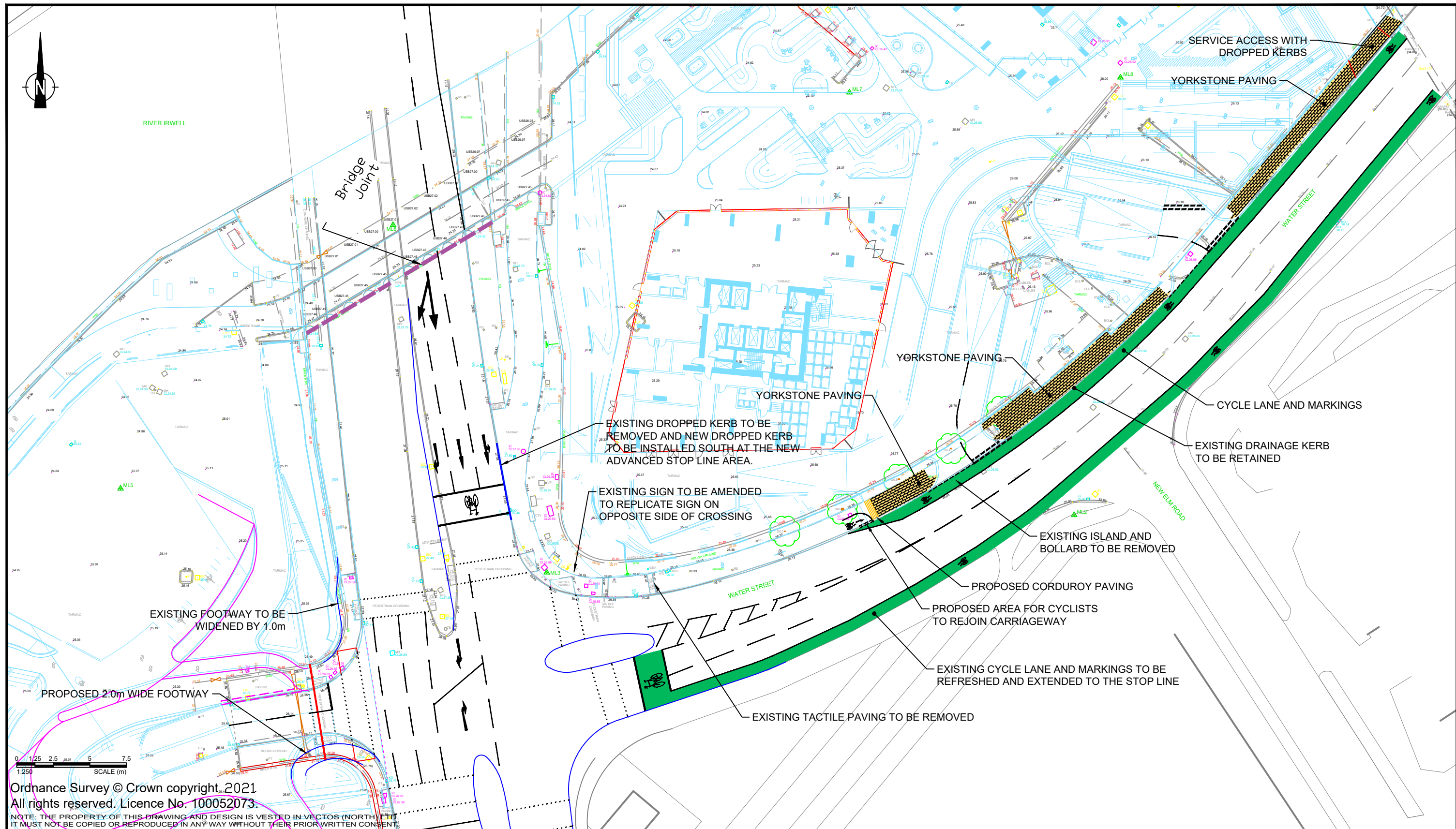
Scale
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Revision
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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Additional notes included	DJR	GD	22.09.21
B	Amended Site Layout	DJR	GD	05.10.21

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Trinity Islands, Manchester

Trinity Way and Water Street
Highway Improvements

DRAWN:
JD

CHECKED:
GD

DATE:
07.09.21

SCALES:
1:500 at A3

Renaker Build Ltd

vectos.
4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008 e: manchester@vectos.co.uk

