

Refuse Strategy Report
Kidderpore Avenue, London

Allies and Morrison

Issue 02
20 August 2014

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London Borough of Camden Planning Guidance - Design - 10
Waste and Recycling Storage

Issue Record

Issue 01	10 March 2014	First Issue
Issue 02	20 August 2014	Second Issue

1.0 Introduction and Scope

This report has been prepared in order to coordinate the proposed refuse strategy for the Kidderpore Avenue Phase 1 development, which comprises of refurbished arts and crafts houses 'Block A1', 'Block A2', 'Block B', and 'Block C', the redeveloped of an existing library 'Block D', and new build 'Block E', 'Block F', 'Block G', and 'Block H'.

Richard Hodkinson Consultancy (RHC) and Whitecode Design Associates (WDA) were appointed to provide specialist sustainability advice for the development. As part of the planning submission two reports were produced:

- Sustainability Statement by Richard Hodkinson Consultancy
- Energy Statement by Whitecode Design Associates

WSP Group provided a Traffic Impact Assessment as part of the planning submission. Within this the quantity of refuse space required based on the number of residential units and types within the development were identified.

Allies and Morrison have coordinated the spatial requirements for refuse based on the above guidance.

The scope of this report responds to the access and layout of the development and is intended to address the following criteria:

- Strategic means for refuse vehicle access across the development.
- Consideration is given to the quantity of refuse generated by the occupants.
- Location of refuse stores with respect to entrances to cores.
- Spatial requirements for refuse storage based on unit mix and sizes.
- Management issues.

2.0 Design Report

2.1 Scheme description

Phase 1, to which this report relates, consists of 75 residential units and a new Hampstead School of Art of approximately 410m². 24% of the housing provided is affordable (68% social rent and 32% shared ownership).

2.2 Site and location

The site is located in the London Borough of Camden. It is situated between Kidderpore Avenue to the north, Platt's Lane to the west and Finchley Road to the south. It is also within the Redington and Frognal Conservation Area.

2.3 Building form and size

Blocks A - C are refurbishments of existing Arts and Crafts houses on Kidderpore Avenue. These are less than six dwellings per block.

Block D comprises of the conversion of the existing Caroline Skeel library on site into residential units. As there is a sustained incline from the waste store, it is proposed for the site management company to use a maintenance buggy to transport the euobins to a collection point at the site entrance to Kidderpore Avenue on collection days.

Block E is a three-storey new build located in the centre of the development. It will use the waste store for Block D and its waste will be managed in the same way as Block D.

Blocks F - H are new build residential facing Finchley Road. Eurobins will be brought to a collection point outside blocks F and H.

3.0 Record of Consultations

See attached.

4.0 Refuse Strategy

The site will be managed by Barret Residential Asset Management (BRAM).

4.1 Refuse collection constraints

According to London Borough Camdens's (LBC) refuse strategy document, 'A Guide to Developers of Commercial and Residential Premises in London Borough of Camden':

- Bin storage areas must be within 10 metres wheeling distance of the collection point.
- The paths between the storage facility and the collection point must be a minimum width of 1.5m, with minimum clear headroom of 2.2m.
- If bin stores are fitted with locks then these should be standard Fire Brigade locks.
- Vehicles should not be expected to reverse. If this is unavoidable, then the maximum reversing distance should be 20m.

The refuse from Block D will be moved to a designated holding area along Kidderpore Avenue.

4.2 Location of refuse stores

The locations of the refuse stores for Phase 1 are shown on drawing 809_00_02_030.

4.3 Quantity of refuse storage

LBC's guideline capacity requirements for refuse are:

Unit size	Storage	
1 bed unit	0.20m ³	200 litres
2 bed unit	0.25m ³	250 litres
3 bed unit	0.30m ³	300 litres
4 bed unit	0.35m ³	350 litres
5 bed unit	0.40m ³	400 litres

These figures include both recyclable and non-recyclable waste.

4.4 BREEAM Domestic Refurbishment

All retained and refurbished dwellings, namely Blocks A - D, will be designed to achieve a BREEAM Domestic Refurbishment rating 'Very Good'. To achieve this, LBC's waste storage requirements must be adhered to.

