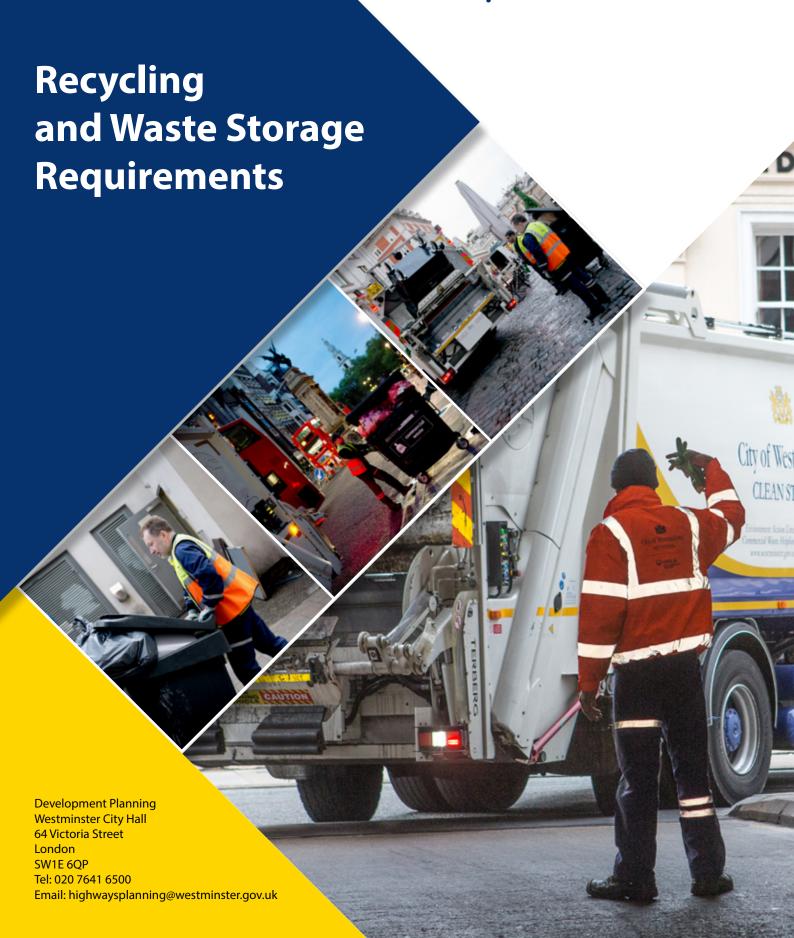


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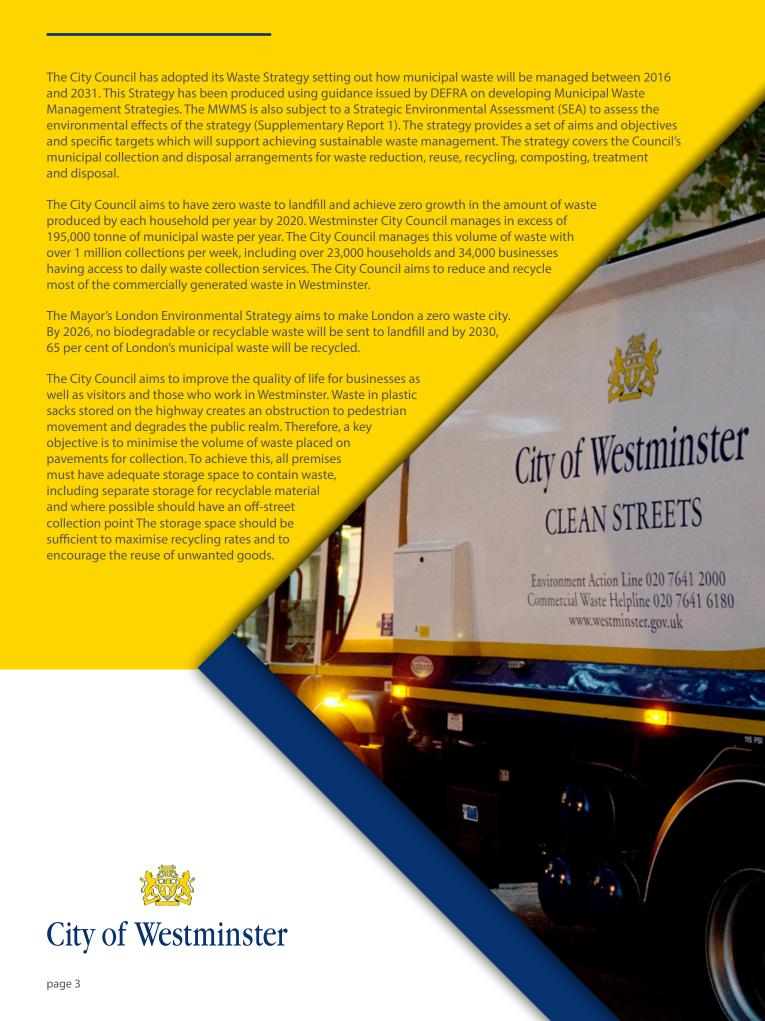
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Introduction



When a new development, extension or change of use is submitted for approval the scheme will be assessed to ensure that adequate storage facilities are provided for waste and recyclable material. This requirement should therefore be considered at the earliest stages of the design process and details included on drawings submitted to the Council when applying for planning permission.

All residential developments using communal waste storage must provide a minimum of 60% storage space for recyclables. All non-residential development must provide a minimum of 70% storage space for recyclables. All developments should also make provision for organic/food waste. This document details the minimum physical space required for waste storage for common land uses within Westminster.

Storage space and waste management facilities within commercial and residential developments are determined by the frequency of the City Council's waste collection service. This provision must also take into account occasional and seasonal peaks in waste output The use of a waste compactor and/or cardboard baler may be considered appropriate in certain types of development. Compactors are not suitable for comingled recyclables however.

These notes, which apply only to the City of Westminster, are intended as a guide for architects when planning any new development, modernisation or change of use. They indicate methods of waste storage and the criteria by which Development Planning estimates waste production. They should not be considered an alternative to consultation. Proposed schemes should be discussed in a holistic manner with a representative of Development Planning prior to submission to ensure acceptable provision for waste storage, via the formal pre-application process.

