

Phoenix Place – Phase 2 Blocks B, C & D

Refuse Strategy

STATUS			
Revision	Date	Comments	By
A	23-08-2018	First Issue	ZR
B	29-08-2018	Revised to client comments	JA
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1.0 INTRODUCTION

The aim of this document is to give an outline strategy for the method of collection, storage and disposal of the refuse collected from Phoenix Place, Phase 2. The three buildings comprise a total of 131 Apartments. The main apartment entrances are at ground level and the car parking and service areas are located in the basement area.

This Strategy document has been compiled in conjunction with London Borough of Camden's Guidance document, - CPG 1.

The proposed location for the refuse storage on the scheme is as noted in Drawing no. 00200-Consented Scheme – Basement Plan.

Code for Sustainable Homes Level 4 is required for this phase. We consider that 4 credits for WAS 1 will be sought as follows:

Storage of household waste

An adequate external space should be allocated for waste storage and sized to accommodate containers according to the largest of the following two volumes:

The minimum volume recommended by British Standard 5906 (British Standards Institution, 2005) based on a maximum collection frequency of once per week.

This volume is 100 litres for a single bedroom dwelling, with a further 70 litres for each additional bedroom.

Storage of recyclable household waste

A Local Authority collection scheme where recyclable household waste is pre sorted

2.0 CALCULATION OF RESIDENTIAL REFUSE CAPACITY

London Borough of Camden refuse guidelines state the calculation of residential waste based on the size of the dwelling the number of these in the development and the projected weekly waste per household of that size. See Appendix 6.0 and 6.2.

These bin numbers are provided within secure internal stores indicated on drawing 00200-Consented Scheme – Basement Plan. The space to access the associated bins is in accordance with the BS 5906 2005 and is demonstrated on 00200-Consented Scheme – Basement Plan Appendix 6.1 drawing noting the required bin access dimensions.

3.0 METHOD AND FREQUENCY OF COLLECTION

The general refuse would empty directly into 1100 litre Eurobins type bins and the recycling into 1100 litre bins, and the food waste into 660 litre bins. Twice weekly Collection and Sanitation of the bins is proposed. The general refuse, recycling and food waste are located locally to each residential vertical circulation core.

Bulky waste will be arranged by appointment only. Residents will contact the residential management company to arrange provision within the secure internal storage, indicated in drawing 00200-Consented Scheme – Basement Plan. The management will then organise a collection outside of the regular twice weekly collection times, storing bulky items within the collection holding area off-street, at the top of the car park ramp.

3.1 COLLECTION BY LONDON BOROUGH OF CAMDEN

Euro bins will be brought to street level by the building management team using an electrically powered tug (Verhagen Leiden V-move waste bin Tug) and presented for Street edge collection within designated zone, off-street at the top of the car park access ramp (clear of security gate swing & ramp access), see drawing 00200-Consented Scheme – Basement Plan Appendix 6.1 for indicative location.

In response to the officers comments, the storage of the types of waste (including bulky waste, food waste, recycling, refuse) are to be locally stored within the secure collection zone marked by pin studs. The area

accommodates 10No. 1100 Litre bins and 2No. 660 Litre bins for twice weekly collection. The area is clear of gate swing & ramp access. This is displayed on 00200-Consented Scheme – Basement Plan Appendix 6.1 drawing.

Details of collection to be progressed with LBC and Veolia during the development of the Servicing and Delivery Plan.

Bin collection days should be on alternate days to Phase 1, to reduce the amount of vehicular traffic on the road network. Refer to Phase 1 Refuse Strategy, 30924-Refuse Strategy RevF. In addition to collection on alternative days, the Phase 1 concierge will manage the bin collection from the Phase 2 basement stores to the holding area, located on the drawing 00200-Consented Scheme – Basement Plan Appendix 6.1, on the required collection days.



4.0 RECYCLABLE MATERIALS STRATEGY

Recycling Eurobins will be contained within the Bin stores.

A suitable recycling storage bin is to be provided in each apartment, preferably within the Kitchen area.

