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# MANOR ROAD, RICHMOND

Revised Waste Management Strategy Addendum

25/08/2023



# DOCUMENT CONTROL ISSUE SHEET

## Project & Document Details

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# 1. INTRODUCTION

- 1.1.1 Momentum Transport Consultancy ('Momentum') has been appointed by the applicant, Avanton Richmond Development Ltd to provide an Addendum Revised Waste Management Strategy to support the planning application for the residential and commercial development at Manor Road, North Sheen, within the London Borough of Richmond upon Thames (LBRuT).
- 1.1.2 This is an addendum to the previously submitted Revised Waste Management Strategy submitted in November 2019, and addendums which followed in 2020 and 2021.
- 1.1.3 This Addendum Revised Waste Management Strategy details the strategy for waste management at the site, providing an overview of the provision of waste and recycling throughout the development as well as providing details on how waste will be collected.
- 1.1.4 This Addendum Report also takes into consideration the London Borough of Richmond upon Thames' Local Plan Supplementary Planning Document on Refuse and Recycling. The document was adopted on 22 December 2022 and provides revised guidance on storage and access requirements for New Developments.
- 1.1.5 Since the previous iteration of this addendum and following the Government's announcement in July 2023 confirming the intention to mandate second staircases in new residential buildings above 18 metres, the proposals have been revised to ensure all buildings above 18 metres meet these standards and present the highest standard of fire safety. This has been accommodated through internal changes, including improving the efficiencies of circulation space and reductions in unit sizes, and minor external changes, including marginal increases in building footprint.
- 1.1.6 This information has been produced to provide LBRuT officers with comfort that the waste strategy for the development is suitable, well managed and efficient, and will operate effectively when the site is in full occupation.
- 1.1.7 This section of the report forms the introduction. The rest of the report outlines the updated waste storage requirements and waste collection layout.

## DEVELOPMENT PROPOSALS

- 1.1.8 The development proposals are described as: "*Demolition of existing buildings and structures and comprehensive phased residential-led redevelopment to provide 453 residential units (of which 173 units will be affordable), flexible retail, community and office uses, provision of car and cycle parking, landscaping, public and private open spaces and all other necessary enabling works.*".

## POLICY CONTEXT

- 1.1.9 This addendum has been considered in relation with the following policies:
- National Planning Policy Framework (2021)
  - Waste Management Plan for England (2021)
  - London Plan (2021)
  - London Borough of Richmond upon Thames Local Plan (2018)
  - London Borough of Richmond upon Thames Local Plan Supplementary Planning Document: Refuse and Recycling: Storage and Access Requirements for New Developments (2022)

## 2. WASTE STORAGE REQUIREMENTS

### 2.1 Waste Storage Requirements

- 2.1.1 It is proposed that both the general and recyclable waste arisings are stored in 1,100L Eurobins for both the residential and commercial waste.
- 2.1.2 LBRuT waste guidance states that capacity for future food waste provision must also be provided. Food waste can be stored in 140L and 240L bins, therefore It is proposed to use 240L 'wheelie' bins for communal food waste collection for both the residential and commercial land uses.
- 2.1.3 Two waste collections are proposed per week. One of these will be the waste collection provided by LBRuT, which at the time of writing occurs on a Tuesday. The other will be provided through a private contractor. Thus, the waste management strategy assumes two collections per week.
- 2.1.4 The LBRuT Refuse and Recycling Storage Requirements state that, although at present developments such as the one proposed at Manor Road do not receive weekly food waste collections, *"it is likely that new legal requirements will extend weekly food waste collections to all domestic developments over the coming years and all waste storage facilities in proposed developments producing household waste must provide suitable and sufficient space for separate containers for food waste in addition to containers for refuse and dry recycling to future-proof them against this likelihood"*. It is presumed that any extension of the local authority's current food waste collections would be in line with current provision of once per week, and food waste generation is assumed to be based on a twice-weekly collection, where a private contractor conducts the other food waste collection.
- 2.1.5 Until the local authority extends food waste collections to developments such as the proposed development at Manor Road, food waste will be collected twice weekly by the private contractor.
- 2.1.6 No waste compactors are proposed for the development.
- 2.1.7 As stated in the introduction, the residential development quantum consists of 453 units, comprising 30 studio apartments, 143 one-bedroom units, 246 two-bedroom units, and 34 three-bedroom units. Studio apartments have been assumed to be one-bedroom apartments for the purposes of this assessment, based on the information provided in the LBRuT Refuse and Recycling Storage Requirements (LBRuT RRSR).
- 2.1.8 LBRuT RRSR states that in residential developments using communal refuse storage containers, such as the proposed development at Manor Road, storage capacity should be provided of 70 litres per bedroom, plus 30 litres per household. This requirement relates to communal waste containers. The LBRuT RRSR states that, for recycling, 110L per household (55L of paper / card recycling and 55L of mixed container recycling) should be provided. Additionally, a further 23L of food waste recycling should be provided per household.
- 2.1.9 To create a robust assessment for waste generation, the commercial space has been assumed to be food retail.
- 2.1.10 In previous iterations of this Addendum Report, commercial food waste was assumed to be non-recyclable waste. However, for robustness of calculations, commercial waste generation

rates have come from Westminster City Council Recycling and Waste Storage Requirements (WCC RWSR) (2021), which state that for every 1,000m<sup>2</sup> of floor space, 3,500L of waste storage must be provided, of which 30% should be for general waste, 30% for separated recyclable waste, and 40% for food waste. This is in lieu of generation values from LBRuT RRSR, and come from “other published reliable sources” as permitted in the LBRuT RRSR.

- 2.1.11 Based on the waste generation rates detailed within LBRuT RRSR (for Residential) and WCC RWSR (for Food Retail), it is forecast that the proposed development will generate the following waste outputs, assuming a seven-day, uncompacted output. This was calculated based on the most recent area schedule, dated 21<sup>st</sup> July 2020.

Table 2.1: Forecast Waste Generated by the Proposed Development

Land Use	General (L)	Recyclable (L)	Food Waste (L)	Total (L)
Residential (C3)	67,280	49,830	10,419	<b>127,529</b>
Commercial <i>assumed food retail</i>	520	520	693	<b>1,733</b>
<b>Total</b>	<b>67,800</b>	<b>50,350</b>	<b>11,112</b>	<b>129,262</b>

- 2.1.12 Table 2.1 shows that general waste forms the main stream of waste, with 53% of the total, with non-food recyclable waste making up 39%. Food waste makes up 8%. Due to the size of the respective land uses, the residential development expectedly generates the bulk of the waste on-site.

- 2.1.13 Based on the weekly waste generation rates, a total of 108 x 1100L bins would be required. Additionally, 47 x 240L bins would be required for food waste, of which 44 would be for residential use.

- 2.1.14 Table 2.2 shows the number of bins proposed to be provided within the development, assuming a half weekly collection.

