

## **Ealing Council**

### **Draft waste management guidelines for architects and developers**

#### **Section 1**

#### **Introduction**

##### **1.1 Purpose of Document**

This document provides guidelines for architects and developers of new residential, commercial and mixed-use units in the London Borough of Ealing, to ensure that the arrangements for storing, collecting and managing waste are appropriate.

The sustainable management of waste is integral to any development and needs to be factored into its design at the outset. Local authorities have increasing targets to separate out materials for re-use and recycling. If managed well, waste materials can be a source of replacement for raw materials used in manufacturing, engineering and energy production and contribute to a more circular economy; however waste also has the potential to be a nuisance and may cause serious problems if it is not managed properly.

The requirements for managing waste are different according to the type and size of each development, so care should be taken to ensure the right sections of these guidelines are used.

Architects and developers should also refer to Approved Document H6 of the Building Regulations 2010 (2015 edition), and British Standards EN BS 5906:2005.

These guidelines principally deal with operational waste arising from development and do not cover the requirements for managing construction and demolition waste.

##### **1.2 Policy Context – European & National**

The Environmental Protection Act 1990 is the primary legislation governing waste, and defines many of the roles and responsibilities of those involved with its management. In particular, it sets out the duties of a waste collection authority to collect waste (including materials for recycling) produced by residents, subject to this waste being presented in an appropriate manner. The Household Waste Recycling Act 2003 amended the Environmental Protection Act 1990 to require waste collection authorities to collect at least two different types of recyclable waste.

The Waste (England and Wales) Regulations 2011 (amended 2012) have transposed the revised Waste Framework Directive (rWFD) from European into English law. These Regulations require local authorities, businesses and other bodies to ensure that the waste hierarchy (see Figure One) is taken into account in all aspects of waste management.

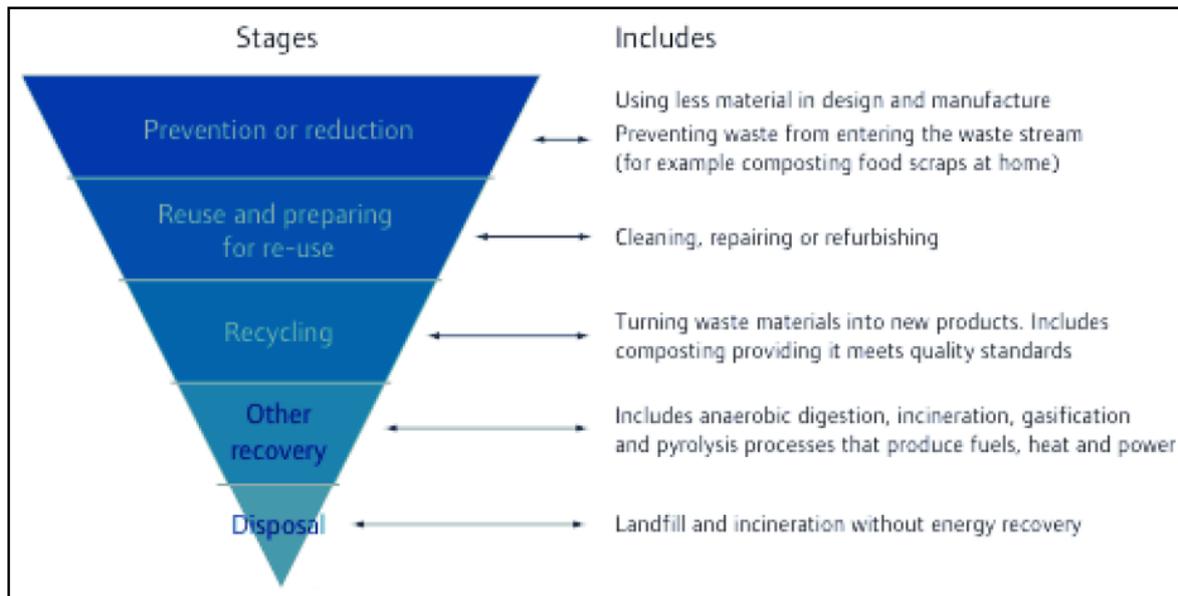


Figure One – The Waste Hierarchy. (Source: The Mayor's Municipal Waste Management Strategy, 2011)

The rWFD places obligations on all collectors of wastes, including local authorities and commercial collectors, to provide 'separate collections' of waste paper, metal, plastic and glass by January 2015. The other requirements include:

- Measures to promote high quality recycling including the setting up of separate collections of different waste materials (e.g. glass, paper, plastic and metal) where technically, environmentally and economically practicable and appropriate to meet the necessary quality standards for the relevant recycling sectors.
- As appropriate, measures to encourage the separate collection of bio-waste with a view to the composting and digestion of bio-waste.
- Measures to be taken to ensure that by 2020 at least 50% by weight of waste from households is prepared for re-use or recycled.
- The collection of mixed recyclate (or 'co-mingled' materials) for subsequent separation at a waste facility is only permissible where it can be demonstrated that separate collection of recyclate materials systems is not 'technically, environmentally or economically practicable' (TEEP).

The National Waste Management Plan for England (2013) stresses that the Government supports local authorities in improving the quality and quantity of recycling. The National Planning Policy for Waste (2014) also highlights that planning should ensure the design and layout of new residential and commercial development and other infrastructure complements sustainable waste management, including the provision of appropriate storage and segregation facilities to facilitate high quality collections of waste.

When determining planning applications planning authorities are expected to ensure that new non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development. This includes providing adequate storage facilities at residential premises, for example by ensuring that there is sufficient and discrete provision for collection equipment or containers, to facilitate a high quality, comprehensive and frequent household collection service.

This means that architects and developers should make provision for waste to be stored and collected in a manner that maximises opportunities for recycling. Consideration should be given to the design of buildings and the procedures that will be required to ensure that those who inhabit and service the building can manage the waste produced in that building in a sustainable manner.

“London’s Wasted Resource” sets out the Mayor’s policies and proposals for reducing the amount of municipal waste produced, increasing the amount of waste re-used, recycled or composted, and generating low carbon energy from waste remaining. This strategy also sets out how the Mayor, through the London Waste and Recycling Board, will help develop more waste management infrastructure in London. This strategy notes the particular issues associated with the management of waste in flatted residential properties and the need for these to be addressed. The London waste authorities are to act in ‘general conformity’ with the Mayor’s Municipal Waste Management Strategy and The London Plan (Policy 5.17 Waste Capacity; Clause E, which states ‘suitable waste and recycling storage facilities are required in all new developments).

