

WASTE & SERVICING STRATEGY

Union Living Manchester 1 Ltd

T1 UNION, ST JOHN'S MANCHESTER

Discharge of Conditions 26/27

July 2021

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Ground Floor
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1 INTRODUCTION

Background

- 1.1 Vectos have been commissioned by Union Living Manchester 1 Ltd to provide Waste & Servicing advice in support of the T1 Union development off Water Street, part of the St John's regeneration development located in Central Manchester. This report aims to discharge Conditions 26 and 27 of the planning permission LPA Ref 125655/FO/2019. These conditions are given below:

Condition 26:

No development, other than enabling works comprising piling and construction of the substructure commences, shall commence until a scheme for the storage (including segregated waste recycling) and disposal of refuse, in association with all office uses, flexible commercial elements, has been submitted to and approved in writing by the City Council as local planning authority. The details of the approved scheme shall be implemented as part of the development and shall remain in situ whilst the use or development is in operation.

Condition 27:

No development, other than enabling works comprising piling and construction of the sub structure, shall commence until a scheme for the storage (including segregated waste recycling) and disposal of refuse, in association with all co-living units, has been submitted to and approved in writing by the City Council as local planning authority. The details of the approved scheme shall be implemented as part of the development and shall remain in situ whilst the use or development is in operation.

Planning History

- 1.2 Planning consent for a 36-storey tower was granted in 2017 under planning reference 114385/FO/2016, for 305 residential apartments along with retail uses at ground floor. The revised application, reference 125655/FO/2019 amended this scheme to involve the construction of a new 32 storey building with two levels of basement, to accommodate 390 co-living units (870 beds), public and private amenity space and ground floor commercial space.
- 1.3 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

Site Overview

- 1.4 The Site comprises previously developed land. **Figure 1.1** overleaf illustrates the location of the Site within the context of Manchester city centre.

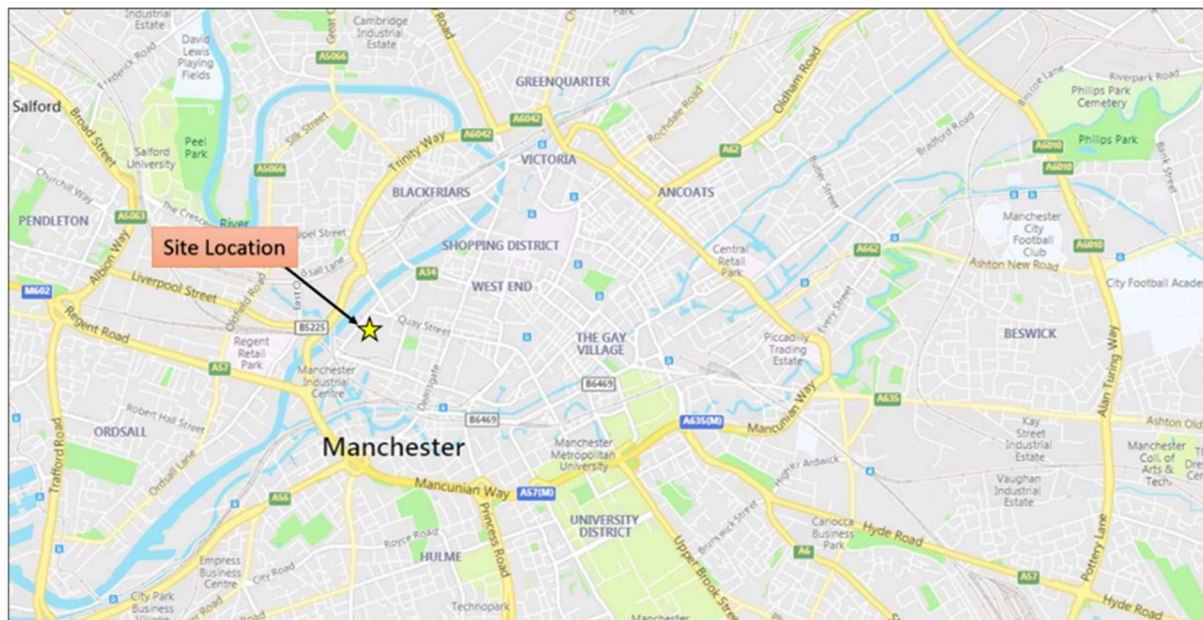


Figure 1.1. Site Location

- 1.5 It lies to the east of Water Street, and to the west of the Manchester Goods Yard development site, which is being developed as an eleven-storey mixed use commercial building.
- 1.6 The site lies adjacent to, or in close proximity to, a number of Listed structures and non-designated heritage assets, including the Grade I Listed Liverpool Road Station and Goods Warehouse, Grade II Listed Colonnaded Railway Viaduct, Grade II Listed Zig Zag Viaduct, Grade II Listed Victoria and Albert Hotel and the Bonded Warehouse.

Report Structure

- 1.7 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.
- 1.8 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.
- 1.9 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.
- 1.10 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 The Union, St Johns' site previously operated as a surface car park associated with ITV Granada Studios (see **Figure 2.1**) and since that time the area has been undergoing considerable redevelopment as part of the St Johns regeneration framework. T with the red line boundary for the application shown in the drawing **Dwg 6510-T1-P-B500-XP-00-002 Rev A**.

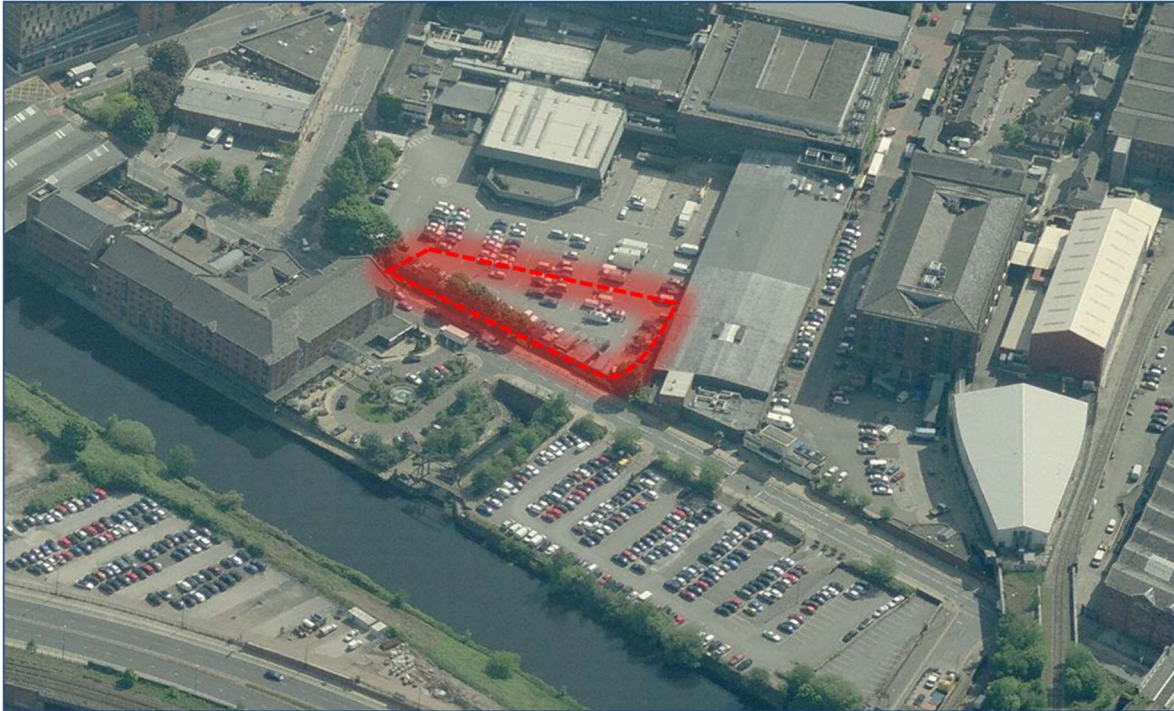


Figure 2.1. Aerial View of the Site

- 2.2 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 adjacent Manchester Goods Yard development.

3 DEVELOPMENT PROPOSALS

Introduction

- 3.1 Full planning permission is being sought for the erection of a 32-storey building plus two basement levels, comprising 390 co-living units and studios and associated occupants' amenity space (Sui Generis), gym (Use Class D2), flexible commercial space (Use Classes A1, A2, A3 and / or A4), landscaping, access and other associated works. The scheme will be car-free with no car parking provided.
- 3.2 The Ground Floor and B1 Basement layouts are shown in **Dwg 6548-P-B500-P-00** and **Dwg 6548-A-G200-P-B1**.
- 3.3 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. 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.
- 3.4 The Studios and Studio + are expected to attract more short-term demand and will be available on tenancies from 1-month. 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.
- 3.5 The general ground floor layout of the scheme is provided as **Dwg 6548-P-B500-P-00**. It can be seen that there are two commercial units proposed with one providing 194sqm of flexible commercial space and the second providing 158sqm.