Table 2.2: Waste Storage Requirements (Uncompacted Half-Weekly Output)

Land Use	General	Recyclable	Food Waste	Total
	<i>Bin Type: 1100L Eurobin</i>		<i>Bin Type: 240L Wheelie Bin</i>	
Residential (C3)	31	23	22	76
Commercial <i>assumed food retail</i>	2	2	2	6
<b>Total</b>	<b>33</b>	<b>25</b>	<b>24</b>	<b>82</b>

- 2.1.15 As detailed above, by assuming a twice-weekly collection, the provision of 58 bins at 1,100L per bin (providing 63,800L of capacity) is sufficient in accommodating the assumed weight of waste generated. Additionally, for twice-weekly food waste collections, a total of 24 x 240L wheelie bins would be required, of which 22 would be for residential land uses and two for commercial as a minimum.

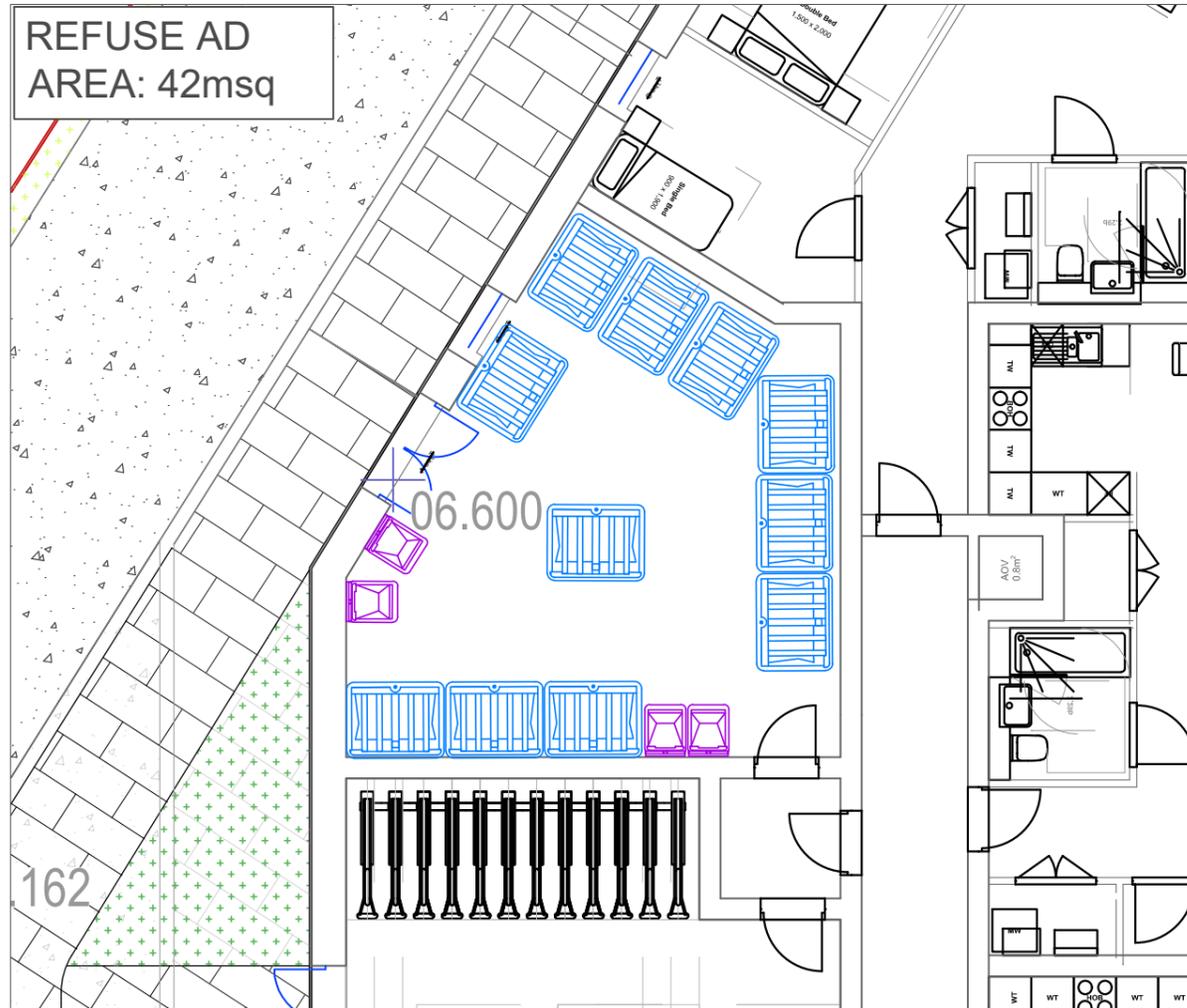
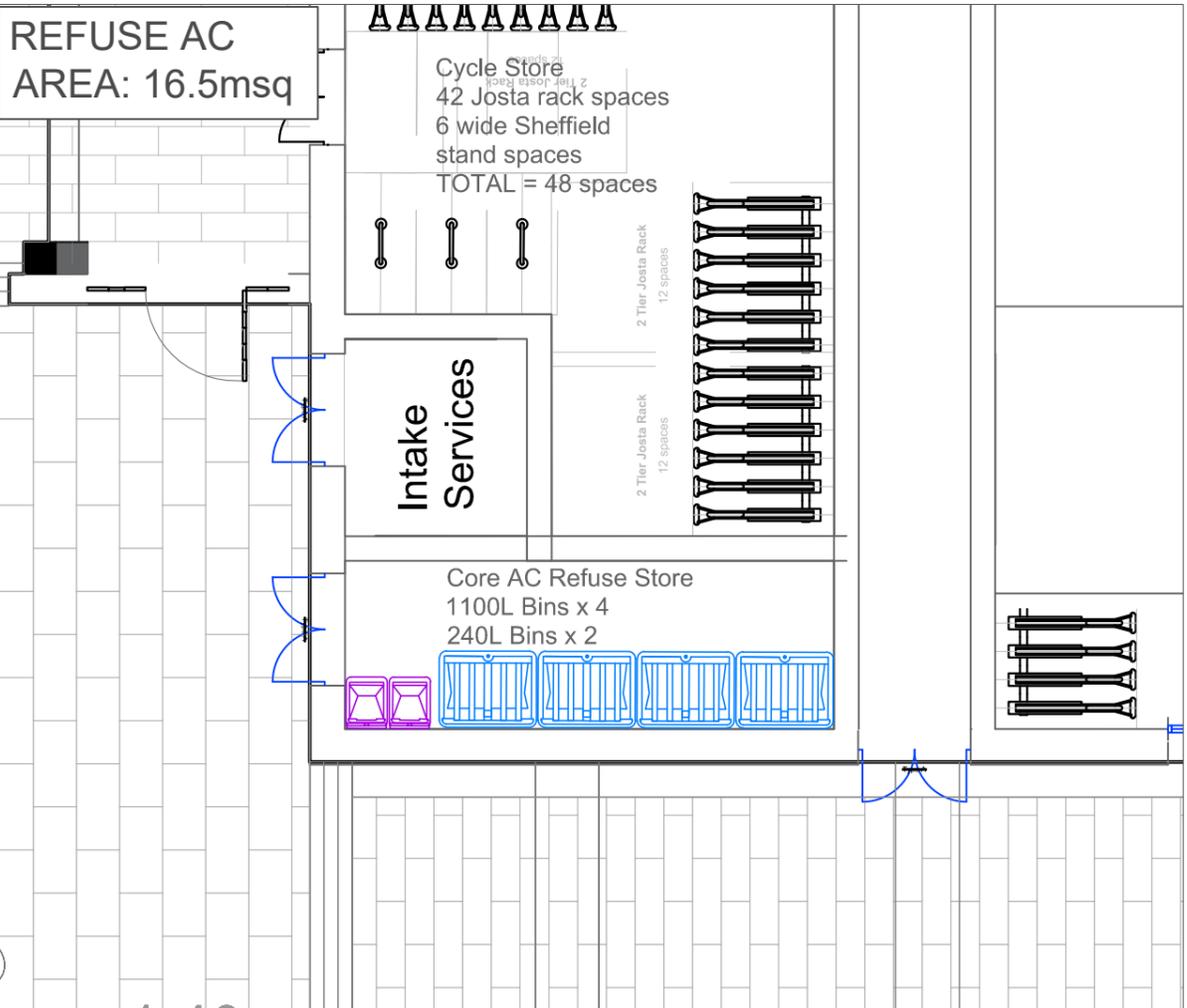
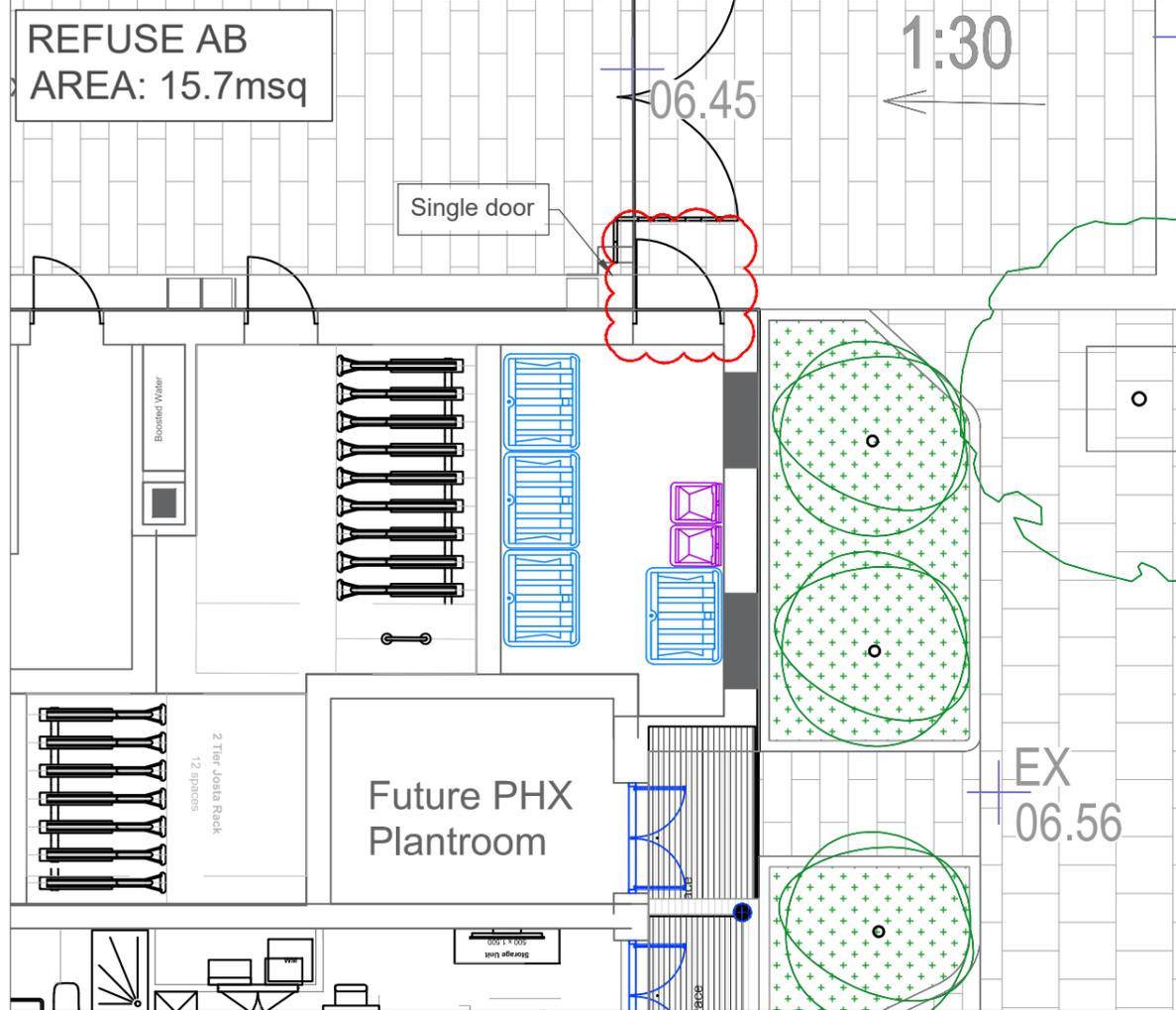
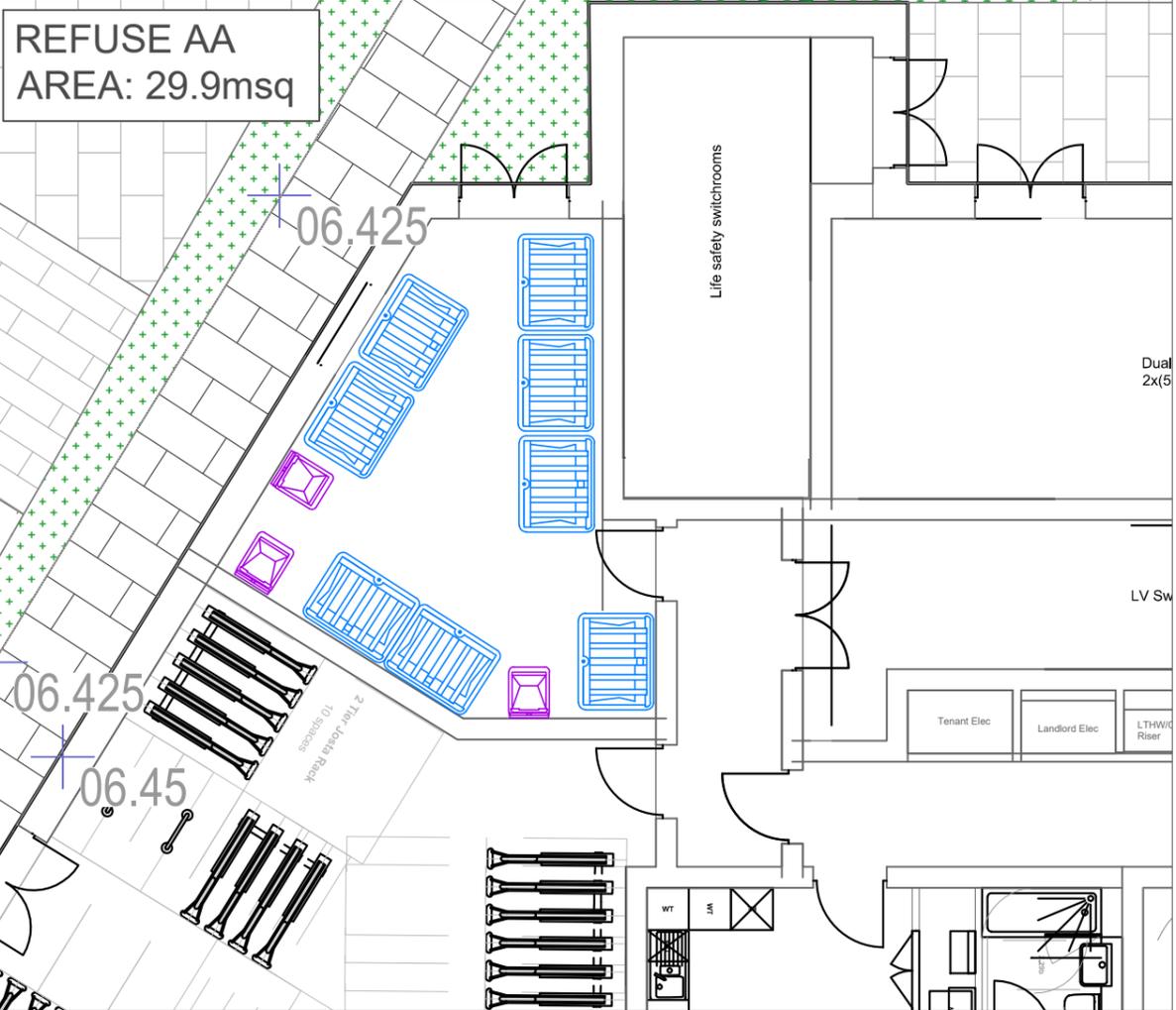
- 2.1.16 Table 2.3 shows this in more detail.

