

# Douglas

## Waste Management Guidelines for Architects and Property Developers.



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## Introduction

This document provides guidelines for architects and developers when designing facilities for storing, collecting and managing waste in developments. You should also refer to Building Regulation H6, Approved Document H and British Standards EN BS 5906:2005. These guidelines do not cover the requirements for managing construction and industrial waste.

When a planning application is submitted, Douglas Borough Council expects details of the proposed storage accommodation for waste and recyclable material to be specified and agreed. As a statutory consultee under the Town & Country Planning Act (1999) Douglas Borough Council will normally expect the submission of details indicating satisfactory storage arrangements for waste and recyclable material. However, in exceptional circumstances it may be considered appropriate to reserve details of the waste storage accommodation for approval prior to the commencement of construction.

Architects and developers 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. Doing so will help to prevent unnecessary costs and delay if your design does not meet the requirements of the Building Regulations or Flats Regulations as this could require a new planning application to be submitted for any updated design or your development may not be able to be registered as flats. Developers of mixed-use or commercial sites may also need to consult with other waste collection providers to ensure that their requirements are met.

Waste Service 01624 696445

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## Collection Services Overview

Douglas Borough Council currently provides a weekly refuse and fortnightly recycling service for residents in individual houses. Wheelie bins are used for containing and collecting refuse. Douglas has a 'no side waste' policy for refuse to encourage residents to reduce, reuse and recycle their waste. Kerbside Boxes are also used for recycling, which are emptied every two weeks. The recycled materials below are separated at source, which means they are sorted at collection to reduce the need for further segregation:

- Mixed paper and grey card
- Plastic bottles
- Food tins and drink cans
- Glass
- Cardboard

A wide range of other items can be taken to the Eastern Civic Amenity Site Recycling Centre.

The Council can provide collections of bulky waste which are organised on request through Douglas Borough Council's Waste Management Department. This service attracts a fee.

## Commercial Waste

Douglas Borough Council undertakes regular collections of residential waste, details of which are available in the guidance relating to residential developments. For standard refuse and recycling collections there is no charge levied by the Council in addition to the rates. However, the arrangements for commercial waste are different. The Council does offer a commercial waste collection service alongside a currently free recycling 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. We strongly suggest you discuss your requirements with us as early as possible during the design process.

Douglas Borough Council currently provides a free recycling service to commercial customers. The following items can be put into the recycling bins:

- Mixed paper and grey card
- Plastic bottles
- Food tins and drink cans
- Glass
- Cardboard

Consideration should be given in all circumstances to the provision of storage capacity for recyclates as well as general waste. Under Section 65(4) of the Public Health Act 1990 the Council can make it a condition of collection that recyclable materials are stored for collection in a particular way.

## Guidance on Waste Provision for Houses

### 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. The Council provides bags or boxes for residents to use to collect materials for recycling. 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. Paragraph 2.4.12e of the Isle of Man Affordable Housing Standards Design Guide (2016) states that kitchens should be supplied and fitted with a 3 compartment waste bin suitable for segregating the key wastes for recycling. Developers are also encouraged to install in-sink food waste disposal units to help reduce the amount of waste being presented for collection.

### External Storage – Capacity

Douglas Borough Council currently undertakes one weekly collection of refuse. Recycling collections are currently provided on a weekly or fortnightly basis, but developers should ensure there is sufficient bin storage capacity for the latter. 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. The Borough of Douglas recommends that developers follow the guidance issued in document H6 of the Building Regulations with regards to waste storage capacity, so that a total of 0.25m<sup>3</sup> (240 litres) is provided per dwelling. 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. However, any eventual under-provision of waste storage that results from not providing the recommended capacity of 240 litres per dwelling will be the responsibility of the site managers to resolve. The Borough of Douglas recommends that 25-30% of waste storage capacity be allocated for recycling, where 240 litres per dwelling are being allocated. Where the BS 5906:2005 calculation is being used, it is recommended that this be used to determine the refuse capacity, with recycling allocated as an additional 25-30% capacity on top of this. 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 (such as glass, mixed plastics and mixed cans) becoming accepted in the recycling bins.