4 SERVICING STRATEGY

Introduction

- 4.1 The main servicing will occur to the rear of the building, where a new dedicated service road will be provided (which will be an unadopted private road) running in a one-way clockwise direction from Water Street between Union, St John's and Manchester Goods Yard, before re-joining Grape Street via the South Street service access road.
- 4.2 Access to this road will be controlled using automatic bollards, similar to the arrangement used at Irwell Square within the Left Bank development in Manchester City Centre. The service route will be shared with pedestrians and cyclists and any vehicle will be subject to a 5mph speed limit and be instructed to move at walking pace so that pedestrians have priority.
- 4.3 The tracking of a 10m Freight Transport Association Design Rigid vehicle through this service route is shown in **Dwg VN70930-TR116**.
- 4.4 There is the potential that Festival Square may be closed on occasion to host events. When this occurs, service vehicles for both Union and from MGY will access the MGY Service Road and travel around MGY, past the Studios and head west towards Festival Square. At this point the vehicles would turn right using the Union/MGY Service Road in the reverse direction. The tracking of vehicles in this scenario is shown in **Dwg VN70930-TR117**.

Typical Deliveries

- 4.5 The typical deliveries for Union are as follows:
 - Residential: Online Groceries, post /courier deliveries, occasional furniture deliveries.
- 4.6 In addition, there may be some deliveries for the gym and ancillary commercial units:
 - Ancillary Commercial Units: consumables, retail products, food, drink, stationary.

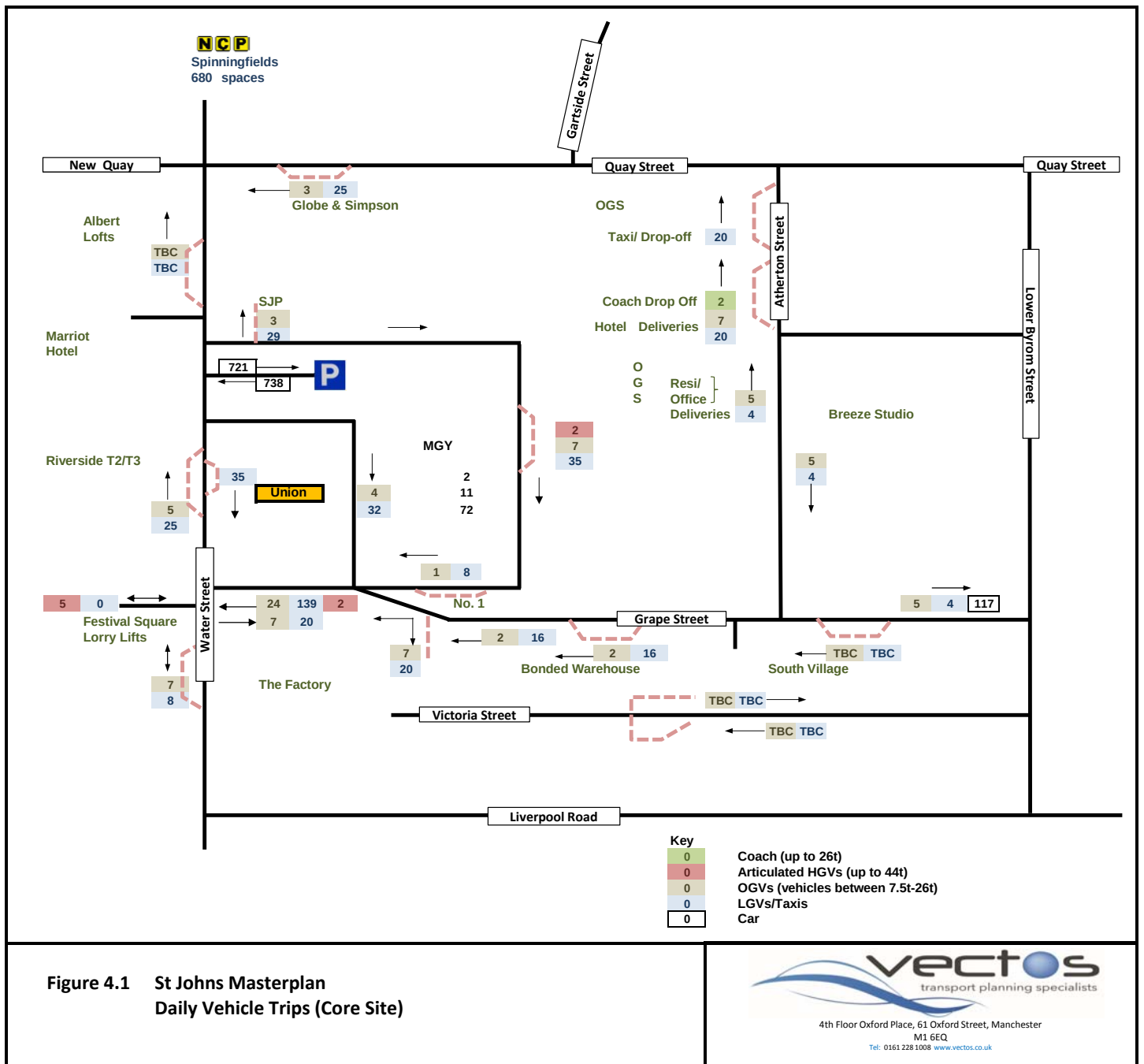
Proposed Goods Receipt Strategy

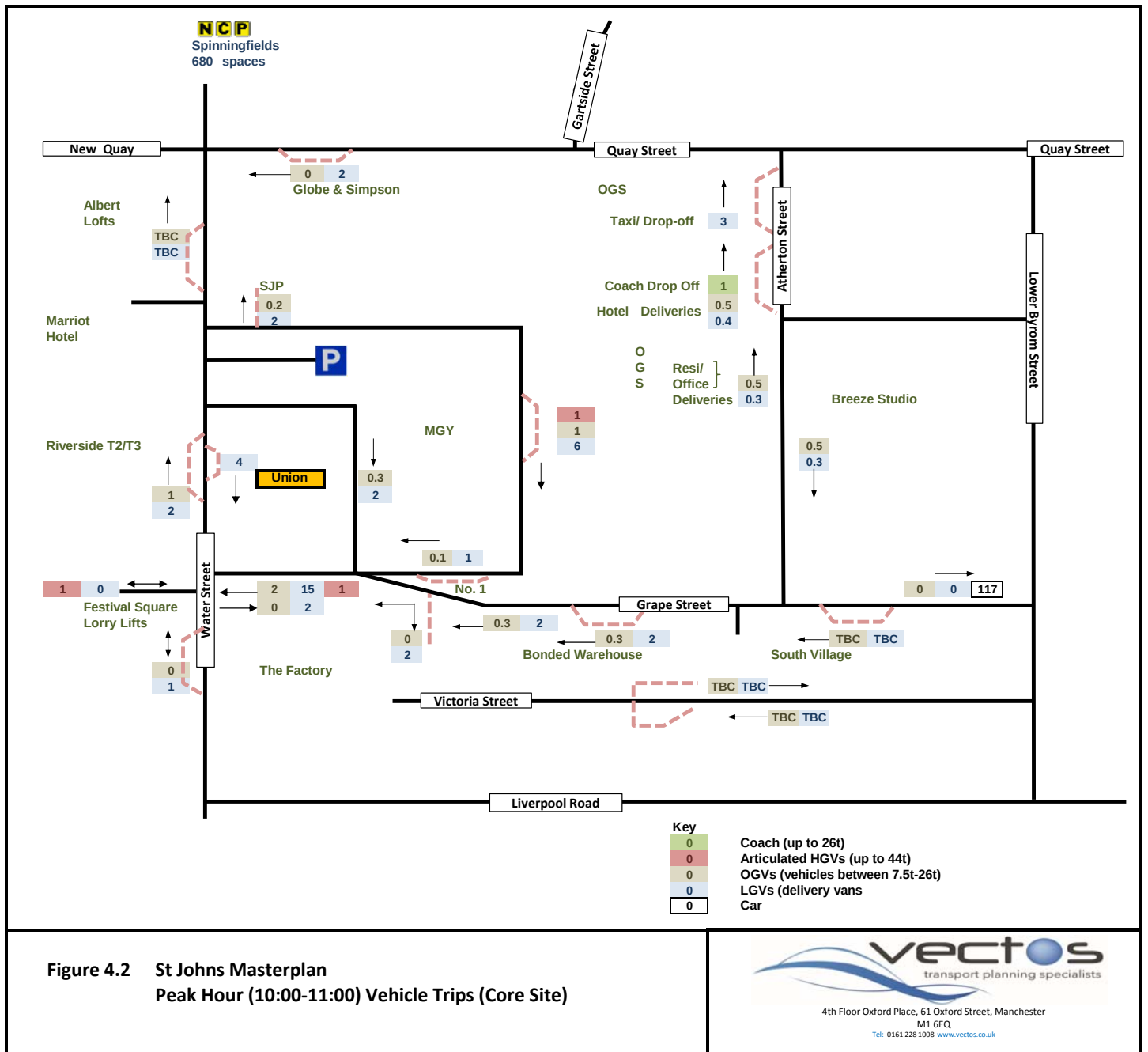
4.7 The proposed goods receipt strategy is described below:

- 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.

Delivery Forecasts

- 4.8 The estimated waste and servicing vehicle trips generated by Union have been based upon information from the TRICS database. These forecasts have been considered alongside the waste and servicing trips generated by the wider St John's development, to provide a comprehensive picture of these trips in and around the area under a full operational scenario.
- 4.9 These wider development servicing trips have also been based upon the TRICS database as well as other surveyed information from similar land uses and described more fully in the Transport Assessment. The forecasts separate light delivery vehicles and other goods vehicles that are in excess of 7.5tonnes.
- 4.10 It is expected that there would be a good deal of coordination of deliveries as drivers would progress from one building to the next. This will help limit the overall number of vehicles arriving to the development.
- 4.11 The forecast number of delivery vehicles expected over the day by the type of use is given in **Figure 4.1**. The busiest period overall for service activity is between 10:00-11:00 and the service traffic at this time is shown in **Figure 4.2**.
- 4.12 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. Occasional vehicles may stay for longer, up to 40 minutes such as those making furniture deliveries.
- 4.13 The length of parking by service vehicles in the area would be monitored via CCTV by the on-site management and if any problems are identified they can tackle that directly with the delivery company or via the occupier.