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For pre-application on any development scheme in Westminster, please contact Development Planning on line via https://www.westminster.gov.uk/planning-pre-application-advice.

Note: At the current time all residential dwellings in Westminster receive a minimum of two collections a week for residual waste. Other waste collection authorities may not offer this frequency of collection and architects considering development work in other boroughs should therefore seek information and advice from the local authority dealing with their application.



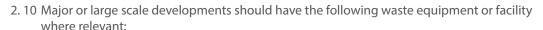


2. Submitting planning applications-waste management issues and general requirements



- 2.1 When a planning application is submitted, the City Council would expect details of the proposed storage accommodation for waste and recyclable material to be specified and agreed. This requirement would be essential for the following types of application:
 - New developments
 - Residential conversions
 - Major extensions to existing buildings
 - Redevelopments
 - Most changes of use, especially those providing hospitality services.
- 2.2 In determining planning applications, such as those listed above, Development Planning would expect satisfactory storage provision for waste and recyclable materials (including space for reusable goods). Permission would not normally be granted in advance of submission of details indicating satisfactory storage arrangements. However, in exceptional circumstances it may be considered appropriate to reserve details of the waste storage accommodation, for approval prior to commencement of construction.
- 2.3 All residential dwellings must have storage space for seven days output of waste. At least 60% of the storage capacity should be for recyclable material if using communal waste storage. Please note that chute systems are not permitted as their use for dry mixed recyclables has not demonstrated the quality required of these materials for reprocessing.
- 2.3.1 This provision must be clearly marked on the relevant plans submitted with the planning application, e.g. containers for waste marked 'W; those for recycling marked 'R' and those for organic marked 'O'. Where large amounts of waste would be generated a waste compactor and/or cardboard baler may be required (note: comingled recyclables cannot be compacted). The storage locations of the cardboard baler, compactor, food waste facilities and waste cooking oil must be indicated on the plans. Wash down and drainage facilities are also necessary In order to facilitate required hygiene standards.
- 2.3.2 The waste store should be sized so that it would be able to accommodate additional recycling containers as may be required in the foreseeable future. In developments with mixed residential and commercial units, the residential dwellings would be required to have seven days storage.

- 2.4 Commercial collection service for non-residential uses, is a charged service that can only be provided by a licensed waste contractor, such as the council, who need to be contracted to perform the collection service. The Council only has a duty to collect residential waste and recyclables (covered by the Residential Council Tax). For commercial developments in areas where the City Council's collection service is:
 - Daily provision must be made for at least two days output of waste.
 - Three times a week, or less provision must be made for at least four days output of waste.
- 25 In all applications where clinical waste would be produced, (Medical, Dental, Cosmetic and Veterinary establishments, etc.), separate storage and collection arrangements would be required for clinical and non-clinical waste. A separate waste store must be provided exclusively for clinical waste. This waste store must be secured and locked. The clinical waste store should be provided with an Impermeable surface with a sealed drainage system, or within sealed containers located on an impermeable surface with sealed drainage system. Sealed containers shall be kept locked when not being loaded or unloaded. A waste permit may be required from the Environment Agency to store clinical waste on site, please refer to the Environment Agency guidance on storage of clinical waste for further information. Also, refer to the Department of Health guidance on safe management of healthcare waste.
- 2.6 In major residential or commercial developments a waste management plan or strategy must be submitted. This should indicate estimated volumes and types of waste produced by the development, the size and location of waste and recycling stores and how recyclable material and other waste would be delivered to these stores, the equipment specified for compacting and/or containing waste, the management of biodegradable material (a composter may be required), the proposed collection point, as well as the method for transferring waste to this location.
- 2.7 A waste route diagram should be included showing transfer of waste within the development to the waste store and transfer of waste from the waste store to the collection point. The route from a waste storage area to the nearest parking place for a waste collection vehicle must be kept to a minimum, particularly if bulk waste storage containers or compactors are proposed (refer to 4.2.2).
- 2.8 Pre-application advice concerning the type, size and location of the proposed waste storage accommodation should be sought from a representative of Development Planning. These guidance notes seek only to provide basic advice on the storage requirements for waste and recyclable materials but may be helpful in early stages of the design process.
- 2.9 It normally costs less to recycle waste and proposed waste management systems should therefore be designed to maximise recycling. Therefore to maximise recycling, large scale or major developments (both residential and commercial) should have a minimum of one waste management operative on full time or part time basis to ensure proper segregation of different waste streams. Also, mixed recycling storage for this kind of developments are not acceptable as there is a requirement under the Waste Regulation 2011 to keep materials fully segregated to avoid dry mixed recycling. In other words, there should be a separate bin for different recyclable material waste streams.









3. Calculation of storage capacity required for recyclable material and residual waste



3.1 General requirements

When considering the amount of storage space needed for any particular development the following requirements would help to calculate the volume of waste generated. They should only be taken as a guide, since some developments such as Bl, B8, and 02 uses and sui generis may need customised storage requirements depending on the scale and frequency of use. It is very important to note that if developers install their own waste infrastructure that does not meet the Council storage and collection criteria, then the Council has the right to withdraw or halt the collection service.

The use classes have been broadly categorised into 4 groups which are described below:

3.1.1 Residential (C2, C3 and C4)

The latest research has demonstrated that 60% of residential waste output should be recyclable and the proposed storage space should reflect this. Residential dwellings must have adequate storage capacity to allow for two general waste and one recycling collection per week. Waste should be split into 3 streams namely:

- Dry mixed recycling (60L bedroom)
- Food waste (10L per bedroom)
- General waste (30L per bedroom)

It should be noted that the requirement above only applies to developments of less than 10 households. Residential developments with communal bin storage and large scale residential developments will be required to have segregation of recyclable materials into separate bins, in which case there will be 5 different waste stream storage as outlined below:

- Paper and cardboard (20L per bedroom)
- Glass (20L per bedroom)
- Packaging waste such as plastic bottles, pots, trays and tubs, cans, Tetra Pak type-cartons (20L per bedroom)
- · General waste (30L per bedroom)
- Food waste (10L per bedroom)

For developments of less than 10 households;

- Studio and one bed dwellings one x 90 litre dustbin for waste, two x 44 litre boxes for mixed recycling and one x 23 litre caddy for food waste.
- Households of three bedrooms or less one x 90 litre dustbin for waste, four x 44 litre boxes for mixed recycling and one x 23 litre caddy for food waste.

