

Framework Operational Waste Management Plan

Enderby Place, Greenwich

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Prepared for
Maritime View Ltd.



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1. Introduction

1.1 Purpose of the Report

1.1.1 Markides Associates (MA) have been instructed by Maritime View Ltd. ('the applicant') to prepare this Framework Operational Waste Management Plan in support of an application for re-development of Enderby Place ('the site'), adjacent to Morden Wharf in the Royal Borough of Greenwich (RBG). RBG are both the planning and highways authority.

1.1.2 The proposals comprise the erection of part-3, part-23, part-35 storey buildings, providing up to 564 residential apartments (Class C3), light industrial (Class E(g)(iii)) and community / café use (Sui Generis), and associated highways, landscaping and public realm works.

1.2 Other Documents

1.2.1 In addition to this DSMP, the applicant has prepared a number of separate transport documents as follows:

- Transport Assessment (Ref: 22181-MA-RP-TA01)
- Framework Residential Travel Plan (Ref: 22181-MA-RP-D-TP01)
- Framework Workplace Travel Plan (Ref: 22181-MA-RP-D-TP02)
- Framework Construction Logistics Plan (Ref: 22181-MA-RP-D-CLP01)
- Framework Site Waste Management Plan (Ref: 22181-MA-RP-D-SWMP01)
- Framework Delivery and Servicing Management Plan (Ref: 22181-MA-RP-D-DSMP01)

1.3 Report Structure

1.3.1 The remainder of this report is structured as follows:

- **2.0 Proposed Development** – This section provides details of the proposals and proposed access arrangements; it also considers the relevant policy and level of overlap with circular economy considerations.
- **3.0 Site Users and Relevant Waste Streams** – sets out the details of the expected weekly waste arisings by land use and waste streams.
- **3.0 Proposed Waste Management Strategy** – sets out storage and collection processes and facilities for the site by land use.
- **5.0 Summary and Conclusion** – This section provides a summary of this report and concludes.

2. Proposed Development and Policy

2.1 Preamble

2.1.1 This section of the OWMP details the context of the site in terms of the Proposed Development, its surroundings, and access.

2.2 The Site

1.1.1 The site is currently un-occupied brownfield site, formerly occupied by a now demolished – Submarine Cable Works. As such it currently has no formal land use status but could otherwise be considered B2/B8 industrial.

1.1.2 It is bound to the north by land which has planning permission for a development known as Morden Wharf, separated by a Historical Retaining Wall and light Industrial warehouses to the northeast. The river Thames bounds the site to the west along with the Thames Path walking and cycling route. The site is bound to the south by Telegraph Avenue and Telcon Way, which form the main access for all modes to the site.

1.1.3 South of Telegraph Avenue is a completed mixed-use development identified as Enderby Wharf, with the grade listed Enderby Public House retained and situated at the western end of Telegraph Avenue. Telegraph Avenue itself forms a non-vehicular cul-de-sac, providing pedestrian and cycle access to the Thames. The site context is shown diagrammatically in Figure 2.1 overleaf.

Figure 2.1 Site Context Plan



2.3 Proposals

Use and Mix

- 2.3.1 The development proposals are for the erection of part-3, part-23, part-35 storey buildings, providing up to 564 residential apartments (Class C3), light industrial use (Class B1), and associated highways, landscaping and public realm works. The site layout is included in **Appendix A**.
- 2.3.2 The schedule of accommodation is summarised in **Table 2.1** below.

Table 2.1 Schedule of Accommodation

Residential			
Unit Size		Number of Units	Number of Bedrooms
1-bed	1B2P	282	282
2-bed	2B3P	87	408
	2B4P	117	
3-bed	3B5P	70	210
4-bed	4B6P	8	32
Total		564	932
Commercial			
Use Class		Size (GIA)	
B1 Light Industrial		1,445 sqm	

Access

- 2.3.3 All vehicle access will be taken from Telcon Way, including all servicing and delivery movements. Speeds and movements are expected to be limited therefore to operational demand only and 10mph.
- 2.3.4 Active travel access will be taken from numerous points – via footways and cycling along Telcon Way, with cycle access to the podium cycle parking areas (more detail given below), and to/from the Thames Path, which forms the western boundary of the site. A pedestrian/cycle link has also been designed into the development to connect to Morden Wharf to the north as that site comes forward in due course. It is also expected that the Morden Wharf development will deliver improvements and widening to the Thames Path at its boundary, allowing improved access to the north of the peninsula.