The recycling and waste collections are to be clearly segregated.

5.0 COMMERCIAL UNIT

An Area will be allocated by the developer for refuse storage from the commercial and retail units in accordance with BREEAM Wst 03 Operational Waste. External storage of refuse is NOT permitted.

5.1 CALCULATION OF COMMERCIAL CAPACITY

The refuse from the commercial/ retail units will be stored within a dedicated commercial bin store, by the tenant until collection. The tenant will provide storage pro rata to equal to a minimum of 1000 Litres of storage for every 500 m² of commercial retail area, with provision for mixed dry recycling.

5.2 PROPOSED METHOD OF COLLECTION: COMMERCIAL

The commercial tenant will be responsible the management of their waste and collection of their waste, retaining within their own demise and bringing the storage out to the street on collection day. The commercial tenants must present their refuse storage and collection strategy to the Building Management Company for their review and approval. Space has been provided for 1x 1100 Euro bin within the collection zone (at the top of the car park access ramp) for commercial collection provision.

6.0 APPENDIX – BROADWAY MALYAN BIN SCHEDULE

Phoenix Place, London - Phase 2

Refuse and Recycling Bin Provision

200

Rev B

Date:19.11.18

Block B

Occupation	Number	Predicted waste per week (Litres)	Total lt
3b	0	240	0
2b	38	170	6460
1b	25	100	2500
			8960
Number of Bins			1100 lt/ 8960lt 8.5 bins
Bin Mix 4 Refuse Bins (1100 Litres) 4 Dry Recycling (1100 Litres) 1 Food Waste (660 Litres)			

Block C

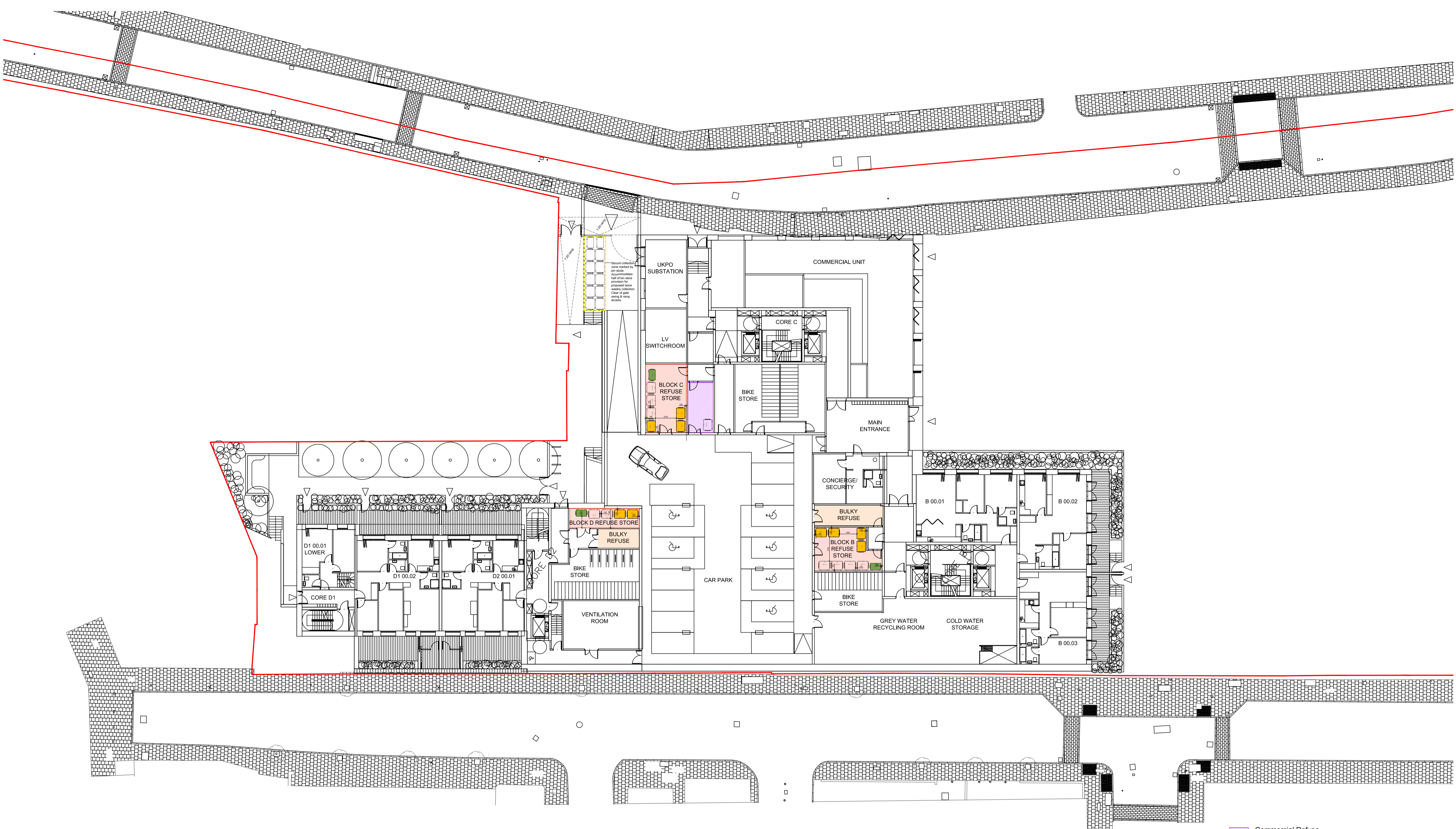
Occupation	Number	Predicted waste per week (Litres)	Total lt
3b	3	240	720
2b	25	170	4250
1b	18	100	1800
			6770
Number of Bins			1100 lt/ 6770lt 6.5 bins
Bin Mix 3 Refuse Bins (1100 Litres) 3 Dry Recycling (1100 Litres) 1 Food Waste (660 Litres)			