### **1.3 Policy Context – Local**

The London Borough of Ealing is one of six constituent boroughs in the West London Waste Authority (WLWA), along with Brent, Harrow, Hillingdon, Hounslow and Richmond. The six boroughs are waste collection authorities, whilst WLWA is the waste disposal authority.

Waste disposal is funded through a levy on the six boroughs, which is primarily based on the total amount of waste collected. The levy increases each year at a rate that exceeds inflation, which means that the costs of waste disposal are continuing to rise during a period of ongoing cuts to local authority funding. It is a priority for Ealing and the other boroughs to reduce the amount of waste collected in order to control the disposal costs, as well as increasing the amount of waste that is reused and recycled.

### **1.4 Waste Reduction**

Owing to the rising financial and environmental costs of waste disposal, it is the Ealing Council’s policy to require architects and developers to properly apply the waste hierarchy in new developments by taking steps to encourage a reduction in the amount of waste that is presented for collection. This is in addition to more established strategies for maximising recycling, such as making internal and external space available for segregation of recyclable items from other waste.

The following are suggested actions for reducing waste arisings at new developments:

- Provide on-site composting facilities for all developments, including individual compost bins in private gardens and community composting sites on larger developments. Information on how to compost materials at home, and the benefits of doing so, should be provided in all new residents’ packs.
- Engage with community and third sector organisations to collect reusable furniture items from bulk waste stores.
- Provide and manage a communal tool and equipment store/service for residents in blocks of flats, including vacuum cleaners, power drills etc. This will help with storage pressure in the flats, as well as reducing the need for residents to buy products that will actually be used very little.

- Encourage reuse and sharing of items amongst neighbours by providing a physical or online noticeboard. This could include rarely-used kitchenware and cleaning appliances, as well as books, DVDs and other such products.
- Select durable, high-quality materials and fitted appliances for new homes and businesses.
- Install in-sink food waste disposal units (macerators), or allow for their future installation through the choice of appropriate sink designs and provision of under-sink power supplies in all new kitchens.
- Consider the installation of small-scale on-site combined heat and power (CHP) systems fuelled by waste for new larger developments.

## **1.5 Submitting Planning Applications**

When a planning application is submitted, the London Borough of Ealing will expect details of the proposed storage accommodation for waste and recyclable material to be specified and agreed.

In determining planning applications, permission will not normally be granted in advance of submission of details indicating satisfactory storage arrangements for waste and recyclable material.

In larger developments (such as 10 or more dwellings for residential developments or 1,000 sq. metres of new floor space for non-residential developments) the Council may require a waste management plan/strategy to 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 the waste will be delivered to these facilities.
- The size and quantity of containers for waste.
- Any proposed separate collection point, and the method for transferring waste to this location.

A Template Recycling & Waste Management Strategy for New build flats in London has been developed by LWARB and LEDnet that can be utilised.

Architects and developers of large developments are encouraged to consult with the Council's Waste Management department at the earliest opportunity in the design process to ensure that proposals for waste storage and collection meet the necessary requirements. Pre-application packs/submissions should also have regard to waste storage and collection arrangements.

Developers of mixed-use or commercial sites may also need to consult with other waste collection providers to ensure that their requirements are met.

## **A – Residential Guidelines**

### **Section 2**

#### **Houses**

This section of the guidance should be followed for houses, and where at least one unit is being created, and where units are being created following the sub-division of an existing

house, which have a front garden or yard, where each property will have individual waste storage provision. Ealing Council does not recommend the use of communal waste storage for developments of houses, and encourages developers to ensure that all street level properties have direct road access to simplify waste collection services. However, where this is not possible, architects should follow the guidance in Section 3 for the design and positioning of bin stores, rather than using the detail in this section for premises with individual waste and recycling bins.

## **2.1 Collection Services Overview**

Recycling and rubbish collections are made on alternate weeks for most households in the borough: recycling one week and rubbish the next. Food waste is collected every week and garden waste is collected fortnightly.

Wheelie bins are used for containing and collecting refuse. Ealing Council has 'one-bin' and 'no side waste' policies for refuse to encourage residents to reduce, reuse and recycle their waste.

Wheelie bins are also used for recycling. The recycled materials are co-mingled, which means they are collected together and sorted out later on at a Materials Recovery Facility (MRF). At present the following materials are included in the collections, which can all be placed into the same bin without any need for further segregation:

- Cardboard and thin card
- Mixed paper
- Plastic bottles, pots, tubs and trays
- Food tins and drink cans, aerosol cans and clean aluminium foil
- Glass bottles and jars
- Food and drink cartons

An individual external food waste bin is provided for recycling food waste, collected on a weekly basis. Newspaper or compostable liners can be used and the following items can be recycled:

- Tea bags and coffee grounds
- Fruit and vegetable peelings
- Leftovers and plate scrapings
- Dairy, fish, egg shells
- Meat and bones
- Bread and pastries

A wide range of other items can be taken to the Council's Reuse & Recycling Centre. The Council also provides collections of bulky items and green garden waste, which are chargeable and can be requested online at [www.ealing.gov.uk](http://www.ealing.gov.uk) or on 020 8825 6000.

## **2.2 Internal Storage**

To enable and encourage occupants of new residential units to recycle their waste, developers should provide adequate internal storage, usually within the kitchen, for the segregation of recyclable materials from other waste.

Developers are also encouraged to install in-sink food waste disposal units to help reduce the amount of waste being presented for collection.

### **2.3 External Storage – Capacity**

Developers should ensure that there is sufficient and appropriate space within the front garden or yard for the necessary wheelie bins.

For 1-4 bed houses, it is recommended that space is allocated for two 240-litre bins (one for recycling and one for refuse). For larger properties, sufficient space should be allocated for two 360-litre bins (one for recycling and one for refuse). The dimensions of all standard bin sizes are included in Appendix A.

Where a street-level property is being subdivided into flats, it may be appropriate to allow for each dwelling to have its own refuse and recycling bins. However, the proliferation of wheelie bins can be detrimental to the street scene, so adequate solutions must be devised by architects to minimise this. In some cases, it may be more appropriate to move the property onto a communal waste storage system, using the larger 360-litre wheelie bins.