2.4 Waste Policy

- 2.4.1 The national, regional, and local legislation that are relevant to the Proposed Development, in addition to waste policy and guidance at a local level, have been reviewed and a summary is given in **Appendix B**, including:

- The Waste (Circular Economy) (Amendment) Regulations 2020
- Waste Management, The Duty of Care Code of Practice (2020 update)
- The Waste (England and Wales) Regulations 2011
- Environmental Protection Act 1990
- Ministry of Housing, Communities & Local Government (MHCLG), National Planning Policy Framework (2021)
- Department for Environment, Food and Rural Affairs (DEFRA), Our Waste, Our Resources: A Strategy for England (2018);
- Waste (England and Wales) Regulations 2011 & The UK Waste Hierarchy
- HM Government, A Green Future: Our 25 Year Plan to Improve the Environment (2018)
- Greater London Authority (GLA), The London Plan 2021 (March 2021) -
- GLA, London Environment Strategy (2018) -
- Royal Borough of Greenwich Waste Guidance Notes for New Developments (November 2022)

Circular Economy Considerations

- 2.4.2 Once operational, waste will be managed in accordance with the waste hierarchy.
- 2.4.3 The London Plan Policy SI 7 target will be targeted, which involves 65% of any municipal waste to be recycled by 2030.
- 2.4.4 Residential recycling rates are dictated by the collection authority; facilities have been designed in accordance with RBG requirements stated in their guidance. As recycling performance increases, the waste storage can be adapted to reflect these changes and meet the relevant targets.
- 2.4.5 Residential waste streams will include:
- Residual waste;
 - Dry Mixed Recycling (DMR); and
 - Food waste.
- 2.4.6 RBG currently does not segregate DMR into individual waste streams (card, paper, mixed plastics, metals, or glass).

Operational Waste Reporting

- 2.4.7 The developer will be contractually responsible for all operational waste reporting for the Development.
- 2.4.8 This reporting will be based either on number of container lifts per waste stream, or collection weight data if available. Data requirements and reporting methods will be agreed with the relevant authorities once all elements are occupied.

Smart Logistics & Waste Minimisation

- 2.4.9 It is anticipated community-led waste minimising initiatives will be encouraged, such as charity partnership for the bulky waste storage areas. Additionally, shared composting facilities within the green areas could be explored. The RBG waste management department will be encouraged to engage with residents upon occupation, to ensure they are aware of how to minimise their waste. These measures could include how to reduce avoidable food waste and minimising the use of single use items.

3. Site Users and Relevant Waste Streams

3.1 Preamble

3.1.1 This section of the report considers the site users and their waste generation.

3.2 The Development & Waste Streams

3.2.1 The users of the development will be residents, employees and visitors accessing the site. It is anticipated that a large proportion of site users will follow typical work patterns, travelling to and from the site on weekdays with a concentration of departure trips during AM peak periods (07:00-10:00) and arrivals during PM peak periods (16:00-19:00).

3.2.2 RBG collects waste from households in three waste and recycling streams through its borough-wide “Green, Blue, Black” service, as outlined below:

- Green – Organic waste recycling
 - Collects food and garden waste mixed together in a single, green-lidded bin. This includes cooked and uncooked food, leftovers, grass-cuttings and leaves and green garden waste.
- Blue – Mixed dry recycling
 - Collects the following materials for recycling; paper, cardboard, glass bottles and jars, plastic bottles, cans and tins, cartons (such as tetra paks). These materials are collected commingled (mixed together) in a blue-lidded bin. Mechanical sorting of the material into individual waste types prior to being delivered for recycling is conducted at a later date at a materials recovery facility (MRF).
- Black – General waste
 - Collects anything that cannot be recycled in the blue or green top bins as general waste in a black lidded bin. This waste is not recycled and instead sent for energy recovery at an Energy from Waste facility.