**Figure 4.2 St Johns Masterplan
Peak Hour (10:00-11:00) Vehicle Trips (Core Site)**

5 WASTE MANAGEMENT STRATEGY

Introduction

- 5.1 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.
- 5.2 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.

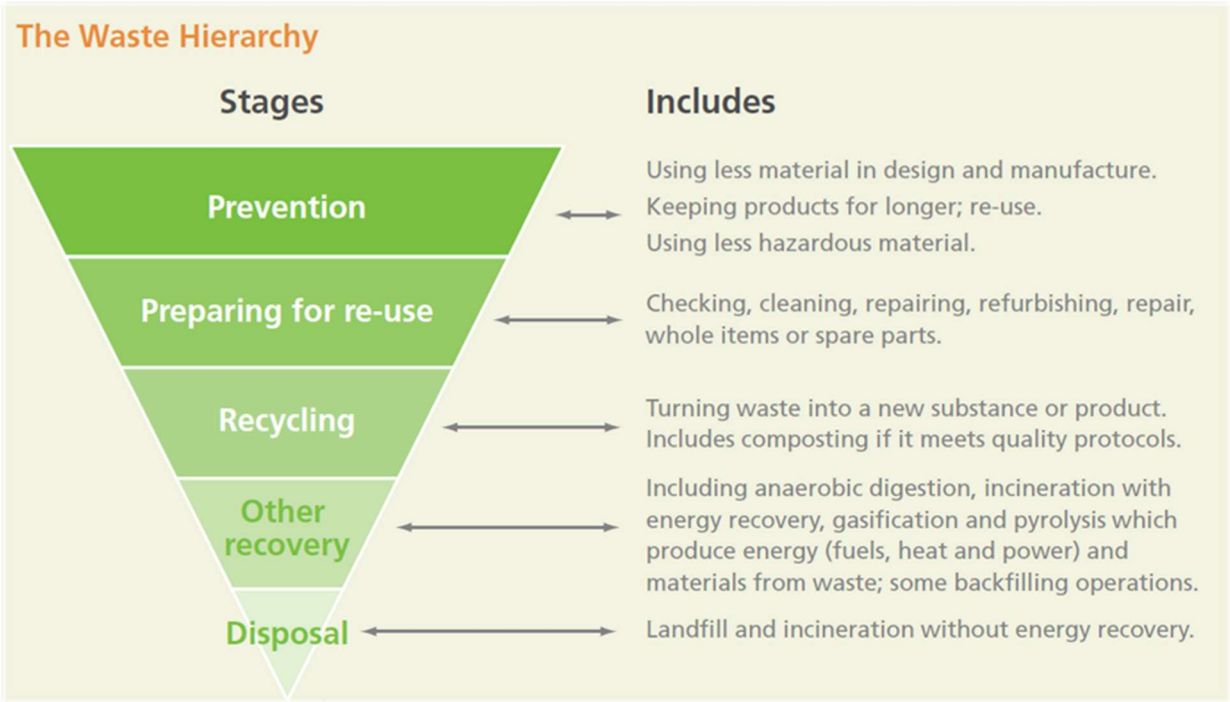


Figure 5.1: Waste Hierarchy

- 5.3 The waste collection would be overseen by the management company for Union, 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 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.

Co-Living Waste Streams

- 5.5 The residential waste management benefits from a Waste Chute which includes a tri-separator to separate recyclables. Those waste streams are: General Refuse & Food waste, Pulpable Card/Paper and Mixed Recyclables. Residents would have three bins within each apartment according to the three waste streams and they would take the waste from their apartment bins to the refuse chute lobby on their floor. They would select the button according to the waste type and deposit the waste in the chute. An example of a waste chute is provided in **Figure 5.2**.



Figure 5.2: Three Way Waste Chute Panel

- 5.6 Beneath the tri-separator there are 3 x 1100litre bins positioned to accept the waste. 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 and swapped over accordingly by the on-site team.
- 5.7 Bins in the refuse store would be monitored and the area kept clean by the on-site management team, and this would be helped by the provision of a tap and impervious floors.
- 5.8 Residents do not have access to the bin store. Residents with large or unusual items of waste can arrange with reception to have the waste put in one of the bins by the management team or for items such as furniture, collected with a charge.

- 5.9 The shared use amenity areas would be kept clean by the management company and the waste collected by cleaners who in the upper floor areas would either use the same waste chute system or take the waste by lift to the bin store. The shared space includes dining and food preparation areas and in these areas the cleaners would take that food waste to the bin store where there are a couple of bins available.
- 5.10 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.
- 5.11 The development therefore will 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. Notwithstanding that, we have used a standard rate of waste generation per apartment of 110 litres of waste per week as set out in BS2906:2005. This equates to the following waste generation:
- 42,900 litres per week for 390 units.

Commercial Waste Forecast - Gym

- 5.12 The gym located in the basement is expected to generate relatively low volumes of waste most of which would be consumables waste such as plastic bottle waste. There is little data on waste generation for this type of land use but from observation it is assumed that a gym of this size may generate around:
- 100 litres per day or 700 litres per week.

Commercial Waste Forecast – Ground Floor Flexible Retail Units

- 5.13 The occupiers of the ground floor commercial space are not known but we have taken a robust view assuming that these are occupied by higher generating land uses.
- 5.14 We have assumed that for robustness that the smaller northern unit is occupied by a café /restaurant (which would generate more waste than a bar) and based on the size we have assumed that this would have around 100 covers. Based on MCC's GD04 restaurant rate of 1500 litres per 20 covers per week. This equates to the following waste generation:
- 7,500 litres of waste per week for approximately 100 covers, or around 1100 litres per day.
- 5.15 We have assumed the southern ground floor unit of 198 sqm would be occupied by a retail unit. MCC's GD04 suggests a rate for retail uses but here we have taken the higher rate from BS5906:2005 it suggests a rate of 10 litres per sqm for a per week for that type of use which equates to the following trip generation:
- 1,980 litres of waste per week, or around 300 litres per day.

Recycling Waste Streams Forecasts

5.16 We have forecast the volume of recycling waste generated for T1 Union are described in **Table 5.1** below. This has been based on either MCC guidance, WRAP studies or surveys of similar land uses.

Table 5.1 Waste Generation & Recycling Rates					vectors.	
Tower 1 Waste Forecast		Vectos	12.07.19	v2		
Co-Living						
Co-Living Apartments		=	390			
Weekly Waste Forecast						
GD04 Waste Forecast (110 litres per Apartment per Week)		=	42900 litres per week			
		=	6129 litres per day			
		=	18386 litres every 3 days			
Bin Storage Provision			=	51	sqm	
Waste Collection Frequency			=	Every 3 days		
Recycling Streams			General Refuse (inc Food Waste	Paper/ Card	Plastic/ Metal/ Glass	Total
* Based on GD04		Waste Recycling	52%	24%	24%	
		Waste Generation based on a collection every 3 days (Litres)	9561	4413	4413	18386
		Bin Storage	1100l Eurobin	1100l Eurobin	1100l Eurobin	
			9	5	5	19
Southern Commercial Space (A1/A2/A3/A4) Assume Retail						
Retail Unit						
BS5906:2005 10 litres per m ² per week						
Area		198 sqm	c.	1980 litre of Waste per Week		
			=	792 Litres every 2 Days (with Headroom)		
Bin Storage Provision To be confirmed, subject to fitout			Assumed to include 4 x 240 litre bins			
Waste Collection Frequency			Every 3 Days			
Recycling Streams			General Refuse	Paper/ Card	Plastic/ Metal/ Glass	Total
* Based on WRAP Waste Ratios		Waste /Recycling	50%	25%	25%	
		Waste Generation based on a collection every 2 days (Litres)	396	198	198	792
		Bin Storage	240 litre	240 litre	240 litre	
			2	1	1	4
Northern Commercial Space (A1/A2/A3/A4) Assume Café/Restaurant						
Restaurants						
BS5906:2005 75 litres per cover per week						
Area		154 sqm	c.	100 covers		
			=	7500 Litres of Waste per Week		
			=	1500 Litres every Day (with Headroom)		
Bin Storage Provision To be confirmed, subject to fitout			Assumed to include 2 x 240 litre bins and 3 x 360 litre bin			
Waste Collection Frequency			Every Day			
Recycling Streams			General Refuse	Organic	Paper/ Card	Plastic/ Metal/ Glass
* Based on WRAP Waste Ratios		Waste /Recycling	10%	40%	22%	28%
		Waste Generation based on a daily collection (Litres)	150	600	330	420
		Bin Storage	240 litre	360 litre	360 litre	240 litre
			1			2
				2	1	3
Basement Gym						
Gym Unit						
Assumed Waste Generation		700 litre of Waste per Week				
Bin Storage Provision To be confirmed, subject to fitout			Assumed to include 2 x 240 litre bins, 1 x 360 litre bin			
Waste Collection Frequency			Weekly			
Recycling Streams			General Refuse	Paper/ Card	Plastic/ Metal/ Glass	Total
* Based on WRAP Waste Ratios		Waste /Recycling	50%	25%	25%	
		Waste Generation based on a weekly collection (Litres)	350	175	175	700
		Bin Storage	360 litre	240 litre	240 litre	
			1	1	1	2
						1

Table 5.1 T1 Union, Waste Generation, Recycling and Waste Storage

- 5.17 It is also noted that the General Refuse will be further processed by the Waste Contractor to reduce the amount going to landfill. In fact most waste collection companies can offer nearly 100% waste recycling or energy from waste management.