Block D

Occupation	Number	Predicted waste per week (Litres)	Total lt
4b	1	310	310
3b	12	240	2880
2b	8	170	1360
1b	1	100	100
			4340
Number of Bins			1100 lt/ 4340lt 4 bins
Bin Mix 2 Refuse Bins (1100 Litres) 2 Dry Recycling (1100 Litres) 1 Food Waste (660 Litres)			

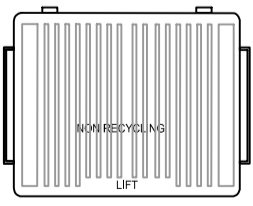
6.1 APPENDIX – BROADWAY MALYAN DRAWING

00200-Consented Scheme – Basement Plan

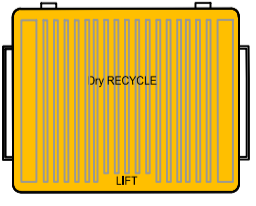


- Commercial Refuse Holding Room
- Residential Bin Stores
- Residential Bulky Waste Stores
- Application Area
- Refuse Highway Collection Zone

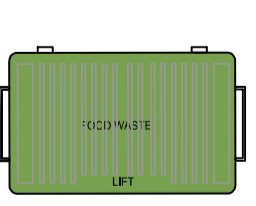
Waste Storage Key



General Refuse
None Recycling
1100 litre euro bin
1370x1260x990mm



Dry Mixed Recycling
1100 litre euro bin
1370x1260x990mm

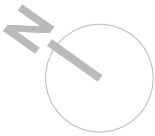
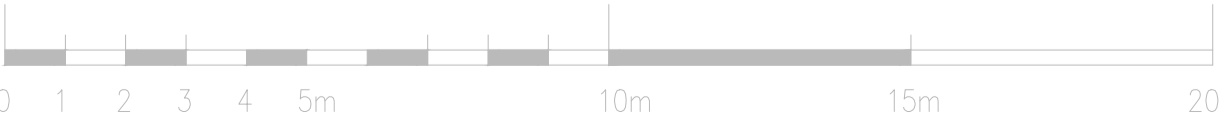