DRAWING NUMBER:
VN211913-D103

REVISION:
B

Appendix A

Service Vehicle Swept Path Tracks



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site Layout Amended	WD	GD	15/11/21

Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

Trinity Islands, Manchester

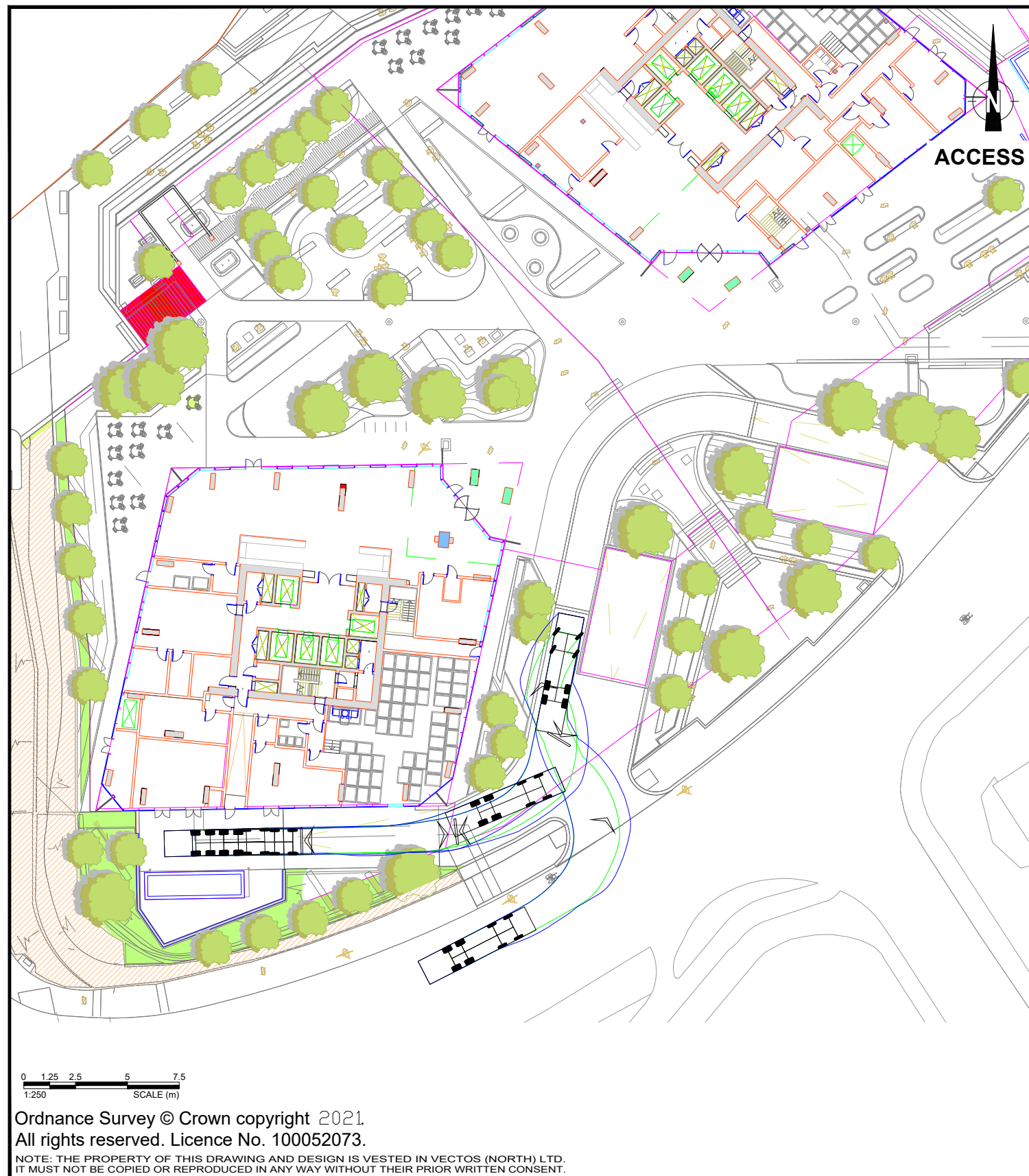
Swept Path Analysis - Site C1

DRAWN: DJR	CHECKED: GD	DATE: 23.09.21	SCALES: 1:500 at A3
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Renaker Build Ltd

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4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
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DRAWING NUMBER: VN211913-TR109	REVISION: A
-----------------------------------	----------------



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site Layout Amended	WD	GD	15/11/21

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

11.5m Large Refuse Vehicle (4 axle)

Overall Length 11.500m
Overall Width 2.500m
Overall Body Height 3.750m
Min Body Ground Clearance 0.300m
Track Width 2.500m
Lock to lock time 6.000m
Wall to Wall Turning Radius 11.330m

Trinity Islands, Manchester

Swept Path Analysis - Site C2

DRAWN: DJR	CHECKED: GD	DATE: 23.09.21	SCALES: 1:500 at A3
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Renaker Build Ltd

vectos.