Waste Collection Frequency

- 5.18 As a large development with a unique land use, the frequency of refuse collection reflects the nature of the land use and the type of waste collected. The proposed frequency of collection is:

- | | |
|--|--------------|
| - Co-Living | Every 3 days |
| - Flexible Retail Unit, Retail | Every 3 Days |
| - Flexible Retail Unit Café/Restaurant | Daily |
| - Gym | Weekly |

Waste Management Strategy

- 5.19 Waste collection for T1 Union 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. A tap will be provided close to the bin stores to help cleaning.
- 5.20 As described in Section 3, Co-Living is not a standard residential offer as it provides accommodation for people who might be new to the city but whose needs do not fit into the standard offer for rented apartments or an aparthotel. 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.
- 5.21 The refuse containers will be wheeled a short distance from the refuse store to the collection vehicle which will park on the service road to the east of the building. Waste from the Gym will be brought up to ground floor level by the lift.
- 5.22 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 T1 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.
- 5.23 If the development generates significant volumes of Food Waste then this will be subject to animal by-products controls. Developments which generate significant volumes of food waste will have to comply with the requirements of the 'Animal By-Product' Regulations (Defra 2011). The on site team will manage this with the waste collection company in accordance with the guidance.

Waste Storage Provision

- 5.24 The Co-Living land use has a dedicated bin store with an area of 51sqm accommodating around 21 Eurobins and a Waste Chute Tri-Separator unit. The bin stores for the ground floor commercial units would be determined according to the nature of the occupiers and the fitout of those spaces as would the gym in the basement. We have shown below in **Figure 5.3** the potential location of the ground floor bin stores to give an indication of the area needed to be allocated within the demise. We also show the allocation of bins to the respective waste streams as described in **Table 5.1**.

