

Union Living Ltd

**UNION, ST JOHN'S
MANCHESTER**

WASTE & SERVICING STRATEGY

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1 INTRODUCTION

1.1 Background

1.1.1 Vectos have been commissioned by Union Living Ltd to provide Waste & Servicing advice in support of Union Tower 2, a St John's development at Water Street, part of the wider St John's regeneration development located in Manchester City Centre.

1.2 Planning History

1.2.1 Planning consent for a 36-storey tower on the site was granted in 2017 under planning reference 114385/FO/2016, and that approved scheme proposed 305 residential apartments along with retail uses at ground floor. Accompanying Transport Statement Assessment, Travel Plan and Waste and Servicing Strategy documents prepared by Vectos were submitted in support of that application.

1.2.2 This Waste & Servicing Strategy has been prepared to appraise the Local Authority, Manchester City Council (MCC), of the associated waste management implications of the Site. The Proposed Development would involve the construction of a new 36 storey building with one level of basement, to accommodate 372 Co-Living units (806 beds), 2000sqm of Co-Work space over three floors, public and private amenity space and ground floor flexible amenity / commercial space. It will have a Service Area to the north. The development does not have any parking for its occupants. This report accompanies a Transport Statement and Travel Plan also presented by Vectos.

1.3 Site Overview

1.3.1 The Site comprises previously developed land. **Figure 1.1** illustrates the location of the Site within the context of Manchester city centre. The red line boundary plan for the application shown in **Dwg 6555-P-B500-XP-00-001**.

1.3.2 It lies to the west of Water Street and south of the Manchester & Salford Junction Canal head and to the west of the Manchester Goods Yard (MGY) development site. MGY is being developed as an eleven-storey mixed use building under planning reference 121511/FO/2018, approved in December 2018.

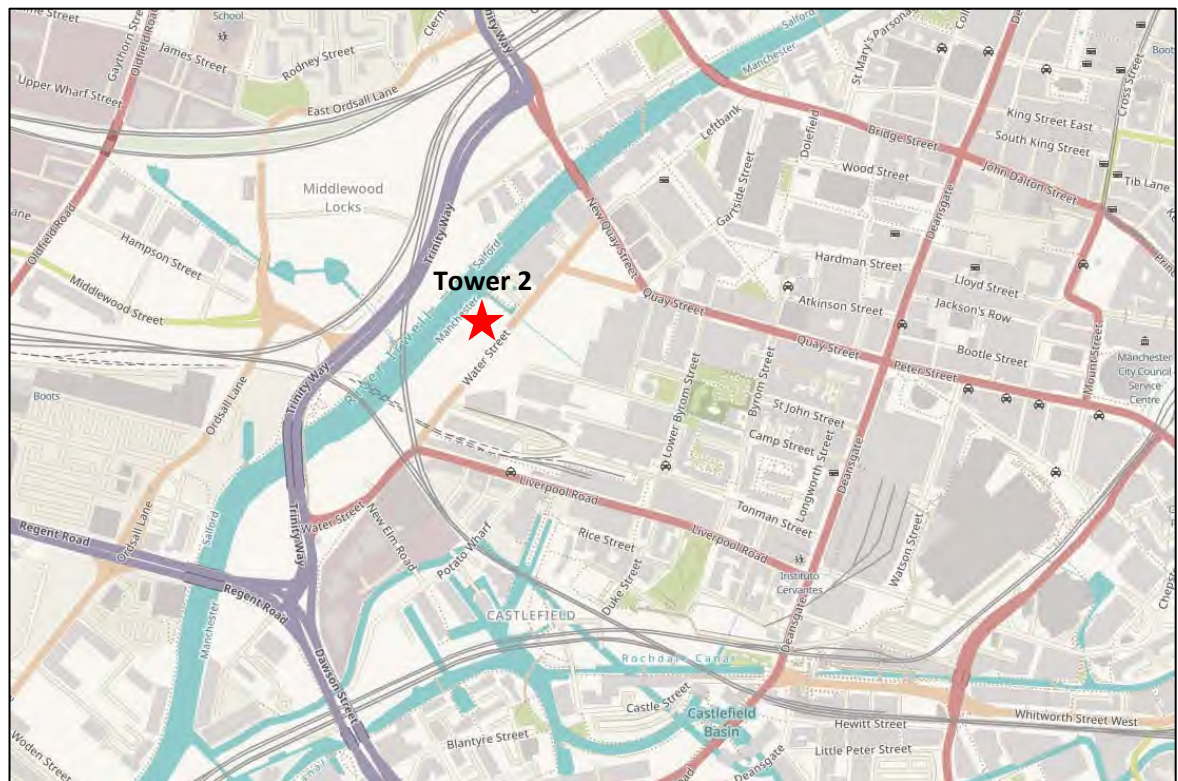


Figure 1.1. Site Location (local context)

1.4 Report Structure

1.4.1 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.

1.4.2 The servicing strategy sets out the movement of vehicles to and from the building and includes:

- Calculation of the number of deliveries to Union; and
- Service Strategy for goods to be delivered to the occupiers.

1.4.3 The waste strategy sets out the means of recycling the material generated and sets out the:

- Estimated waste generation;
- Proposed waste management strategy; and
- Proposed waste storage facilities.

1.4.4 Following this introductory chapter, this Waste and Servicing strategy considers the following:

- **Section 2** - Discusses the existing nature of the site;
- **Section 3** - Outlines the development proposals;
- **Section 4** - Presents the servicing strategy including the forecast of vehicle arrivals;
- **Section 5** - Considers the Waste Management Strategy for the building, forecasting the Waste streams, recycling and waste collection procedures; and
- **Section 6** - Presents a summary and conclusions to this report.

2 EXISTING CONDITIONS

- 2.1.1 The Union Tower 2 site has previously operated as a surface car park associated with ITV Granada Studios and is currently used as a construction site compound. An aerial view of the Site as formerly used by ITV is given in **Figure 2.1**.



Figure 2.1. Aerial View of the Site (former use by ITV)

- 2.1.2 The Site comprises developed land located entirely within the Castlefield Conservation Area and forms part of a wider Masterplan and Strategic Regeneration Framework for the area, which is known as St. John's. Parts of the St John's masterplan development are being constructed at the time of writing, including the Factory development and the Manchester Goods Yard development.
- 2.1.3 The Site lies to the south of the Spinningfields commercial district of Manchester City Centre, an exemplar of City Centre economic regeneration and the largest City Centre office scheme in the UK.
- 2.1.4 Continuing south of the Site is Castlefield, an established residential district, set within the City's legacy industrial infrastructure and buildings, and infused with leisure, retail and heritage attractions.

- 2.1.5 To the east of the Site is the St. John Street district, a mixed-use district characterised by Georgian buildings used as residences and space for professional businesses including legal, accountancy and medical professions.
- 2.1.6 Immediately beyond the St. John Street district is the south Deansgate area, which comprises retail facilities, leisure attractions and the City Centre's conference facilities.
- 2.1.7 To the north of the Site lies the Grade II Listed Victoria and Albert Hotel and the River Irwell beyond, with hotels and office uses located on the western side of the river. There are a number of current mixed-use regeneration initiatives underway on the Salford side of the River Irwell, including Salford Central and Middlewood Locks (both mixed use schemes including office, retail and residential).
- 2.2 **Local Highway Network**
- 2.2.1 **Water Street** borders the Site to the east and provides a single lane in each direction, with a footway provided along either side of the road. It is subject to a 20mph speed limit.
- 2.2.2 Various changes are being implemented to highways in the local area as part of the St John's masterplan works, being delivered under a Section 278 agreement. Just to the north of Tower 2, Water Street will be narrowed from 7.5m to 6m to provide additional trees and public realm space in front of Union, Tower 1. In this location there are two on-street drop-off bays that are time limited to 20mins (no return within 40 mins). There will be six on-street parking bays provided on Water Street to the north of the Marriott Hotel. These pay and display parking bays are around 100m north of Tower 2 and disabled drivers can also park in these locations for free. Around 220m to the south on Water Street are 10 disabled parking bays.
- 2.2.3 To the south of Tower 2 the alignment of Water Street passes by Festival Square, rising up to a raised table and access controls to manage service vehicle movements through the Square. Water Street then narrows as it passes under Factory, a major new cultural venue for Manchester.