### 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.

Although houses should normally have their own refuse storage, in some instances such as mews houses it may be more appropriate to share refuse storage. In these cases the size of the bin stores must correspond to the number of dwellings provided for by each store. All bins must be fully accessible from the front of the bin so the lid can be lifted 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 a 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.

### 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. A roof and surrounding planting will assist in screening visually and prevent nuisance noise. The walls and roofs 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 a 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 accesses 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.

The floor should be suitably drained. 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.

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. The Borough of Douglas 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.

### 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 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 are given in Section 2. The surfacing of the route the operatives will take between the bin storage/collection areas and the vehicle should have a hard, smooth and continuous finish. The pathway must be free of any ironworks, trees, drainage gullies 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 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 the Douglas Borough 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.

### Designated Collection Points

The ideal situation is for waste storage and collection points to be the same place but 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 agreed. It is the responsibility of the site managers to move the waste containers to the designated collection point by 6am on the scheduled collection day, and then to return the containers to their storage areas after emptying. In the case of recycling bins, collections may not be completed until 4pm.

Sufficient provision should be made to ensure that all health and safety requirements are met for on-site staff to move the bins. 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. 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 10m. 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.



## Guidance on waste provision for Flats & HMOs

### 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. The Council provides bags or boxes for residents to use to collect materials for recycling. 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. Paragraph 2.4.12e of the Isle of Man Affordable Housing Standards Design Guide (2016) states that kitchens should be supplied and fitted with a 3 compartment waste bin suitable for segregating the key wastes for recycling. Developers are also encouraged to install in-sink food waste disposal units to help reduce the amount of waste being presented for collection.

### External Storage – Capacity

Douglas Borough Council currently undertakes one weekly collection of refuse. Recycling collections are currently provided on a weekly or fortnightly basis, but developers should ensure there is sufficient bin storage capacity for the latter. 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. The Borough of Douglas recommends that developers follow the guidance issued in document H6 of the Building Regulations with regards to waste storage capacity, so that a total of 0.25m<sup>3</sup> (240 litres) is provided per dwelling. 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. However, any eventual under-provision of waste storage that results from not providing the recommended capacity of 240 litres per dwelling will be the responsibility of the site managers to resolve. The Borough of Douglas recommends that 25-30% of waste storage capacity be allocated for recycling, where 240 litres per dwelling are being allocated. Where the BS 5906:2005 calculation is being used, it is recommended that this be used to determine the refuse capacity, with recycling allocated as an additional 25-30% capacity on top of this. 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 (such as glass, mixed plastics and mixed cans) becoming accepted in the recycling bins.

### External Storage – Bins

For developments with more than 6 dwellings, communal 1100-litre Eurobin containers should be provided for both refuse and recycling. However, for developments of 6 or fewer dwellings, it is permissible for communal two-wheeled 360-litre bins to be used. The total storage capacity should comply with the requirements given above. Douglas Borough Council will provide the necessary bins for external waste storage, and ensure that these are in place before residents move into new properties. 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 has powers under Section 66 of the Public Health Act 1990 to require that waste is stored in suitable receptacles. 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 Douglas Borough 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.

#### 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 be at ground level. 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 ideal situation is for bin storage and collection points to be in the same place.

#### 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 of the bin so the lid can be lifted 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 a 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.

#### 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. A roof and surrounding planting will assist in screening visually and prevent nuisance noise. The walls and roofs 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 a 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 accesses 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. The floor should be suitably drained. 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.

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. The Borough of Douglas 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.

Please note that combined refuse storage and cycle storage is not acceptable as it is inappropriate to store bicycles and refuse together because bicycles are often valuable and should therefore be stored more securely than refuse in a manner where they cannot be damaged when bins are collected.