Food Recycling
660 litre euro bin
1145x1305x745mm

PHOENIX PLACE

Drawing 00200 - CONSENTED SCHEME - BASEMENT PLAN
Scale 1:200 @ A1
Date FEB 2018

PARKING TOTALS
Parking Bays = 8
Disabled Bays = 6
Cycle Spaces = 78



6.2 APPENDIX –CAMDEN COUNCIL GUIDANCE.

10 Recycling and Waste Storage

KEY MESSAGES

Planning for waste recycling and storage should ensure that developments accommodate:

- adequate space (designed) for the storage of recyclables and waste;
- safe location - accessible for all users and collectors and minimise nuisance to occupiers and neighbours (and their amenity space) e.g. noise, obstruction, odours, pests, etc.;
- recycling and refuse collection for any waste contractor (and allow for reasonable changes to collection services in the future);
- containers should have designated storage areas; and
- sensitively designed/located, especially in conservation areas/or listed buildings.

- 10.1 This section seeks to ensure that appropriate storage for recyclables and waste is provided in all developments in Camden. Its key aim is to assist those involved in the design and management of buildings to best provide for the storage of waste and maximise the amount that can be sent for recycling.
- 10.2 This guidance relates to Core Strategy Policy – CS18 - Dealing with our waste and encouraging recycling and Development Plan Policies - DP26 – Managing the impact of development on occupiers and neighbours and DP22 – promoting sustainable design and construction.
- 10.3 This guidance also relates to the British Standard BS5906-2005 – Waste management in buildings – Code of practice.
- 10.4 The following section provides detailed guidance on the space requirements for both internal and external storage features. It covers residential developments of 6 or fewer dwellings, residential developments of more than 6 dwellings, and non-residential or commercial dwellings.
- 10.5 This guidance applies to:
 - all new build developments;
 - developments that significantly increases amount of floor space and on-site waste; and
 - other activities that significantly increase the amount of waste generated on-site.
- 10.6 This guidance does not cover construction and demolition waste, or hazardous waste. For further information on these topics please refer to CPG4 Sustainability, particularly the chapter Sustainable use of Materials and Hazardous substances and Construction Management Plans.

Guidance on standards for waste storage

- 10.7 This section provides detailed guidance on the requirements for both internal and external recycling and waste facilities to ensure designs allow sufficient space for the storage of recyclable material and waste in developments. To encourage occupants to recycle, internal storage areas should be designed into each unit of a new development. This will enable occupants to segregate their waste into refuse and recyclables, and store it temporarily, until it can be transferred to external bins.

Residential development of 6 dwellings or fewer

Space requirements

- 10.8 Residential development of 6 dwellings or fewer are usually serviced by a kerbside recyclables and waste collection. The designs for recycling and waste facilities need to provide sufficient internal and external storage areas for each unit, ensuring:
- that internal space is provided for recycling and refuse storage, comprising adequate space for a recycling receptacle (typically a green reusable box or bag), food waste caddy, and waste bin for non-recyclables. Kitchens and utility rooms are generally the most appropriate locations;
 - there is external storage for mixed (commingled) recyclables, organic kitchen waste and non-recyclable waste, providing space for the following:
 - a free-standing 140l or 240l wheelie bin for the storage of commingled recycling;
 - a free-standing kitchen waste caddy;
 - seasonal storage of garden waste i.e. in large hessian sacks;
 - a free-standing receptacle for the storage of refuse (should the developer or resident wish to purchase one, as the Council does not currently provide containers for refuse);
 - for details of container dimensions please see Figure 13, below.

