

# Waste & Recycling Container, Storage and Vehicle Access Requirements

*PLEASE NOTE: This information is intended to provide overview guidelines for University of Edinburgh staff and contractors only. Exact container requirements for new buildings and refurbishments must be confirmed prior to finalising any design specifications. Current vehicle access requirements corresponding to current container types in use in centrally managed UoE contracts are appended to this document and will be updated as and when necessary.*

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## General Site Requirements

- **Roads** providing access to the building should have foundations and a hard-wearing surface capable of withstanding a fully laden refuse vehicle of 32 tonnes gross vehicle weight (GVW), with a maximum axle weight of 20 tonnes.
  - Roads should have a minimum **width** of 5m and arranged so that the collection vehicle can continue mainly in a forward direction.
  - If **turning space** is necessary, the road layout should permit a turning circle of 21.5m\*, kerb to kerb. (\*Required turning circle is larger for the 15.3cu.m. compactor should it be required).
  - Any **gates or arches** on the vehicle route to the refuse/recycling storage area should give a minimum clearance of 3.72m width and 4.5m height.
  - There should also be a **water supply** and a trapped gully to allow for regular cleansing, adequate **lighting** and sufficient space around to allow **safe access** by staff to all containers (and any bin compaction units where present).
  - **Surface** of the service bay and between the service bay and the building should be rendered with a smooth continuous finish (a cobbled surface is unsuitable for any type of wheeled container).
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## Space Requirements for Specific Containers in use

The management of waste and recycling within the Academic and Support estate is carried out by Estates & Buildings. Within the Accommodation estate, waste and recycling are managed by Accommodation Services. Waste Management services are procured according to Public Procurement rules and the contractor for these services could change accordingly.

It is therefore necessary to confirm with the relevant unit exactly which containers are suitable for the proposed building which you are dealing with prior to using the specific information below.

### Academic and Support Estate

The main containers in use (and their volume) around the Academic and Support estate are:

- Compactors – 10.7m<sup>3</sup>.

- Closed, secure walk-in containers (Ro-Ro's) – 26.7m<sup>3</sup>.
  - Closed, secure skips – 9.1m<sup>3</sup>.
  - Front-End Loader (FEL) – 6.1m<sup>3</sup>.
  - Mobile, eurocart containers – 1100-litre, 660-litre, 240-litre.
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### Compactors

Compactors have a large capacity and can achieve volume reductions of up to 4:1. This kind of container is suitable for use in premises where a significant volume of waste is likely to be produced, such as large offices, retail units and hotels as well as mixed developments. They are usually purchased outright by the Project.

They require direct access by a skip or Ro-Ro vehicle. Additional length is required to that given below for the service bay to accommodate the collection vehicle.

The University owns two main compactor types – Avermann P10 and Phoenix (slightly smaller).

#### P10 (10.7m<sup>3</sup>) compactor

- Vehicle (Roll-on, Roll-off 4 axle) - see appendix for current vehicle specifications and access requirements.
- Compactor Dimensions - 4.375m (l) x 1.99m (w) x 2.46m (h)
- Service Bay Dimensions – 6m (l) x 5m (w) x 5m (h)
- Other requirements:
  - Smooth, impervious, level surface
  - Minimum width of entrance to service bay: 4.0 metres.
  - Power Supply 3x400V, 50Hz (three-phase neutral & earth), CEE-connector 32A, commando plug connector suitable for external use. 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 12m. This is to prevent the vehicle encroaching on to the footway when loading or unloading the skip.

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### Closed, secure walk-in containers (Ro-Ro's)

This container type tends to be used only for recyclate at the University in areas where very large volumes of recyclate are produced.

Currently only 26.8m<sup>3</sup> roll-on, roll-off containers are in use. These containers are entered via a single hinged door to the back of the container (as per vehicle orientation on collection).

- Dimensions (of a 26.7m<sup>3</sup> container) – 6.1m (l) x 2.5m (w) x 2.4m (h).
- Service Bay Dimensions – 9.5m (l) x 6m (w) x 5m (h).
- Vehicle (Roll-on, Roll-off) - see appendix for current vehicle specifications and access requirements.
- Other requirements:
  - Smooth, impervious, relatively level surface (low gradients can be acceptable but only along a particular orientation).
  - Minimum width of entrance to service area: 4.0 metres.
  - Sufficient space to the side to enable the door to be fully opened in order to be connected to a catch on the side of the container.

**Important notes:**

- This container type is not emptied on site. An empty container is brought and the full one taken away. The location must therefore allow for space in the vicinity for the empty container to be put down whilst the full one is removed. *Not all sites suit this type of arrangement.*
  - 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 12m. This is to prevent the vehicle encroaching on to the footway when loading or unloading the skip.
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**Closed, secure skips – 9.1m<sup>3</sup>.**

This container type tends to be used for large volume recycle (dry) or general waste (wet).

- Dimensions (of a 9.1m<sup>3</sup> container) – 4.1m (l) x 1.9m (w) x 1.7m (h).
- Service Bay Dimensions – 6.1m (l) x 4m (w) x 4.5m (h).
- Vehicle (Skip) - see appendix for current vehicle specifications and access requirements.
- Other requirements:
  - Smooth, impervious, relatively level surface (low gradients may be acceptable but only along a particular orientation).
  - Minimum width of entrance to service area: 4.0 metres.