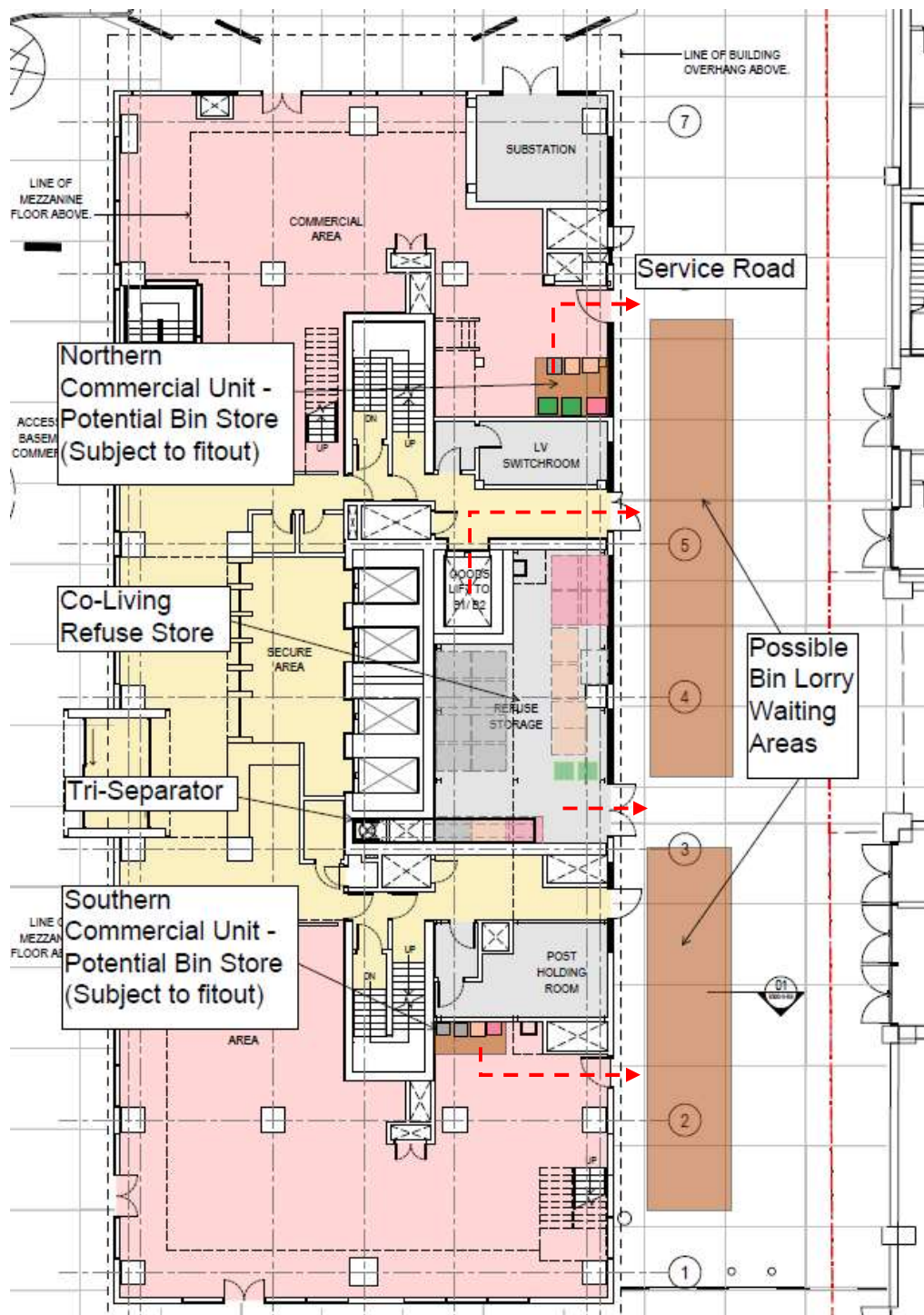


Figure 5.3 Ground Floor Bin Storage Provision

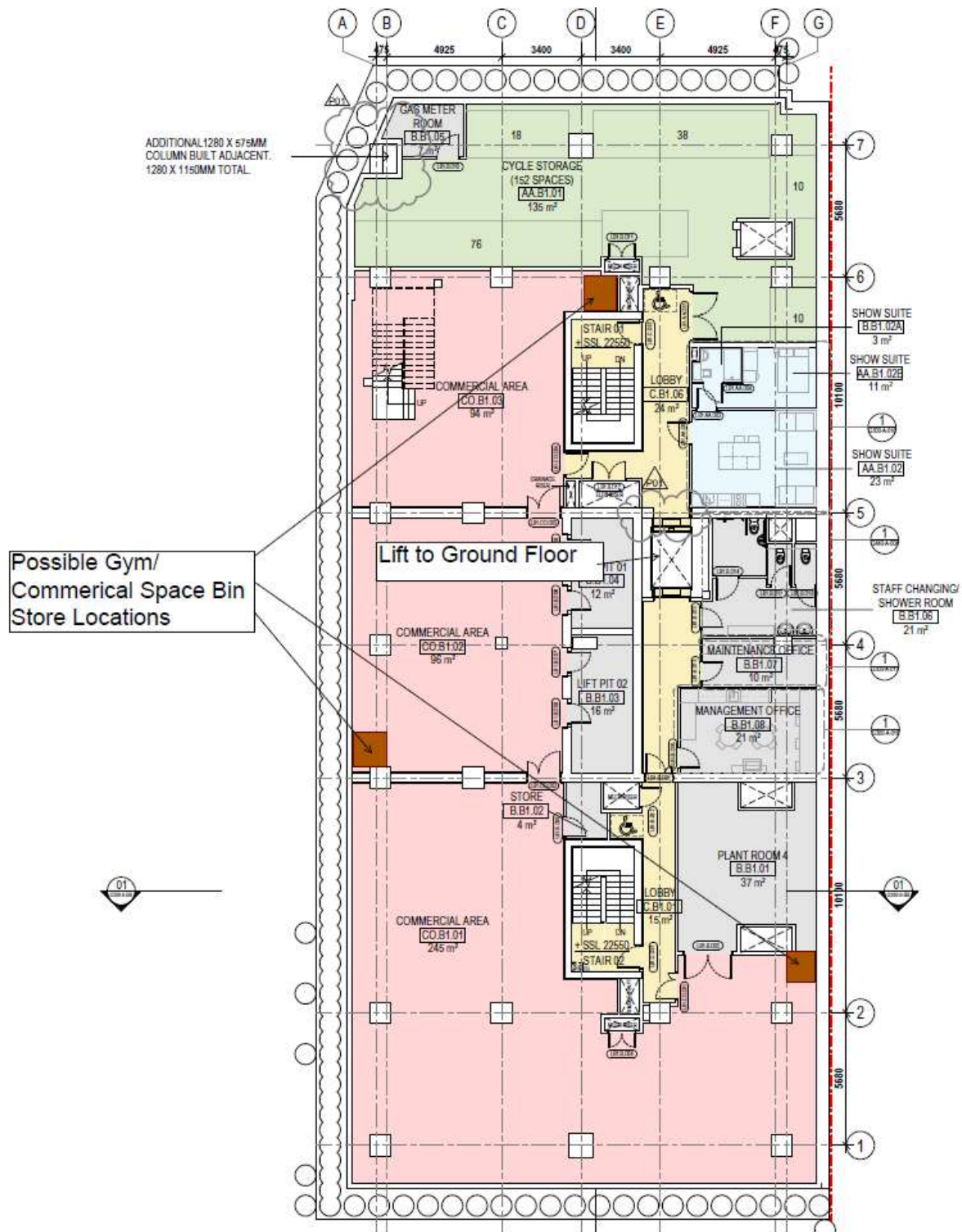


Figure 5.4 Basement Gym/Amenity Space Layout

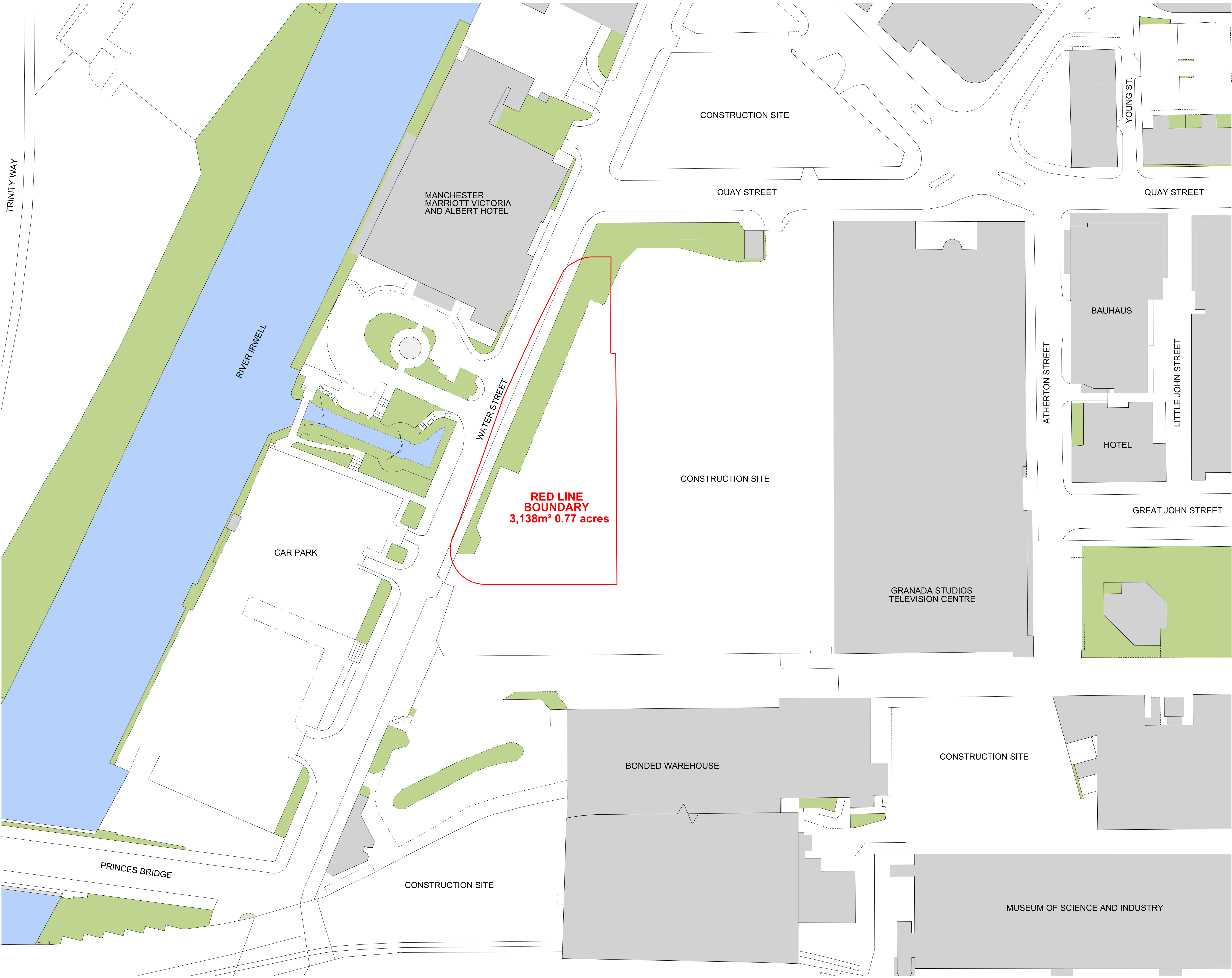
- 5.25 These bin stores would be kept clean and there will be a water tap in the bin store to help in that process.

- 5.26 The waste from the gym and commercial uses would be stored within their own demise and kept separate from the residential waste. The collection regime would be via a private contractor where bins would then be returned immediately after collection has taken place.
- 5.27 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 A**. The waste forecast assumptions are described below for each type of land use.

6 CONCLUSIONS

- 6.1 This document provides a Waste & Servicing Strategy for a new 32 storey building with two levels of basement, to accommodate 390 co-living units, public and private amenity space including a gym and ground floor commercial space.
- 6.2 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.
- 6.3 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



General Notes
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KEY
— RED LINE APPLICATION BOUNDARY

A	20191111	JG	GS	JR	PLANNING ISSUE
-	20191008	CM	GS	JR	DRAFT PLANNING ISSUE
No.	Date	Dwn	Chk	App	Revision or reason for issue

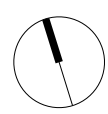
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Scale / North Point
1:1000 @ A3
0 5 10 15 25m
1:500 @ A1
0 5 10 15 25m



Drawing Title
EXISTING SITE PLAN

Drawing Number
6510-T1-P-B500-XP-00-002 A
Drawing Status
PLANNING

General Notes:
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KEY

- BACK OF HOUSE
- CIRCULATION
- COMMERCIAL
- SITE BOUNDARY

A	20191111	JG	GS	JR	PLANNING ISSUE
-	20191004	CC	JR	JR	DRAFT PLANNING ISSUE
No.	Date	Dwn	Chk	App	Revision or reason for issue