It shall be the responsibility of the developer to purchase the necessary bins for external waste storage, and ensure that these are in place before residents move into new properties. Ealing Council can provide these bins, with details of indicative prices available on request. If bins are to be purchased from another source then the details must be provided and agreed with the Council in advance.

### **2.4 External Storage – Design Features**

The design of the front garden or yard should enable the bins to be stored in a shaded position away from windows. The bins must not intrude on the street scene, and therefore must be contained within an appropriate front wall, fence or hedge for the garden, or alternatively within a dedicated and suitably designed structure within the boundary of the premises. Bin storage areas should be located to minimise nuisance to adjoining properties.

In all cases there must be sufficient space for the occupants to easily access both their refuse and recycling bins to deposit waste, and it must be possible for the lids of all bins to be fully opened. There should be clearance of 150mm around and between each bin to enable ease of movement. Each bin should be able to be used and moved without having to move another bin first.

All collections for individual houses take place at the front of the premises. Residents are required to present their wheelie bins and food waste bin for collection at the edge of their property, but not on the pavement. Adequate provision must be made for the elderly, disabled and families with young children, such that the design of the front of the premises enables residents to set out all of the required containers for collection while maintaining sufficient access to the property entrance for a wheelchair or double-buggy.

Appropriate access for collection crews must also be included in the design of the outside space. This should involve solid surfaces, with a maximum of 1 step down to the pavement from the bin storage/presentation point (there must be no steps up from this position). The distance from the presentation point to where the collection vehicle can safely stop should

be no more than 15m for bins of up to 240-litres, or 10m for larger containers. There should not be any locks on the doors or gates of bin storage chambers for individual houses.

If developments of individual houses are located on new access roads, these must be designed in accordance with Section 6 to allow safe use by waste collection vehicles.

## **2.5 Bulky Household Items**

Ealing residents can request a chargeable collection for bulky household items that will not fit into their refuse wheelie bin, such as furniture or large appliances. Up to eight items can be collected at a time.

Developers should ensure that residents are able to present large items for collection so that no obstruction is caused to building exits, nor to the refuse and recycling bins.

## **2.6 Garden Waste**

Residents can subscribe to the Council's green garden waste collection from the Council via [www.ealing.gov.uk/gardenwaste](http://www.ealing.gov.uk/gardenwaste). Garden waste is collected fortnightly using a wheelie bin or reusable bags. Residents are required to present their container(s) for collection at the edge of their property, but not on the pavement. Developers should therefore ensure that there is sufficient space at the front of the premises for such material to be presented for collection so that no obstruction is caused to building access or the refuse and recycling wheelie bins.

To enable and encourage residents to compost their garden waste at home, the Council requires any properties with a rear garden to include sufficient space for a home composting bin. Ealing residents can purchase home composting bins at reduced prices from [www.ealing.getcomposting.com](http://www.ealing.getcomposting.com). Developers are encouraged to install compost bins in all private gardens to encourage their use by residents.

## **Section 3**

### **Purpose-Built Flats**

This section provides information and guidance on waste storage and collection requirements for purpose-built blocks of flats, where residents share communal waste facilities. The management of waste in flatted properties poses particular challenges and needs to be factored into the design of a building at an early stage. The guidance given in this section on the design, size and location of bin stores will be applicable for other types of facility as well, including commercial units and housing developments without individual bins.

The key considerations are as follows:

- a) Adequate storage (internal and external, allowing for the separate storage of recyclable materials)
- b) Separation of materials for recycling
- c) Collection of materials (e.g. sacks, containers)
- d) Accessibility/convenience (to resident, on-site manager and collector)
- e) Amenity impacts including management of odour, noise and visual impacts/design
- f) Hygiene
- g) Safety and security

- h) Practicability of on-site treatment
- i) Local authority waste management targets (e.g. regarding recycling)
- j) Management of bulky waste

There is specific information provided in Section 5 for sites where waste containers are to be stored underground.

In new developments, and particularly larger-scale sites with 50 units or more, it may be appropriate for alternative on-site waste treatment and management solutions to be built into the design, which will help to reduce the impact on the local environment and reduce the requirements for waste storage capacity.

Architects and developers should be aware that Ealing Council does not offer a compacted waste collection service. At sites where compaction is used, waste collection and disposal will need to be arranged and paid for through a private contractor that is able to offer an appropriate service. More information on compaction is available in Section 4.

### **3.1 Collection Services Overview**

Ealing Council currently provides weekly refuse collection services for residents living in purpose-built flats, with separate collections of recycling undertaken on a weekly basis.

Most purpose-built flats have communal refuse bins for residents to use. The standard types of bins are metal 1100l Eurobins, but in some smaller developments there are sets of two wheeled plastic bins. In locations where there are refuse chutes installed, Chamberlain bins are normally used.

Separate containers are used for recycling. These communal Eurobin containers are sited around bin storage areas or other appropriate locations, and are clearly labelled to distinguish them from refuse containers.

The following items can be put into the recycling bins:

- Cardboard and thin card
- Mixed paper
- Plastic bottles, pots, tubs and trays
- Food tins and drink cans, aerosol cans and clean aluminium foil
- Glass bottles and jars
- Food and drink cartons

A communal food waste bin (240-litre wheeled bin) is provided for recycling food waste, collected on a weekly basis. Newspaper or compostable liners can be used and the following items can be recycled:

- Tea bags and coffee grounds
- Fruit and vegetable peelings
- Leftovers and plate scrapings
- Dairy, fish, egg shells
- Meat and bones
- Bread and pastries

A wide range of other items can be taken to the Council's Reuse & Recycling Centre. The Council also provides collections of bulky items and green garden waste, which are chargeable and can be requested online at [www.ealing.gov.uk](http://www.ealing.gov.uk) or on 020 8825 6000.

Ealing residents can request a chargeable collection for bulky household items that will not fit into their refuse wheelie bin, such as furniture or large appliances. Up to eight items can be collected at a time. A separate designated area must be provided for bulky waste, and only those items which have been booked for a collection will be cleared.

Where bulky items are dumped on a private development (or left in a bin storage area without a collection being booked), it is the responsibility of the site managers to organise a collection through a commercial arrangement with the Council or a private contractor.

### **3.2 Internal Storage**

To enable and encourage occupants of new residential units to recycle their waste, developers should provide adequate internal storage, usually within the kitchen, for the separation of recyclable materials from other waste.

Residents will be responsible for providing their own internal containers. However, it is recommended that developers consider methods to integrate the reusable sacks for recycling into the design of the kitchen areas to enable and encourage residents to make full use of them.