- Households having more than three bedrooms - three xl 40 litre wheeled bins (one for waste and two for dry mixed recycling) and one x 23 litre caddy for food waste.

For developments of 10 households or more, using communal waste storage containers:

60 litre for dry recycling per bedroom into 3 streams (20 litre paper, 20 litre glass, 20 litre other) plus 10 litre food. These requirements relates to and refers to storage of waste and recyclable material provided by wheeled containers with a capacity of 660 litres or above, refer to appendix I (vi) & (vii).

Large scale or major residential developments must have a micro recycling facility to enable separate collection of each stream of recyclable materials. This is to maximise recycling capability and increase the quality of the recyclable materials for further reprocessing. Consequently, the use of chutes in residential developments are not permitted or allowed due to high level of contamination and low quality of collected recyclable materials. Please refer to Waste Regulation 2011 for further information.

Note: for large residential developments additional storage space would be required for redundant bulky household goods, such as refrigerators/freezers, furniture, cookers and electrical equipment, much of which could be reusable.

3.1.2 Offices, professional services and community uses (A2, 81 and D1)

- 2000 litres waste storage for every 1,000 \mbox{m}^2 gross floor space.

Note: 70% of this capacity must be retained for the storage of separated material (50% paper and cardboard, 10% other dry mixed recyclables, 10% food waste).

3.1.3 Retail and shops (A1)

- 4000 litres waste storage for every 1,000 m² gross floor space.

Note: 70% of this capacity must be retained for the storage of separated material for recycling (50% paper, 10% other dry recyclables, 10% food waste).

The amount of storage space required for waste can vary due to the difference in waste output of retail units. This depends on factors such as location (i.e. proximity to a larger unit for the same retailer brand), market niche, products sold and their policies relating to minimising use of packaging material. Each application would be assessed using output data from similar units operating in Westminster.

3.1.4 Hotels, restaurants/fast food outlets (A3, A4, AS and Cl)

- 3500 litres of waste storage for every 1,000 m². Note: 70% of this capacity must be retained for the storage of separated material for recycling. Please note that food waste storage capacity can be counted against recycling materials storage capacity. Restaurants with floor space less than 500 m² should provide a minimum storage capacity 1,500L.

Note: 70% of this capacity must be retained for the storage of separated waste for recycling (10% paper and cardboard, 10% other dry mixed recyclables, 10% glass, 40% food waste).

In larger restaurants compaction equipment would also be required to efficiently manage the volume of cardboard and waste produced. To arrive at the optimum size of the waste store, the equipment proposed to store and manage waste should be included on the drawings submitted and allowance for circulation of space.

Hotels, restaurants, butcher shops and food processing establishments needs to be aware of the animal by-product and food safety regulations that governs and regulates how animal by-products waste should be managed, stored and used. Strict protocol must be followed to ensure compliance with these regulations.

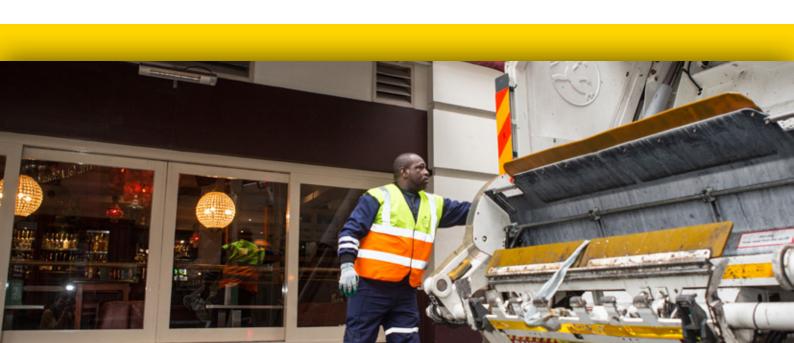
Certain food outlets, especially those of the fast food type, are likely to generate substantially greater amounts of waste. Each application will be assessed depending on the frequency of use and size of the food outlet.

Food waste should be stored in 140L wheeled bins, only where these can be presented at street level for waste collection (refer to 6.4.5). As an alternative, food waste can be stored in 23 litre caddies which have handle for carrying and a hinged lid.

Proposed hotel developments that include a restaurant and/or other ancillary facilities should have a storage capacity of 3500 litres for every 1000m². Hotels without restaurant/banqueting facilities should propose reasonable storage capacities for residual waste and recyclable materials. Note: 70% of this capacity must be retained for the storage of separated recyclable materials. Each application will be assessed depending on the frequency of use and size of the hotel.

Compaction equipment is also be required in larger hotels. Commingled recyclables should not be compacted before collection. However, cardboard can be compacted separately into bales before collection. The equipment proposed to store and manage waste should be included on the drawings submitted and allowance made for circulation space. Note: 70% of this capacity must be retained for the storage of separated waste for recycling.

The volume of waste produced depends to a large extent on the type of hotel, since this range from short stay bed and breakfast to luxury hotels with full banqueting facilities. Development Planning should be contacted at an early stage in the design process to obtain advice 011 storage space and equipment.





4. Storage systems and requirements for recyclable material and residual waste



4.1 General requirements

4.1.1 As a general rule every development should be provided with the minimum number of separate containers in which to store residual waste, food waste and dry recyclable material. The provision of a compactor, and cardboard baler if necessary, should be considered in order to reduce the volume of waste to be stored and collected (refer to appendix I (ix) & II).

All storage receptacles and bins should be labelled clearly and conspicuous to provide information to users about which receptacle to correctly use. All signage must be approved by the council. Also, proper channel must be in place so that the council is able to effectively administer communications to ensure quality and quantity of recycling.