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Project Title

UNION, ST. JOHNS

Scale / North Point

1:100 @ A1 0 1 2 3 5M
1:200 @ A3

Drawing Title

LEVEL 00 GA PLAN

Drawing Number

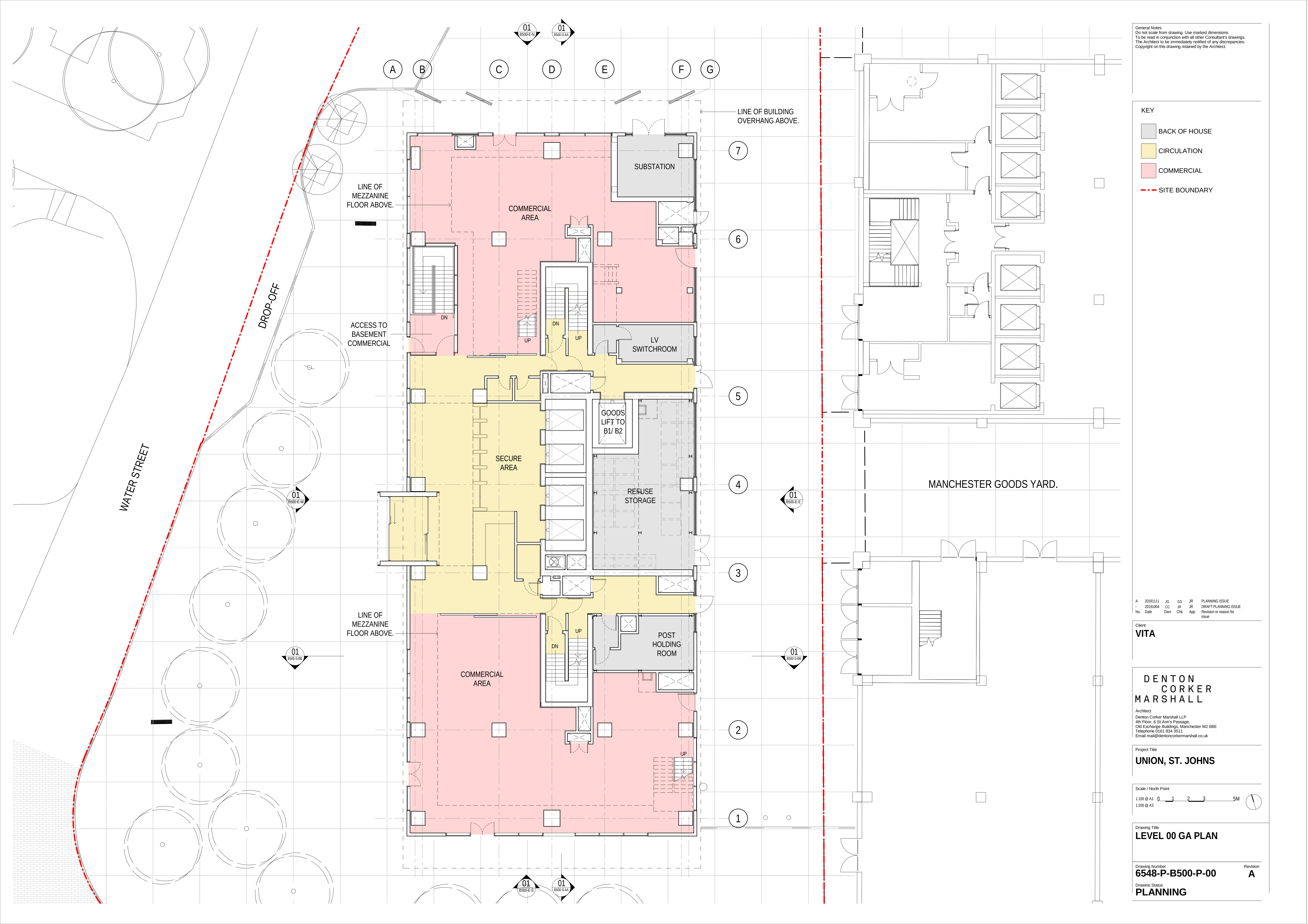
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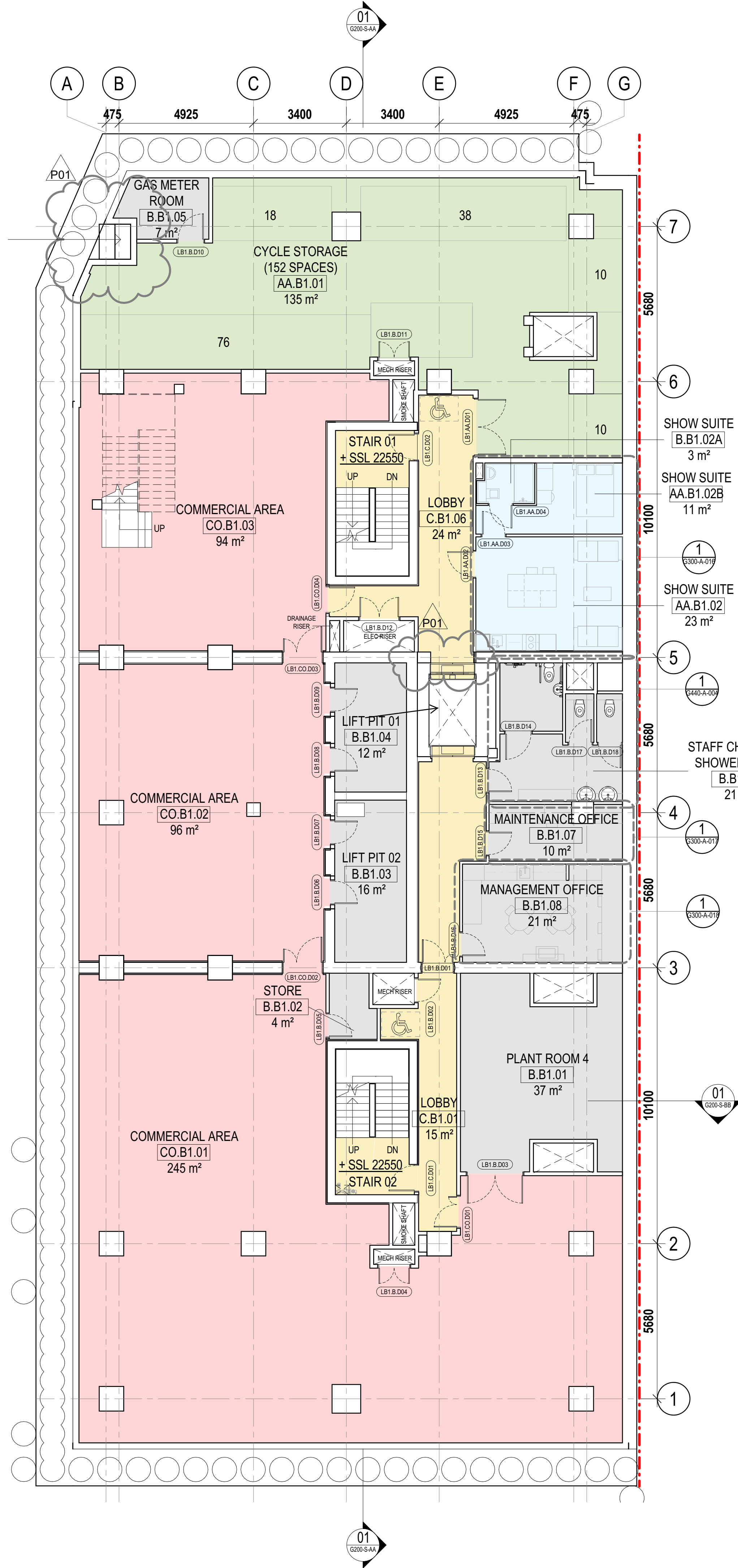
PLANNING

Revision

A



ADDITIONAL 1280 X 575MM
COLUMN BUILT ADJACENT.
1280 X 1150MM TOTAL.



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- KEY
- AMENITY
 - BACK OF HOUSE
 - CIRCULATION
 - COMMERCIAL
 - STORAGE
 - DIVIDING BOUNDARY

P01	20201204	ES	GS	JR	REISSUED FOR STAGE 4 Updates to Basement, B1-L02 Columns, L01 AHU cabinets
M	20200313	MM	GS	JR	REISSUED FOR STAGE 4
L	20191129	GS	GS	JR	REISSUED FOR STAGE 3
K	20191115	GS	GS	JR	ISSUED FOR STAGE 3
J	20191004	GS	GS	JR	First Issue
H	20190905	CC	JR	JR	Stage 2 Drawing Set
G	20190827	SY	JR	JR	Drawing updated
F	20190731	SY	JR	JR	Gym Entrance
E	20190728	SY	JR	JR	Structure
D	20190717	SY	JR	JR	For Coordination
C	20190712	SY	JR	JR	For Coordination
B	20190708	SY	JR	JR	Column moved to slab edge
A	20190704	SY	JR	JR	FIRST ISSUE STAGE 2 (ADDED SHOW SUITE)
-	20190703	PM	JR	JR	FIRST ISSUE STAGE 2
No.	Date	Dwn	Chk	App	Revision or reason for Issue

Client
VITA

**DENTON
CORKER
MARSHALL**

Architect
Denton Corker Marshall LLP
4th Floor, 6 St Ann's Passage,
Old Exchange Buildings, Manchester M2 6BE
Telephone 0161 834 3511
Email mail@dentoncorkermarshall.co.uk

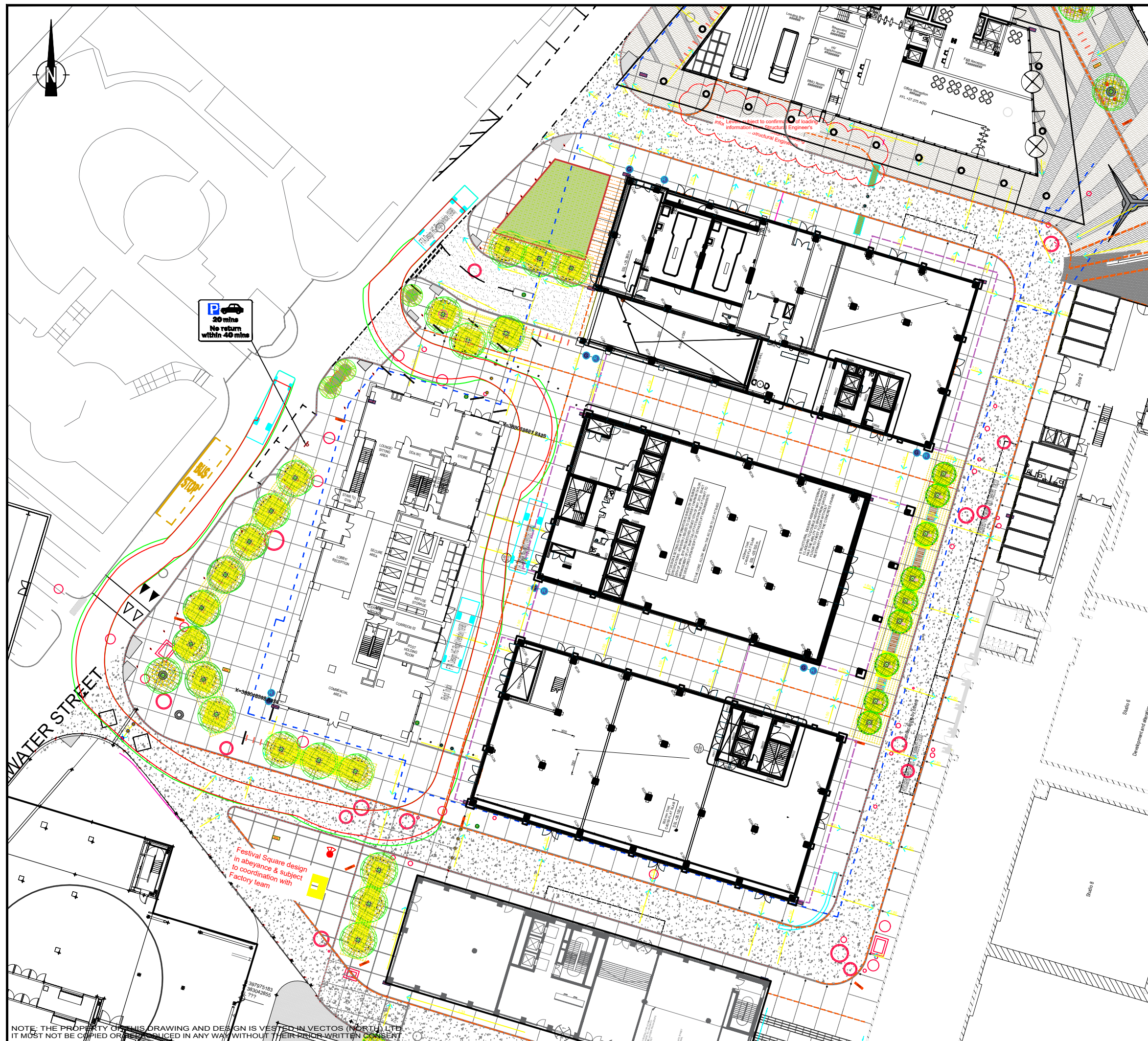
Project Title
**T1 VITA LIVING,
ST JOHN'S**