Developers are also encouraged to install in-sink food waste disposal units to help reduce the amount of waste being presented for collection.

### **3.3 External Storage – Capacity**

Ealing Council will undertake one weekly collection of refuse. Recycling collections will be provided on a weekly or fortnightly basis, but developers should ensure there is sufficient bin storage capacity for the latter collection frequency. Sufficient capacity for waste storage must be provided for each household to allow for extended gaps between collections owing to Bank Holidays, severe winter weather or other operational disruptions.

Ealing Council recommends that developers follow the guidance issued in document H6 of the Building Regulations with regards to waste storage capacity (covering refuse and recycling), so that a total combined capacity of 0.25m<sup>3</sup> (250 litres) is provided per dwelling. It should be noted that although the total storage capacity for refuse and recycling can be calculated collectively, in practice the storage will be provided in separate containers. For developments where the average number of bedrooms in the dwellings is less than 2, developers may choose to follow the formula for calculating waste storage capacity as set out in BS 5906:2005.

Ealing Council recommends that 50% of the total combined waste storage capacity be allocated for mixed recycling, where 250 litres per household are being allocated. As refuse and recycling are stored in separate containers the requirement for each household is 125 litres of storage for refuse and 125 litres of storage for recycling.

For developments where the average number of bedrooms in the dwellings is less than 2, developers may choose to follow the formula for calculating waste storage capacity based

primarily on BS 5906:2005. Ealing Council recommends that 50% of the total combined waste storage capacity be allocated for mixed recycling.

**Formula:  $A \times ((B \times C) + 30 \text{ litres})$**

**A** = no. of dwellings

**B** = volume arising per bedroom (100 litres)

**C** = average no. of bedrooms

Example 10 x 1 bedroom flats and 10 x 2 bedroom flats

**A** = 20

**B** = 100l

**C** = 1.5

3600 litres total, which would equate to:

2 x 1100l refuse bins

2 x 1100l recycling bins

Developers should give consideration to the flexibility of the storage capacity provided; so that the Council and site managers are able respond effectively to rising levels of resident participation in recycling and/or an increased range of materials becoming accepted in the recycling bins.

For developments with 9 or more households, communal 1100-litre Eurobin containers should be provided for both refuse and recycling. However, for developments of 8 or fewer households, it is permissible for communal two-wheeled 360-litre bins to be used. The total storage capacity should comply with the requirements given above.

### **3.4 External Storage – Bins**

It shall be the responsibility of the developer to purchase the necessary bins for external waste storage, and ensure that these are in place before residents move into new properties. In order to ensure the manufacturing quality, branding and labelling meet required standards, developers or site managers should acquire the necessary refuse and recycling bins from Ealing Council. Bins must be purchased, and will not be provided by the Council for an annual hire charge. In the event that a developer/site manager wishes to acquire bins independently of the Council, the full specifications must be provided and agreed in advance. The Council reserves the right to refuse to empty bins that do not meet the required standards if there is a risk of damage to the collection vehicles or to the safety of the collection staff.

The latest indicative container price list for bin purchases from Ealing Council is available on request. Full terms and conditions for the supply of containers will be provided at the point of purchase, and updated prices should be sought from the Council.

It will be the responsibility of the site managers to arrange for bins to be cleaned. It is recommended that space is allocated on-site for the storage of at least one empty container, to allow cleansing of bins to be undertaken on a rotation basis without reducing the availability of refuse and recycling storage capacity. Site managers will be responsible for

the security of the bins, and the storage arrangements should therefore be designed to minimise the risk of theft, arson or other vandalism. In the event of a bin being stolen, or damaged beyond repair through vandalism, the site manager will be required to purchase a replacement container.

Minor damage to bins that have been purchased from Ealing Council may be repairable without a charge to the site managers. Bins that have been purchased from other sources will be the responsibility of the site managers to repair or replace. It will be the responsibility of site managers to adequately cleanse waste storage and collection areas, including the floor, internal walls, bins and lighting fixtures. Site managers will also be responsible for ensuring that all waste is placed into the containers for collection. This includes materials that have been placed beside or on top of bins, or waste that has overflowed from the containers.

### **3.5 External Storage – Location**

For purpose-built flats it is necessary to provide an appropriate storage area for refuse and recycling containers. These must be an integral part of any new development, with appropriate design, capacity, layout, access and signage. Communal bin storage areas should be clearly identified on plans, and the space allocated to them must be guaranteed for the purposes of waste storage.

Communal bin storage areas must be located within the footprint of the development, and ideally be at ground level. However, if an underground storage solution is planned for standard wheeled bins (such as in a basement car park) then an appropriate collection point for the containers at ground level must be provided and clearly shown on the plans. Developers that are looking at using underground systems should refer to Section 5.

Bin storage areas should be easily accessible for the dwellings that they serve, with residents being required to walk no further than 30m from their front door (excluding vertical distances) when carrying refuse and recycling. For larger developments it may be necessary to provide several bin storage areas to ensure an adequate distribution across the site. The location of communal bin storage areas should have regard to the impact of noise and smell on the occupants of neighbouring properties, both existing and proposed.

The location of these storage areas relative to collection points is covered in section 3.8 below.

### **3.6 External Storage – Dimensions**

The size and layout of each bin storage area must be designed to accommodate a sufficient quantity of refuse and recycling bins for the number of dwellings that the storage area is likely to serve. Where more than one bin storage area is being provided, consideration should be given to the likely usage of each storage area so that they are sized appropriately. Developers should take into account the preference of some residents to deposit waste as part of their daily commute, which may mean they use a bin store they walk past on their way out, rather than the one closest to their home. For blocks of flats divided into cores, the size of the bin stores must correspond to the number of dwellings accessed through each entrance.

All bins must be fully accessible from the front face, to allow for easy depositing of waste. Layouts that require bins to be swapped round mid-week are permissible if it is demonstrated that there will be site management presence at the development. There must be a minimum of 150mm clearance around and between each bin within a storage area. Where there is more than one bin within a storage area, there must be 2m clearance in front of each bin to enable it to be accessed and safely moved without needing to move any of the other containers. All doors and alleys must be at least 2m wide to allow for safe manoeuvring of bins. The minimum internal height for a bin storage area and any access doorways is 2m. There should be no other internal fixtures or fittings that reduce the clearance above the bins, so that their lids can be opened fully.