Any waste related signage must use the iconography and style developed by WRAP to ensure continuity with Council communications. Guidance on this can be provided by the council if necessary.

Materials currently collected for recycling include paper, cardboard, glass bottles & jars, tins & cans, plastic bottles, cartons (Tetra Paks) and plastic pots, tubs and trays. This wide range of packaging not only encourages recycling, but can also significantly reduce overall collection charges for commercial tenants. Food waste is currently collected from restaurants, hotels and schools and applications for these uses must include storage for food waste. Storage provision for recyclable material must be at least 60% of the estimated total volume of waste output for residential developments and 70% for commercial.

4.1.2 Some of the larger waste storage systems (such as skips, RORO containers and skip compactors) require access for heavy vehicles, which may not always be acceptable in environmentally sensitive locations such as Conservation Areas or in the vicinity of listed buildings. Design constraints mean that provision of access and accommodation for such vehicles may only be possible in new developments, which could be designed to accommodate off-street servicing. In all instances consideration must be given to the sensitivity of location, the requirement for a vehicular cross-over and the likely constraints of headroom and turning space.



- 4.1.8 Storage areas for waste and recyclable material should be clearly designated for this use only, by a suitable door or wall sign and, where appropriate, with floor markings.
- 4.1.9 Medium to large restaurants and hotels must include suitable separate storage provision for waste cooking oil and food waste.
- 4.1.10 The floor and walls of waste stores must be constructed and finished in materials that are impervious and easily kept clean. Where appropriate, a trapped gully and water supply should be provided.
- 4.1.11 In residential dwellings, adequate separate waste storage provision must be accessible for wheelchair users, where appropriate.

4.2 Limitations and requirements

The following limitations and requirements should be noted in relation to the storage and collection of waste and

- 4.2.1 The recommended maximum storage provision for waste and recyclable material is:
 - (I) No more than 10 dustbins
 - (II) No more than 20 Eu robins (660 & 1100 litres) or wheeled bins of any type (for all definitions see appendix I)

If any of these limitations are exceeded, larger waste containers should be used or, as an alternative, it may be necessary to use an appropriate waste compactor.

- 4.2.2 Waste collection operatives should not be required to:
 - (I) Carry dustbins or move wheeled bins (up to 360 litres) more than 20 metres in total;
 - (II) Carry waste sacks more than 20 metres in total;
 - (III) Transport a Eurobins (660 & 1100 litres), or similar wheeled container, more than 10 metres in total;
 - (IV) Transport waste or recyclable material along a gradient, whether rising or falling.
- 4.2.3 Collection of baled cardboard and compacted waste in sacks, wheeled bins or bags from Rotary compactors would only be made at street level. The area from which such waste would be collected must be off-street and level with the footway. The path between the collection point and the nearest vehicular access must have a continuous smooth surface and be free of steps or kerbs. A dropped kerb or cross-over would be required to ease the transition from pavement to street level.
- 4.2.4 In the case of a Eurobin, or similar wheeled waste container, the path between the container housing and chamber and the nearest vehicular access should:
 - (I) Be free of steps or kerbs (a dropped kerb may be required);
 - (II) Have a solid foundation;
 - (III) Be rendered with a smooth continuous finish (a cobbled surface would be unsuitable for any type of wheeled container);
 - (IV) Be level, unless the gradient falls away from the housing or chamber, in which case it should not exceed 1: 14. Refer to 4.2.2 (iv) & 4.2.3 for compacted waste;
 - (V) Have a minimum width of 2 metres.

4.25 Chute systems are not permitted as their use for dry mixed recyclables has not demonstrated the quality required of these materials for reprocessing. Please note that we do not allow chutes in any development for any stream. Automated chute systems (i.e. one chute which can be used for waste and recycling) have proved problematic, many sites have broken, then have issues with maintenance, and also the changeable flap at the bottom does not change quickly enough to allow effective separation of materials. Refer to the Waste Regulations 2011.

- 4.2.6 In large residential developments where the use of chutes would not be allowed, the management will have to provide an internal waste collection service for residents. A fire protected waste storage area would be required on each floor. In addition to a suitable residual waste container, this store should have sufficient space to accommodate containers for the storage of separated dry recyclable material.
- 4.2.7 Storage areas for residential dwellings should be sited so that the occupiers are not required to carry waste more than 30 metres.
- 4.2.8 It is a compulsory requirement that the kitchen of each residential dwelling should be fitted with an under counter storage unit specifically designed to accommodate separate storage bins for recyclable material and residual waste, in addition to communal storage areas. This would enable waste to be separated at source and would therefore maximise recycling rates. These storage units range in sizes suitable for one bed dwellings and above.

4.3 Additional considerations for mixed use developments

- 4.3.1 Each separate use of the development should have its own independent store for waste and recyclable material. Waste storage for commercial users may be combined if 1100 litre wheeled containers, skips or skip compactors are to be used.
- 4.3.2 Residential units would normally be expected to have independent storage.
- 4.3.3 Smaller sack compactors are not suitable for mixed developments.

4.4 Skips

- 4.4.1 A protective metal floor plate should be considered, particularly where waste would be compacted, to minimise damage to the floor surface.
- 4.4.2 For static compactors, floor mounted guide rails would be required, to help the driver line-up the container with the compactor when it is returned to site after emptying.
- 4.4.3 An appropriate heavy-duty stop barrier would be required at the rear of the allocated location for a skip or portable compactor.

4.5 Vehicle access

- 4.5.1 In all cases where a collection vehicle would be required to enter a site to collect waste and recyclable material the applicant must submit swept path tracking diagrams showing separate entry and exit tracks.
- 4.5.2 Vehicle tracking diagrams should be in the 'Auto Track' format and must include a text box giving full relevant details of the vehicle type. For a waste collection vehicle in Westminster this should indicate that the track has been plotted for a vehicle utilising rear axle steer.
- 4.5.3 Reference should also be made to the City Council's transport policy documents such as City Plan policy S42.





5. Developments where a compactor would be required



5.1 Compactors may be required for the following types of development.

Where compactors are provided, separate provision must also be made for the storage of recyclable material, as dry mixed recyclables should not be compacted.