#### 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 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 are given in Section 2. The surfacing of the route the operatives will take between the bin storage/collection areas and the vehicle should have a hard, smooth and continuous finish. The pathway must be free of any ironworks, trees, drainage gullies 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 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 the Douglas Borough 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.

#### Designated Collection Points

The ideal situation is for waste storage and collection points to be the same place but 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 agreed. It is the responsibility of the site managers to move the waste containers to the designated collection point by 6am on the scheduled collection day, and then to return the containers to their storage areas after emptying. In the case of recycling bins, collections may not be completed until 4pm. Sufficient provision should be made to ensure that all health and safety requirements are met for on-site staff to move the bins.

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. 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 10m . 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.

#### Bulky Household Items

The Council can provide collections of bulky waste which are organised on request through Douglas Borough Council's Waste Management Department. This service attracts a fee.

Developers of flats and HMOs should ensure that residents are able to present large items for a collection so that no obstruction is caused to building exits, or to the refuse and recycling bins. Ideally a separate designated area should be provided for bulky waste. 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.

# Guidance on waste provision for Commercial and Mixed Use developments

## Design of Waste Storage Facilities

All developments should provide sufficient storage capacity for all waste arisings irrespective of origin. The size and layout of each bin storage area must be designed to accommodate a sufficient quantity of refuse and recycling bins for the part of the development 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. For buildings divided into cores, the size of the bin stores must correspond to the requirements in each core.

All bins must be fully accessible from the front of the bin so the lid can be lifted 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 a 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.

## Segregation of Commercial and Household Waste

External storage areas for waste on mixed-use developments should 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. Please note that refuse storage and cycle storage should not be combined as it is inappropriate to store cycles and refuse together because bicycles are often valuable and should therefore be stored more securely than refuse in a manner where they cannot be damaged when bins are collected.

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 at the earliest opportunity. Architects and developers should take into consideration that collection arrangements could change in the future so the design of the waste storage and its collection should be suitable for both private and public collection operators.

### Waste Storage Capacity

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 developments and ensure that adequate storage capacity is provided for the likely quantity of waste generated. Guidance for some types of premises is given in British Standard BS 5906:2005.

### Waste Collection Frequency

Residential refuse collections are currently undertaken by Douglas Borough Council on a weekly basis, 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 minimum of 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

## 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 Douglas Borough Council is contained in Appendix C. 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.

### 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.

### 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 17m 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.

### 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.

### Permitted Access

Access to storage areas should be possible from 06:00 to 22:00, 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 pattern.

## Vehicle Dimensions and Specifications

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



Drive 6x2 rear-steer

Overall width 2524 mm  
Overall length 10564 mm  
Overall height 3552 mm  
Wheelbase (axle 1 to axle 2) 4200 mm  
Rear bogie spread (axle 2 to axle 3) 1350 mm  
Rear swept overhang 1235 mm  
Gross Vehicle Weight 26000 kg  
Maximum axle load 11500 kg  
Approach angle 13°  
Departure angle 15°  
Turning circle between walls 14.8 m  
Turning circle between kerbs 17.0 m

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.

## Container Dimensions

### Two-Wheeled Bins

Capacity H (mm) D (mm) W (mm)

240-litre 1085x730x570

360-litre 1090x850x620

### Eurobins

1100-litre is the standard (and recommended)

Eurobin container.

Capacity H (mm) D (mm) W (mm)

660-litre 1310x720x1250

1100-litre 1370x980x1250

## Container Price List

This table gives indicative prices for waste containers purchased from the Borough of Douglas (2019 price list). Final prices will be confirmed at the point an order is made.

240-litre wheeled bin £45.35

360-litre wheeled bin £79.00

660-litre Eurobin £222.67

1100-litre Eurobin £222.67

Recycling Boxes will not incur additional cost, but gravity locking systems will be supplied and fitted for £45.00.

Appendix 1 - Waste Management Design Checklist

If in doubt about any aspect of refuse storage requirements, please call us on 696455 or email [refuse@douglas.gov.im](mailto:refuse@douglas.gov.im) for advice.