### **3.7 External Storage – Design Features**

Bin storage areas should be contained within a suitable enclosure to prevent nuisance from the spread of waste, odour or noise. The walls should be constructed of materials that are non-combustible, impervious, easy to keep clean, and able to withstand impacts from fully-loaded Eurobins being moved. Where necessary, the installation of a suitable buffer can prevent contact between the bins and the inside faces of the walls. It is also recommended that any switches, plugs or other similar installations are placed above or well below the height of the rim of the bins. The external faces of the enclosure walls should be constructed or clad in material that is in keeping with the visual style of the surroundings. It is recommended that the use of appropriate screening or soft landscaping is considered to make bin storage areas more aesthetically pleasing.

The enclosures must be suitably designed to prevent entry by vermin.

Where a roof is being placed over the bin storage area or it is located indoors, the enclosed space must be well ventilated. The roof must be constructed of non-combustible, robust, secure and impervious material.

There should be adequate lighting in the bin storage area. This lighting should involve sealed bulkhead fittings for the purpose of cleaning down with hoses. Switching should be either through a proximity detection system or on a time delay button to prevent lights being left on. This lighting should be easy to maintain by local site staff without the need for specialist parts.

The use of doors or gates can help to reduce the potentially detrimental visual impact of a bin storage area, and can also enable site manager to reduce the risk of bin theft or vandalism. Such doors must not open outward over a public footway or road, and should not cause an obstruction to other access when in an open position. They should be able to remain or be secured in the open position so that access for collection staff is unimpeded when the bins are being emptied.

The thresholds of any doors or gates must be free of rims or impediments at floor level. Where these are part of the design of standard door units being installed, developers must apply graded resin strips or other appropriate features on either side to minimise any impediment to the movement of the bins. Floor-level thresholds must also be very securely fixed down to prevent rising, warping or other such issues.

There must be a water supply with standard tap fittings available to the bin storage area to enable washing down of the bins, walls and floor.

Bin storage areas must have a suitable impermeable hard standing ground covering which can be cleaned easily. The slope of the floor must enable it to drain properly and completely. The drainage system must be suitable for receiving a polluted effluent. Any gullies must not be in the track of the container wheels. See Section 3.4 for details on requirements for cleansing bin storage areas.

The design of bin storage areas should pay as much regard as possible to accessibility for disabled or elderly residents. Where the bin storage areas cannot be designed to meet the requirements of these residents, suitable alternative arrangements should be put in place by the site managers to support any tenants who are unable to use the external waste storage facilities provided.

Storage areas for refuse and recycling bins should be clearly identifiable as such, through the use of appropriate signage on doors or walls. Ealing Council should be consulted in the design of these signs to ensure information is accurate, consistent and presented appropriately, particularly with regards to the waste and recycling services offered in the borough. The use of 'Recycle Now' iconography is recommended for recycling signage.

### **3.8 External Storage – Access and Pulling Distances**

The bin storage areas must be located within a specified minimum distance of a point where the collection vehicle can safely stop for loading. The maximum distances that operatives should be required to wheel containers, measured from the furthest point within the storage/collection area to the loading position at the back of the vehicle, are:

- 15m for any wheeled container up to 240-litres
- 10m for any wheeled container greater than 240-litres

The stopping point for the vehicle should be safe, legal and designed to minimise any obstruction to traffic. Please note the requirements for vehicle access given in Section 6.

The surfacing of the route the operatives will take between the bin storage/collection area and the vehicle should have a hard, smooth and continuous finish. The pathway must be free of any ironworks, trees, drainage gulleys or other features which would obstruct or impede the movement of the bins.

The pathway should be free of any steps. If access to a roadway is required along the route then a dropped kerb must be provided as close as possible to the storage area. Slopes should be avoided wherever possible along the pathway, but where needed the gradient should fall away from the bin storage area and should be no greater than 1:12.

It is not acceptable for the route between the storage area and the collection vehicle (i.e. in the direction that filled bins will be pulled) to have any uphill gradients.

Signage and, if appropriate, road/pavement markings should be used to indicate that the storage areas are not to be blocked at any time.

If locks are to be fitted to any doors or gates at bin storage areas, these should be of a standard 'Fire Brigade' pattern. If a keypad and code is to be used for gaining access, then developers and site managers should be aware that the code will be shared with a number of collection staff, and all arrangements must be agreed with Ealing Council prior to

installation. If locks or codes are changed at any point, it will be the responsibility of the site manager to supply new keys or codes to the Council at no cost and as soon as the change has been made.

### 3.9 Designated Collection Points

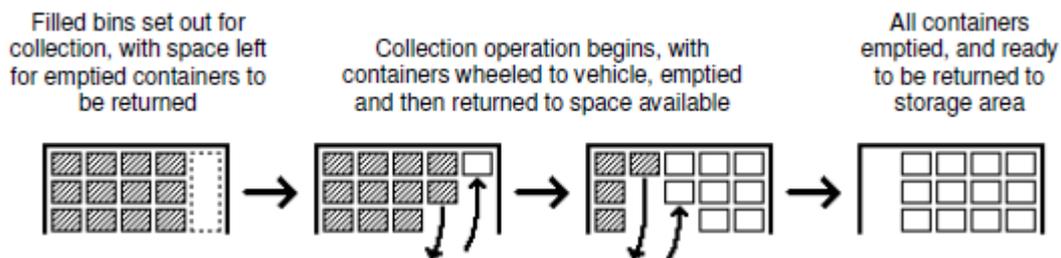
In locations where it is not practicable for architects to provide full access to the bin storage areas for waste collection vehicles, or standard Eurobins are to be located in underground car parks, a separate designated collection point must be provided.

It is the responsibility of the site managers to move the waste containers to the designated collection point by 7am on the scheduled day, and then to return the containers to their storage areas after emptying.

Sufficient provision should be made to ensure that all health and safety requirements are met for on-site staff to move the bins. Where bins are to be towed to the presentation point using a tug, there will be specific requirements for the site layout, bin design and towing operation.

To minimise the potential for delays to collections, the designated collection area should be large enough for all the refuse and recycling bins to be positioned ready for collection at the same time.

The space in the collection area must be sufficient to enable operatives to return emptied bins to a position that does not obstruct the manoeuvring of those containers that are yet to be emptied. A simple example of how this might be achieved is given in the diagram below:



Developers and site managers must make sufficient provision to prevent other vehicles parking in the collection area, or in a position that would impede access for collection operatives.

