EB 124

Recycling and Waste

Planning Guidance on Storage and Collection of Recycling and Waste

Local Development Framework 2001 - 2021

Planning Guidance
September 2013

Chelmsford City Council

Preface

Purpose of this document

This document provides guidance on design of waste and recycling storage in new developments across Chelmsford and its villages. It aimed primarily at developers and architects who are responsible for providing robust and workable places that will serve users over the whole life-time of the development.

Guidance on the location, space needs and design of recycling and waste storage facilities reflects current collection practices based on improving collection rates of materials for recycling and reducing waste.

The document reflects what the Council views as best practice and how the Council seeks to achieve workable, long lasting solutions. Schemes that achieve this objective in innovative and well conceived ways will be considered on their specific merits.

Consolidated guidance

The document provides the primary source of guidance for waste and recycling storage in Chelmsford. It has been informed by other published guidance: Department for Transport's Manual for Streets (2007), the Essex Design Guide (2005), Essex Design Guide Urban Place Supplement (2005), and Building Regulations Part H (Drainage and Waste Disposal) (2002 incorporating 2010 amendments).

Status

This document supercedes the guidance on refuse and recycling contained within the Council's 'Making Places: Urban site guidance for designers, developers and planners' from 2008 (pages 75-76 and Appendix 1.4) and equivalent guidance in the Essex Design Guide from 2007 and the Urban Place Supplement from 2005.

The revised guidance document is the result of extensive liaison with the Council's Recycling, Waste Management and Street Care Services.

A draft consultation version of the document was circulated to many relevant interests and expert practitioners between 25 July 2013 and 5 September 2013. Changes have been made as a consequence.

The document was approved by Development Policy Committee on 19 September 2013 as planning guidance, to support adopted policy in Chelmsford's Local Development Framework. The Core Strategy and Development Control Policies were adopted in 2008.

The document forms a material consideration to be taken into account when determining planning applications. It will inform reasons for refusal, conditions and informatives applied to a planning permission.

Contents

1 Background to this guidance

1.1 Recycling targets

The Waste Strategy for England[1] focuses on the waste hierarchy for future waste management which is a key driver for our recycling services: reduce waste, re-use, recycle, recover. If these are all optimized, disposal of waste is minimized. The EU Landfill Directive sets mandatory targets for the reduction of biodegradable waste sent to landfill. Biodegradable waste in landfill creates methane which is a very potent greenhouse gas.

Essex has an overall aspiration to recycle or compost 60% of its waste by 2020[2]. Separation of waste at source assists in achieving these targets.

Providing continuous improvement in respect of waste minimisation, reuse, recycling and composting is also a key priority in the Council's Corporate Plan. The key targets for Chelmsford are:

- A minimum recycling and composting rate of 50% by 2013/14
- Reduce total waste to no more than 980 kg per household by 2013/14
- Reduce residual waste to no more than 550 kg per household by 2013/14.

1.2 Planning policy

This guidance document complements the Council's 'Core Strategy and Development Control Policies Development Plan Document' which sets out requirements for new development in the Council area. Relevant policies include:

Policy	Relevant content
CP11 Energy and Resource Efficiency, Renewable Energy and Recycling	Development should minimise the production of pollution and waste and incorporate facilities for recycling waste
DC42 Site Planning	Developments' ancillary functions should be arranged in an efficient, safe, workable, spatially coherent and attractive manner.

1.3 Building Regulations

Developments have to comply with Approved Document H of The Building Regulations 2010 (as amended) Drainage and Waste Disposal[3]. Section H6 Solid Waste deals with provision of storage space for waste and means of access for people in the building to the storage space and from the collection point to the storage space.

1.4 Manual for Streets

This design guide has been informed by and complements Department for Transport's Manual for Streets from 2007.

[1] The Waste Strategy for England 2007, DEFRA
[2] The Joint Municipal Waste Management Strategy for Essex 2007–2032
[3] http://www.planningportal.gov.uk/uploads/br/BR_PDF_AD_H_2010.pdf

2 Making space for storage of materials for recycling and waste

2.1 The challenges we face

Each household in the Chelmsford City Council area produced on average almost 1,000 kg of waste in 2012. Overall waste levels and landfill disposal are slowly declining, whilst the amount of waste being recycled, composted or re-used is steadily increasing.

This shift in emphasis away from disposal towards recycling relies on proper sorting and storage at source for both new homes and business premises. There are several design challenges associated with the storage and collection of waste from new developments. These include:

- Access to developments by collection lorries and highway safety
- Access to communal bin stores for collection crew
- Ease of use of stores by householders and business occupiers
- Visual impact of communal bin stores and household bins left on the kerbside
- Contamination of recyclable materials due to inadequate storage
- Pollution and smells

2.2 Making space for storage of materials for recycling and waste

Designing in space inside the home, especially in the kitchen, for simple and easy recycling will encourage the necessary behavioural change to maximise recycling rates. Making space outside the home for storage receptacles is also critical for increasing recycling and composting rates and reducing the amount of waste sent to landfill.

Making space for storage of materials for recycling and waste is therefore an important part of the design of new schemes. Many of the potential problems can be mitigated by appropriate design and location of storage facilities. This document gives guidance and advice on best practice.

The Council will assess proposed arrangements as part of the planning application process. Discussions are also welcome at the pre-application stage.