4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008 e: manchester@vectos.co.uk

DRAWING NUMBER: VN211913-TR110	REVISION: A
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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site Layout Amended	WD	GD	15/11/21

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

11.5m Large Refuse Vehicle (4 axle)
Overall Length 11.500m
Overall Width 2.500m
Overall Body Height 3.750m
Min Body Ground Clearance 0.500m
Track Width 2.500m
Lock to lock time 6.000m
Wall to Wall Turning Radius 11.500m

Trinity Islands, Manchester

Site D1
Swept Path Analysis - Refuse Vehicle

Renaker Build Ltd

vectos.
4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008 e: manchester@vectos.co.uk

DRAWN: DJR	CHECKED: GD	DATE: 23.09.21	SCALES: 1:500 at A3
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DRAWING NUMBER: VN211913-TR112	REVISION: A
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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site Layout Amended	WD	GD	15/11/21

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

11.5m Large Refuse Vehicle (4 axle)
Overall Length 11.500m
Overall Width 2.500m
Overall Body Height 3.750m
Min. Body Ground Clearance 0.500m
Track Width 2.000m
Lock to lock time 6.000m
Wall to Wall Turning Radius 11.530m

Trinity Islands, Manchester

Swept Path Analysis - Site D2

Renaker Build Ltd

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DRAWN: DJR
CHECKED: GD
DATE: 23.09.21
SCALES: 1:500 at A3

DRAWING NUMBER: VN211913-TR111
REVISION: A

Appendix B

WASTE PRO-FORMA

Appendix E

Proforma for Planning Applications



MANCHESTER
CITY COUNCIL

Planning Application - Waste Management Strategy

Planning Application Number:

Date Submitted:

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 for this application.	Not applicable for this application.
Pulpable Recycling	140 / 240	Not applicable for this application.	Not applicable for this application.
Mixed Recycling	140 / 240	Not applicable for this application.	Not applicable for this application.
Garden Waste	140 / 240	Not applicable for this application.	Not applicable for this application.
Food Waste	-	Not applicable for this application.	Not applicable for this application.

High Rise Apartment Developments

	Yes/No - how much space has been provided?
0.43m ² has been provided per apartment for the container space. Space to manoeuvre and access containers individually has also been provided so that each container can be accessed and removed for collection individually.	No Site C1 130sqm c.40x1100litre bins+4x360litre food bins Site C2 163sqm c.52x1100litre bins+5x360litre food bins Site D1 142sqm c.52x1100litre bins+4x360litre food bins Site D2 150sqm c.51x1100litre bins +4x360litre food bins

Commercial Developments

Please state number of bins you propose, showing calculations where appropriate

For Calculations See Overleaf

Commercial Unit C1 Assumed to be Retail

230sqm

General Refuse	1150 litres/week	2 Eurobins
Pulpable Recycling	575 litres/week	1 Eurobin
Mixed Recycling	575 litres/week	4 x 360litre bins
Food Waste		
Industrial Waste		

Commercial Unit C2 Assumed to be Retail

90sqm

General Refuse	450 litres/week	1 Eurobins
Pulpable Recycling	225 litres/week	1 Eurobin
Mixed Recycling	225 litres/week	1 x 360litre bins
Food Waste		
Industrial Waste		

Has / will a contract be obtained with a licensed waste carrier?
--

Yes

Mixed Use Developments

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

Yes

Internal Stores (Residential and Commercial)