5.1.1 Residential

Compactors for residential developments only tend to be effective if these sites have a managed waste system with porterage.

5.1.2 Offices

Compactors are recommended for all office developments larger than 5,000m². For offices over 15,000m² in size a Eu robin compactor or rotary compactor would be suitable and offices larger than 20,000m² should use a rotary compactor or portable skip compactor.

5.1.3 Light industrial

For units of 1,500m² or more, or for small units where the gross combined floor space exceeds 1,500m² a small sack compactor would be recommended.

5.1.4 Retail

The most appropriate type of compactor for units of 2,000m² or more would be the small sack compactor. This type of compactor may also be used for small units where the gross combined floor space exceeds 2,000m².

For major retail developments of over 5,000m² a Eurobin compactor or rotary compactor would be suitable. Those over 10,000m² should be provided with a rotary compactor or a portable skip compactor, and for those over 15,000m² a larger static compactor should be considered.

5.1.5 Restaurants / fast food outlets

Compactors are required for fast food outlets with an eat-in facility and are recommended for other restaurants. A small sack compactor, or the type using wheeled containers, would be suitable for most applications, although the rotary compactor would be preferable for restaurants with potentially high output.

5.1.6 Hotels

For hotels of up to 250 bedrooms the most appropriate type of compactor would be the small bag compactor, or the type that compresses waste into Eu robin wheeled containers. For larger hotels a rotary compactor, portable skip compactor or static compactor should be considered, particularly for those with banqueting facilities.

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5.1.7

A rotary compactor using heavy duty bags would be suitable for most large developments. However, the type using modified heavy duty Eurobins may not be suitable for some uses, particularly if heavy waste would be produced. Development Planning should be contacted for advice if a rotary compactor is considered for use in any development.



6. Recycling



6.1 The City Council's Municipal Waste Management Strategy aims to achieve zero growth in the amount of waste produced by each household per year by 2020 and achieve a municipal waste recycling of 45% by 2031. The waste hierarchy is at the heart of the Council's approach to managing waste. In looking at how to manage any waste, this approach firstly focuses on the scope for waste prevention, and then examines each subsequent option before disposal is considered. This is a prudent approach to waste management that is designed to minimise climate change impacts. Please see the Westminster Municipal Waste Strategy for more information.

The Mayor of London aims to recycle 60% of London's municipal waste by 2031. Please read the full municipal waste strategy here. All planning applications for residential properties would be required to take account of this recycling target and must incorporate adequate space for the storage of waste for recycling. The Mayor has stated that 70% of commercial waste should be recycled by 2020. Applications for commercial use would need to show sufficient storage space for recycling and appropriate waste management equipment such as a card board baler and storage containers for glass, waste cooking oil and food where appropriate. Please see the London Environment Strategy for more information.

DEFRA has released the <u>Resource and Waste Strategy</u> in December 2018 which sets a new direction for the management of waste and resources in the UK, including additional materials to be collected for recycling from residents and businesses.

6.2 The City Council endorses the objectives of BREEAM and in particular its aim to persuade developers, property owners and architects to provide separate storage facilities for recyclable material.

6.3 Residential developments

- 6.3.1 The City Council currently collects different types of recyclable material stated in Section 3.1.1. Details of suitable materials for recycling are also available on line. All residential premises must have adequate provision to store these materials for recycling. The storage capacity must be at least 60% of the total volume of waste output. For single households two of the box containers shown in appendix 1 (iv) would be sufficient to store various recyclable materials in them for sorting after collection. For mansion blocks the 360 litre wheeled bin or Eurobin container of 660 or 1100 litre capacity, as shown in appendix 1 (v) & (vii), would be required.
- 6.3.2 Developments of more than 10 residential dwellings should provide storage for 140 litre wheeled bins for food waste.

6.4 Commercial developments.





7. Off-street collection



- 7.1 In order to further reduce the environmental impact of waste being placed on the pavement for collection (a particular problem in Soho, Covent Garden and the West End but also in other areas) buildings would be expected to have an off-street collection area at ground floor level. In certain locations It may be permissible for the collection area to be at basement level, provided it has direct vehicle access from the street. In most cases waste should be containerised in an enclosed store as waste collection using plastic bags placed on the street is not preferred. Containerised waste makes collection easier and also prevent rodents, foxes and scavengers rummaging through the waste. More importantly, it makes the pavement and the street clean and tidy.
- 7.2 Developments proposing off-street collection should ensure that access to the collection area or loading point are free of obstructions, especially car parking bays to accommodate easy manoeuvre of the refuse vehicle during access to, and exit from the site. The loading point should be very close to bin presentation area to avoid long distance dragging of bins.
- 7.3 Large and major developments (both residential and commercial) are encouraged to provide additional space within off-street storage for the council street sweepers bin. This will prevent council street sweeper bins being stored on the pavement in close proximity to these new development, to improve the street scene and the aesthetic of the development.
- 7.4 Exceptions would be made to these requirements only if to make the provision would require structural and visual changes that are unacceptable to the City Council. This particularly could apply to listed buildings or buildings in a conservation area.
- 7 5 In large developments the City Council requires waste servicing to be accommodated on-site and off-street (this includes the collection vehicle) to protect the amenity of local residents and avoid restricting the free flow of traffic.

A Recycling Contre

8. Public recycling sites



- 8.1 Many residents are not able to store recyclables for a whole week due to a lack of suitable storage space.

 These sites provide an opportunity for them to recycle materials in-between doorstep collection days.
- 8.2 Where appropriate, in major new developments (both residential and commercial), the City Council would require the provision of a public micro-recycling site, to provide additional facilities for the local community. This would need to have storage space for a minimum of four 1280 litre Eurobins to provide a small multimaterial recycling centre. A good example of this is the Waitrose Development on Porch ester Road, where the site provided a micro-recycling facility.
- 8.3 Developers should not assume that a micro-recycling centre located adjacent to their proposed development would be removed on commencement of works, as appropriate alternative locations may not be available. These sites are protected under core planning strategy as key infrastructure to support good operation of the city. Should a developer want an MRC to be relocated, this should be discussed with the Waste and Recycling Manager prior to planning approval.