**Important notes:**

- This container type is not emptied on site. An empty container is brought and the full one taken away. The location must therefore allow for space in the vicinity for the empty container to be put down whilst the full one is removed. *Not all sites suit this type of arrangement.*
  - 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 12m. This is to prevent the vehicle encroaching on to the footway when loading or unloading the skip.
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**Front End Loader (FEL)**

This container type is used for medium volume general waste (wet).

- Dimensions – 2.14m (l) x 2.0m (w) x 2.14m (h).
  - Vehicle (FEL) – see appendix for current vehicle specifications and access requirements.
  - Other requirements:
    - Additional 2.0m height required to open bins for normal use.
    - Smooth, impervious, level surface for storage.
    - Containers must sit at least 1m away from building walls and 0.5m away from any other container.
    - Containers are tipped on site and as a result have extra height requirements.
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**Mobile, Eurocart containers – various**

**1100-litre wheeled bins**

- Dimensions – 1.36m (l) x 1m (w = depth in this case) x 1.45m (h)
- Vehicle (trade refuse vehicle – 3 axles) – see appendix for current vehicle specifications and access requirements)
- Other requirements:
  - Additional 1.2m height required to open bins for normal use.
  - Smooth surface for wheeling with level surface for storage and through to point of uplift.

Smaller capacity bins can be made available where necessary.

## Requirements for Internal Bin Storage areas

Internal bin storage areas are suitable for wheeled bins of 1100-litres or smaller capacity only:

- a) A suitable cover or roof.
- b) At least one external wall. The walls to be constructed of impervious material.
- c) A double door of minimum 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 2.2 m.
- h) Sufficient space to allow access to all containers (and any bin compaction units where present).
- i) The floor surface should incorporate an integral coving to facilitate cleaning.
- j) A rubbing strip should be attached to the wall surfaces and doors to prevent scuffing.
- k) The total distance from the internal store room to the collection vehicle should be no greater than 25m.
- l) The floor must be level with the adjacent path or highway with a gradient of no more than 1.1 from storage site towards the collection vehicle.

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## “Wheeled Bin” Compaction Units

These compaction units are used with wheeled bins in areas where additional capacity is needed but where it is not possible to provide appropriate space for larger container types. These compactors can achieve volume reductions of up to 3:1.

Adequate floor space is required (given in the table below) to allow for working space for the container. It is advisable to site the compactor undercover at ground floor level with close, level access to the collection point.

### Unit specifications:

Bin Capacity (litres) 660 & 1100

Dimensions - 1.8m (w), 2.7m (l), 4.0m (working length), 2.5m (h)

Floor area required - 7.2 m<sup>2</sup>

Power Supply 240 volts, 15 amp earthed socket

Bin type: 1100 litre (see requirements for 1100-litre bins for additional information).

<p><b>If you require any further information, please contact Estates Waste Management, Estate Operations, 13 Infirmary Street, EH1 1LT. Tel: 0131 651 4287. Email: Waste@ed.ac.uk</b></p>
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## Appendix - Container and Vehicle Access Requirements

The information appended here regarding vehicle access requirements is current at the time of preparing this document. It is intended to provide additional information to enable Design Teams and contractors to more accurately plan external waste storage requirements for Capital Projects.

**The onus is on the user to check with Estate Waste Management as to whether container types in use or vehicles being used to service these containers has changed (or is likely to in the near future).**

### **Skip vehicle specification and requirements** *(last updated April 2015)*

Gross Vehicle Weight – 18,000kg

Number of axels – 2

Width – 2500mm truck body / 2650 including mirrors

Height – 4000mm truck height / 4500 mm full height loading

Length – 6700mm vehicle length / 15,000mm operating length when collecting

### **Ro-Ro vehicle specification and requirements** *(last updated April 2015)*

Gross Vehicle Weight – 32,000kg

Number of axels – 2

Width – 2500mm truck body / 2650 including mirrors

Height – 3850mm truck height / 4950 mm full height loading

Length – 9140mm vehicle length / 20,000mm operating length when collecting

### **FEL vehicle specification and requirements** *(last updated April 2015)*

Gross Vehicle Weight – 32,000kg

Number of axels – 4

Width – 2500mm truck body / 2650 including mirrors

Height – 4500mm truck height / 5500mm full height top loader

Length – 12000mm

### **Eurocart vehicle specification and requirements** *(last updated April 2015)*

Gross Vehicle Weight – 26,000kg

Width – 2200mm truck body / 2650 including mirrors

Height – 3500mm truck height

Length – 8300mm vehicle length / 12300mm operating length when collecting

### **Glass collection vehicle specification and requirements** *(last updated April 2015)*

Gross Vehicle Weight – 11,000kg

Width – 2200mm truck body / 2650 including mirrors

Height – 3030mm truck height / 4300mm full height top loader

Length – 7500mm

Turning Circle – wheel-cut angle 49.5 degrees