3.3 Waste Generation

Residential Waste

3.3.1 The residential waste quantum has been calculated using the RBG Waste Guidance Notes. It is summarised in **Table 3.1**.

Table 3.1 Residential Waste Quantum

Residential	Total Units	Total Bedrooms	Average no. Bedrooms	Total Weekly Waste (L)
Telcon Tower	132	242	1.83	20,900
Morden Tower	258	392	1.52	35,180
River Tower	166	266	1.6	23,600
Telegraph Block	8	32	4.0	2,480
Total	564	932	1.65	82,160

3.3.2 The waste storage allocation in terms of bins per waste stream has been calculated according to RBG guidance and summarised in **Table 3.2**.

Table 3.2 Residential Waste Storage Requirements

Residential	Mixed Recycling (1,100L Eurobins)	Residual Waste (1,100L Eurobins)	550L Organics Recycling	1,100L WEEE Recycling	1,100L Textiles Recycling	Total
Telcon Tower	17	17	1	1	1	37
Morden Tower	32	32	2	2	2	72
River Tower	21	21	2	2	2	46
Telegraph Block	2	2	1	0	0	5
Total	71	71	5	5	5	157

3.3.3 As shown in the table above, the site requires a total of 157 bins of which 152 are Eurobins and 5no. 550L bins.

Commercial Waste

3.3.4 Similar to the residential uses, the commercial uses have also been calculated against the RBG Standards. The results are set out in **Table 3.3**.

Table 3.3 Commercial Waste Generation

Commercial	Floor Area	Total Weekly Waste (L)	50% recycling	50% Residual	Recycling 1,100L Eurobins	Residual 1,100L Eurobins	Total Bins
Telcon Tower	460	4,600	2,300	2,300	2	2	4
River Tower	500	5,000	2,500	2,500	3	3	6
Ground Floor	485	4,850	2,425	2,425	2	2	4
Total					7	7	14

3.3.5 As shown in the table above, the commercial uses require a combined weekly waste storage provision of 17 x 1,100L Eurobins. It should be noted that the quantum of storage above is rounded up and therefore includes some spare capacity.

4. Proposed Waste Management Strategy

4.1 Preamble

4.1.1 The proposed strategy to manage operational waste has been devised to provide a high-quality service to site users whilst also being compliant with the Guidance.

4.1.2 The proposed waste management strategy has been split into the following parts:

- Internal Waste Storage
- Collected Waste Storage
- Waste Collection Process

4.1.3 Each section addresses each waste stream.

4.2 Internal Waste Storage

Residential Waste

4.2.1 Each residential property will be provided with a segregated waste bin, which will be fixed into an appropriate kitchen unit. An example standardized kitchen unit is shown below.



4.2.2 Residents will subsequently take waste in bags to the communal stores at basement level via lifts.

4.2.3 Plans showing the access to waste stores is included in **Appendix A**.

4.3 Commercial Waste

4.3.1 The internal commercial waste can be collected in a simple segregated waste collection unit. An example is shown below.



4.3.2 Staff will convey this to the basement store.

4.4 Collected Waste Storage

4.4.1 As stated, waste will be collated within dedicated stores in the basement as shown in **Appendix A**. All waste facilities will be designed to British Standard Code of Practice standards. In summary, the waste facilities will include the following:

- A suitable water point in close proximity to allow washing down;
- All surfaces will be sealed with a suitable wash proof finish (vinyl, tiles etc.);
- All surfaces will be easy to clean;
- Suitable floor drain; and
- Suitable lighting and ventilation.

4.4.2 Residual waste and DMR will be stored in 1,100L Eurobins and any segregated food waste will be stored in 550L Eurobins.

4.4.3 Waste bins will be clearly labelled by relevant waste stream. An example of each is shown in the image below.



4.5 Waste Collection Process

- 4.5.1 The proposals include the provision of two large servicing and delivery bays within the lower ground floor, suitable to accommodate an 11m refuse vehicle. Vehicles will enter and exit the site from Telcon Way in a forward gear.
- 4.5.2 The site will provide a total of 157 x 1,100L Eurobins; however, it is not expected that these will all be emptied at a single collection. The maximum collection is expected to be 16 x Eurobins at one time.
- 4.5.3 In accordance with the Guidance, the route between the residential waste store and the RCV is:
- free from steps or kerbs;
 - built with a solid foundation;
 - built with a smooth solid surface; and
 - level
- 4.5.4 Full swept path analysis is included as **22181-MA-XX-XX-DR-C-7051 SPA Refuse Vehicle**.