Appendix I - Storage equipment for recyclable material and residual waste

(i) Plastic sacks:

These should conform to British Standard BS EN 13592: 2003. To minimise the problem of sacks splitting, leading to spillage, it is recommended that the following types of plastic sack are used as a minimum standard:

- a) General retail and office use 120 gauges (30 micron), medium density, maximum 80% recycled.
- **b) Catering and hospitality (hotels, restaurants etc.)** 160 gauge (40 micron), low density, maximum 80% recycled.

All plastic sacks used for waste storage should be of maximum dimensions, 950mm long by 700 mm overall width (gussets extended).

(ii) Dustbin:

Dustbins should conform to British Standard EN BS 5906:2005, and be of a nominal capacity of 90 litres. These are to be used to store waste in plastic sacks for collection.

Dimensions (mm) (90 litre capacity dustbin)		
Height	700	
Maximum external diameter	640 (including handles)	





(iii) Kitchen under-counter storage for recyclables:

The following types of under-counter kitchen storage units are required for the storage of separated recyclable material and residual waste, which would enable waste to be sorted conveniently at source. The use of these types of storage units would significantly increase recycling rates.

These units are available in sizes to suit residential dwellings from one bedroom upwards.





(iv) Container for single household recyclable material:

A plastic box suitable to store recyclable material from single households is available on request from the City Council. The box is supplied without a lid and if stored outside would need to be located in a suitable enclosure.

Note: recyclable material from multiple households should be stored in wheeled bins (refer to v & vii).

Space required for recycling box (mm)		
Capacity (litres)	44	
Width	390	
Length	590	
Height	290	





(v) Wheeled bins:

These are plastic wheeled bins with two wheels and should conform to British Standard EN BS 5906:2005. These waste containers are easy to transport and may be used as an alternative to dustbins and sacks.

Note: The 140 capacity wheeled bin would only be supplied from the council as a container for food waste from restaurants, hotels and large residential developments.

Space required for recycling box (mm)		
Capacity (litres)	140/240/360	
Width	485/585/660	
Length	550/740/880	
Height	1065/1100/1100	





(vi) Bulk waste storage containers:

These unlidded waste storage containers should conform to British Standard EN BS 5906:2005. The 940 litre container should be used for residential developments. The waste store should have the following features:

- a) A suitable cover or roof.
- b) At least one external wall. The walls should be constructed of impervious material.
- c) A double door of minimum structural width 1.6m.
- d) A water supply and a trapped gully to allow for regular cleansing.
- e) Adequate lighting.
- f) Means of natural ventilation (air bricks or louvers).
- g) A minimum headroom of 2.2m.
- h) Sufficient space to allow access to all containers.
- i) The floor surface should incorporate an integral coving to facilitate cleaning.
- j) Two rubbing strips should be attached to the wall surfaces and doors to prevent scuffing (CL 0.9m and 1.3m from floor).
- k) The floor must be level with the adjacent path or highway.

Space required for recycling box (mm)		
Capacity (litres)	720/940	
Width	820/1100	
Length	1100/1100	
Height	1430/1430	





(vii) Eu robins (660, 1100 and 1280 litre capacity):

These are wheeled bins with four wheels and should conform to British Standard EN BS 5906:2005. They have a fixed lid, which can be supplied with a lock if required, and are suitable for residential and mixed developments and also offices of up to 2,500m2 in size. Metallic bins should be utilised in developments using bins ranging from 6601 to 12801; plastic bins should be avoided as they are susceptible to breakages.

Several manufacturers supply Eu robins, some of which may be incompatible with the City Council's waste collection vehicles. The City Council prefers to supply its own bin equipment to avoid servicing issues for waste and recycling collections. It is strongly advised to liaise with the City Council's Waste & Recycling Team first before any equipment is installed. The dimension of the Eurobins that would be acceptable are detailed below:

Refer to (vi) for detailed requirements for the dimensions.

Space required for recycling box (mm)		
Capacity (litres)	660/1100/1280	
Width	1250/1260/1260	
Length	720/980/985	
Height	1320/1370/1430	





(viii) Skips:

These bulk storage containers may be used with or without a compactor and are available in two sizes:

a) Skip container

10.5 cubic metres

b) Rolonof skip container

27 cubic metres. Only used where waste output would be considerable, e.g. a major shopping complex. Normally combined with a static compactor.

Dimensions (mm)	10.5 Cu M Skip		27 Cu M Skip	
Dimensions (mm)	Container Service Bay*		Container	Service Bay*
Width	1.80	4.5	2.5	5.0
Length	3.70	5.8	6.2	8.2
Height	2.34	4.9	2.8	6.0

Minimum width of entrance to service bay 4.0

In developments where the service bay opens directly on to the street, the distance from the entrance to the rear of the service bay should be a minimum of:

i) 12.0m for a 10.5 cu m skip*

ii) 19.0m for a 27 cu m skip*

This would prevent the vehicle encroaching on to the footway when loading or unloading the skip. (* Refer to ix e) if used in conjunction with a static compactor.





(ix) Compactors

These utilise accommodation provided for waste storage to its best advantage by minimising the space required. The five main types of compactor are:

a) Small bag compactors

These are small compactors using plastic waste sacks of 300 gauge. Such compactors are either of a cylindrical or cabinet type occupying a floor area of 1 square metre and require minimum headroom of 2.5 metres. They significantly reduce the volume of waste and can achieve a compaction ratio of up to 4:1. A bag of compacted waste may weigh up to 30kg and it would therefore be advisable to site the compactor at ground floor level near a street access. Collection of compacted waste in sacks would only be made at street level. Small compactors are not suitable for mixed developments.