Table 2.3: Waste Generation vs Capacity

Land Use	Weekly Waste Generation (Total)	Half-Weekly Waste Generation	Waste Storage (Capacity)
Residential	127,529 L	63,765 L	64,680 L
Commercial <i>assumed food retail</i>	1,733 L	867 L	4,880 L
<b>Total</b>	<b>129,262</b>	<b>65,556 L</b>	<b>69,560 L</b>

2.1.17 The distribution of these bins is based on nine sites across the wider masterplan. These sites and the distribution of the bins are shown in Table 2.4. The locations are mapped in Figure 2.1.

ISO FULL BLEED A3 420 X 297 MM



**NOTES**  
 1. This drawing is referenced from Gillespies plan 'P11559-00-001-100'.

**KEY**

- 1100 litre Euro Bin General waste and recycling
- 240 litre Bin Food waste

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
C	25/08/23	Revised layout	IH	KC	AH
B	26/05/23	Revised layout	IH	AA	AH
A	13/01/23	First Issue	PD	NS	AH

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CLIENT:  
AVANTON RICHMOND DEVELOPMENT LTD

JOB TITLE:  
MANOR ROAD

DRAWING TITLE:  
REFUSE STORAGE ROOMS AA - AD  
BIN COUNTS

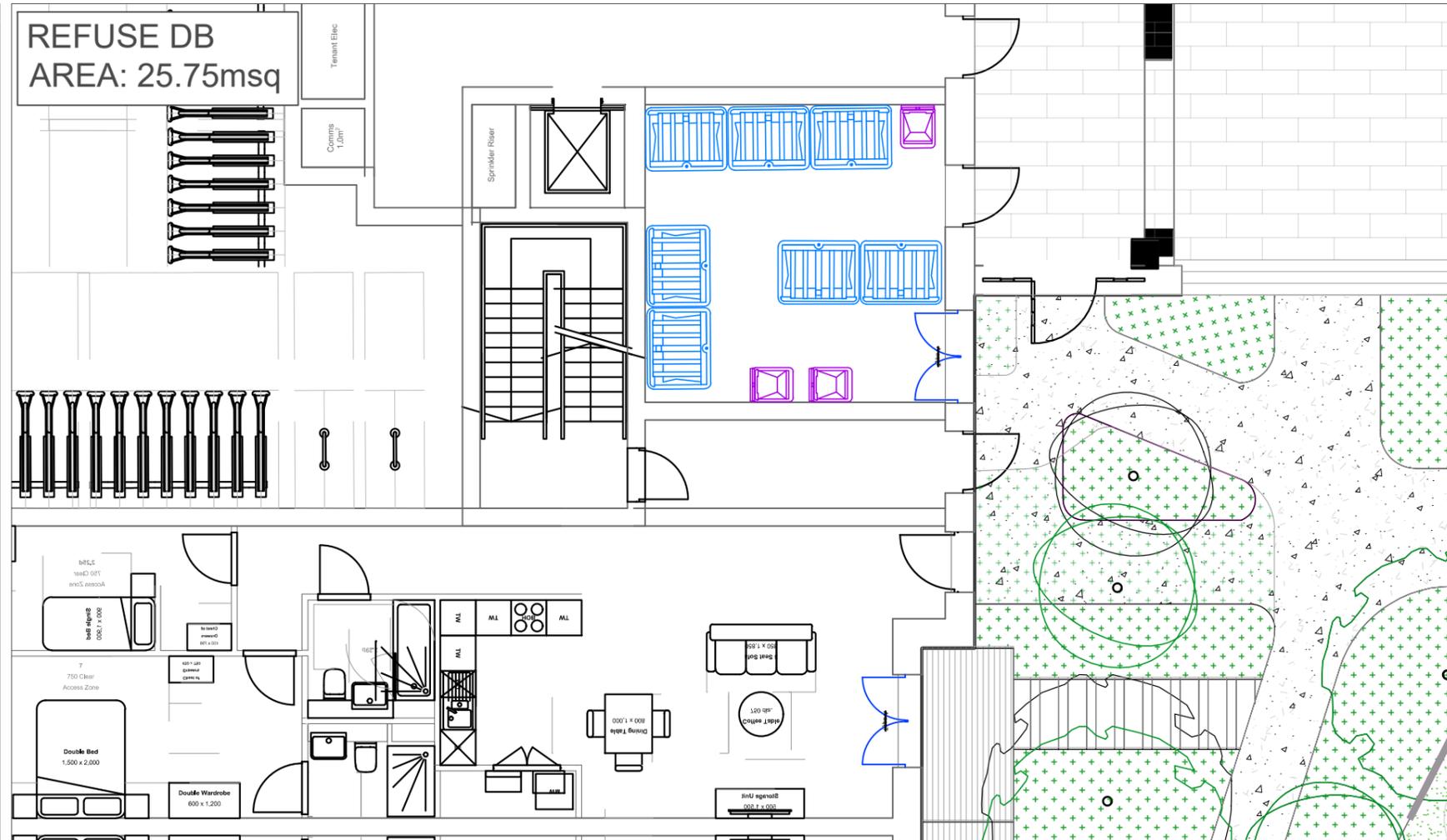
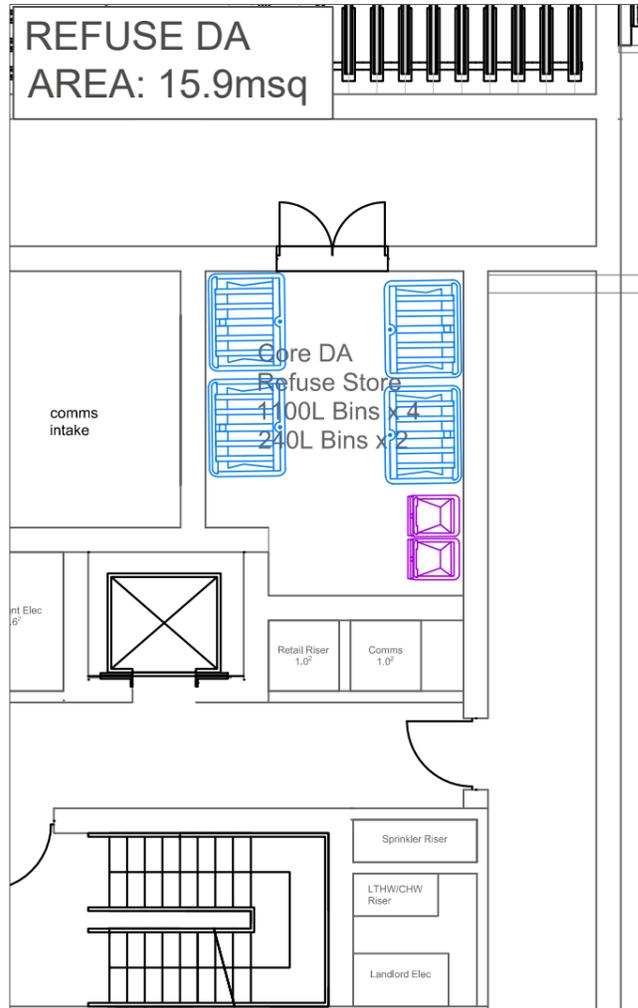
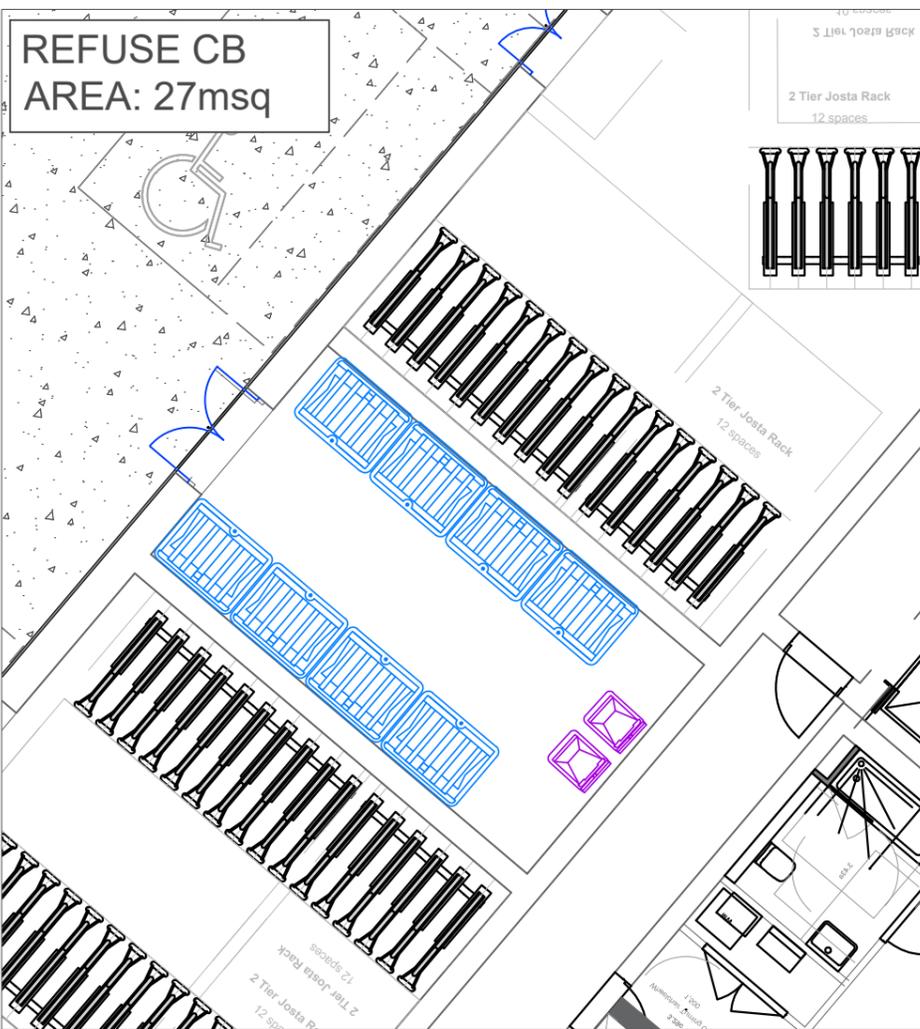
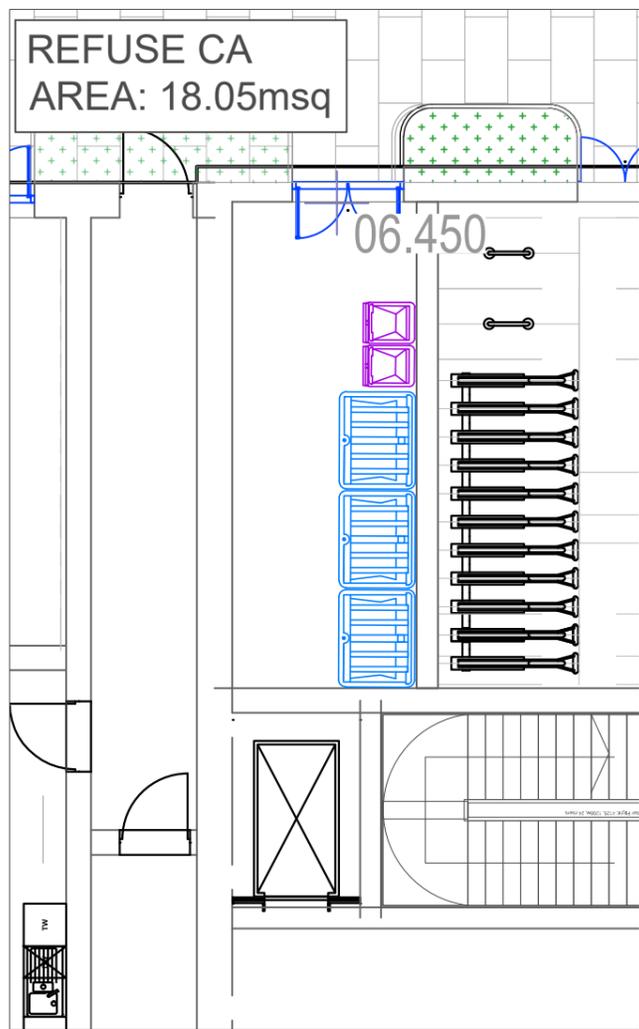
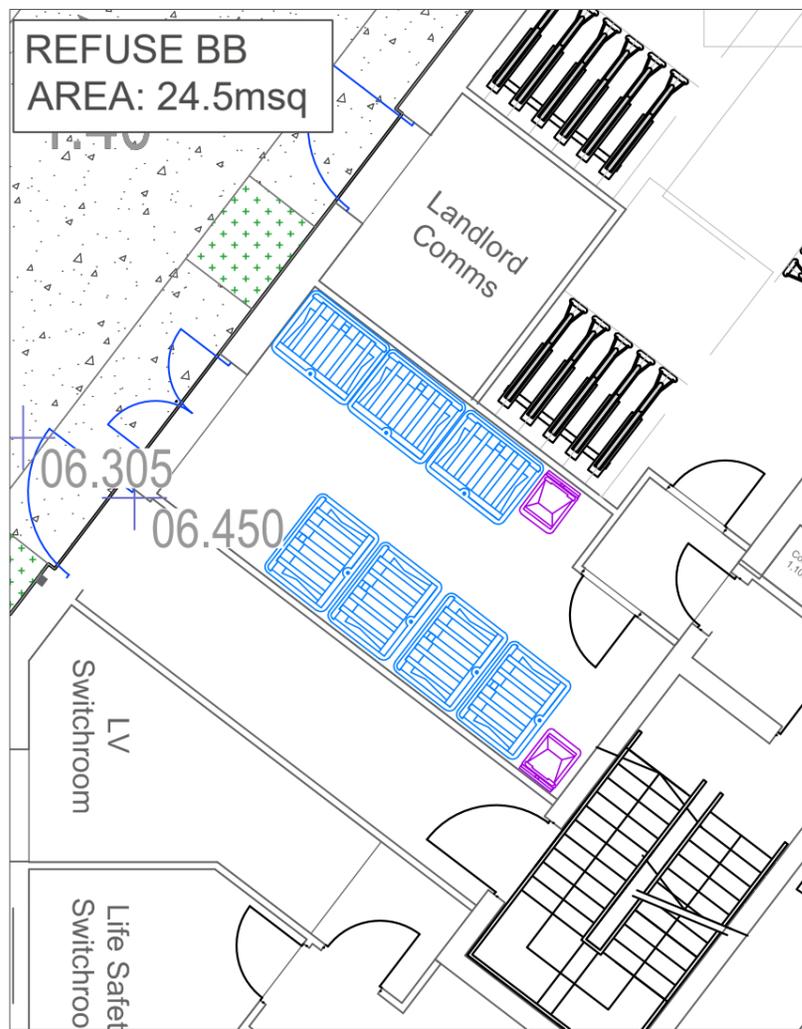
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**FOR INFORMATION**