5. Summary and Conclusions

5.1 Summary

- 5.1.1 Markides Associates have been instructed by Maritime View Ltd. to prepare this Framework Operational Waste Management Plan in support of an application for re-development of Enderby Place, adjacent to Morden Wharf in the Royal Borough of Greenwich.
- 5.1.2 The proposals comprise the erection of part-3, part-23, part-35 storey buildings, providing up to 564 residential apartments (Class C3), light industrial (Class E(g)(iii)) and community / café use (Sui Generis), and associated highways, landscaping and public realm works.
- 5.1.3 A separate Framework Delivery and Servicing Management Plan (Ref: 22181-MA-RP-D-DSMP01) has also been prepared and submitted.

5.2 Conclusions

- 5.2.1 This OWMS has taken into account the need to lessen the overall impact of waste generation through the recycling of materials from the operational phase of the proposed development.
- 5.2.2 This OWMS is a live document and will be subject to update following the appointment of site managers prior to occupation and identification of the commercial operators. Responsibility for the plan will be transferred in the event of any sale of the site.
- 5.2.3 In the interim, the party responsible for this Plan is the Applicant.
- 5.2.4 It is expected and agreed that this OWMP will be conditioned to any planning approval.

FIGURES

Figure 2.1 Site Context Plan

Site Context Plan

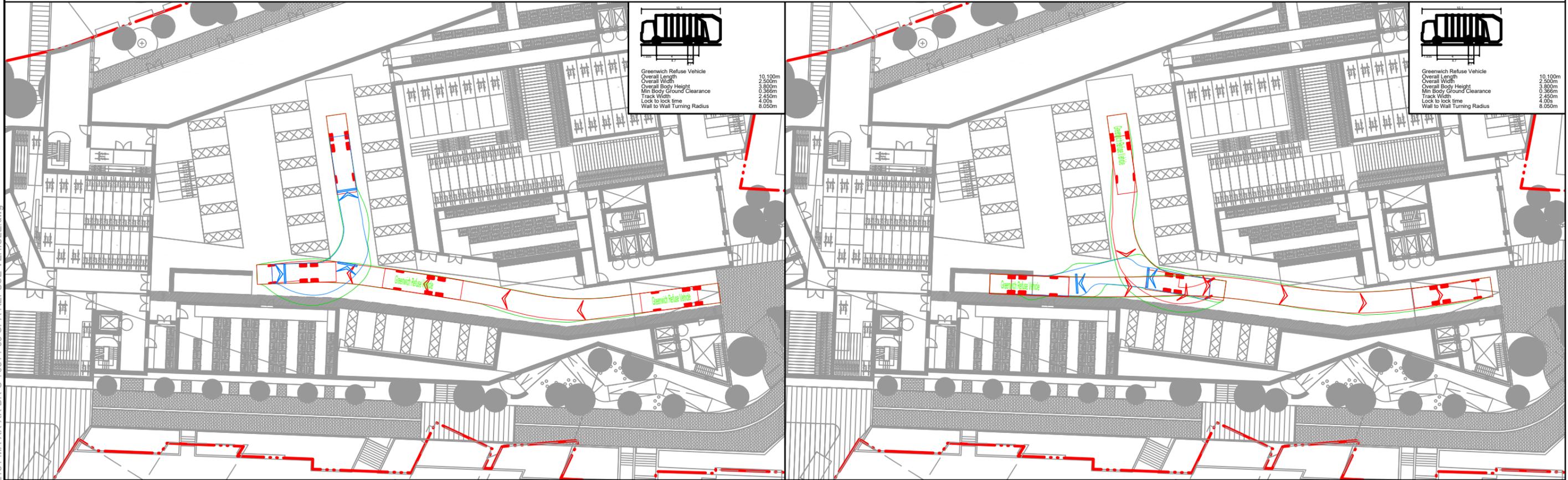
Key

-  Site Location
-  Relevant Development



DRAWINGS

22181-MA-XX-XX-DR-C-7051 SPA Refuse Vehicle

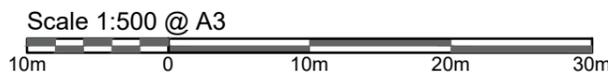


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KEY

- Vehicle Body Line
- Vehicle Wheel Line
- Reverse Line

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Project
ENDERBY PLACE

Drawing Title
**SWEPT PATH ANALYSIS
 REFUSE VEHICLE**

Status
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Scale	1:500	Date	05.10.23		
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Job No	22181	Drawing No	7051	Rev	P03

APPENDIX A – PROPOSED SITE LAYOUTS

APPENDIX B – WASTE POLICY

B1 National Legislation

The relevant national waste legislation is outlined below:

- **The Waste (Circular Economy) (Amendment) Regulations 2020** – these regulations came into force on 1 October 2020 and amended a raft of primary and secondary legislation on waste, to introduce a revised legislative framework to support the EU’s Circular Economy Package (CEP) identifying steps for the reduction of waste and establishing an ambitious and credible long-term path for waste management and recycling.
- **Waste Management, The Duty of Care Code of Practice (2020 update)** - This code of practice replaces the 1996 Code and is pursuant to Section 34(9) of the Environmental Protection Act 1990. It sets out practical guidance on how to meet waste duty of care requirements and is admissible as evidence in legal proceedings i.e., its rules will be taken into account where relevant in any case based on breach of the duty of care.
- **The Waste (England and Wales) Regulations 2011** - Waste collection authorities must collect wastepaper, metal, plastic, and glass separately. This legislation also imposes a duty on waste collection authorities, when making arrangements for the collection of such waste, to ensure that those arrangements are by way of separate collection.