Residential development of 7 dwellings or more

- 10.9 Collection services for developments with 7 or more residential dwellings vary depending on the individual circumstances of the premises. For this type of development a kerbside collection is preferred, where possible. For external storage requirements, the guidance for residential development of 6 or fewer units should be used.
- 10.10 Where communal facilities are required (i.e. the dwellings will share central recycling and refuse bins), the following steps should be followed:
- 10.11 The table below can be used to calculate the total volume of all waste and recycling generated in a week:

Size of household	Number in development	Projected Weekly Waste per household	Waste produced from all households
Studio / one bedroom	A	100 litres	$A \times 100 = W$ litres
Two bedroom	B	170 litres	$B \times 170 = X$ litres
Three bedroom	C	240 litres	$C \times 240 = Y$ litres
Total Weekly Waste Arising			$W+X+Y = Z$ litres

- 10.12 If there are more than six households in a block of flats we recommend the use of bulk bins. The standard Eurobins we use have a capacity of 1,100 or 1,280 litres. The minimum required can be calculated as below:

$$\text{Number of bulk bins required} = \frac{(Z) \text{ litres (from Table 1)}}{1,100 \text{ litres (volume of bulk bin)}}$$

- 10.13 Provision of bins should at least be split equally between refuse and recycling including provision for food waste – e.g. if a building requires 4.5 x 1,100l bins, 2 should be for refuse and 2 for dry recycling, plus a 660l bin for food waste.

Space requirements

- 10.14 Internal storage: Bulk bins must be placed on smooth impervious material that is 100 mm thick to withstand the weight. If multiple bins are needed they are better kept in an enclosure. This discourages non-residents from using the bins and also improves the aesthetics of the development. The dimensions of bulk bins are given in the table below.

Figure 13. Storage containers and dimensions

Container Type	Use	External dimensions mm (H x W x D)
55l green box	Storage of mixed dry recycling by households without space for a wheelie bin. Can be stored internally or externally, collected from the kerbside.	350 x 390 x 585
45l reusable green bag	Storage of mixed dry recycling by households without space for a wheelie bin. Can be stored internally or externally, collected from the kerbside	350 x 300 x 450
7l kitchen caddy	Internal storage of food waste. Contents are then transferred to a larger outdoor caddy or communal food waste bin.	252 x 252 x 229
23l kitchen caddy	External storage and collection of food waste by households with a kerbside collection	405 x 320 x 400
90l white sack	Seasonal external storage of compostable garden waste	450 x 450 x 450
140l wheelie bin	External storage and collection of mixed dry recycling by households with a kerbside collection.	1070 x 580 x 550
240l wheelie bin	External storage and collection of mixed dry recycling by households with a kerbside collection	1070 x 580 x 740
500l Eurobin	Communal external storage and collection of food recycling for households with communal collections	1145 x 1305 x 745
1100l Eurobin	Communal external storage and collection of mixed dry recycling and refuse for households with communal collections	1370 x 1260 x 990

(NB: This list, including the bin dimensions, is subject to change. It is only to be used for preliminary design purposes)

- 10.15 Residents should not be expected to carry their waste more than 30 metres in the horizontal distance from their front door to the bin store.
- 10.16 The enclosure or chamber should be large enough to allow clearance of 150 mm between each bin and the walls.
- 10.17 There should be space in front of the bins to allow residents to easily access the bins when depositing waste.
- 10.18 If multiple bins are used then there should be sufficient space to rotate the bins in between collections.

- 10.19 The walls should be made from an impervious, non-combustible material that ideally has a fire resistance of one hour when tested to BS 476-21.
- 10.20 If a gate or door is added to the enclosure or chamber it should be metal, hardwood or softwood clad with metal. Ideally it should have a fire resistance of 30 minutes when tested to BS 476-22. The door frame should allow clearance of 150 mm either side of the bin, when it is being pulled out for collection. The door frame should be rebated into the reveals of the opening. There should be a latch or clasp to hold the door open while the collection process takes place.
- 10.21 Arrangements should be made for the cleansing of the bin stores with water and disinfectant. A hose union tap should be installed for the water supply. Drainage should be by means of trapped gully connected to the foul sewer. The floor of the bin store area should have a suitable fall (no greater than 1:20) towards the drainage points.
- 10.22 If the chambers are inside the building they should have a light. The lighting should be a sealed bulkhead fitting (housings rated to IP65 in BS EN 60529:1992).
- 10.23 Internal bin chambers 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.