Scale / North Point
1:100 @ A1 0 1 2 3 5M
1:200 @ A3

Drawing Title
GA PLAN LEVEL B1

DCM Drawing Number
6548-A-G200-P-B1
RENAKER Drawing Number
T1-DCM-G200-P1-B1-001
Drawing Status
STAGE 4

Revision
P01



Notes:

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

FTA Design HG Rigid Vehicle (1998)

Overall Length 10.000m
Overall Width 2.500m
Overall Body Height 3.645m
Min Body Ground Clearance 0.440m
Track Width 2.470m
Lock to lock time 3.00s
Kerb to Kerb Turning Radius 11.000m

REV.	DETAILS	DRAWN	CHECKED	DATE

CLIENT:

Union Living Manchester 1 Ltd

PROJECT:

Union

DRAWING TITLE:

Swept Path Analysis -
10m Rigid HGV

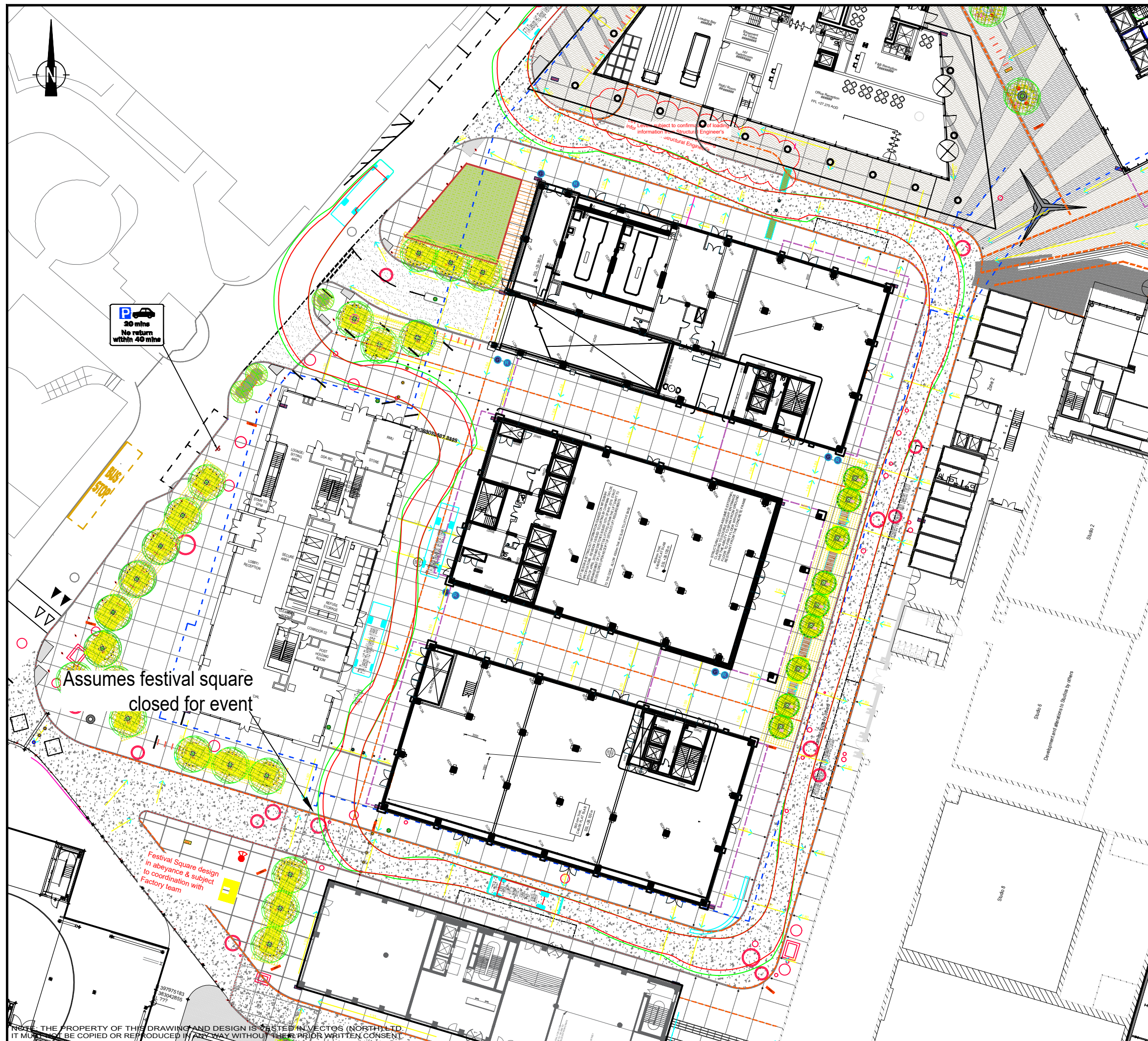
SCALES:

1:500 @A3

DRAWN: WD	CHECKED: GD	DATE: 26.11.2019
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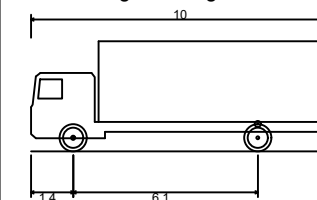
4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008
e: manchester@vectos.co.uk

DRAWING NUMBER:	REVISION:
VN70930-TR116	-



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

FTA Design HG Rigid Vehicle (1998)



Overall Length 10.000m
Overall Width 2.500m
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PROJECT:

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Swept Path Analysis -
10m Rigid HGV

SCALES:

1:500 @A3

DRAWN: WD CHECKED: GD DATE: 26.11.2019



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

DRAWING NUMBER: VN70930-TR117 REVISION: -

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Appendix A

A WASTE PRO-FORMA

Appendix E Proforma for Planning Applications



MANCHESTER
CITY COUNCIL

Planning Application - Waste Management Strategy

Planning Application Number: LPA Ref: 125655/FO/2019

Date Submitted: July 2021

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 maneuver and access containers individually has also been provided so that each container can be accessed and removed for collection individually.	No Co-Living is not a standard residential land use as it includes shared amenity space and has shorter tenancies and is attractive to a different demographic.

Commercial Developments (inc. recycling strategy)

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

Table 5.1 Waste Generation & Recycling Rates				vectos.				
Tower 1 Waste Forecast		Vectos	12.07.19	v2				
Co-Living								
Co-Living Apartments		=	390					
Weekly Waste Forecast								
GD04 Waste Forecast (110 litres per Apartment per Week)		=	42900 litres per week					
		=	6129 litres per day					
		=	18386 litres every 3 days					
Bin Storage Provision		=	51		sqm			
Waste Collection Frequency		=	Every 3 days					
Recycling Streams		Waste Recycling		General Refuse (inc Food Waste)	Paper/ Card	Plastic/ Metal/ Glass	Total	
* Based on GD04		Waste Generation based on a collection every 3 days (Litres)		52%	24%	24%	18386	
				9561	4413	4413		
		Bin Storage		1100l Eurobin	1100l Eurobin	1100l Eurobin	19	
				9	5	5		
Southern Commercial Space (A1/A2/A3/A4) Assume Retail								
Retail Unit								
BS5906:2005 10 litres per m ² per week								
Area		198 sqm	c.	1980 litre of Waste per Week				
			=	792 Litres every 2 Days (with Headroom)				
Bin Storage Provision To be confirmed, subject to fitout				Assumed to include 4 x 240 litre bins				
Waste Collection Frequency				Every 3 Days				
Recycling Streams		Waste /Recycling		General Refuse	Paper/ Card	Plastic/ Metal/ Glass	Total	
* Based on WRAP Waste Ratios		Waste Generation based on a collection every 2 days (Litres)		50%	25%	25%	792	
				396	198	198		
				240 litre	240 litre	240 litre		
		Bin Storage		2	1	1	4	
Northern Commercial Space (A1/A2/A3/A4) Assume Café/Restaurant								
Restaurants								
BS5906:2005 75 litres per cover per week								
Area		154 sqm	c.	100 covers				
			=	7500 Litres of Waste per Week				
			=	1500 Litres every Day (with Headroom)				
Bin Storage Provision To be confirmed, subject to fitout				Assumed to include 2 x 240 litre bins and 3 x 360 litre bin				
Waste Collection Frequency				Every Day				
Recycling Streams		Waste /Recycling		General Refuse	Organic	Paper/ Card	Plastic/ Metal/ Glass	Total
* Based on WRAP Waste Ratios		Waste Generation based on a daily collection (Litres)		10%	40%	22%	28%	1500
				150	600	330	420	
				240 litre	360 litre	360 litre	240 litre	
		Bin Storage		1			2	3
					2	1		3
Basement Gym								
Gym Unit								
Assumed Waste Generation		700 litre of Waste per Week						
Bin Storage Provision To be confirmed, subject to fitout				Assumed to include 2 x 240 litre bins, 1 x 360 litre bin				
Waste Collection Frequency				Weekly				
Recycling Streams		Waste /Recycling		General Refuse	Paper/ Card	Plastic/ Metal/ Glass	Total	
* Based on WRAP Waste Ratios		Waste Generation based on a weekly collection (Litres)		50%	25%	25%	700	
				350	175	175		
				360 litre	240 litre	240 litre		
		Bin Storage			1	1	2	
				1			1	

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?