- 2.2.4 There is currently a plan being consulted upon, to close Water Street to through traffic under Factory with a Prohibition of Driving Order (PoD). That strategy will mean that all servicing vehicles to and from Tower 2 would arrive via the north. The proposals for the PoD are described in **Dwg VN70930-124**. This area is subject to approval by MCC detail design but would require Water Street to rise up to the level of Festival Square and footways would be maintained for pedestrians passing along Water Street. There are Automatic Bollards on Water Street to control access to the PoD. Vehicles that service MGY would egress via Festival Square onto Water Street passing through automatic bollards to head north.
- 2.2.5 The western section of **Quay Street** has been stopped up as part of the public realm works that are being delivered with the St John's regeneration masterplan. It has historically been the point of access into the ITV Granada Studios site. This road closure allows the creation of St Johns Place a new Square and two new commercial buildings.
- 2.2.6 **New Quay Street** As part of the St Johns improvements works the signals at Quay Street/Gartside Street will be upgraded to improve pedestrian and cycle crossing facilities and provide additional capacity.
- 2.2.7 On **Atherton Street** there is a minor change to the on-street parking in order to create a drop-off facility for the OGS hotel.
- 2.2.8 Alongside these highway works there is proposed new **footway links** along the **River Irwell** tying in with the new Factory Square and the new river crossing at the Ordsall Chord footway/cycleway bridge and Tower 2 helps facilitate that by providing the link through to the canal head to the north of the site.

3 DEVELOPMENT PROPOSALS

3.1 Introduction

- 3.1.1 Full planning permission is being sought for the erection of a 36-storey building plus basement, comprising 372 co-living units and studios (806 beds) mixed use building (Sui Generis), comprising Co-Living units, amenity space, 1995 sqm (NIA) of Co-Working space and flexible amenity/commercial space, landscaping, access and other associated works.
- 3.1.2 The scheme will be car-free with no car parking provided. 412 cycle parking spaces will be provided in the basement with an extra 12 cycle parking spaces in the public realm.
- 3.1.3 The ground floor layout is shown in **Dwg 6555-P-B500-P-00** including the Bin Store layout. The accommodation schedule is given in **Appendix A**.
- 3.1.4 The scheme will provide 3 and 4 bed shared apartments (Trios and Duos) which are aimed at long-term residential occupation with minimum 6 months tenancies. These are considered most likely to form a primary residence and will only be available on tenancies from 6-months upwards in length. They will be attractive to new city residents who want to build a friendship and professional network so prefer co-living; to larger groups of friends who want to move in as a collective; and city corporates who want to house graduate scheme staff in the same location.
- 3.1.5 The Studios and 1 bed apartments are expected to attract more short-term demand and will be available on short term lets up to a maximum stay of 6-months. These will be targeted at businesses and institutions looking to house employees and contractors who may only be in Manchester for a short period of time and want a more social experience than a hotel or aparthotel; project workers on fixed-term contracts (particularly characteristic of the creative industries), travelling lecturers and academics, and city workers who want private space but want to be part of the wider Union community.
- 3.1.6 The Co-Work space offering of 2000sqm will be available for residents and the wider business community that will provide flexible business facilities to accommodate informal hot-desking to more formal board meetings including welcome reception, the option of a registered address with mail service, super-fast connectivity, a coffee shop, toilets, printing services, inclusive cleaning and maintenance.

4 SERVICING STRATEGY

4.1 Introduction

- 4.1.1 The proposed ground floor plan and highway layout for Tower 2 is shown in the Landscape plan **Dwg SJQ-702-EXA-XX-L00-DR-L-000100**. This layout provides a service area to the north of the building where large vehicles can reverse in and unload or collect waste. It is expected that regular larger vehicles would be coordinated and timed to stagger their activities. Access into this service area will be controlled by automatic bollards to prevent fly parking with CCTV and a comms unit and regular vehicles benefitting from Automatic Number Plate Recognition.
- 4.1.2 There is scope for smaller couriers/vans to reverse into the area before the bollards and service from there. The service area will be shared with pedestrians and cyclists so any vehicles reversing will need to be mindful of this.
- 4.1.3 The tracking of a large refuse vehicle (11.5m) reversing into this service area is shown in for the Victoria & Albert Hotel and there are sufficient gaps in the traffic for vehicles to make those manoeuvres.

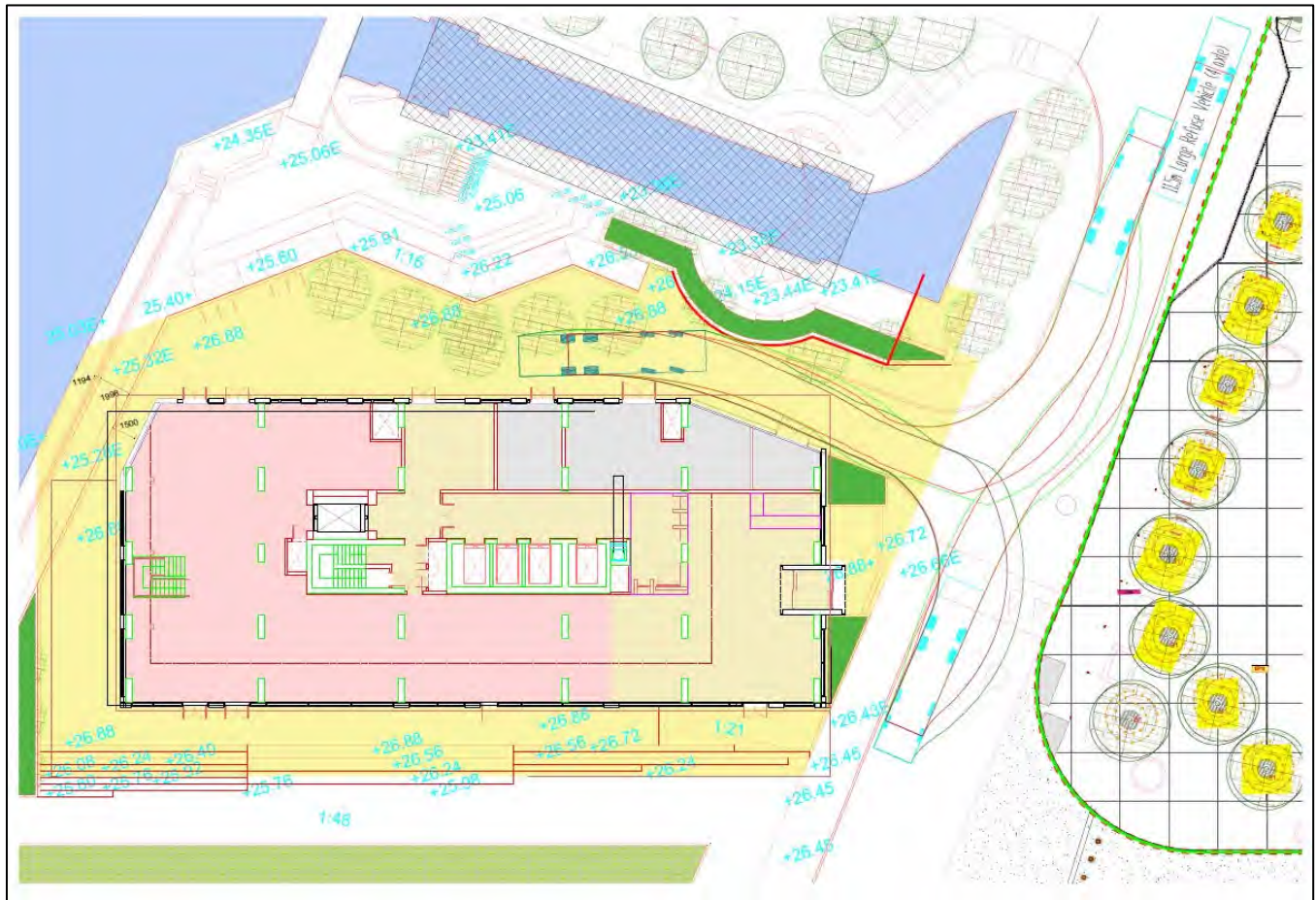


Figure 4.1 Tracking of Large Refuse Vehicle for Tower 2

4.2 Typical Deliveries

4.2.1 The typical deliveries for Union are as follows:

- Residential: Online Groceries, post /courier deliveries, occasional furniture deliveries.

4.2.2 In addition, there may be some deliveries for the gym and ancillary commercial units:

- Ancillary Commercial Units: consumables, retail products, food, drink, stationary.