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

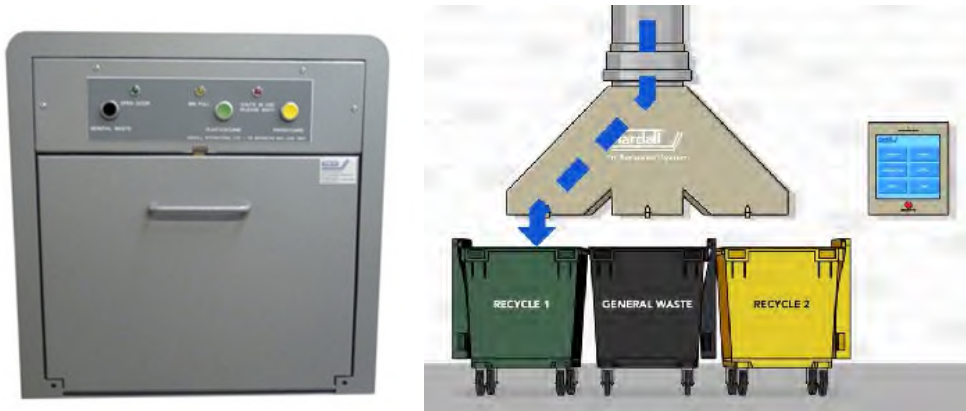
Residential Waste

Within each apartment there will be 3x separate bins and bags colour-coded to help recycling as well as food caddy for those segregating the organic waste

Occupiers will be encouraged to separate waste at the source to aid recycling. The development will benefit from a refuse chute.

The residential waste collection benefits from a tri-separator waste chute from the upper floors. Residents or their cleaners would take the waste from their apartment bins to the refuse chute lobby on their floor. They would select the type of waste stream: General & Foodwaste, Pulpable, Mixed Recyclables and that would be directed to a tri-separator on the ground floor. This would be collected in 1100 litre Eurobins beneath the tri-separator and when full those bins would be swapped over for empty bins by the on-site management team.

An example of a waste chute infrastructure is provided below.



Commercial Waste

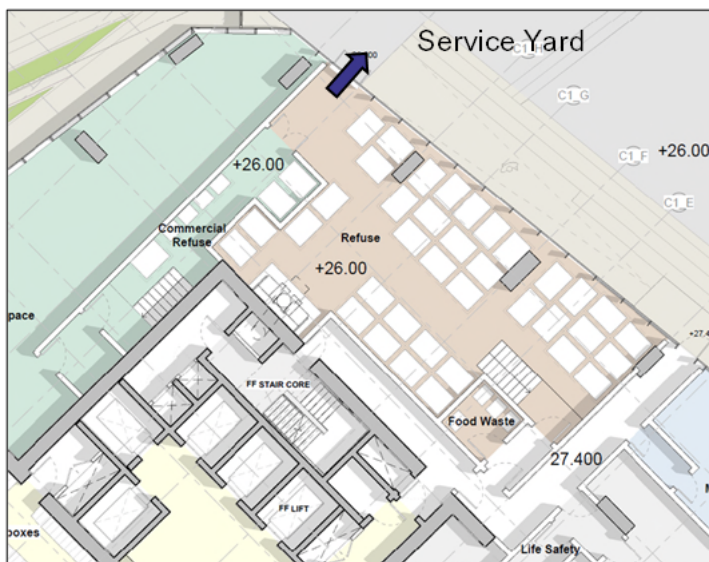
The Internal Waste Storage for the Commercial unit will very much depend on the type of operator

Storage Areas for Waste Containers (Residential and Commercial)

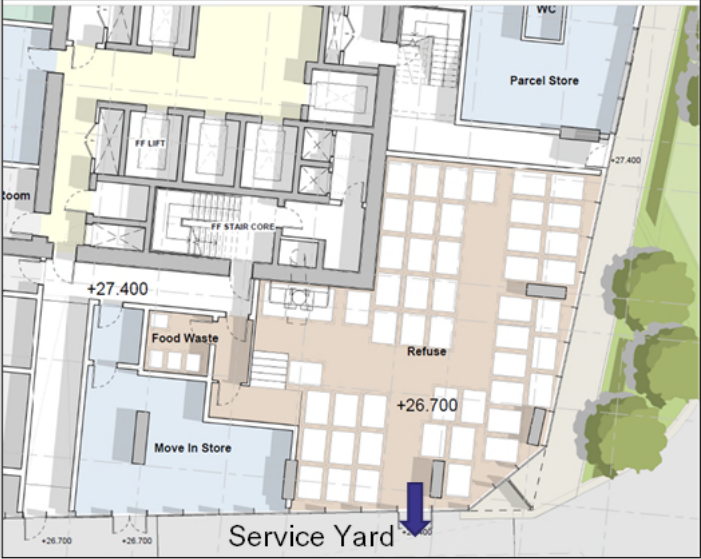
Please provide details of container stores, attaching plans if appropriate.

