Camden Mixed Developments Limited

Grand Union House

Waste Management Stage 2 Report

February 2021
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1 INTRODUCTION

PROJECT BACKGROUND

WSP has been commissions by Camden Mixed Developments Limited to prepare a Waste Management Strategy for Grand Union House, London Borough of Camden (hereafter referred to as the 'Proposed Development'.

The Waste Management Strategy considers the potential impacts that may arise from waste generated during the operational phase with the overall aim of developing a strategy for legislative compliance and good practice in the prevention, minimisation, separation, storage and collection of waste.

DESCIPTION OF DEVELOPMENT

The Proposed Development would comprise part- demolition, re-build and upward extension to provide additional Class E office and commercial floorspace, six residential units (Class C3), new areas of landscaping and public realm.

2 MANAGEMENT OF RESIDENTIAL WASTE

INTRODUCTION

This section outlines the strategy which will be adopted to manage the waste arising from the residential units once operational.

WASTE GENERATION MODEL

Estimated waste generation levels have been quantified based on waste generation metrics for weekly waste arisings detailed in London Borough of Camden's (LBC)'s *Environmental Service Technical Guidance for Recycling and Waste*[1].

As the residential units will have a communal waste store, the formula for '*residential development of 7 dwellings or more'* has been used. **Table 1** shows the formulas used to quantify the weekly residential waste arising from the Proposed Development.

Table 1 – LBC Weekly Residential Waste Generations

Waste Stream	Metric	Comment
Refuse	120 Litres per Dwelling	Maximum of Three Bedrooms per Dwelling
Mixed Dry Recycling	140 Litres per Dwelling	
Food Waste	23 Litres per Dwelling	

Table 2 shows the residential waste generation for the Proposed Development.

Table 2 - Residential Waste Generation

Number of bedrooms	Number of Units	Total Weekly Waste Generation (litres)	Refuse (litres)	Recycling (litres)	Food Waste (litres)
1	3	849	360	420	69
2	3	849	360	420	69
Total	**6**	**1,698**	**720**	**840**	**138**

Table 3 shows the bin requirements for the communal waste store, based on a weekly collection.

Table 3 - Residential Bin Number Requirements

No. of Refuse Bins (1,100 litres)	No. of Recycling Bins (1,100 litres)	Food waste (240 litre)
1	1	1

The dimensions of the waste containers are summarised in **Table 4**:

Table 4 - Bin Dimensions

Bin Type	Height (mm)	Width (mm)	Depth (mm)
1,100 litre bin	1,370	1,275	980
240 litre bin	1,070	580	730

In addition to the bins detailed in **Table 4, Table 5** details the space provided for the storage areas for textiles, WEEE and bulky waste.

[1] London Borough of Camden (2019) Camden's Environmental Service Technical Guidance for Recycling and Waste. https://www.camden.gov.uk/planning-guidance-recycling-and-rubbish-requirements?inheritRedirect=true

Table 5 – Additional Waste Streams

Waste Stream	Area (m^2)
Textiles	1
WEEE	1
Bulky Waste	3

INTERNAL STORAGE

Each of the residential properties will be provided with a segregated waste bin, which will be fixed into an appropriate kitchen unit.

Figure 1 shows an example of a suitable segregated waste bin.

Figure 1 – Example segregated waste bin

The segregated waste bin shown including the following bin sizes:

- Refuse: 35 litres;
- Mixed dry recycling: 35 litres; and
- Food waste: 21 litres.

The proposed segregated waste bin will fit within a single kitchen unit, minimum width 500mm.

WASTE STORAGE

Residents will be responsible for transporting their waste from their individual apartments directly to the residential waste store on the ground floor, where they will segregate it into appropriately labelled bins. The residential waste store will have sufficient capacity for one week's waste generation.

The residential waste store is illustrated in **Figure 2**.

Figure 2 - Location of Residential Waste Store

The residential waste store should be designed to adhere to the below requirements:

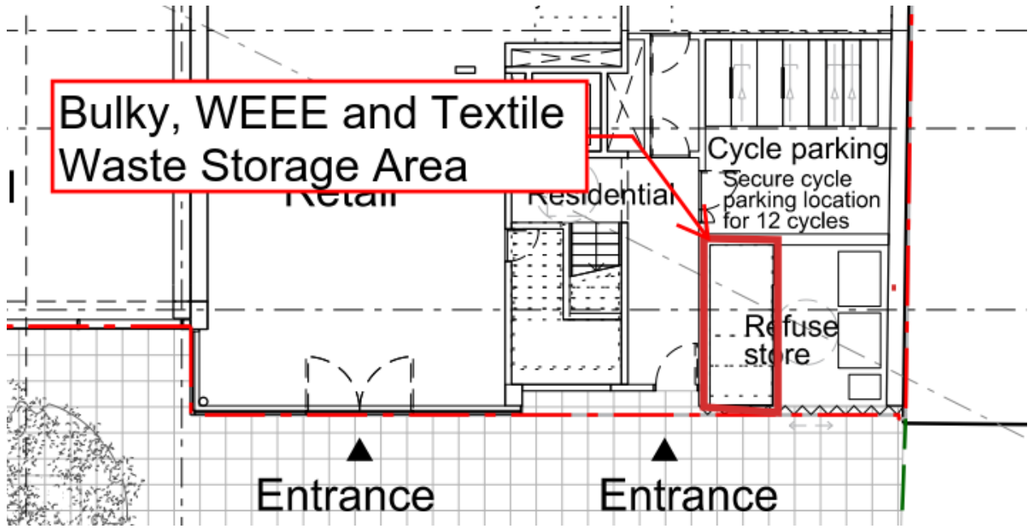
- Residents should not be expected to carry their waste more than 30 metres (horizontal distance only) from their apartment door to the bin store;
- The store should be large enough to allow a clearance of 150mm between each bin and the walls;
- There should be space in front of the bins to allow users to easily access the bins when depositing waste and for collection crews to remove them;
- The lighting should be a sealed bulkhead fitting;
- The store should have appropriate passive ventilators to allow air flow and prevent unpleasant odours. The ventilation must be fly and vermin proofed and near to either the roof or floor, but away from the windows of dwellings.
- The store should be designed to *BS5906:2005 Waste management in buildings - Code of practice* standards. In summary, they should include the following:

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

Within the residential waste store, an area to store bulky waste will be provided, which is separated from the residential waste store through the use of cage / screening. Space has been provided for the collection of textiles, Waste Electrical and Electronic Equipment (WEEE) and bulky waste, as per LBC's Guidance.

Figure 3 shows the location of the storage area for bulky, WEEE and textile items.

Figure 3 - Location of Bulky, WEEE and Textile Waste Storage



COLLECTION OF RESIDENTIAL WASTE

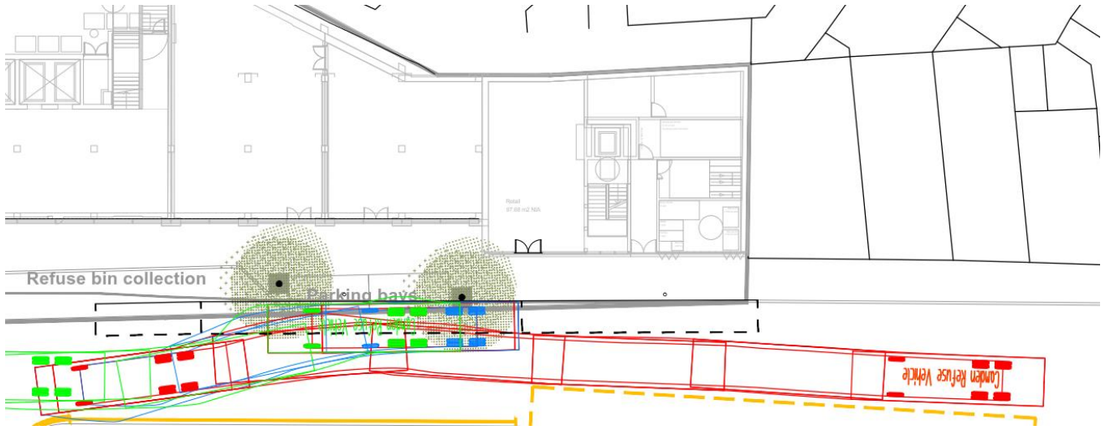
It is proposed that on nominated collection days, LBC waste collection operatives will access the bins in the residential waste store using a digital-code door lock, and wheel them out to the parked Refuse Collection Vehicle (RCV) on Kentish Town Road to be emptied before returning them promptly to the residential waste store.

In accordance with LBC's Guidance, the path between the residential waste store and the RCV will:

- Be free of kerbs or steps (a dropped kerb may be required); and
- The gradient of any path where bins have to be move should ideally be no more than 1:20 with a width of at least 2 metres and the surface should be smooth.

Figure 4 shows the location of the RCV in relation to the residential waste store.

Figure 4 – Location of RCV



Due to site restrictions, the bin drag distance to the RCV is approximately 12m.

3 MANAGEMENT OF COMMERCIAL WASTE

INTRODUCTION

This section outlines the strategy which will be adopted to manage the waste arising from the commercial areas once operational.