4.3 **Proposed Goods Receipt Strategy**

4.3.1 The proposed goods receipt strategy is described below:

- In general deliverers/ drivers will be responsible for taking goods directly to the tenants/occupiers.
- There is scope for some deliveries to be stored by reception.
- Deliverers/drivers will arrive at the service access point where they would communicate via intercom /CCTV system linked to each occupier or arrive at reception.
- Deliverers/drivers will be given free access to the service corridors and goods lifts to take the goods to the various tenants.
- Deliverers/Drivers will generally have their own material-handling equipment.

4.4 **Delivery Forecasts**

4.4.1 The estimated waste and servicing vehicle trips generated by Union have been based upon information from the TRICS database which is described more fully in the Transport Statement.

4.4.2 The forecasts forecast light vehicles (vans) and other heavier goods vehicles that are in excess of 7.5tonnes.

4.4.3 It is expected that in St Johns and for Union in particular, there would be a good deal of coordination of deliveries as drivers would progress from one building to the next helping to limit the overall number of vehicles arriving at St Johns.

4.4.4 A summary of service vehicle trip forecasts is provided in **Table 4.1** overleaf.

	Tower 2 Light Vehicles		Tower 2 Heavy Goods Vehicles	
Time Range	ARR	DEP	ARR	DEP
00:00-01:00	0.0	0.0	0.0	0.0
01:00-02:00	0.0	0.0	0.0	0.0
02:00-03:00	0.0	0.0	0.0	0.0
03:00-04:00	0.0	0.0	0.0	0.0
04:00-05:00	0.0	0.0	0.0	0.0
05:00-06:00	0.0	0.0	0.0	0.0
06:00-07:00	0.0	0.0	0.0	0.0
07:00-08:00	2.4	1.7	0.6	0.6
08:00-09:00	4.5	4.3	0.4	0.5
09:00-10:00	3.1	3.3	0.2	0.4
10:00-11:00	2.4	2.7	0.5	0.3
11:00-12:00	2.7	2.9	0.2	0.2
12:00-13:00	3.1	2.8	0.3	0.3
13:00-14:00	1.6	1.2	0.1	0.1
14:00-15:00	2.4	1.6	0.4	0.2
15:00-16:00	2.7	3.0	0.5	0.5
16:00-17:00	3.2	3.5	0.3	0.5
17:00-18:00	2.6	2.3	0.2	0.4
18:00-19:00	0.7	1.3	0.1	0.0
19:00-20:00	0.2	0.1	0.0	0.0
20:00-21:00	0.0	0.2	0.0	0.0
21:00-22:00	0.0	0.0	0.0	0.0
22:00-23:00	0.0	0.0	0.0	0.0
23:00-24:00	0.0	0.0	0.0	0.0
Daily Trip Rates:	31.7	31.0	3.7	4.0

Table 4.1. Servicing Trip Forecasts – Union Tower 2, St John's

- 4.4.5 It can be seen that we forecast up to 4 HGVs a day and around 31 light goods vehicles. The busiest hour is between 8am-9am, with around 4 light goods vehicles. The HGV forecast is half a vehicle per hour at this time, so it is better described as one vehicle arriving in a two-hour period between 7am-9am.
- 4.4.6 These deliveries in the context of deliveries to the wider St Johns area is described in **Figure 4.1** for the AM peak, **Figure 4.2** for the PM peak and **Figure 4.3** for the Daily Flows.

- 4.4.7 It can be seen that most deliveries are expected to be made by vans. The overwhelming majority of deliveries would be made within 5-10 minutes and the vehicle would move on. Refuse collections would also take around 10 minutes. Occasionally vehicles may stay for longer, such as those making furniture deliveries say up to 40 minutes or for maintenance and in these circumstances, they should be planned in advance to avoid congestion.
- 4.4.8 It can be seen from the figures that we have also forecast taxi/drop off activity in front of Tower 2 of one or two vehicles per hour or up to 35 vehicles in a day. This activity is expected to happen on street. In front of Tower 2 rather than come into the service area.

5 WASTE MANAGEMENT STRATEGY

5.1 Introduction

5.1.1 The site 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.

5.1.2 Central Government's strategy for minimising waste generation and its transfer to landfill is most simply described according the 'Waste Hierarchy' as shown in **Figure 5.1**. 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.

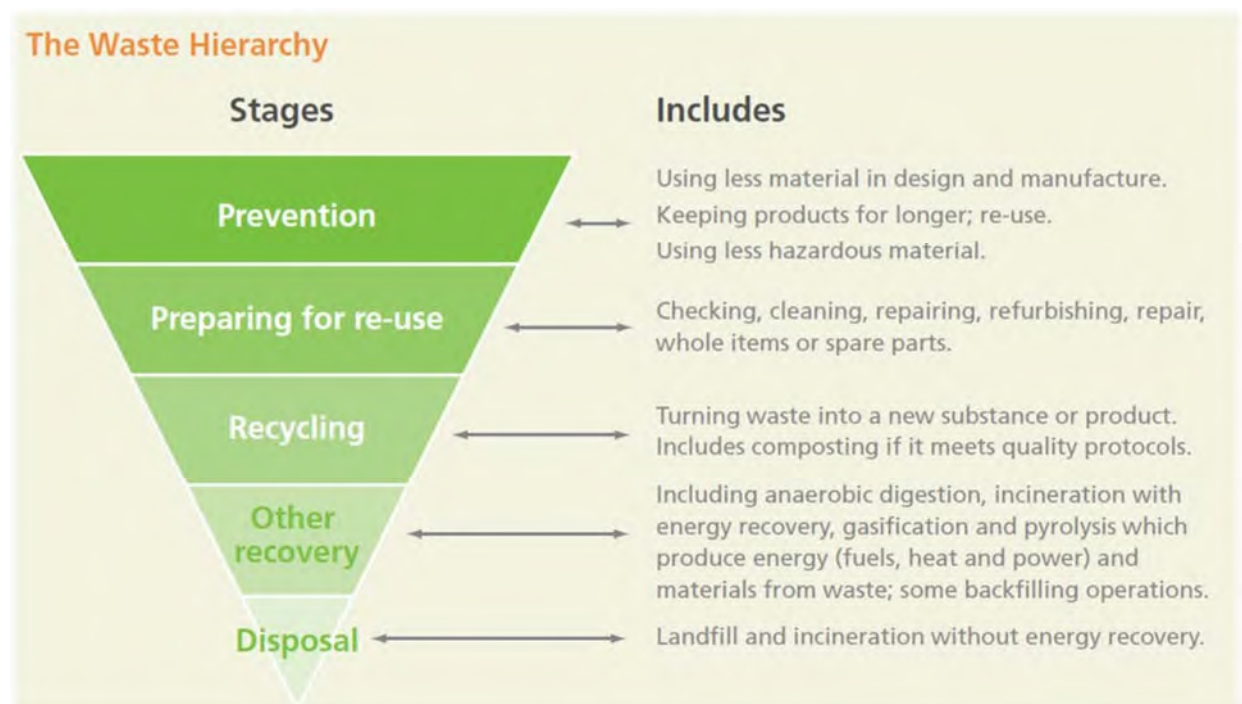


Figure 5.1: Waste Hierarchy

- 5.1.3 The waste collection would be overseen by the management company for Union Tower 2 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.
- 5.1.4 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.
- 5.1.5 MCC publishes Guidance on the Waste Storage and Collection (GD04) and the advice in that document has been incorporated into this strategy. This guidance requires a Waste Pro-Forma to be prepared and this is presented in **Appendix B**. The waste forecast assumptions are described below for each type of land use.
- 5.2 **Co-Living Waste Forecast**
- 5.2.1 As outlined in Section 1, the planning permission sought is Sui Generis and is not a standard residential or aparthotel development and this may influence the volume of waste generated. The Duo, Trio and Quad (2, 3 and 4 bed) apartments are considered most likely to form a primary residence and will only be available on tenancies from 6-months upwards in length.
- 5.2.2 It is expected therefore to differ from standard residential apartments with a different demographic, different occupancy levels due to the greater turnover of occupants, a greater propensity for eating out, or potentially they may have more communal meals than normal, all of which could affect the volume waste generation.
- 5.2.3 To provide a robust assessment, the standard residential waste forecasts of 110 litres of waste per week per apartment from the British Standard 'Waste Management in Buildings — Code of Practice' (BS5906:2005) has been used. This equates to the following waste generation:

- 40,920 litres per week for 372 units or 5845 litres per day

5.3 Co-Work Waste Forecast

5.3.1 The space for Co-Working covers 1995sqm NIA and it is assumed that this would provide accommodation for around 312 employees over 3 floors, assuming a typical 80% occupancy rate. BS5906:2005 forecasts a typical office waste generation at 50 litres per employee per week or 10 litres per day. Applying this to the Co-Work space gives:

- 3,120 litres per day for 312 employees

5.4 Flexible Amenity/Commercial Space

5.4.1 The flexible amenity commercial offer can include a variety of land uses. The current expected use is a General Store of around 341 sqm with a coffee shop at Mezzanine level of around 100 covers. It is assumed that the General Store employs some form of backhaul system with its suppliers whereby they take back the delivery packaging waste with every delivery.