Dimensions (m)	
Width	0.78
Length	0.98
Raised height (standard model)	2.68
Raised height (short model)	2.38
Power supply	240 volts 15 amp earthed socket





b) Wheeled bin compactor

This compactor compresses waste into 660 or 1100 litre Eu robins. Adequate floor space is required (given in the table below) to allow for working space for the operator and free movement of waste containers. This type of compactor can achieve volume reductions of around 3:1 (a higher compaction ratio would result in damage to the castors). It would be advisable to site the compactor at ground floor level near street access, as collection of wheeled bins containing compacted waste is only made at street level. These compactors are not suitable for mixed developments unless fully managed.

Dimensions (m)			
Bin capacity (litres)	660 & 1100		
Width	1.5		
Length	1.9		
Working length	4.0		
Height	2.5		
Power supply	240 volts 15 amp earthed socket		

Note: to allow for servicing requirements, a minimum space of 1 m would be required at one side of the compactor and 150 mm at the opposite side.





c) Rotary compactors

This compactor utilises a heavy duty spiked rotating head, which tears and compacts waste placed in the machine and can achieve high compaction ratios. One example of this type compacts waste into a very large bag supported on a wooden pallet. A full bag has a diameter of around 1.5 m and may weigh up to 600kg.

Rotary compactors are suitable for use in hotels, offices, retail units and supermarkets, but are not recommended for mixed developments unless fully managed.

Dimensions (m) Bag Type		
Width	1.35	
Working length	4.20 (to allow safe removal of full bag)	
Max Height	3.08	
Power supply	415 volts 32 amp. Three phase neutral and earth	

Note: to allow for servicing requirements, a minimum space of 600 mm would be required at each side of the compactor as well as the rear.





d) Portable skip compactor

These have a capacity of 9.5 cubic metres and can achieve volume reductions of up to 4:1. They require direct access by a skip vehicle. Additional length would be required to that given below for the service bay to accommodate the collection vehicle.

These compactors are suitable for use in premises where a significant volume of waste would be produced, such as large offices, retail units and hotels as well as mixed developments.

Dimensions (mm)	9.5 Cubic Metre Skip Compactor		27 Cubic Metre Skip Compactor	
Dimensions (mm)	Container	Service Bay*	Container	Service Bay*
Width	1.75	4.5	2.5	5.0
Length	4.28	5.8	6.63	8.63
Height	2.34	4.9	2.75	6.0

Minimum width of entrance to service bay 4.0

Power Supply 415 volts 32-45 amps (depending on model) three phase neutral and earth. The power supply should terminate with an RCD box located within two metres of the compactor.

NOTE: in developments where the service bay opens directly on to the street, the distance from the entrance to the rear of the service bay should be a minimum of:

- i) 12.0 m for a 9.5 cu m skip compactor.
- II) 19 m for a 27 cu m skip compactor.

This would prevent the vehicle encroaching on to the footway when loading or unloading the skip.





e) Static compactor

These units are fixed and used in conjunction with a removable fully enclosed skip. They can achieve volume reductions of up to 5:1. Skips are available in a range of sizes from I 0.5 to 27 cubic metres. Additional length would be required to that given below for the service bay to accommodate the collection vehicle. Static compactors are ideal for developments where a considerable volume of waste would be produced, including large retail, hotel and commercial developments. Static compactors may be used in conjunction with Eurobin wheeled containers.

Dimensions (mm)	With 9.5 Cubic Metre Skip		With 27 Cubic Metre Skip	
Dimensions (mm)	Combined Unit	Service Bay*	Combined Unit	Service Bay*
Width	1.8	4.5	2.5	5.0
Length	6.6	8	10.2	12.2
Height	2.4	4.9	2.8	6.0

- Power supply 415 volts 32-45 amps (depending on model). Three phase neutral and earth.
- Minimum width of entrance to service bay 4.0

NOTE: in developments where the service bay opens directly on to the street, the distance from the entrance to the rear of the service bay should be a minimum of:

- i) 145 m for a 105 cum skip
- ii) 22.0 m for a 27 cu m skip

This would prevent the skip vehicle encroaching on to the footway when loading or unloading the skip.





Appendix II - Cardboard balers

The use of a baler enables waste cardboard to be stored in an efficient and safe manner. Four types of baler, recommended for use in Westminster, are outlined below:

a) Top loading mini baler

These are small top loading balers which could be used where space is limited and cardboard output would not be excessive. They require a floor area of 1 square metre and a minimum headroom of 2.2 metres.

b) Top loading baler

These are versatile top loading balers, which are suitable for use in most restaurants and retail units. They require headroom of 2.7 metres.

c) Top loading twin chamber baling press

These are efficient top loading balers, which are ideal for use in hotels, mixed retail developments and large restaurants. One advantage of this unit is that the second chamber could be loaded while the first is compacting. They require minimum headroom of 2.2 metres.

d) Front loading baling press

These are efficient front loading balers, which are ideal for use in hotels and mixed retail developments. They require minimum headroom of 2.2 metres.

Collection of baled cardboard is only made from areas that are properly accessible for the collection vehicle. A baler should therefore be located at ground floor level or in a basement with lift access to a suitable collection pint at street level. Adequate space must be provided for servicing the baler. Balers are not suitable for mixed developments unless fully managed.

Dimensions (mm)	(a)	(b)	(c)	(d)
Width	0.71	0.78	1.74	1.00
Length	1.10	1.20	0.88	0.83
Working Length	1.60	1.70	1.80	1.80



Appendix II - Cardboard balers

Dimensions (mm)	(a)	(b)	(c)	(d)
Height	2.20	2.70	2.20	2.20
Size of bale (plan view) mm	700 x 500	700 x 700	700 x 700	800 x 700
Weight of bale - min kg	20	30	40	60
Weight of bale - max kg	40	60	60	80

Power supply: a) to c) 240 volts 15 amp earthed socket; d) 415 volts 20 amp. Three phase neutral & earth.





Appendix III - Vehicle dimensions

i) Skip vehicle (Two Axle 18.00 tonnes GVW)

Dimensions (m)		
Width	1.35	
Overall length - vehicle	4.20 (to allow safe removal of full bag)	
Working length - vehicle and skip	3.08	
Height - travelling (with skip)	3.7 (min height required 45)	
Height - working	4.45 (min height required 4.9)	
Kerb turning circle	14.4 Diameter	
Swept circle	17 .0 Diameter	
Axle weights - front	7.0 Tonne	
Axle weights - rear	11.0 Tonne	



Note: any part of a building through which a skip vehicle would pass must have a minimum clear height of 4.5 m, to allow for overhead fixtures and fittings. This must increase to 4.9 min the service area containing the skip. The proposed service bay (refer to appendix 1 (viii) & (ix) d & e) should not have ceiling mounted services such as ductwork, sprinklers, pipes etc.