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M000476-1-1-DR-001

REV: C

SCALE AT A3:  
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**NOTES**  
1. This drawing is referenced from Gillespies plan 'P11559-00-001-100'.

**KEY**

- 1100 Litre Euro Bin  
General waste and recycling
- 240 litre Bin  
Food waste

REV	DATE	REVISION DESCRIPTION / DETAILS	DRN BY	CHKD BY	APRVD BY
C	25/08/23	Revised layout	IH	KC	AH
B	26/05/23	Revised layout	IH	AA	AH
A	13/01/23	First Issue	PD	NS	AH

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CLIENT:  
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JOB TITLE:  
MANOR ROAD

DRAWING TITLE:  
REFUSE STORAGE ROOMS BB - DB  
BIN COUNTS

STATUS:  
**FOR INFORMATION**

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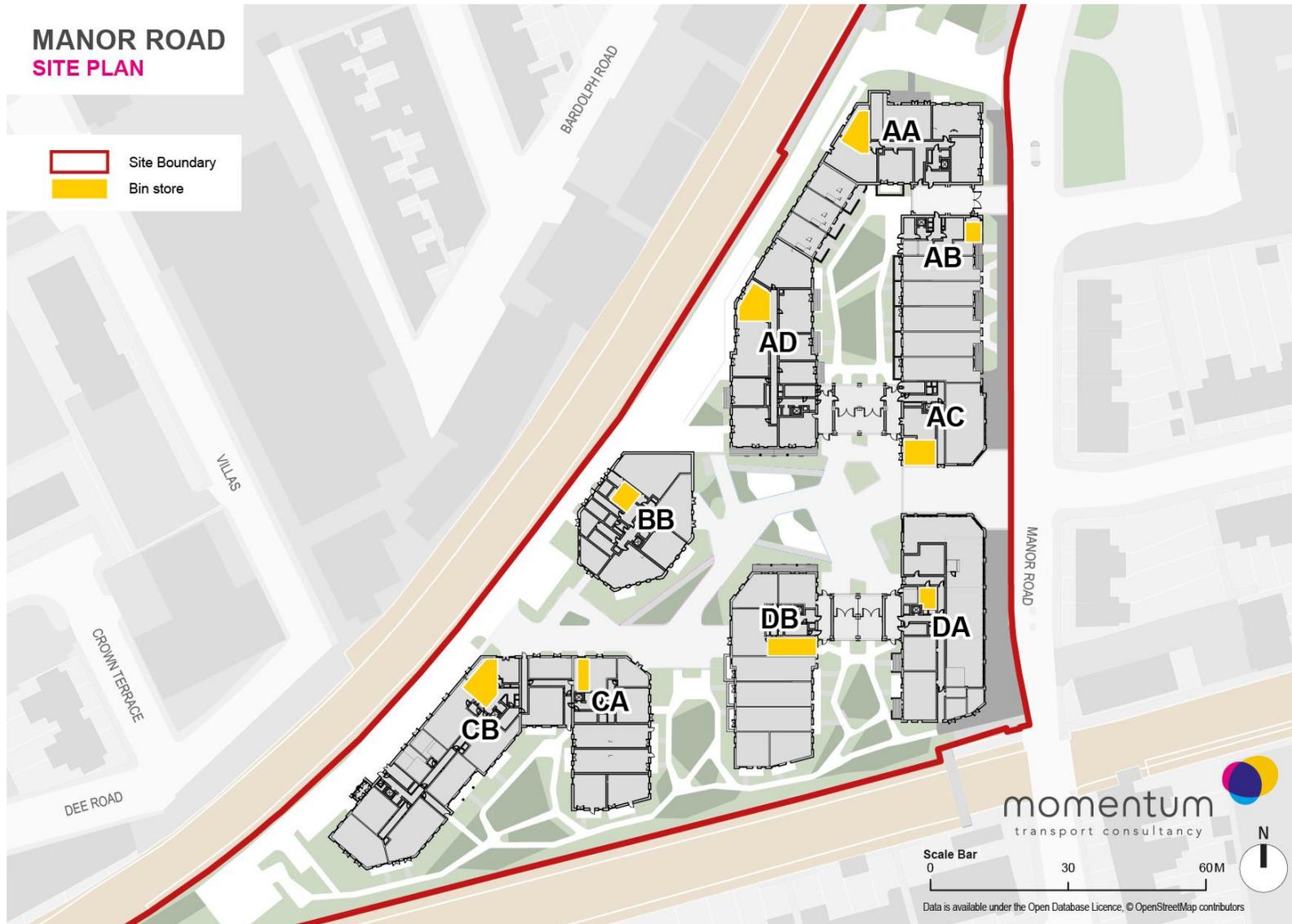
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C

SCALE AT A3:  
1:100

B30 FULL BLEED A3 420 X 297 MM

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Figure 2.1: Location of Bins on Site



2.1.18 The 1100L bins provided by LBRuT are 137cmx126cmx98cm. Additionally, the 240L wheelie bins provided for food waste by LBRuT are 107cmx58.5cmx74cm. Therefore, the total area needed for bin storage (including a circulation factor of 2) within each of the locations is also shown in Table 2.4.