5.4.2 BS5906:2005 gives forecasts for retail at 10 litres per 1sqm per week and for cafes around 75 litres of waste per cover per week. Given that there is variation in activity over the course of a week we have applied some robustness to the calculations to arrive at a daily figure. This equates to the following waste generation:

General Store

- 3,410 litres of waste per week or around 700 litres per day

Cafe

- 7,500 litres of waste per week or around 1500 litres per day

5.5 Recycling Waste Streams Forecasts

5.5.1 The waste forecasts and the recycling streams for Union Tower calculated on a daily basis and are described in **Table 5.1**. The proposed development's recycling streams have been outlined above. The development will benefit from a refuse chute which will efficiently transfer waste from the Co-Living floors to the bin store. The waste chute will include a tri-separator splitting the waste into the General (inc Food), Pulpable and Mixed Recyclables waste as previously outlined.

5.5.2 It is also noted that the General Refuse will be further processed by the Waste Contractor to reduce the amount going to landfill.

Co-Living Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	23.5%	1,373
Mixed	23.5%	1,373
General Waste (inc Food)	53%	3,098
Daily Co-Living Waste	5,845 litres per day	
Co-Work Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	50%	1,560
Mixed	15%	468
Food Waste	5%	156
General Waste	30%	936
Daily Co-Work Waste	3,120 litres per day	
Flexible Amenity/Comm Retail Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	25%	175
Mixed	25%	175
General Waste (inc food)	50%	350
Daily Commercial Waste	700 litres per day	
Flexible Amenity/Comm Cafe Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	22%	330
Mixed	28%	420
Food Waste	39%	585
General Waste	10%	150
Daily Commercial Waste	1,500 litres per day	

Table 5.1: Forecast Recyclables

5.6 **Waste Management Strategy**

- 5.6.1 As described in Section 3, this development provides a unique offer which is not a standard residential apartment tower. It provides accommodation for people who might be new to the city but whose needs don't fit into the standard offer for rented apartments or a hotel/aparthotel. Given this nature of occupiers the waste will be treated as in a commercial operation and collected by cleaners. Bins within the apartments/kitchens will be colour-coded to assist in the correct separation of waste at source.
- 5.6.2 The building benefits from a Refuse Chute with waste lobbies on each Co-Living floor. The waste chute will have colour coded buttons to ensure the waste is directed to the correct bin.
- 5.6.3 Waste will be collected by a licensed waste carrier in accordance with government legislation requiring the appropriate documentation to ensure that waste is disposed of in a hygienic and environmentally sustainable way. This arrangement with a private waste management company will be maintained in perpetuity at the sole cost of the owner.
- 5.6.4 Waste collection for Union Tower 2 will be supervised by the on-site building management team and involves bins being brought out immediately prior to collection and returned immediately after and to ensure areas are kept clean.
- 5.6.5 Waste from the flexible/commercial units would be stored within their own demise and brought out for collection by the occupiers. It is expected that this waste collection would be coordinated with the Co-Living and Co-Work collections. Food Waste is subject to the animal by-products controls. Developments which generate food waste will have to comply with the requirements of the 'Animal By-Product' Regulations (Defra 2011).
- 5.6.6 There may be specific waste streams that are managed separately from the main waste streams. These could include:
- Waste Electrical and Electronic Equipment recycling (WEEE), printer cartridges etc
 - Cooking Oil
 - Furniture
 - Confidential waste

5.6.7 There are different ways of managing these specific waste streams and the Building management would ensure there are suitable procedures in place to ensure that this waste is managed according to best practice

5.7 Waste Storage and Collection Frequency

5.7.1 The main Co-Living bin store provides c.51sqm and a separate c.12sqm Bin Store is provided for the Co-Work land use. The flexible amenity/commercial land uses are assumed to store waste within their own demise.

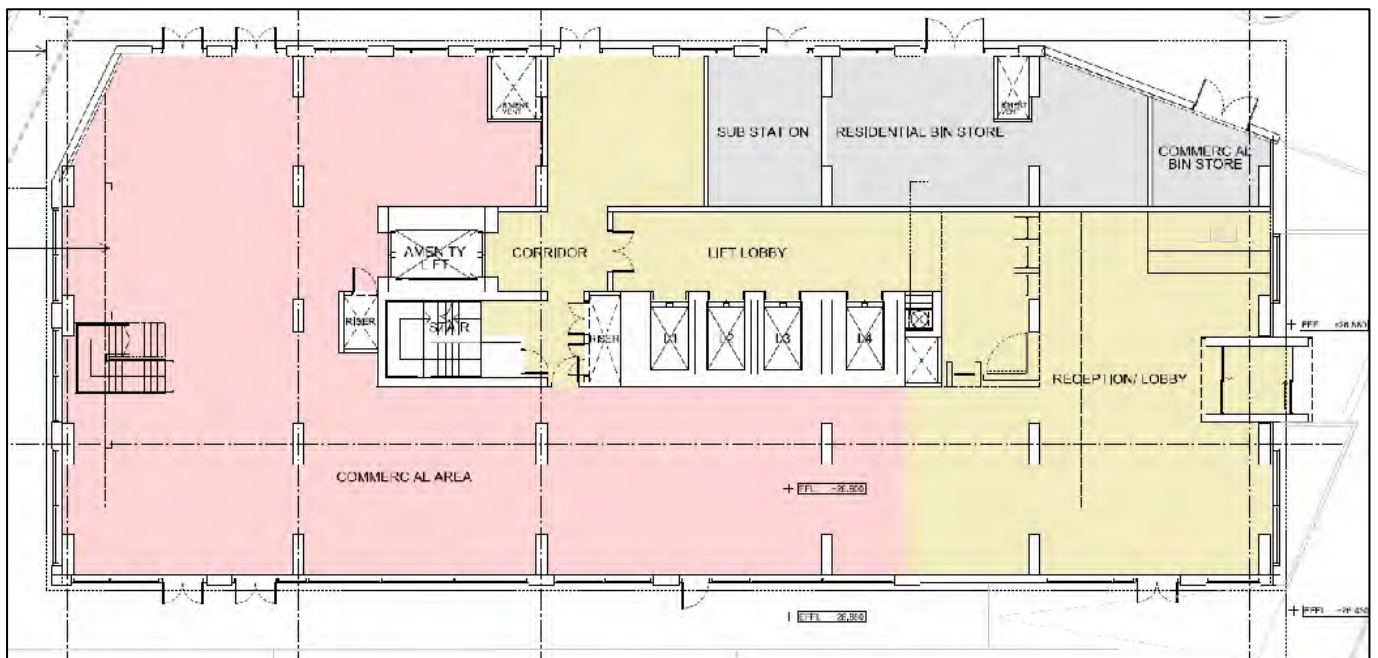


Figure 5.1 Bin Stores at Ground Level

5.7.2 The Co-Living Bin Store is expected to accommodate around 20 Eurobins while the Commercial Bin Store is forecast to store up to 5 Eurobins. Bin stores will benefit from ventilation, impermeable surfaces and a nearby water tap to assist in cleaning. There is no intention to compact or process the waste on site.