Adequate arrangements must be provided for the collection vehicle to remain at its loading point for an extended period, particularly where a significant number of bins are to be emptied at the same time. Site managers should ensure that no other access is required to or through the designated collection point on the scheduled day of collection.

In positioning and designing the collection point, architects must ensure that the distance that operatives will need to wheel bins from the furthest point within this area to reach the loading point at the back of the collection vehicle does not exceed 15m for bins of up to 240-litres, or 10m for larger containers.

Developers should ensure that they adhere to the other relevant access requirements for waste collection. In particular, dropped kerbs must be provided beside the designated collection point if they are not level with the roadway.

Developers will need to give consideration as to how residents can dispose of their waste when the bins have been moved to the collection point. If the refuse bins have been moved at a separate time to the recycling bins, there must be adequate arrangements in place at all waste storage areas to ensure that residents attempting to deposit non-recyclable refuse have the opportunity to do so without contaminating a recycling container.

### **3.10 Bulky Household Items**

Ealing residents can request a chargeable collection for bulky household items that will not fit into their refuse wheelie bin, such as furniture or large appliances. Up to eight items can be collected at a time. A separate designated area must be provided for bulky waste, and only those items which have been booked for a collection will be cleared.

Where bulky items are dumped on a private development (or left in a bin storage area without a collection being booked), it is the responsibility of the site managers to organise a collection through a commercial arrangement with the Council or a private contractor.

This service is available for residents living in flats, but can only be provided if adequate measures have been included in the design of the development. If these measures are not in place then the Council may not be able to undertake collections requested by residents, and the site managers will be required to make alternative commercial arrangements to have bulky items removed.

Residents can book and pay for collection of bulky household items through the Council's website or Contact Centre, and up to eight items may be taken away through each booking. Details of the items needing to be collected are taken at the point of booking, and this information is issued to the relevant collection crew. The Council will only collect those items that have been booked for a bulky collection by a resident. Any other items that are left in a waste storage area without a booking having been made, or are dumped elsewhere on the development, will be the responsibility of the appropriate site managers to clear through a chargeable commercial arrangement with the Council or a private contractor.

Designated storage facilities must be provided for residents to deposit bulky waste items they have booked for a collection:

- For larger developments (150+ units), these storage areas must be separate from those containing normal refuse and recycling bins.
- For smaller developments, the bulky waste storage area can comprise a designated space within a standard bin store. In such arrangements, the presence of bulky waste must not obstruct the refuse and recycling bins, and similarly it should be possible to safely remove the bulky items without the need to move any other bins.

Collections will not be undertaken by the Council if the bulky waste causes an obstruction or is itself obstructed.

The guidance provided earlier on design, accessibility and signage for waste storage areas should also be followed for bulky waste stores. However, it is an additional requirement that

bulky waste stores are covered, so that potentially reusable items are protected from the weather.

Appropriate signage must be installed to identify the designated areas. It is also recommended that signage be installed at other waste storage areas to provide information to residents on how to correctly dispose of bulky items.

### **3.11 Management-Provided Internal Waste Collection Services**

In large residential developments, it may be proposed by developers that the site management will provide an internal waste collection service for residents, either door-to-door or through use of smaller communal waste deposit points.

Developers considering doorstep collections must ensure that all relevant health & safety issues are addressed, including trip hazards and fire risk. In particular, developers must be able to demonstrate to Ealing Council that they have consulted and received approval from the London Fire Brigade in respect of any such proposals.

A waste storage area must be provided on each floor, which includes provision for appropriate and separate containers for refuse and recycling. The storage area must be well-lit, ventilated, include fire-suppression technology, and be designed to enable easy cleansing.

Any external waste storage areas, and the location where the waste will be presented for collection, must be designed in accordance with Section 3.

A written statement must be provided to Ealing Council which demonstrates how the internal waste collection service will be operated and managed, and how the waste will be presented for collection.

### **3.12 Chute Systems**

Designers of larger residential developments may consider the installation of chute systems to make it easier for tenants to deposit their waste. Ealing Council does not recommend this type of system owing to the tendency of the chutes to get blocked, but if such a system is being considered then the following guidelines should be followed.

Waste chutes must be designed to fit in with the architectural aesthetics of the buildings. The internal surfaces of the chutes should be completely smooth to minimise snagging of waste sacks and subsequent blockages.

Chute systems will only be permitted if there are two separate chutes provided at each installation point, to enable the segregation of refuse and dry recycling.

The receptacles on each floor into which tenants deposit their waste must be clearly labelled to encourage recycling and minimise the risk of contamination. Poster or sticker designs should be presented to the Council's Waste Management department for approval. The use of 'Recycle Now' iconography is recommended.

It will be the responsibility of the site management to cleanse and maintain chute systems, and clear any blockages which may arise. Ealing Council will expect to see details of how this will be managed.

A fully enclosed and secured bin storage area must be provided at the base of each chute, designed in accordance with the requirements set out in Section 3.

Chamberlain bins are recommended for use with chute systems (see Appendix A for more information). However, Eurobins may also be used, and are recommended if it is expected that some tenants will deposit their waste directly into the containers without using the chutes.

Site management will be responsible for rotating the bins at the base of the chutes between the weekly collections to prevent overflowing of waste. Any overflows which do occur will be the responsibility of site management to clear.

## **B– Non-Residential Guidelines**

### **Section 4**

#### **Commercial & Mixed-Use Developments**

This section provides information on the specific requirements for developments that include commercial units. The information given in this section should be read in conjunction with Section 3, and treated as additional to those which are set out in that section in relation to capacity, storage and access.

##### **4.1 Service Provision Overview**

Ealing Council undertakes regular collections of residential waste, details of which have been given in the previous sections. For standard refuse and recycling collections there is no charge levied by the Council, except for the purchase of bins for new developments.

However, the arrangements for commercial waste are different, as businesses do not receive a collection service through their Business Rates. The Council offers a commercial waste collection service with a range of container options and collection frequencies to suit all types of premises. Businesses can also choose to take out a contract with a fully licensed private waste collection firm.

##### **4.2 Design of Waste Storage Facilities**

All developments should provide sufficient storage capacity for all waste arisings, whether commercial or residential in origin. The design and layout of waste storage areas or chambers will be consistent with that for purpose-built flats, so architects should apply the guidance given in Section 3 to the specific circumstances of the scheme.