Access for collections

- 10.24 Collectors should not have to cart a bulk bin more than 10 metres from the point of storage to the collection vehicle.
- 10.25 The gradient of any path that the bulk bins have to be moved on should ideally be no more than 1:20, with a width of at least 2 metres, and the surface should be smooth.
- 10.26 If the storage area is raised above the area where the collection vehicle parks, then a dropped kerb is needed to safely move the bin to level of the collection vehicle.
- 10.27 The roadway the vehicle parks on should be able to accommodate the weight and size of a 26 tonne vehicle.

Non-residential and commercial buildings

- 10.28 Occupiers of commercial premises are legally obliged to make an arrangement with either the Council or a licensed waste carrier for the collection of the waste produced from the premises.
- 10.29 The volume of waste generated and thus the number and type of containers that a commercial development requires is ultimately dependent on the use of the building. Further information can be found on the Council's website:
<http://camden.gov.uk/ccm/content/environment/waste-and-recycling/commercial-waste/duty-of-care.en>

- 10.30
- Where an extension or change of use to an existing property is proposed, this may result in the removal of existing container storage areas, typically, to the rear of a property. This may be acceptable provided that an alternative storage area is designated as part of the proposed development, in line with this guidance. For external storage requirements, Figure 14: External Storage Requirements should be used.

Space requirements

- Internal collection and storage points should always be considered for all types of waste to maximise the amount of recyclable material.
- External storage must be provided in most cases. As a guide, approximately one cubic metre storage space is required for every 300-500sq m of commercial space (includes both recyclable and non-recyclable waste). Storage space must be designed to accommodate bins to hold this amount of waste, separated, and should be designed in consultation with the waste collection contractor.
- Waste and recyclables from residential and commercial components of a development must be stored separately, but they should be stored using the same container type to facilitate ease of collection.
- For a summary of external waste storage requirements see Figure 14

RESTAURANTS AND FOOD WASTE

Special consideration must be given to the location and nature of external storage areas. The volume of waste generated is generally high and has a high biodegradable content, therefore can potentially cause nuisance from odour, visual blight, and through attraction of vermin and scavengers. Storage of such waste should be in solid receptacles which ameliorate negative environmental impacts

Since 1st January 2006 developments that generate food waste have had to comply with the requirements of the Animal By-Products Regulations 2005. The Regulations place controls on the collection, handling, transport, storage and disposal of animal by-products, which includes catering waste. This may have implications for the design of the building and the waste containers required. Further information on The Animal By-Products Regulations 2005 should be sought from DEFRA – www.defra.gov.uk/animalh/by-prods/default.htm

Location Requirements

- 10.31
- The table below summarises the key external storage requirements. In particular, the first six features apply to all developments regardless of size and type of units.

Figure 14. External storage requirements

	External storage area features:	Less than 6 residential units	7 or more residential units	Non-residential (commercial) Development
1	Should not be located near ground storey windows. They should be located within 10 metres of an external access.	✓	✓	✓
2	External storage areas and collection points must be as close as possible to, and preferably within 10 metres of, a place suitable for a collection vehicle to stop.	✓	✓	✓
3	Storage facilities must be at or near street level, and should be accessible via appropriately sized and graded ramps to allow bins to be wheeled to and from the collection point easily.	✓	✓	✓
4	Must be safe for users by being well lit and visible from public vantage points and nearby dwellings / tenancies.	✓	✓	✓
5	Should be unroofed, unless they are fully enclosed and secured (ideally inaccessible to animals).	✓	✓	✓
6	Should be accessible for collection purposes and not impede pedestrian or vehicular access on public thoroughfares or to and from buildings.	✓	✓	✓
7	Should be located as close to the front property boundary as possible, preferably behind the front boundary wall, without detracting from the street scene.		✓	
8	Consideration should be given to the: <ul style="list-style-type: none"> • allocation of additional external storage space in the future, e.g. additional bins, • composting facilities - in residential development with a garden or landscaping, • provision of onsite storage for bulky waste (i.e. furniture) items and potential opportunities for re-use of these items. 		✓	
9	Should be in an enclosed chamber that can be accessed from outside the building.			✓
10	Large developments in areas that are deficient in recycling banks ("bring") facilities will be expected to incorporate these facilities onsite for use by the general public - must be located in secure and easily accessible communal areas,		✓	✓