5.7.3 The forecast number of bins and the collection frequency is given in **Table 5.2** below.

Co-Living Waste	No. Bins	Collection Frequency
Pulpable	5 Eurobins	Twice a week
Mixed	5 Eurobins	Twice a week
General Waste (inc Food)	10 Eurobins	Twice a week
Co-Work Waste	No. Bins	Collection Frequency
Pulpable	3 Eurobins	Daily
Mixed	1 Eurobins	Daily
Food Waste	1 x 240litre bin	Daily
General Waste	1 Eurobins	Daily
Flexible Amenity/Comm Retail Waste	No. Bins	Collection Frequency
Pulpable	1 x 240litre bin	Daily
Mixed	1 x 240litre bin	Daily
General Waste (inc food)	2 x 240litre bins	Daily
Flexible Amenity/Comm Cafe Waste	No. Bins	Collection Frequency
Pulpable	1 x 330litre bin	Daily
Mixed	2 x 240 litre bins	Daily
Food Waste	3 x 240litre Bins	Daily
General Waste	1 x 240 litre bin	Daily

Table 5.2 Bin Storage and Collection Frequency

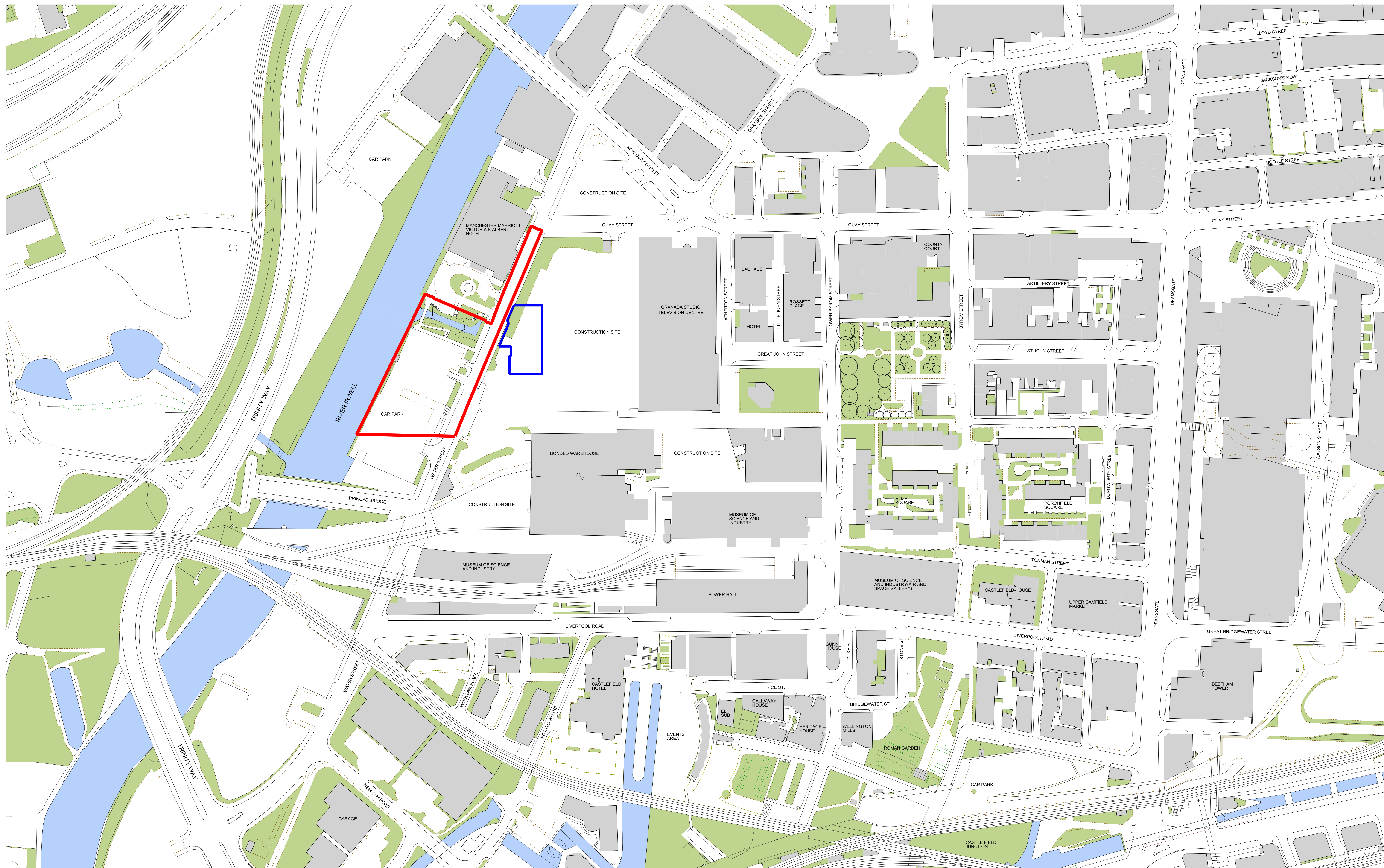
- 5.7.4 The refuse containers will be wheeled a short distance from the refuse store to the collection vehicle. The path between the ground floor refuse store and the collection vehicle using the service road to the east of the building.
- 5.7.5 The route will be step free and will have a minimum width of 1.54m, ensuring adequate manoeuvring space. It is also noted that waste collection for Tower 2 could be aligned with the wider collection activities taking place at St Johns to improve efficiency and reduce the number of refuse vehicles needing to serve the site.
- 5.7.6 These bins stores would be kept clean and there will be a water tap in the bin store to help in that process.

- 5.7.7 On each floor, the development will provide a refuse chute lobby. This will contain colour coded buttons to identify what type of waste is being deposited. The refuse chute will then direct that waste to the appropriate bin within the bin store at the bottom.
- 5.7.8 It is important that the usage of the waste chute is supervised in order to ensure the efficient internal movement of waste within the development. Management will be present 24 hours a day and as part of the overall strategy, the building management team will monitor the use of the chute system using CCTV to ensure compliance and to monitor how full each bin becomes. This will be supported by an automatic alarm that will alert management as each bin approaches capacity.
- 5.7.9 In general, it is expected that waste from each waste stream will be collected every other day from the service area to the rear. However, some different waste streams can be collected at the same time such as the Pulpable and Mixed Recyclables.
- 5.7.10 It is noted that the General Refuse will be further processed by the Waste Contractor to reduce the amount going to landfill.

6 CONCLUSIONS

- 6.1.1 Full planning permission is being sought for the erection of a 36-storey building plus basement, comprising 372 co-living units and studios (806 beds) mixed use building (Sui Generis), comprising Co-Living units, amenity space, 1995 sqm of Co-Working space and flexible amenity/commercial space, landscaping, access and other associated works.
- 6.1.2 This document provides a Waste & Servicing Strategy for this building.
- 6.1.3 This development provides a unique offer which is not a standard residential apartment tower. It provides accommodation for people who might be new to the city but whose needs don't fit into the standard offer for rented apartments or a hotel/aparthotel. Given this nature of occupiers the waste will be treated as in a commercial operation. Waste will be collected by a licensed waste carrier in accordance with government legislation requiring the appropriate documentation to ensure that waste is disposed of in a hygienic and environmentally sustainable way. This arrangement with a private waste management company will be maintained in perpetuity at the sole cost of the owner.
- 6.1.4 This report has forecasted the number of likely deliveries needed to serve the site and the arrangements for deliveries and has set out the policy context for waste management. It has also provided a calculation for the various waste streams generated by development and associated the refuse storage provision by establishing a clear strategy for minimising waste generation.
- 6.1.5 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 can be undertaken in an efficient manner.

DRAWINGS



No. Date Dwn Chk App Revision or reason for issue
A 20 E JR First issue
DRAFT
FOR REVIEW
DR PLANNING

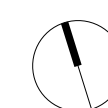
KEY

— RED LINE APPLICATION BOUNDARY

— OWNERSHIP BOUNDARY

General Notes
Do not scale from drawing. Use marked dimensions.
To be read in conjunction with all other Consultant's drawings.
The Architect to be immediately notified of any discrepancies.
Copyright on this drawing retained by the Architect.