##### **4.3 Segregation of Commercial and Household Waste**

External storage areas for waste on mixed-use developments must be segregated, so that domestic and commercial waste bins are in separate secured areas.

Access to the domestic bins should only be possible for residents of the development and site management. It is also good practice to secure the commercial bin storage area to prevent residents from misusing these for disposing of household waste. Combined storage of domestic and commercial waste can be permitted if the developers make arrangements for this to be dealt with through a commercial contract. Ealing Council reserves the right to refuse to undertake domestic waste collections from non-segregated storage areas.

Suitable arrangements for segregating the storage of bulky household waste items will also need to be made.

All storage areas must be easily identifiable through the use of clear and appropriate signage. It is also recommended that residents and businesses are provided with leaflets or information sheets explaining which waste storage areas to use.

In developments where on-site businesses will be arranging individual contracts with waste collection providers, it will be necessary to ensure there is sufficient space available for each commercial unit to have its own bin or allocated area for storage.

On developments with multiple commercial units, landlords or site managers may choose to include the cost of waste collection in the unit rental price. This will enable a single contract to be arranged between the landlord/site manager and the Council or a licensed waste collection provider, and remove the need for individual bins/storage areas to be provided for each business.

Architects and developers should ensure that provisions for waste storage and collection are compatible with the varying container and vehicle types used by different waste contractors. If it is known that a particular provider is the intended contractor for a site then that company should be consulted with at the earliest opportunity.

#### **4.4 Waste Storage Capacity**

The guidance given in Section 3 should be followed in relation to the required capacity for domestic refuse and recycling. The quantity of waste generated on commercial premises can vary significantly, depending on the nature of the business occupants and the frequency of collection they secure through their waste contract. Architects and developers should identify the types of businesses intended for any units proposed on their developers, and ensure that adequate storage capacity is provided for the likely quantity of waste generated. Further guidance for some premise types/uses is given in British Standards BS 5906:2005.

<b>Typical weekly waste arisings</b>			
<b>Building</b>	<b>Weekly waste calculation</b>	<b>Example</b>	<b>Weekly waste arising (litres)</b>
Office	50l per employee	10 employees	500
Fast Food Outlet	5l per sale	1000 sales per week	5000
Restaurant	75l per dining space	30 dining spaces	2250
4/5 Star Hotel	350l per bedroom	120 bedrooms	42000
2/3 Star Hotel	250l per bedroom	100 bedrooms	25000
1 Star Hotel / B&B	150l per bedroom	5 bedrooms	750

#### **4.5 Waste Collection Frequency**

Residential collections are undertaken by Ealing Council on an alternate weekly basis for refuse and recycling for houses/house conversions, and weekly for refuse for flatted developments, with recycling services carried out every week or fortnight.

Collection frequencies for commercial waste will be dependent on the space available, the amount of waste being generated and the particular contractual arrangements. However, where commercial units will be producing food waste, developers should be aware of the increased likelihood of odours. A twice-weekly collection service is recommended for such businesses, and should be allowed for in the design of the waste storage and access. Premises which generate a significant quantity of waste may also benefit from a twice weekly collection to reduce the need for storage space.

#### **4.6 Recycling**

The Waste Regulations 2011 require 'separate collections' of paper, metal, plastic and glass to be in place for businesses by January 2015. Developers should ensure that businesses and waste contractors are able to meet these requirements through the design of waste storage and collection facilities at new developments, including storage space within the business premises.

Mixed-material recycling is in operation for household waste, but such schemes may not be appropriate for businesses. As such, architects should consider the need for separate bins for each material for business premises. Medium to large hotels and restaurants must be designed to include separate storage provision for waste cooking oil.

#### **4.7 Compactors**

In locations where the space available for storing waste is limited, it may be appropriate for developers to consider using compaction systems to reduce the volume of the waste being generated on site. There are various types of compactors available to suit different types and sizes of development.

Developers should note that Ealing Council does not offer a compacted waste collection service, so alternative arrangements would need to be made with a private contractor to have the bales of waste collected. The intended service provider should be consulted at the earliest opportunity in the planning process to ensure that their requirements for container storage and access are met.

### **Section 5**

#### **Underground waste storage systems**

##### **5.1 Basement Storage of Towable Eurobins**

A relatively simple solution to providing underground storage of waste containers involves placing Eurobins in a basement storage room (often part of an underground car park) that is accessible by tenants for depositing waste. The bins are then brought up to ground level by the site managers through the use of service elevators or ramps.

The design and layout of the storage area should meet the appropriate requirements set out in Section 3. If access is through an underground car park, appropriate markings and parking restrictions may be required to protect access to the bin stores.

It will be the responsibility of the site manager to move the waste containers to an agreed designated collection point at ground level, and return the containers to their storage area after emptying. See Section 3 for more details about the requirements of this designated collection point.

A written statement must be provided to demonstrate how the movement of the bins to the collection point will be managed and undertaken. The plans must also show the parking location for any tractor and trailer that may be used by site staff for this purpose. Where a goods/service elevator is intended to be used to transport the bins to ground level, it must be large enough to safely accommodate a porter and the appropriate number of containers, and the width of the doors must allow free movement of the bins.

## **Section 6**

### **Vehicle Access**

Vehicles used to collect waste and recycling will be amongst the largest and heaviest needing to access any development. Further information about the dimensions and other specifications of waste collection vehicles used by Ealing Council are provided in Appendix B. Developers should be aware that other private contractors undertaking collections of commercial waste from developments may use larger vehicles.

In order to ensure that all refuse and recycling collections can take place unimpeded and without the risk of any damage to the vehicles, paving or other fabric of the sites, developers must ensure that access roads and driveways meet the following requirements.

#### **6.1 Roadway Strength**

Roads should have foundations and a hard-wearing surface capable of withstanding a fully laden waste collection vehicle of 26 tonnes gross vehicle weight, with a maximum axle weight of 11.5 tonnes. Any ironworks situated in the roadways should also be capable of withstanding the loads indicated.

#### **6.2 Roadway Layout**

Roads should have a minimum width of 5m. Pinch points, such as archways or gates, should give a minimum clearance of 3.7m width, and additional allowances must be given if vehicles are required to approach from an angle.

Any part of a building through which a waste collection vehicle passes must have a minimum clear height of 4.5m, to allow for overhead fixtures and fittings.

If a turning space is necessary, the road layout should permit a turning circle of 16.1m kerb-to-kerb, or 20.3m wall-to-wall.