- **Environmental Protection Act 1990** - Part II of the Act was originally implemented by the Duty of Care Regulations 1991.
- **Ministry of Housing, Communities & Local Government (MHCLG), National Planning Policy Framework (2021)** - The revised National Planning Policy Framework was updated on 20th July 2021 and sets out the government’s planning policies for England and how these are expected to be applied. It does not include anything of relevance to waste management that would apply to the Proposed Development.
- **Department for Environment, Food and Rural Affairs (DEFRA), Our Waste, Our Resources: A Strategy for England (2018)** - The strategy sets out how England will preserve the stock of material resources by minimising waste, promoting resource efficiency, and moving towards a circular economy. At the same time, the country will minimise the damage caused to the natural environment by reducing and managing waste safely and carefully, and by tackling waste crime. It combines actions the country will take now, with firm commitments for the coming years, and gives a clear longer-term policy direction in line with the 25 Year Environment Plan. This is the blueprint for eliminating avoidable plastic waste over the lifetime of the 25 Year Plan, doubling resource productivity, and eliminating avoidable waste of all kinds by 2050.

- **Waste (England and Wales) Regulations 2011 & The UK Waste Hierarchy** – These regulations require that an establishment or undertaking that imports, produces, collects, transports, recovers, or disposes of waste must take reasonable steps to apply the Waste Hierarchy when waste is transferred or disposed of. The Waste Hierarchy requires avoidance of waste in the first instance followed by reducing the volume that requires disposal after it has been generated. It gives an order of preference for waste management options to minimise the volume for disposal as follows:
 - Prevent
 - Reduce
 - Reuse
 - Recycle
 - Recover
 - Dispose

- **HM Government, A Green Future: Our 25 Year Plan to Improve the Environment (2018)** - The 25 Year Environment Plan sets out government action to help the natural world regain and retain good health. Its aim is to deliver cleaner air and water in cities and rural landscapes, protect threatened species and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first. With regard to waste management, the plan details aims which include:
 - Zero avoidable plastic waste by 2042;
 - Reduce food waste; and
 - Improving the management of residual waste.

B2 Regional Policy

The relevant Regional Policy is set out below:

- **Greater London Authority (GLA), The London Plan 2021 (March 2021)** - The London Plan is the overall strategic plan for London, it sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

5.2.5 The strategy includes the following waste management policy that has influenced the development of more specific business waste guidance:

- 'Policy D3 Optimising site capacity through the design-led approach

3.1B.18 Shared and easily accessible storage space supporting separate collection of dry recyclables, food waste and other waste should be considered in the early design stages to help improve recycling rates, reduce smell, odour, and vehicle movements, and improve street scene and community safety.'