Scale / North Point
1:2500 @ A3
0 10 20 30 40 50m
1:1250 @ A1
0 10 20 30 40 50m

DENTON
CORKER
MARSHALL

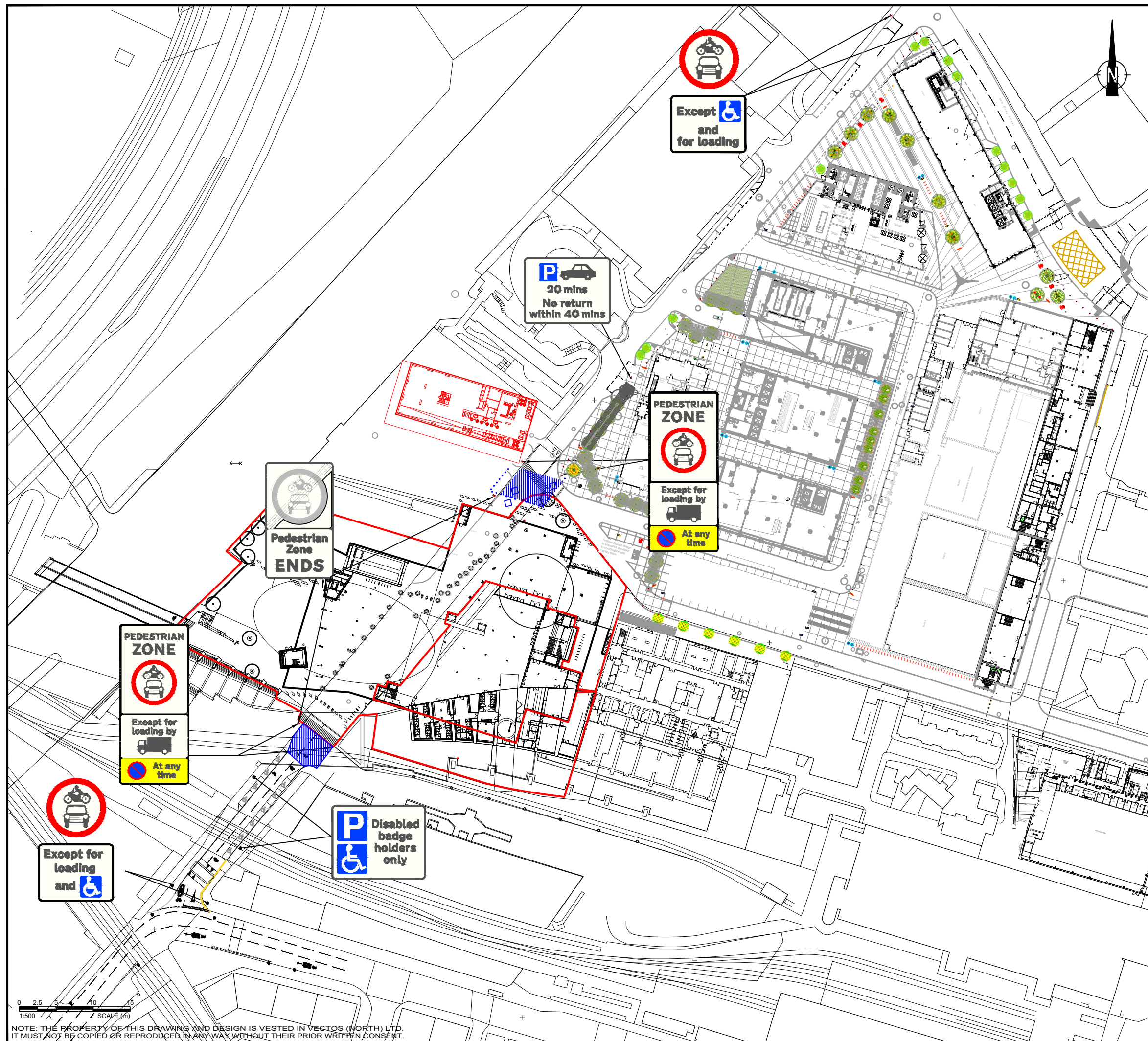
Architect
Denton Corker Marshall LLP
3.04 The Frames 1 Phipp Street
London EC2A 4PS
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Project Title
**UNION, ST. JOHNS
VITA T2**

Client
VITA
The Box, Horseshoe Lane
Alderly Edge, SK9 7QP
Telephone:
Email info@selectproperty.com

Drawing Title
EXISTING LOCATION PLAN

Drawing Number	Revision
6555-P-B500-XP-00-001	A
Drawing Status	
PLANNING	



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

Key

Turning Area
(Subject to
Further Design)



REV.	DETAILS	DRAWN	CHECKED	DATE
-	-	-	-	-

CLIENT:

Manchester Quays Ltd

PROJECT:

St Johns Technical Masterplan

DRAWING TITLE:

General Arrangement

SCALE:

1:1250 at A3

DRAWN:	WD	CHECKED:	GD	DATE:	24.02.20
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4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008
e: manchester@vectos.co.uk

DRAWING NUMBER:

VN70930-124

REVISION:

-

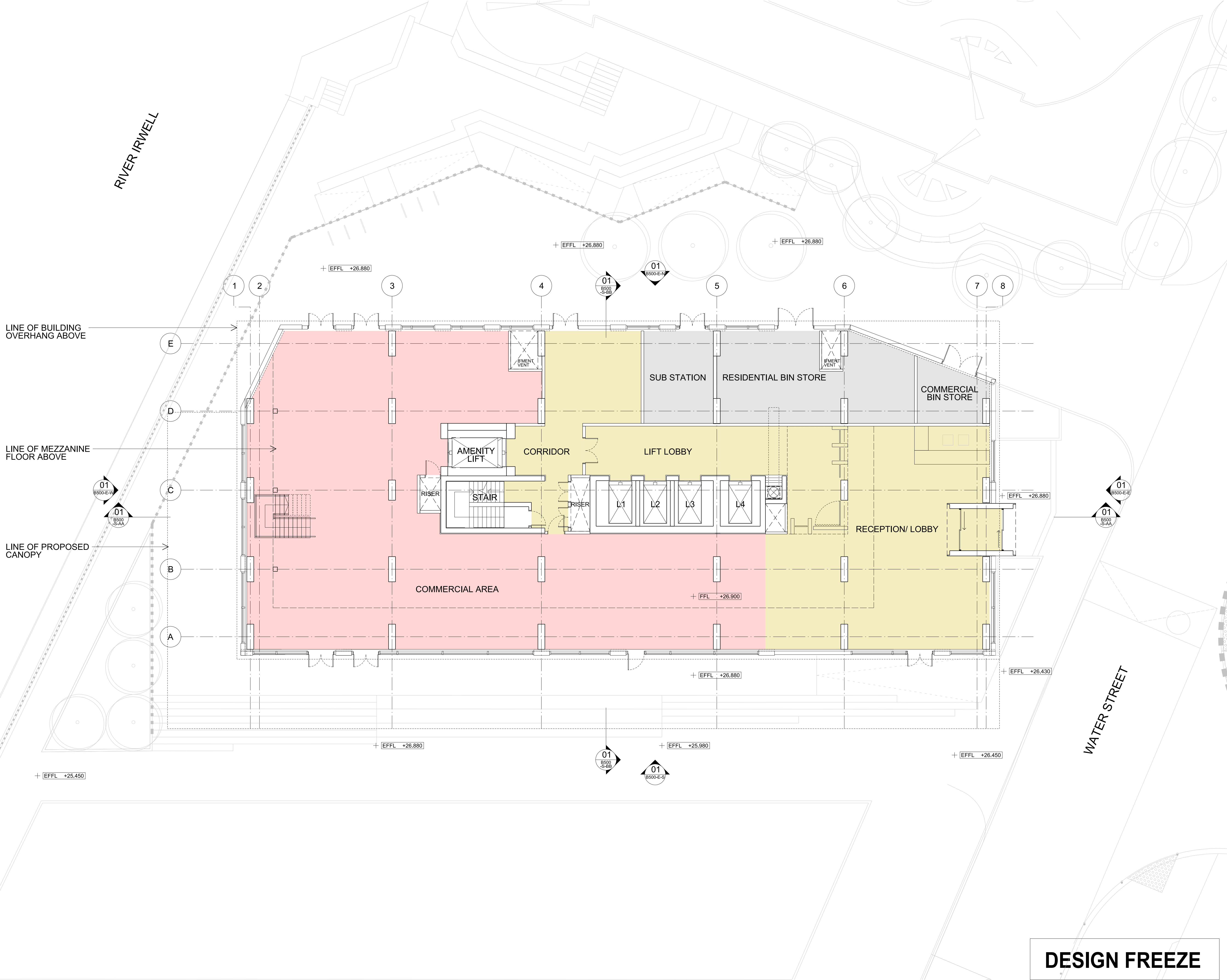
General Notes
Do not scale from drawing. Use marked dimensions.
To be read in conjunction with all other Consultant's drawings.
The Architect to be immediately notified of any discrepancies.
Copyright on this drawing retained by the Architect.