Any locations where the gradient of the roadway changes must be designed to allow for the overhang of the lifting equipment at the back of waste collection vehicles.

### **6.3 Manoeuvring**

Waste collection vehicles should not be required to reverse more than 12m, and then only in exceptional circumstances. If pedestrians also use access routes where waste collection vehicles will be required to reverse, an additional raised footpath must be provided. Waste collection vehicles should never be required to reverse up or down a slope/ramp.

Where possible, developers should design road layouts so that waste collection vehicles are not required to reverse in from or out to the public highway.

Vehicles undertaking collections should be able to stop for loading in a safe and legal position where they will not obstruct other traffic, pedestrians or access.

Appropriate measures must be incorporated into road layouts to control unauthorised parking of vehicles that would prevent access by the waste collection vehicles and staff.

Developers should ensure that sufficient car parking is provided in order to prevent such problems.

### **6.4 Permitted Access**

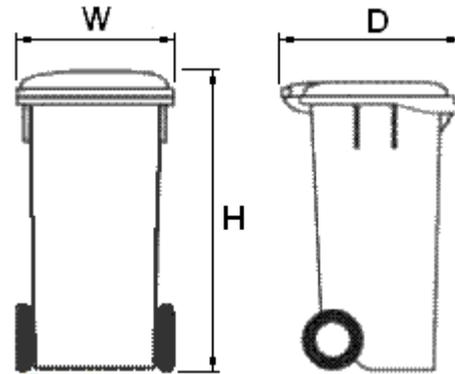
Access to storage areas should be possible from 07:00 to 21:00, Monday to Sunday. If there is any electronic gate or barrier control into the development then immediate access for waste collection vehicles must be possible without the need for the crew to know an entry code, use a swipe-card, or carry any fob/key other than one of a standard 'Fire Brigade' pattern.

## Appendix A Container Dimensions

### Two-Wheeled Bins

240-litre is the standard container.

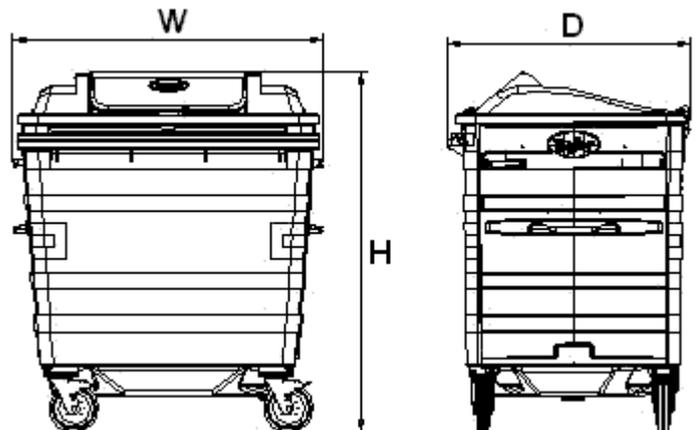
Capacity	H (mm)	D (mm)	W (mm)
140 litre	1100	550	500
180 litre	1100	650	540
240 litre	1100	740	580
360 litre	1110	880	660



### Eurobins

1100-litre is the standard (and recommended) Eurobin container.

Capacity	H (mm)	D (mm)	W (mm)
660 litre	1340	720	1260
1100 litre	1410	1000	1265

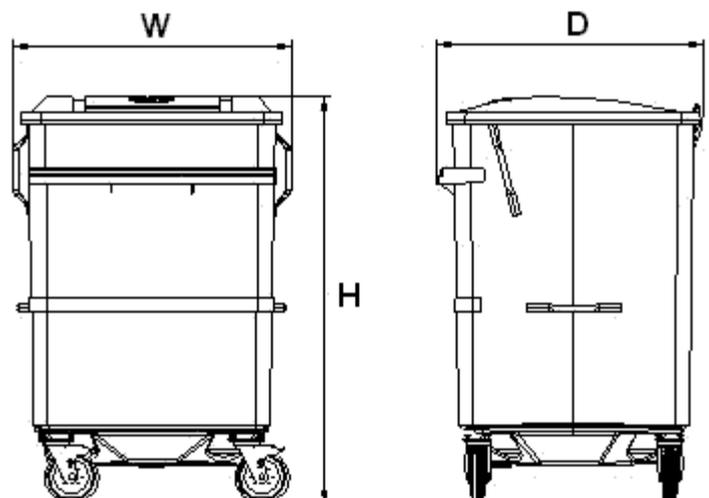


### Chamberlain Bins

940-litre is the standard (and recommended) Chamberlain container.

Capacity	H (mm)	D (mm)	W (mm)
940 litre	1410	953	1020

Note that Chamberlain bins are only suitable for use where refuse/recycling chutes are installed. Eurobins should be used at all other locations.



## Appendix B Vehicle Dimensions and Specifications

This section provides information on the standard vehicles used by Ealing Council to collect both refuse and recycling.

**Drive** 6x2 rear-steer  
**Overall width** 2650mm  
**Overall length** 8300mm  
**Overall height** 2885mm  
**Gross Vehicle Weight** 26000kg  
**Turning circle between walls** 16.1m  
**Turning circle between kerbs** 20.3m

Architects and developers of sites where commercial units will be located should be aware that private waste contractors use a range of vehicles, which can sometimes be larger or have different manoeuvrability concerns than those specified below. In these circumstances, developers should consult with the intended private contractors to establish the specifications for other vehicles that may need to access the site. **It is recommended that a 6x4 rigid vehicle is modelled in these circumstances, as it is an industry standard.**

	Dimensions (mm)
A Wheelbase (first to second axle)	3900
A+ 1350mm (outer axle spread)	5250
B Front overhang	1850
C Rear overhang	1200
D Overall length	8300
E Frame height at rear axle	915
F Frame depth	284
G Back of exhaust pipe or air stack to end of frame	5950
H Bumper to back of cab	2032
I back of cab to centre line of front axle	182
J Overall height (nominal not inc sunroof) – unladen	2885
K Ground clearance front	205
L Width over cab	2490
M Ground clearance rear	245
N Frame width (at rear)	760
O Bogie spread	1350
P First step height from ground	515
R Cab floor height from ground	860
S Centre line of front axle to rear of exhaust pipe or air stack	500
Minimum cab gap (to rear of exhaust pipe)	50
Turning circle (wall to wall) – tolerance +0.5m, -0.0m	16.1m

All heights are in 'laden' condition unless otherwise stated