WASTE GENERATION MODELLING

Estimated waste generation levels have been quantified based on waste generation metrics detailed in British Standard *Waste management in buildings – Code of practice BS5906:2005.*

The formula used to quantify commercial waste arising at the Proposed Development once operational are detailed in **Table 6**.

Table 6 – Commercial Waste Metrics

Commercial Area	Waste Generation Metric (Weekly)	Assumptions
Office	Volume arising per employee (50l) x Number of employees	Assumes 1 employee per 8m^2
Retail*	Volume per number of cover (75l)	Assumes 1 cover per 3m^2

* *Assumes a worst-case scenario of food and beverage.*

Table 7 shows the commercial waste generation for the Proposed Development once operational.

Table 7 - Commercial Waste Generation

Class Use	NIA (m^2)	Level	Waste Generation (litres)	Refuse (litres)	Recycling (litres)
Retail	64.3	Ground Floor	1,608	804	804
Retail	85.4		2,135	1,068	1,068
Retail	87.8		2,195	1,098	1,098
Office	720.3		4,502	2,251	2,251
Office	373.6	Ground Mezzanine	2,335	1,168	1,168
Office	1224	First Floor	7,650	3,825	3,825
Office	1,221.8	Second Floor	7,636	3,818	3,818
Office	1,054.9	Third Floor	6,593	3,297	3,297
Office	716	Fourth Floor	4,475	2,238	2,238
Total	**5,483.8**	-	**33,191**	**16,596**	**16,596**

RETAIL UNITS

For the retail units, the commercial occupiers will be required to provide waste storage areas within their premises.

The individual commercial occupiers' waste stores should have sufficient capacity to allow refuse and recycling to be segregated. The size/ capacity of the waste stores should be sufficient to accommodate the volumes of waste generated by the occupiers' business activities and the frequency that waste will be collected. These waste storage areas are where waste produced by the retail units will be sorted prior to collection.

On collection days, the collection operatives will collect the waste directly from the retail units to the RCV which would park on Kentish Town Road.

OFFICE UNITS

The office units will have its own dedicated waste store.

Table 8 shows the total bin requirements for the office waste store based on three times a week collection frequency.

Table 8- Bin Requirements for Office Waste Store on three times a week collection frequency

	No. of Refuse Bins (1,100 litres)	No. of Refuse Bins (1,100 litres)	Total
Total	**7**	**7**	**14**

The dimensions of the waste containers are summarised in **Table 9:**

Table 9 - Bin Dimensions

Bin Type	Height (mm)	Width (mm)	Depth (mm)
1,100 litre bin	1,370	1,275	980

Facilities Management (FM) appointed by the office tenants will be responsible for transporting the waste from the office units to the office waste store.

Figure 5 shows the location of the office waste store.

Figure 5- Location of Office Waste Store

The office waste store should be designed to adhere to the below requirements:

- Large enough to allow a clearance of 150mm between each bin and the walls;
- There should be space in front of the bins to allow users to easily access the bins when depositing waste and for collection crews to remove them;
- Should be designed to *BS5906:2005 Waste management in buildings - Code of practice standards*. In summary, they should include the following:
    - A suitable water point in close proximity to allow washing down;
    - All surfaces sealed with a suitable wash-proof finish;
    - All surfaces easy to clean; and
    - Suitable floor drains.

The path between the office waste store and the RCV will:

- Be free of kerbs or steps (a dropped kerb may be required); and
- The gradient of any path where bins have to be moved will be no more than 1:20 with a width of at least 2 metres and the surface smooth.

4 COMPLIANCE WITH BREEAM NEW DEVELOPMENT

Summarised below is an abridged summary of the relevant BREEAM requirements contained in Wst 03 Operational Waste:

- *One Credit* – There is dedicated space(s) to cater for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities.

  The dedicated space(s) must be:
  a) Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams.
  b) Accessible to building occupants/facilities operators for the deposit of materials and collection by waste management contractors.
  c) Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that arise from daily/weekly operational activities and occupancy rates.

- Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the buildings use and operation, the following facilities are provided as part of its waste management strategy:

  a) Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space.
  b) Vessel(s) for composting suitable organic waste resulting from the buildings daily operations and uses OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility.
  c) Where organic waste is to be stored/composted on site, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes.

In order to comply with the BREEAM requirements, the waste management strategy proposed, and associated design would need to incorporate the following:

- Sufficient space to accommodate a baler to compact cardboard packaging.
- Sufficiently sized dedicated space/s to store the required number of waste containers.
- Waste storage areas are accessible to the relevant commercial tenants on-site.
- Sufficient space to accommodate food waste containers.

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