KEY

COMMERCIAL

BACK OF HOUSE / PLANT

CIRCULATION



A 20200313 PT PT JR ISSUED FOR INFORMATION - DESIGN FREEZE
First Issue
No. Date Dwn Chk App Revision or reason for issue

Client
VITA

**DENTON
CORKER
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Project Title
**UNION, ST. JOHNS
VITA T2**

Scale / North Point
1:100 @ A1
0 1 2 3 5m

Drawing Title
LEVEL 00 GA PLAN

Drawing Number
6555-P-B500-P-00

Drawing Status
INFORMATION

Revision
A

DESIGN FREEZE

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100 000 000	100 000 000	100 000 000
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--	INITIAL ISSUE	26.03.2020
Rev	Description	Date

doi:10.1371/journal.pone.0142104.g002

EXTERIOR ARCHITECTURE

NOTES

Unit 17.1, The Leather Market, 11-13 Weston Street, London, SE1 3ER

Studio 537, The Royal Exchange, St Anns Square, Manchester, M2 7DH

E-MAIL office@exteriorarchitecture.com

T2 ST JOHN'S

NICKEL AND DIME TOWER 2

GENERAL ARRANGEMENT KEY PLAN

Scale	1:200 @ A1	Drawn	ExA
Status	PLANNING	Checked	SPI

Date	20.05.2020	Approved	JM
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SJQ-702-EXA-XX-L00-DR-L-000100 --

APPENDIX A ACCOMMODATION SCHEDULE

ProjectVITA T2

Reference

Date27.03.2020

RevisionC

Vita T2

6555-A-Z100-A-100

Revision	Date	Author	Checker	Revision/Issue
-	12.03.20	PT	JR	ISSUED FOR INFORMATION
A	13.03.20	PT	JR	ISSUED FOR INFORMATION
B	20.03.20	PT	JR	ISSUED FOR PLANNING
C	27.03.20	PT	JR	ISSUED FOR PLANNNG

AREA AND ACCOMODATION SCHEDULE

Revision(s) highlighted in RED

Note:

Level	GEA		GIA		NIA															Total NIA (Net Internal Area)	
	sqm	sqft	sqm	sqft	Studio (17 sqm)	Accessible Studio (27 sqm)	Studio Plus 1 (31 sqm)	Studio Plus 2 (27 sqm)	3 Bed (72 sqm)	4 Bed (99 sqm)	Cleaners Store/ BOH/ plant (sqm)	Lobby/ Reception (sqm)	Flexible Amenity & Commerical (sqm)	Amenity (sqm)	Co-Work (sqm)	Postal (sqm)	Refuse (sqm)	Cycle Storage (sqm)	Plant (sqm)	sqm	sqft
Basement	873	9395	748	8053														383	250	633	6808
Ground	813	8746	769	8277								166	341				51		25	583	6277
Mezzanine	809	8709	559	6016									274			30			129	433	4658
Level 01	842	9061	772	8312										654						654	7036
Level 02	855	9207	784	8443											665					665	7158
Level 03	855	9207	784	8443											665					665	7158
Level 04	855	9207	784	8443											665					665	7158
Level 05	855	9207	784	8443	4	1	1	-	4	2	4									614	6604
Level 06	855	9207	784	8443	4	1	1	-	4	2	4									614	6604
Level 07	855	9207	784	8443	4	1	1	-	4	2	4									614	6604
Level 08	855	9207	784	8443	4	1	1	-	4	2	4									614	6604
Level 09	855	9207	784	8443	4	-	1	1	4	2	4									614	6604
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APPENDIX B WASTE PRO-FORMA

Appendix E Proforma for Planning Applications



MANCHESTER
CITY COUNCIL

Planning Application - Waste Management Strategy

Planning Application Number: To be confirmed
Date Submitted: March 2020

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.	Not applicable for this application as the nature of the proposed development is not a standard residential tower.

Commercial Developments (inc. recycling strategy)

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

Co-living Units

The planning permission sought is Sui Generis and as this is not a standard residential or aparthotel development. It provides accommodation for people who might be new to the city but whose needs don't fit into the standard offer for rented apartments or a hotel/aparthotel. Given this nature of occupiers the waste will be treated as in a commercial operation and collected by cleaners. Waste collection would be with a private waste management company and would be maintained in perpetuity at the sole cost of the owner.

If we were to use the standard residential waste forecast of around 110 litres of waste per week per apartment or 40,920 litres per week for 372 units or 5845 litres per day.

The bin store can accommodate c. 20 Eurobins and therefore it is recommended to have a twice weekly collection.

Co-Living

The Co-work space can provide accommodation for c. 312 employees. Using BS5906:2005 forecast of 50 litres per employee per week (or 10 litres per day) this gives rise to a daily 3120 litres per day. The bin store can accommodate c. 5 Eurobins + 240 litre bin we expect that Co-Work waste would be collected daily.

Flexible Amenity/ Commercial Use

The flexible amenity/commercial space could be occupied with a General Store (341sqm) and a café (c. 100 covers).

Using BS5906:2005 the General Store is forecast a rate of 10 litres per 1sqm. This assumes that they employ a backhaul system so that delivery packaging is taken away by the delivery company. This equates to 3140 litres per week or 700 litres per day.

Again using BS5906 a café is assumed to generate 75 litres of waste per cover per week. This equates to 7,500 litres of waste per week or 1500 litres per day.

The forecast waste generation and bin storage volumes are given below:

Co-Living Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	23.5%	1,373
Mixed	23.5%	1,373
General Waste (inc Food)	53%	3,098
Daily Co-Living Waste	5,845 litres per day	
Co-Work Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	50%	1,560
Mixed	15%	468
Food Waste	5%	156
General Waste	30%	936
Daily Co-Work Waste	3,120 litres per day	
Flexible Amenity/Comm Retail Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	25%	175
Mixed	25%	175
General Waste (inc food)	50%	350
Daily Commercial Waste	700 litres per day	
Flexible Amenity/Comm Cafe Waste	(%) Volume of Waste generated	Waste Generated litres per day
Pulpable	22%	330
Mixed	28%	420
Food Waste	39%	585
General Waste	10%	150
Daily Commercial Waste	1,500 litres per day	

Co-Living Waste	No. Bins	Collection Frequency
Pulpable	5 Eurobins	Twice a week
Mixed	5 Eurobins	Twice a week
General Waste (inc Food)	10 Eurobins	Twice a week
Co-Work Waste	No. Bins	Collection Frequency
Pulpable	3 Eurobins	Daily
Mixed	1 Eurobins	Daily
Food Waste	1 x 240litre bin	Daily
General Waste	1 Eurobins	Daily
Flexible Amenity/Comm Retail Waste	No. Bins	Collection Frequency
Pulpable	1 x 240litre bin	Daily
Mixed	1 x 240litre bin	Daily
General Waste (inc food)	2 x 240litre bins	Daily
Flexible Amenity/Comm Cafe Waste	No. Bins	Collection Frequency
Pulpable	1 x 330litre bin	Daily
Mixed	2 x 240 litre bins	Daily
Food Waste	3 x 240litre Bins	Daily
General Waste	1 x 240 litre bin	Daily

Recycling of Waste

The proposed development's recycling streams have been outline above. The Co-Living Waste uses a refuse chute with a Tri-Separator so there are three waste streams with organic waste assumed to go into the general refuse stream.

It is expected that the Pulpable and Mixed Recyclables would be collected at the same time.

It is also noted that the General Refuse will be further processed by the Waste Contractor to reduce the amount going to landfill and most contractors can achieve close to a 100% rate of diversion from landfill.

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?

N/A

Internal Stores

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

Occupiers will be encouraged to separate waste at the source to aid recycling. Separate recycling bins will be provided within the Co-Living apartments and Co-Work Space. Waste will be transferred by cleaners to the refuse store. Waste collection will be supervised by the on-site building management team and involves bins being brought out immediately prior to collection and returned immediately after and to ensure areas are kept clean.