4.5 Code for Sustainable Homes

New build elements of the residential development, namely Blocks F - H, will be designed to achieve Level under the Code for Sustainable Homes. Refuse capacity requirements are:

Unit size Storage

1 bed unit 100 litres
2 bed unit 170 litres
3 bed unit 240 litres

Therefore, the capacity requirements for each block based on the figures by LBC are:

Block	# Apartments	Waste Generation/ weeks (litres)	Eurobins Required Weekly Collection	Current allocation (design)
A1	2	650	1	4x140l, 2x 120l, garden waste (sack) (800l)
A2	2	650	1	4x140l, 2x 120l, garden waste (sack) (800l)
B	4	1300	2	8x140l, 4x 120l, garden waste (sack) (1600l)
C	1	250	1	4x140l, 2x 120l, garden waste (sack) (800l)
D	30	8650	8	8 x 1100l (8800l)
F	14	2950	3	3 x 1100l (3300l)
G	13	2900	3	3 x 1100l (3300l)
H	9	2550	3	3 x 1100l (3300l)

Blocks A – C

Refuse will be housed in dedicated bin stores inside the wall to Kidderpore Avenue. The refuse will be divided between non-recycled, recycleable, garden waste and food waste, as laid out by LBC requirements.

Block D

Refuse will be housed in a dedicated store on Level -01. The bins will be split between recycling and non-recycling. The bins will be brought to the holding area at the site entrance to Kidderpore Avenue on collection day by the on site team using a utility buggy.

Block F – H

Refuse will be housed in two dedicated stores in Block F and G. The bins will be brought to holding areas as the stores lie outside the 10metre pull distance to the kerb.

Block E

Block E will come under LBC guidance non-residential waste which states: *as a rough guide, in a development comprising that developments comprising between 3000 and 5000 square feet per floor should set aside at least one cubic metre of usable waste storage per floor.*

On a pro rata basis this equates to 1.5m³ for Block E as a whole. This equates to one 1100 and one 660 eurobin. This will be located in a dedicated bin store to the north of the entrance to the car park entrance of Block D.

4.6 Collection of large items

LBC advise that provision should be considered for 'onsite storage of bulky waste (i.e. furniture) items and potential opportunities for re-use of these items' for developments with seven or more units. A designated holding area will be identified for these items. As the development as a whole will be managed, the following stores will be provided:

Block	No. People	Current achieved bulk store
D	165	10m ²
F	34	12m ² (combined for blocks F, G, and H)
G	36	
H	41	

This provision is below the 0.3m² per person recommended by LBC but as this is a managed site, it is deemed that the store will be monitored and system put in place by the on-site maintenance company to deal with bulky items (such as furniture) and excessive storage is not required. A draft version of the proposal was issued to LBC who gave their provisional approval.

5.0 Drawing List
Architectural Drawing List
Site Plan Level 00
 809_00_02_030_P1

Appendix

Camden Planning Guidance – Design – 10 Waste Recycling and Storage
 (Non-applicable sections have been omitted)

Key Messages

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

- adequate space (designed) for the storage of waste and recyclables;
- 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;
- 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.

This section seeks to ensure that appropriate storage for waste and recyclables is provided in all developments in Camden. Its key aim is to ensure that assists 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.

This guidance relates to:

Core Strategy Policy - CS18: Dealing with our waste and encouraging recycling
 Development Plan Policy - DP26: Managing the impact of development on occupiers and neighbours
 Development Plan Policy - DP22: Promoting sustainable design and construction.

The preceding section provides detailed guidance on the space requirements for both internal and external storage features – these are set out in two parts:

Residential developments – internal/external features

- 6 dwellings or fewer
- 7 dwellings or more

Non-residential and commercial development

- internal/external features

This guidance applies to:

- all new build development
- development that significantly increases amount of floor space and on-site waste
- other activities that significantly increases the amount of waste generated on-site

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

This section provides detailed guidance on the requirements for both internal and external waste and recycling facilities to ensure designs allow sufficient space for the storage of waste and recyclable material in developments. To encourage occupants to recycle waste, 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**

Residential development of 6 dwellings or fewer are usually serviced by a kerbside waste and recyclables collection. The designs for waste and recycling facilities need to ensure that:

- internal and external storage areas are designed into each unit;
- internal space is provided for recycling storage, i.e. kitchens and utility rooms are generally the most appropriate locations;
- storage for both mixed recyclables, organic kitchen waste and nonrecyclable waste.
- recycling waste storage comprises either a box or bag which are normally stored inside and taken to the kerbside on collection days;
- organic waste (food) kitchen caddies are stored inside the property and emptied into larger external, free-standing organic waste receptacles;
- external space for the storage of garden waste i.e. in large hessian sacks; and
- external storage for both waste and recyclables outside the buildings within the curtilage (for waste collector).

Residential development of 7 dwellings or more

Collection services for developments with 7 or more residential dwellings vary depending on the individual circumstances of the

premises. The design of the building and space requirements will be determined on a case-by-case basis by the Council’s Street Environment Service – and need to be consulted prior to lodging an application. 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 (see Figure 16) should be used.