Table 2.4: Distribution of Waste Provision

Location	General	Recyclable	Food	Area Required (sqm)	Area Provided (sqm)
AA	3	5	3	22.4	29.9
AB	3	1	2	11.6	15.7
AC	3	1	2	11.6	16.5
AD	6	5	4	30.7	42
BB	3	3	2	16.6	24.5
CA	2	1	2	9.2	18.1
CB	4	4	2	21.5	27
DA	2	2	2	11.6	15.9
DB	5	1	3	17.4	25.8
AC (Commercial)	1	1	2	11.6	*
DA (Commercial)	1	1			*
<b>Totals</b>	33	25	24	164.1	209.2

2.1.19 Table 2.4 also shows the area provided in each of the stores. The bin stores provide sufficient capacity to accommodate the bins and also allow circulation of the bins within them throughout the development.

2.1.20 Figure 2.2 and Figure 2.3 show the indicative location of each bin within the respective stores.

## 2.2 Waste Collection Strategy

- 2.2.1 The relocation of the waste storage areas, as well as the food waste storage requirements, require the waste collection strategy to be revisited and updated.
- 2.2.2 To ensure that every store has spare capacity for the disposal of waste, facilities management will manually monitor and move bins to different stores as and when required. This will form a part of the occupant's management strategy.
- 2.2.3 On collection days, it is proposed that the facilities management team(s) on site manually move the bins from cores AB, AC, DA and DB to a holding area close to the perimeter route and adjacent to Block BB, as shown Figure 2.5. This avoids bins being moved or collected along Manor Road.
- 2.2.4 All other bins will be collected by the refuse collection team by accessing the site's various stores.
- 2.2.5 The refuse vehicle(s) would stop a total of four times to collect bins:
- Core AA bins would be collected adjacent to the building's refuse storage entrance
  - Core AD bins would be collected adjacent to the building's refuse storage entrance
  - The refuse vehicle would pull into the space between Cores BB and AD, to collect bins from cores AB, AC, BB, DA and DB.
  - The outstanding bins from cores CA and CB would then be collected before the vehicle completes its three-point turn and returns to the main carriageway using the same perimeter route.
- 2.2.6 All bins will be held within 20m of the pick-up spots and refuse vehicles using the perimeter route will not need to reverse more than 12m.
- 2.2.7 Waste collection vehicles would not need to pass through the centre of the site. Instead, all collection under this strategy will be possible from the perimeter route around the site.
- 2.2.8 When the waste has been collected, the facilities management team(s) on site will then move the bins back to their storage facilities in the respective cores as shown in the diagram in Figure 2.5.
- 2.2.9 Emergency vehicles can use both the perimeter route or the shared surface running through the site. Therefore, in the event that the perimeter road is blocked by a refuse collection vehicle, the shared surface would be used by the emergency service vehicles to route into the site. The service route and shared surfaces are to be designed to accommodate an appropriate emergency vehicle specification such that a 40T fire vehicle, as well as a fully-laden refuse collection vehicle could manoeuvre on these surfaces.