- 'Policy SI7 Reducing waste and supporting the circular economy

Resource conservation, waste reduction, increases in material re-use and recycling, and reduction in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to:

5) design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.'

- **GLA, London Environment Strategy (2018)** - The Mayor, with the new London Environment Strategy, aims to make London a zero-waste city. By 2026, no biodegradable or recyclable waste will be sent to landfill and by 2030, 65% of London's municipal waste will be recycled. With regards to waste management within the Proposed Development, the following extracts are of relevance:

'To help them achieve the recycling targets, waste authorities should deliver the following minimum level of service for household recycling:

- all properties with kerbside recycling collections to receive a separate weekly food waste collection
- all properties to receive a collection of, at a minimum, the six main dry recycling materials, i.e., glass, cans, paper, card, plastic bottles, and mixed rigid plastics (tubs, pots, and trays)

Proposal 7.2.1.c The Mayor will support efforts to increase recycling rates in flats.

The Mayor will encourage Resource London to provide more support and funding to those waste authorities that are working towards achieving higher recycling performance in flats. Through LWARB, the Mayor will seek additional funding to tackle recycling performance in flats. The London Plan requires that all new developments referred to the Mayor include adequate recycling storage for at least the six main dry recyclable materials and food.

Waste authorities, through the planning application process, should apply the waste management planning advice for flats, including the domestic rented sector, developed by LWARB in partnership with the London Environment Directors Network (LEDNET).'

B3 Local Policy

London Borough of Southwark Waste Management Strategy 2003 – 2021 – This document sets out the Boroughs approach and targets for municipal waste. The management of waste is based on the following principles:

- To reduce total waste arising through the promotion of waste minimisation;
- To recover value from waste materials that would otherwise be disposed of in landfill; and
- To minimise the social, environmental, and financial impacts of waste management.

The document is aged and targets now expired; a 2014 update¹ is also somewhat old.

London Borough of Southwark Waste management guidance notes for residential developments 2014 - This document provides guidance on the waste storage and collection requirements that should be considered for residential developments in Southwark.

The following formula is used to calculate the estimated total weekly refuse (recyclable and non-recyclable) arising from a residential development with communal refuse facilities:

- Total weekly refuse (L) = 30L per unit + 70L per bedroom

It is recommended that space be provided for recycling bins to accommodate 50% of this total weekly volume. This is in line with the revised British Standard (BS5906 Waste Management in Buildings).

Refuse (or residual waste) provision is required for 75% of the total weekly refuse arising:

- Recycling provision (L) = Total weekly refuse (L) x 0.5
- Residual waste provision (L) = Total weekly refuse (L) x 0.75

E.g., If the total weekly refuse is 1000ltr, we would require 500ltr capacity for recycling and 750ltr capacity for residual waste.

Any planned waste capacity over 660ltr will require the use of communal bins.

The distance residents have to walk to the bin store must be under 30m (horizontal distance). Collection points should be at street level and within 10m of the nearest stopping point for refuse collection vehicles. The path between the bin storage and collection point must be free of steps and kerbs (a drop-kerb should be designed in wherever possible).

¹ <https://www.southwark.gov.uk%2Fassets%2Fattach%2F1982%2F6.1.3-South-East-London-Boroughs-Joint-Waste-Appportionment-Paper-2014-Update.pdf&usg=AOvVaw2CJvdXC9ZI-ZNsXEOWpexV&opi=89978449>

The maximum distance we would expect a collection vehicle to reverse in order to turn at a turning head is 2 vehicle lengths (up to 15m). It is required that collection vehicles can both enter and exit a development (to leave or rejoin the highway) using a forward gear.

The current key specifications for the largest vehicle in the council's refuse fleet for which sufficient clearance must be incorporated in building and road layout designs are as follows:

- Length 10700mm
- Width 2550mm
- Max. Height 4300mm
- Max. Weight (fully laden) 26 tonnes