The refuse store for each building is given below

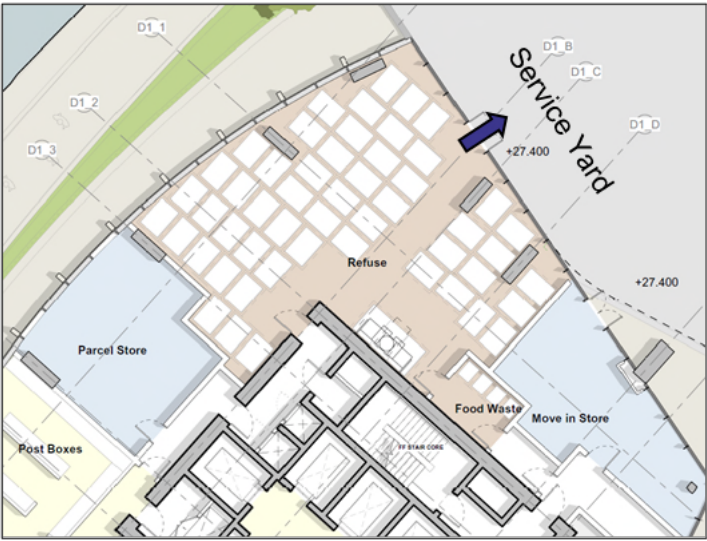
Site C1



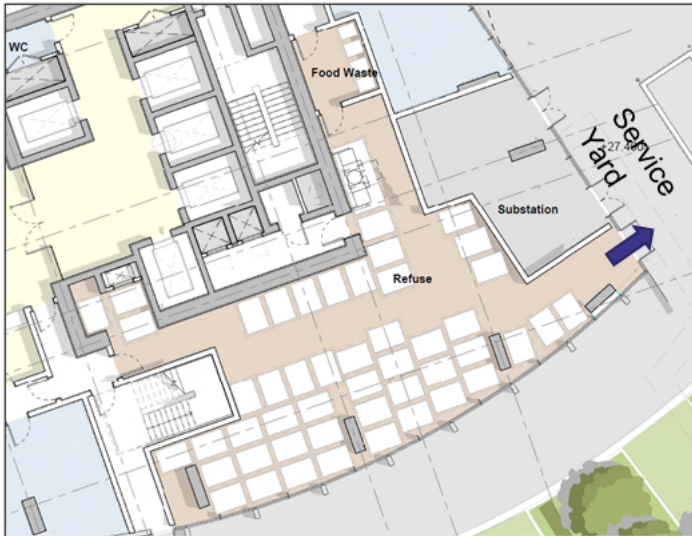
Site C2



Site D1



Site D2



Ensure all bins in the store are accessible

The refuse store will not be accessible by the general public due to the presence of the Tri-Separator. However, there is a Food Bin Store on Sites C1, C2 and D1 for residents to bring their foodwaste in a food caddy

The bin storage area includes space for maneuvering and the doors are designed to be wider than the 1.3m minimum.

N

Ensure recycling facilities are as easy to access as general refuse

Y

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

Ventilation

The bin stores will be mechanically ventilated.

Hygiene

The floor and walls of the refuse stores across the site will be constructed and finished in materials that are impervious and easily kept clean. Overall waste management would be undertaken by the on-site staff member/management company who would monitor the cleanliness on a regular basis and would ensure that all areas of the site are kept clean as required.

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.

The on-site staff overseen by the Buildings Management. The Council have accepted that the General Waste can be collected on a weekly basis. However, they would only collect recyclables on an alternate fortnightly basis. This fortnightly storage of recyclables is not possible on the ground floor layout. Therefore, it is proposed that an extra collection of recyclables is made every week thereby reducing the storage requirement to match the available bin storage areas.

Should for whatever reason that private collection fails and the council needs to step in then there is additional bin storage capacity available in the basement car parks. This requires additional movement of bins but is considered manageable and would be undertaken by the on site management company

The refuse collection company operatives would take the bins from the bin store to the vehicle and will return the bins to the bin store immediately after collection has taken place. This would be under the direction of the General Manager.

Please ensure that you have attached:

Detailed plans of waste stores	Y – please see site layout plans
Location plans showing stores	
Location plans showing the proposed collection point and the route the collection vehicle will take	Y – detailed within this Proforma

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

Contact

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Birmingham

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Birmingham B3 3JY
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