Figure 2.4: Indicative Vehicle Routes

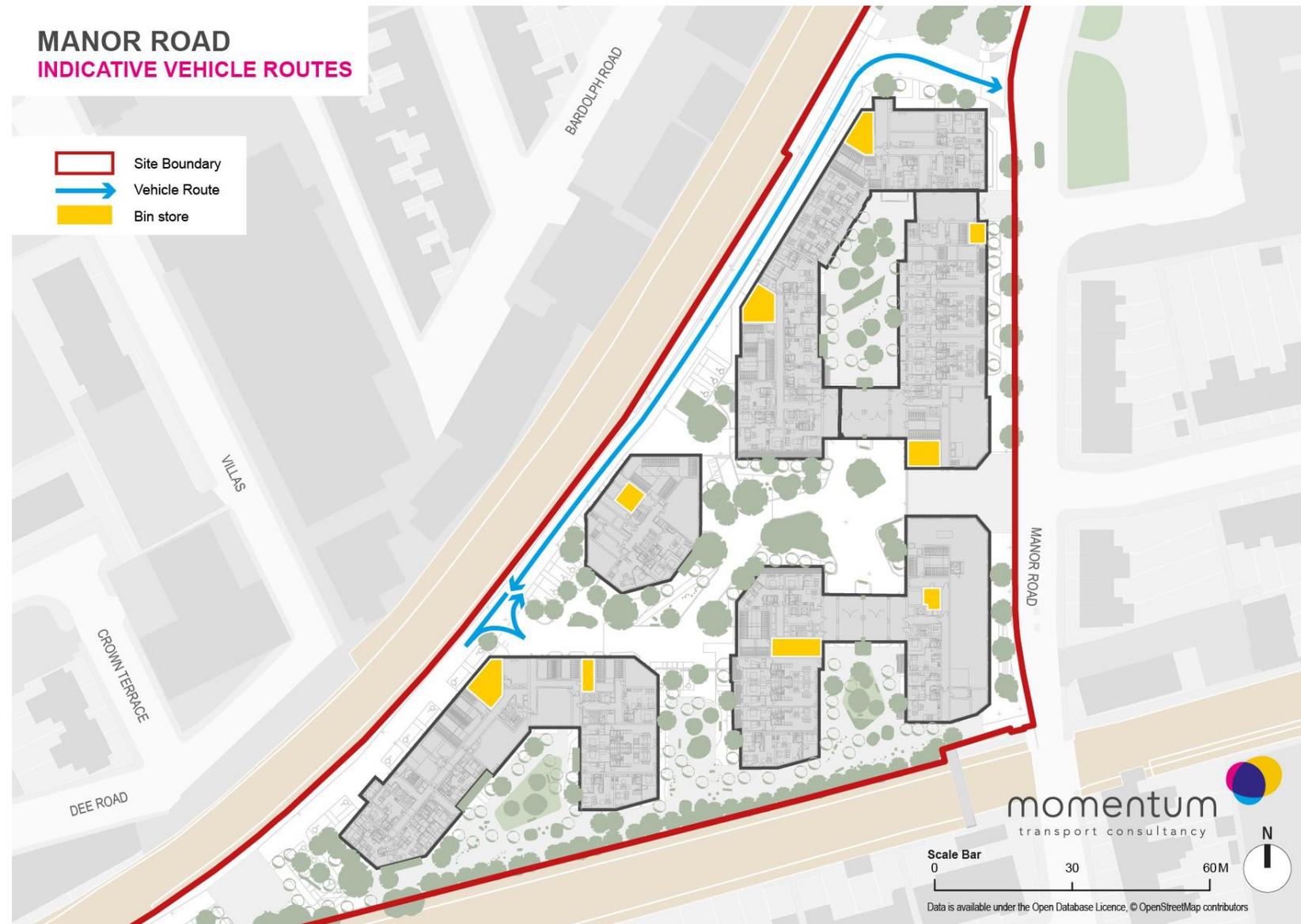
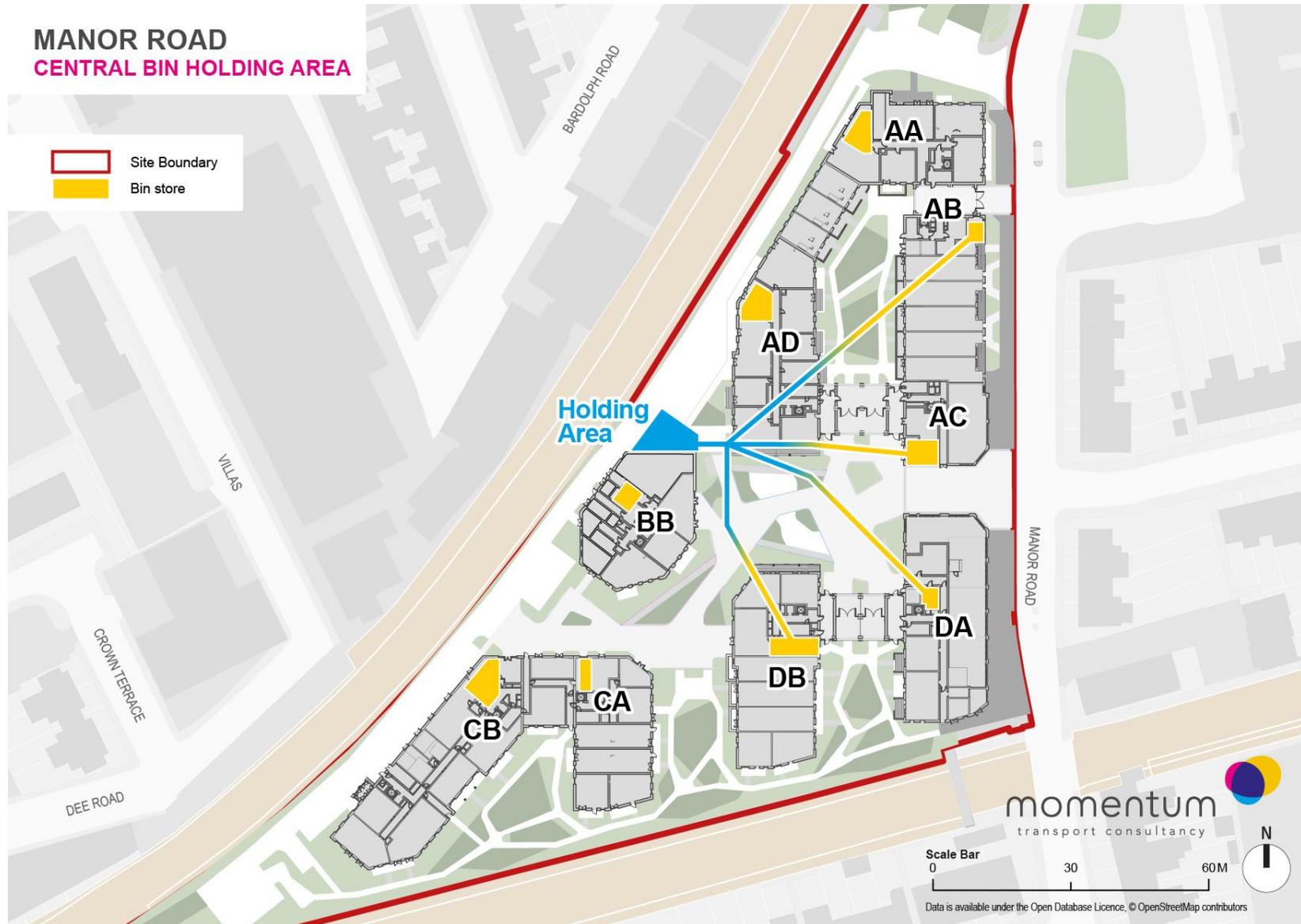


Figure 2.5: Indicative Movement of Bins to Holding Area



## 2.3 Swept Path Analysis

- 2.3.1 As demonstrated, vehicles will route into and out of the site via the northern entrance to the access route, from Manor Road. They would stop to the north of the site on the perimeter route to collect bins from Core AA, then proceed along the western perimeter route and stop adjacent to the store in core AD. From there, it will proceed to the central holding area to collect the majority of the site's waste, before continuing to the southwest of the site to collect the remaining bins before turning around and using the same perimeter route to exit back onto Manor Road.
- 2.3.2 The Swept Path Analysis is presented in order to demonstrate that a refuse collection vehicle could feasibly use the perimeter route and undertake the collections as recommended in the strategy. It also demonstrates the possibility of vehicles being able to successfully complete the turn(s) required as part of the collection strategy.
- 2.3.3 For the vehicle tracking shown in Figure 2.6, the vehicle used is a Phoenix 2-23W with Elite 2 6x2MS chassis. The specification for this vehicle is shown in Table 2.5, and reproduced on the drawing in Figure 2.6.

Table 2.5: Phoenix 2-23W Vehicle Specification

Item Measured	Measure
Length	10.42m
Width	2.53m
Height	3.21m
Minimum Body Ground Clearance	0.416m
Track Width	2.53m
Lock to lock time	4 seconds
Kerb to kerb turning radius	11.15m

- 2.3.4 The vehicle will travel for the most part in forward gear. The only occasion on which it will need to travel in reverse gear is to the south, when completing the turn.
- 2.3.5 The vehicle tracking is shown in Figure 2.6.

Figure 2.6: Swept Path Analysis



## 3. CONCLUSION

- 3.1.1 This Revised Waste Strategy Addendum has been prepared by Momentum Transport Consultancy on behalf of Avanton Richmond Development Ltd to update how waste will be collected, stored and removed in a sustainable and efficient way following the redevelopment of Manor Road, North Sheen, Richmond.
- 3.1.2 A total of 58 x 1,100 litre Eurobins and 24 x 240L bins for food waste are proposed to be provided within the development. The waste forecast by the proposed development equates to 129,262L per week, and would therefore require a total of 155 bins (108 1100L and 47 240L) if collections were undertaken solely by the LBRuT refuse collection team. As described throughout this report, it is proposed to undertake twice weekly collections, with the client committed to obtaining a private contractor for at least one of those collections. therefore, the provision of a total of 82 bins provides enough waste capacity when based on a half-weekly uncompacted output.
- 3.1.3 The proposed amendments to the design of the scheme will not impact the waste strategy submitted previously and are acceptable in waste strategy terms.