Space requirements

Internal storage:

Developments this size needs to ensure that Internal storage, i.e.:

- be located in an accessible and communal area inside each dwelling;
- the location should also be easily accessible from external storage areas, near to areas of high waste production, and hard wearing and washable - kitchens and utility rooms are generally the most appropriate; and
- recyclables must be able to be separated at the source, and dwellings should be provided with capacity for receptacles for each recyclable component (including food waste), according to the separation at the relevant “bring” facility e.g. glass (3 banks as colour separated at source – clear, green, brown), cans, plastic bottles, paper (single banks for mixed collections), etc, and for non-recyclable waste.

Space considerations:

- provide for both mixed recyclables, organic kitchen waste and non-recyclable waste; and
- storage for recycling must have at least twice, if not three times, the capacity of storage for non-recyclable waste to account for the separation requirements and the frequency of removal from the dwelling.

External storage - by rooms per dwelling:

- Must be provided to allow for recyclables and waste that is expected to be produced by the size of development. For external storage requirements, the following should be used.

Number of habitable rooms in dwelling Capacity of external storage space required for that dwelling (for weekly collection)

1	0.15 m3
2	0.20 m3
3	0.25 m3
4	0.30 m3
5	0.35 m3
6	0.40 m3

NB: The figures include both recyclable and non-recyclable waste

External Bins for waste and recycling storage

Bins for waste and recycling storage vary in size and an appropriate combination must be provided to accommodate the needs of the development.

The following is a summary of the bins currently used in waste and recyclables storage to provide a guide to the space requirements. Normally, recycling bins are provided in one of the following combinations:

- 5 x 1280L Eurobin (separated recyclables);
- 5 x 360L Wheelie Bin (separated recyclables);
- 1 or 2 x 1280L Eurobin (mixed recyclables).

Consultation must be undertaken with Camden Street Environment Services to confirm the bin requirements and standards:

Bin Type	Use	External Dimensions mm H x L x D (H + open lid)
360L Wheelie Bin	Recyclables	1100 x 650 x 880
240L Wheelie Bin	Food Waste	1070 x 580 x 740
500L Eurobin	Food Waste	1145 x 1305 x 745
Wheelie Bin Housing (Broxap)	Food Waste	1290 x 650 x 750
660L Eurobin	Non-recyclable waste	1310 x 1260 x 730 (2040)
1100L Eurobin	Recyclables or Non-recyclable waste	1370 x 1260 x 990
1280L Eurobin	Recyclables or Non-recyclable waste	(2360)
Paladin	Non-recyclable waste	1610 x 900 diameter
940L Box Paladin	Non-recyclable waste	1500 x 1020 x 975

Non-residential and commercial buildings

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. 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 <INSERT> 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 nonrecyclable 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.
- Even if a recyclables collection program is not proposed, space must be allocated to locate bins for storage of likely recyclable waste. For example, in any office development, space should be allocated for storage of recycling bins for waste paper.

Location Requirements

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.

	External storage area features:	Less than 6 residential units	7 or more residential units	7 or more residential units
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, • composting facilities - in residential development with a garden or landscaping, 		*	
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,*		*	*

arrangements, as agreed with Street Environment Services, should be provided with the application.

For large proposals, or for proposals with complex waste separation or collection arrangements, a management plan might be required as a condition of approval.