(ii) Waste collection vehicle

(Three Axle 21.2-26.00 tonnes GVW)

Dimensions (m)			
Width	2.5		
Overall length - vehicle	10.4		
Height	3.8 (min height required 4.5)		
Kerb turning circle	18.7 diameter		
Swept circle	20 diameter		
Axle weights - 1st	7.1 tonne		
Axle weights - 2nd & 3rd	9.5 tonne		

Note: any part of a building through which a skip vehicle would pass must have a minimum clear height of 4.5 m, to allow for overhead fixtures and fittings. This must increase to 4.9 m in the service area containing the skip. The proposed service bay (refer to appendix 1 (viii) & (ix) d & e) should not have ceiling mounted services such as ductwork, sprinklers, pipes etc.





(ii) Waste collection vehicle

(Three Axle 21.2-26.00 tonnes GVW)

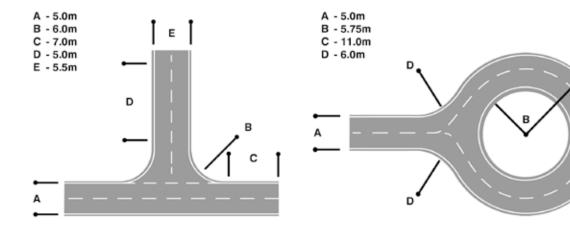
Dimensions (m)			
Width	2.5		
Overall length - vehicle	11		
Working length - vehicle and skip	16.5		
Height - travelling	43 (min height required 5.0)		
Height - working	5.5 (min height required 6.0)		
Kerb turning circle	21.4 diameter		
Swept circle	22.8 diameter		

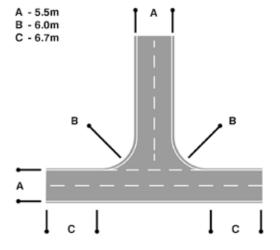
Note: any part of a building through which a Rolonof skip collection vehicle would pass must have a minimum clear height of 5.0 m, to allow for overhead fixtures and fittings. This must increase to 6.0 min the service area containing the skip. The proposed service bay (refer to appendix 1 (viii) & (lx) d & e) should not have ceiling mounted services such as ductwork, sprinklers, pipes etc.

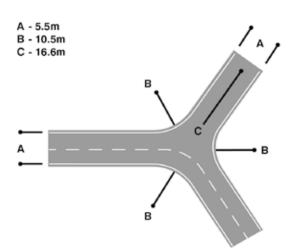


iv) Minimum dimensions for turning areas

(Waste collection vehicle)







Appendix IV - Useful information

WEB ADDRESSES:

commercialwaste@westminster.gov.uk (Contact details for commercial waste collections from businesses and organisations)

www.westminster.gov.uk/commercialwaste (Website with information on commercial waste in Westminster) https://www.london.gov.uk/sites/default/files/housing_spg_final.pdf (GLA HMO guidance)

www.bre.co.uk (Building Research Establishment)

http://www.cfpa-e.eu/wpcontent/uploads/files/guidelines/CFPA_E_Guideline_No_7 _2011 _F.pdf (Safe distance between waste containers and buildings)

www.bsigroup.co.uk (British Standards Institution)

www.ciwm.co.uk (Chartered Institution of Wastes Management)

www.defra.gov.uk/environment (Dept. for Environment, Food & Rural Affairs)

www.environment-agency.gov.uk (Environment Agency)

www.gov.uk/government/publications/code-for-sustainable-homes-technical-guidance

www.recyclenow.com (useful advice & recommended icons for waste materials)

www.westminster.gov.uk/planning

www.westminster.gov.uk/recycling

www.westminster.gov.uk/wastestorage

https://crossriverpartnership.org/projects/heart-of-london-deliveries-and-wastes-programme-2017-2021/www.wrap.org.uk

https://www.gov.uk/government/publications/resources-and-waste-strategy-for-england

DEVELOPMENT PLANNING:

North Team Email: northplanningteam@westminster.gov.uk

Central Team Email: centralplanningteam@westminster.gov.uk

South Team Email: southplanningteam@westminster.gov.uk

Planning, Licensing & Events Contact Centre: 020 7641 6500

Environment Action Line: 02076412000

Appendix V - Reference documents

BREEAM (Building Research Establishment Environmental Assessment Method)

- a) An Environmental Assessment For New Offices
- b) An Environmental Assessment For New Homes
- c) Household waste: storage provision and recycling

British Standards Institution Codes and Standards

BS 4998: 1985 Moulded Plastic Dustbins

BS 5906: 2005 Waste Management in Buildings Code of Practice

BS 5395-1:2010 Stairs, ladders and walkways

BS EN 840-1:2004 Mobile waste containers

BS EN 13592:2003 Plastic Sacks for Household Waste Collection

Building Regulations 2010, requirement H6, Solid waste storage

Build Ing Regulations 2000, requirement K1, Stairs, ladders and ramps

Chartered Institution of Wastes Management. Publication No.3 Advice on Storage and On-Site Treatment of Household, Commercial and Industrial Wastes

Clean Neighbourhoods & Environment Act 2005

Code for Sustainable Homes Technical Gulde November 2010

Designing for Deliveries, FreightTransport Association

Environmental Protection Act 1990

London Environment Strategy 2018

The London Plan the Mayor's Spatial Development Strategy July 2011

The Manual Handling Operations Regulations 1992

Unitary Development Plan 2007

Westminster's City Plan: Strategic Policies Nov 2016

London Environment Strategy

Westminster Municipal Waste Management Strategy

Greener City Action Plan 2015

Resources and Waste Strategy 2018, (published 18 Dec 2018)

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