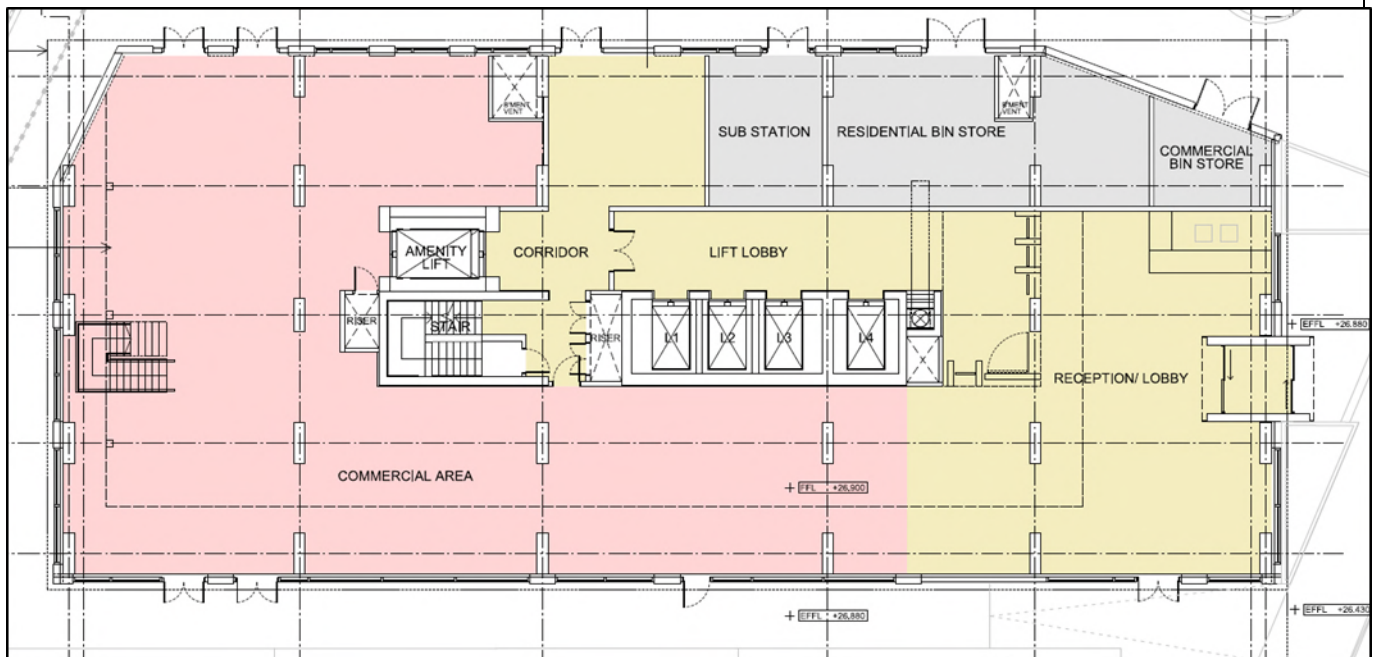
On each floor, the development will provide a refuse chute lobby. This will contain colour coded buttons to identify what type of waste is being deposited. The refuse chute will then direct that waste to the appropriate bin within the bin store at the bottom. The usage of the waste chute will be supervised in order to ensure the efficient internal movement of waste within the development. Management will be present 24 hours a day and as part of the overall strategy, the building management team will monitor the use of the chute system using CCTV to ensure compliance and to monitor how full each bin becomes. This will be supported by an automatic alarm that will alert management as each bin approaches capacity.

Waste will be collected by a licensed waste carrier in accordance with government legislation requiring the appropriate documentation to ensure that waste is disposed of in a hygienic and environmentally sustainable way.

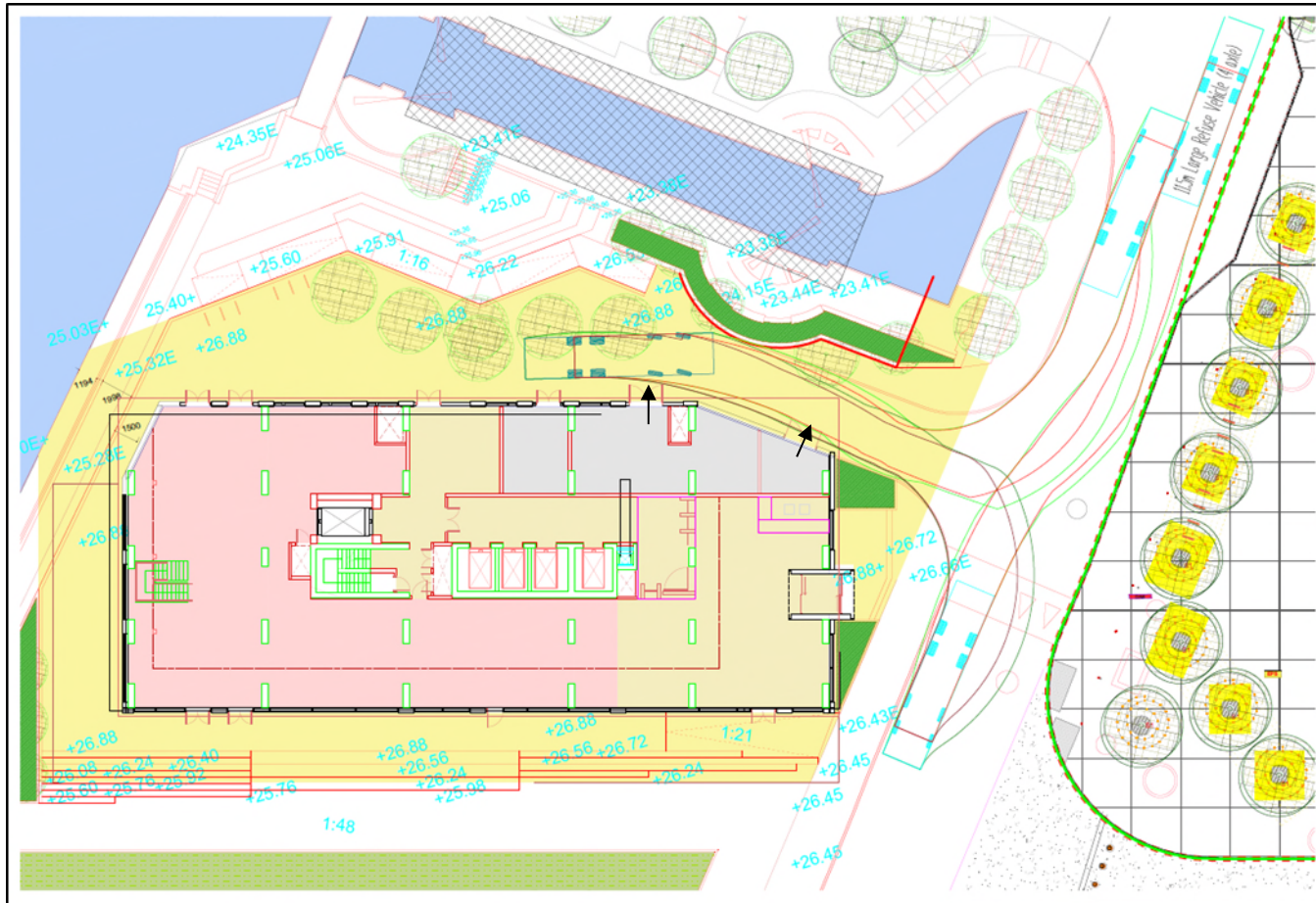
Storage Areas for Waste Containers

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

The main Co-Living bin store provides c.51sqm and a separate c.12sqm Bin Store is provided for the Co-Work land use. The flexible amenity/commercial land uses are assumed to store waste within their own demise. The storage their own demise would be determined prior to occupation. The main ground floor bin stores are given below.



Co-Living and Co-Work bin stores



Track of Large (11.5m) Refuse vehicle accessing the Service Area

Ensure all bins in the store are accessible

Yes*

*Note - The bin store will not be accessible by the general public. The bin storage area includes space for maneuvering and the doors are designed to be wider than the 1.3m minimum. Waste not to be sent via Chute would be collected by the On Site management team.

Ensure recycling facilities are as easy to access as general refuse

Yes

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

Ventilation

The bin store will benefit from ventilation, impermeable surfaces and a nearby water tap to assist in cleaning. There is no intention to compact or process the waste on site.

Hygiene

The floor and walls of the bins store 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.

Refuse containers will be brought out immediately prior to collection and returned immediately after by the on-site building management team.

Refuse containers will be wheeled a short distance from the refuse store to the collection vehicle. The path between the ground floor refuse store and the collection vehicle using the service road to the east of the building. The route will be step free and will have a minimum width of 1.54m, ensuring adequate manoeuvring space.

It is also noted that waste collection for the development could be aligned with the wider collection activities taking place at St Johns to improve efficiency and reduce the number of refuse vehicles needing to serve the site.

The waste contract can be provided through Manchester City Council's own residential waste collection regime with increased collections agreed through a legal agreement/planning condition, via Manchester City Council or a private contractor.

Please ensure that you have attached:

Detailed plans of waste stores	Yes
Location plans showing stores	Yes
Location plans showing the proposed collection point and the route the collection vehicle will take	Yes

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