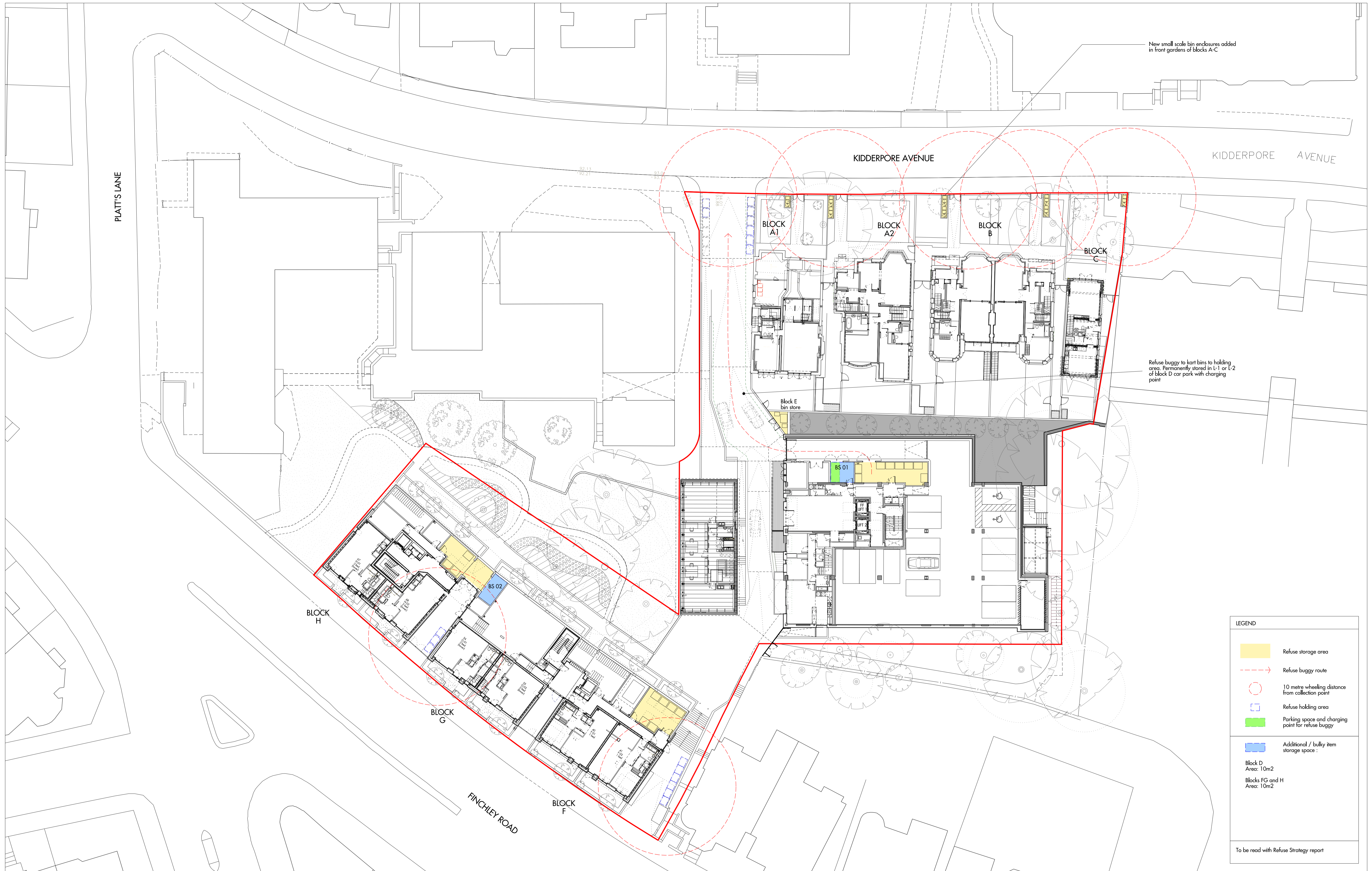
Consideration should also be given to materials and finishes, and lighting of waste enclosures, to ensure that they are safe and secure, and do not present a fire hazard. These are dealt with in the Building Regulations.

Private contractors often collect commercial and other non-municipal waste. They may have different requirements for collection to those of the Council, and should be consulted prior to making an application, to ensure that their requirements can be accommodated.

Additional Requirements

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

For schemes that create 7 or more dwellings, or includes a nonresidential component, the applicant must consult Camden Street Environment Services 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



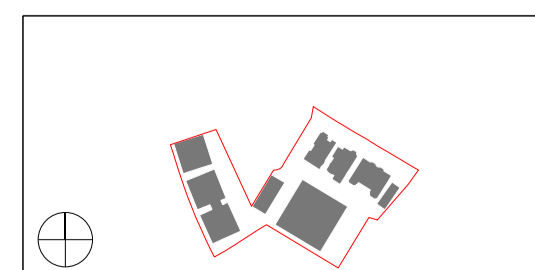
LEGEND

- Refuse storage area
- Refuse buggy route
- 10 metre wheeling distance from collection point
- Refuse holding area
- Parking space and charging point for refuse buggy
- Additional / bulky item storage space

Block D
Area: 10m²

Blocks FG and H
Area: 10m²

To be read with Refuse Strategy report



Do not scale from this drawing. Use figured dimensions only. Figured dimensions are in millimetres. All levels are in metres. All dimensions and levels shall be verified on site before proceeding with works. Detailed site survey to be carried out to verify positions and level relationships with site features and ordnance survey. Boundaries are indicative only and are to be verified by others. The architect must be notified of any discrepancy. Where building components are described in the specification as contractor designed, "construction" information relating to those components on this drawing represents design intent only.

REV	DATE	DESCRIPTION	CD
P1	07.02.2014	ISSUED FOR COORDINATION	NR
P2	11.03.2014	FOR DISCUSSION	NR
P3	18.08.2014	ISSUED FOR PLANNING CONDITION	NR

— INDICATIVE SITE BOUNDARY

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KIDDERPORE AVENUE
 SITE PLAN LEVEL 00/-01/-02
 REFUSE STRATEGY
 809_00_02_030
 SCALE 1:250 @A1 1:500@A3