Additional Requirements

- 10.32 Applicants must provide details of storage for waste and recyclables in a proposed development as part of their application. These should be shown on the plans or in the application documents, where possible, and will form part of the approval
- 10.33 For schemes that create 7 or more dwellings, or includes a non-residential component, the applicant must consult Camden's Planning Department prior to making an application to determine the best means of storage and collection for the development. A statement describing the proposed waste storage and collection arrangements should be provided with the application.
- 10.34 For large proposals, or for proposals with complex waste separation or collection arrangements, a management plan might be required as a condition of approval.
- 10.35 Consideration should also be given to materials and finishes, and lighting of waste enclosures, to ensure that they are safe and secure, and do not present a fire hazard. These are dealt with in the Building Regulations.

Further information

Camden Street Environment Services	<p>Applicants are advised to contact Camden Street Environment Services in the first instant prior to making an application to determine the appropriate means of storage and collection required for a proposal</p> <p>Address: Roy Shaw Centre 3-5 Cressy Road London NW3 2ND 020 7974 6914/5 www.camden.gov.uk/waste</p>
Waste storage requirements	<p>Waste Storage : A Guide for Developers of Commercial and Residential Premises in the London Borough of Camden, Camden Street Environment Services</p> <p>BS 5906 2005 Waste management in buildings – Code of practice, British Standards</p>
Assistance with the identification of an appropriate company to deal with recyclable waste from the proposed development	<p>Waste recycling www.wasterecycling.org.uk</p> <p>For free environmental guidance for small and medium-sized enterprises, see Environment Agency (NetRegs) www.environment-agency.gov.uk/netregs/default.aspx</p>

How to present recycling and waste for collection

When to present recycling and waste

- Waste should be placed out at the correct time and date outside your premises and against the structure of the building wherever possible.
- Please place the recycling and waste for collection half an hour before the earliest expected collection time e.g. collection time band is 6pm – 8pm, place waste for collection at 5.30pm. The collection vehicle will arrive anytime between 6pm and 8pm so the recycling or waste needs to be ready for the earliest time the collection could take place.

How to present recycling and waste

- Please ensure it is visible from the street so the collection crew can see it and all your waste is contained securely in the bag or container.
- Place bags against the structure of the building where possible.
- Liquids from waste or loose waste escaping from bags can stain the street, make it look untidy and cause difficulties for collection staff. Double bagging some waste can prevent spillages and waste escaping.
- Please ensure you do not block the pavement or have any sharp items sticking out of the bags that could injure pedestrians or collection staff.
- Please ensure we have access to collect bags and bins. Vehicles sometimes block access to bins or gates are locked preventing us from gaining access.
- All waste should be presented in clearly identifiable bags. Camden Council customers should use Camden green bags for their waste and clear bags for mixed recycling only, unless using a Camden bin or container.
- Waste presented for collection in black bags will not be collected and will be reported as fly tipped waste.
- Please ensure that the clear recycling bags only contain items that are suitable for recycling.
- If mixed recycling bags or bins contain general waste or unsuitable items (contaminated) we cannot collect them with the rest of the recycling. The incorrect items can either be removed by you or collected as waste which could incur additional costs to you.



How to present recycling and waste for collection



Containers must:

- ✓ Have a closed lid
- ✓ Contain all the waste
- ✓ Have no waste or litter around the container
- ✓ Be kept in a suitable location, not restricting access and safe from vandals, thieves, children, trespassers or animals



Containers must not:

- ✗ Have lids left open or unlocked
- ✗ Have waste and litter around them
- ✗ Be easily accessible to the public or animals
- ✗ Block access to public highway
- ✗ Pose a fire risk

Containers should not contain the following items:

- ✗ Building rubble
- ✗ Hazardous waste
- ✗ Clinical waste
- ✗ Waste Electrical and Electronic Equipment (WEEE)
- ✗ Liquid wastes