Co-Living Stores are separate from Commercial uses who will store within own demise.

Internal Stores

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

Co-Living apartments will have 3 colour coded bins plus a food caddy.
There is a Waste Chute with a Tri-separator for the 3 main waste streams.

Waste Stream 1 - General Refuse (including Organic)
Waste Stream 2 - Pulpable Waste (Paper & Card)
Waste Stream 3 - Mixed Recyclables (Glass, Metals, Plastics)

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.

The shared Co-Living amenity spaces will have 3 colour coded bins available to use.

Cleaners would take waste from the shared amenity spaces and either take them to the Waste Chute or via lift to the bin store.

The Commercial Occupiers of the Ground Floor Flexible Retail Units have not yet been identified and their bin stores will be constructed as part of the fitout.

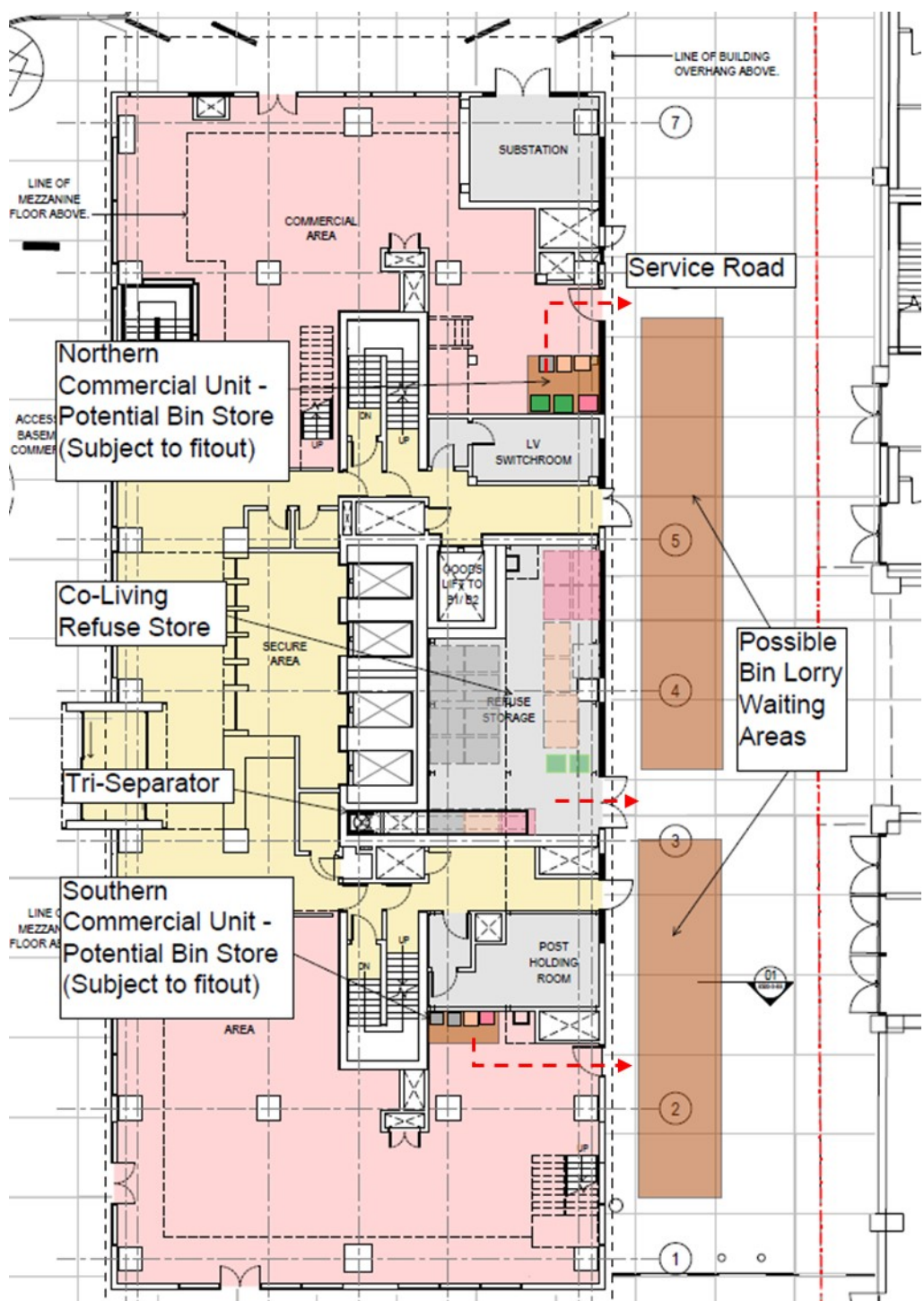
Occupiers will separate waste at the source to aid recycling. Waste collection will be supervised by the on-site building management team and involves bins being brought out immediately prior to collection and returned immediately after and to ensure areas are kept clean.

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.

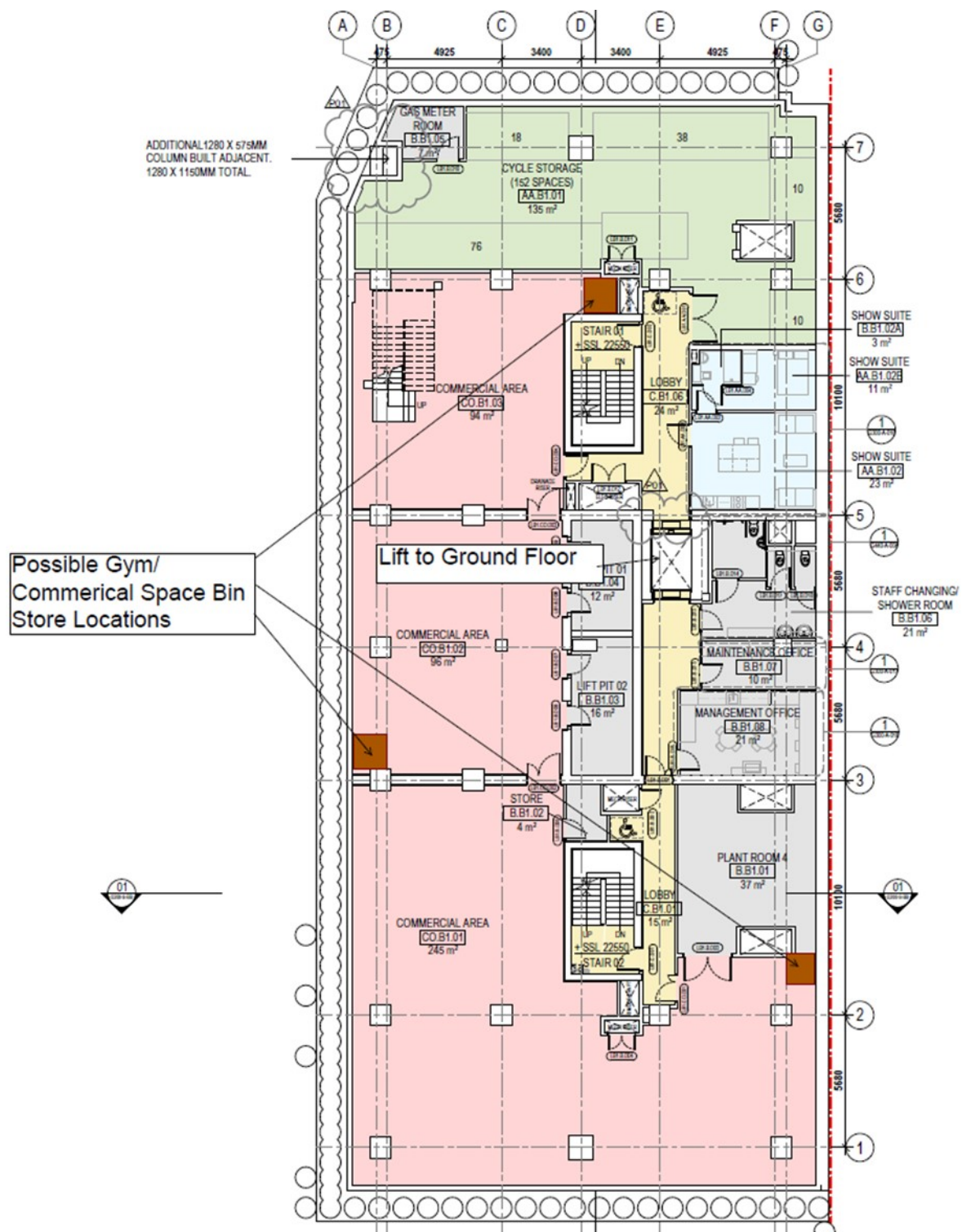
Storage Areas for Waste Containers

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

The Co-Living Refuse Store is 51sqm in area.



Ground Floor Waste Storage and Collection Routes



Ensure all bins in the store are accessible For Health and Safety reasons, the bin store will not be accessible by Residents as they are expected to use the Waste Chute for standard waste. Residents will be able to deposit large or unusual waste items by arrangement with reception. Specific collections such as for furniture may incur a charge. The bin storage area includes space for maneuvering and the doors are designed to be wider than the 1.54m minimum.	Yes for staff. Residents to use Chute
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. Due to the regular collection frequency and that the Co-Living occupancy is managed, waste collection would be provided by 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.

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