2.3 Collection from houses and flats

- Chelmsford City Council provides a fortnightly kerbside collection service of materials for recycling.
- Each material is collected in separate recycling receptacles including sacks, bags and boxes along with a separate food waste collection.
- There is a weekly collection of non-recyclable household waste – and food waste.
- Collection operatives take bins from property boundaries and do not normally enter private properties.

The Council also provides a recycling and waste collection service for non-residential uses although private contractors may be used.

3 Development layout

3.1 Designing development layouts to facilitate collection

In larger new developments that create new roads, the layout has to safely accommodate the vehicles making weekly and fortnightly collections.

In order to prevent risks associated with collection vehicles reversing, it is recommended that developments are designed to enable the collection vehicle to continue in a forward direction wherever possible. This avoids the need for large turning heads which waste site area and attract car parking. If the layout has other merits and reversing is necessary, this should be no more than 12 m although longer distances will be considered, subject to the route being straight, safe and easy to navigate.

If the vehicle has to turn, this should preferably be completed in a single 'U' turn. Sharp bends should also be avoided, especially where buildings are placed close to the road. Designers of new layouts should bear in mind the likelihood of street parking and the need for clear passage for collection vehicles.

The proposed layouts of larger scale developments should include swept path diagrams indicating satisfactory vehicle manoeuvrability within the site to be developed, and demonstrate that it has been designed to include an efficient collection 'round', based upon vehicle dimensions in section 3.2 below.

To allow safe access, all roads, and other areas, that are to be used by the collection vehicle, must be designed to withstand the full weight of the heaviest vehicle used, which is 26,000 kg when fully loaded.

Collection vehicles will not travel along private drives, or use them for turning.

3.2 Collection vehicle dimensions

All collection vehicles used in Chelmsford are Dennis Eagle with Terberg Lifts. The largest vehicle is the Dennis Eagle Elite 2 Olympus Twin Pack 6 x 4 Wide Body RCV. All development layouts should allow for this vehicle to be used. The dimensions are as follows:

Length	9.22 metres (allowing for rear overhang of the bin lift)
Width	2.85 metres (allowing for wing mirrors)
Height	3.5 metres (but allow a clear height of 3.6 metres to allow for overhead fixtures and fittings)
Operating Height with tailgate lifted	5.21 metres
Minimum Turning Circle	22 metres

Private waste contractors collecting from non-domestic properties may use larger vehicles.

Figure 1. One of the Council's collection vehicles called a Kerbsider. It is used to collect the contents of the green box from houses.

3.3 Location of bin storage and carry distances

In new development, storage of materials for recycling and waste has to be located in line with the principles in Table 1 below:

Table 1 Principles for location of storage of materials for recycling and waste

Layout principle	Comments
Safe and convenient for householders to use.	Individual bin stores should be close to the kitchen. Communal bin stores should be located no further then 30 m away from flats or apartments served by this store.
Easy for a householder to wheel the bins to the kerbside and back again, to avoid bins being left permanently on the kerbside.	This distance should be as short as possible and avoid steps and other obstructions.
Easy access for collection operatives.	All bin stores should be as close as possible to the highway. Collection operatives should not have to wheel or carry receptacles further than 20 m. Steps and other obstructions should be avoided. Dropped kerbs may be necessary. For houses on private drives located further than 20 m away from an adopted road, a shared collection point is necessary. These need to be screened and should preferably be immediately adjacent to the adopted highway.
Does not occupy useful open space or compromise household amenity.	Refer also to section 5.2 and Appendix 3.
In a position that is not visually intrusive.	

3.4 Front, back or side?

Detached or semi-detached houses may have stores at the side or close to the rear of the building where all the above criteria can be met.

If stores are too far to the rear, the likelihood of bins being replaced after collection is diminished.

Terraced houses will usually need to have storage designed into the front as householders cannot be expected to carry containers through the house week by week. In terraced houses the options are to:

- Provide storage space within the building envelope in conjunction with a porch or entrance way (see Figures 2 and 3)
- Incorporate an enclosed store on the outside of the building
- Provide a store detached from the building, forming part of the front boundary edge.

Figure 2. Totally enclosed bin store attached to front of house.

Figure 3. Bin store to front of house partly screened by vegetation.

4 Collection requirements for houses (including bungalows, terraced, semis and detached houses)

The Council provides a range of receptacles for the different types of materials that can be recycled as well as for residual waste. Table 2 provides details about the receptacles required and the recommended location on the plot. Appendix 1 provides dimensions and diagrams of the receptacles.

Table 2 Recycling and waste receptacles required for houses

1-6 person house	**Material for collection**	**Bin type**	**Recommended location on house plot**
	Non-recyclable general waste	180 litre wheeled bin (black), maximum 1 bin	Near to house, close to front or back door, easily wheeled to kerbside for collection.
	Garden waste	240 litre wheeled bin (brown), maximum 2 bins	
	Cans, glass, aerosols, foil, textiles and small WEEE[4]	55 litre green box (with lid)	Undercover e.g. bin store, garage, car port, shed, kitchen, utility room. Able to be easily moved to kerbside for collection.
	Paper	White bag – re-useable poly sack (55 litre)	
	Cardboard	White bag – re-useable poly sack (55 litre)	
	Plastic & cartons	Clear bags (55 litre)	
	Food waste - internal	7 litre small grey caddy – maximum 1 bin	In kitchen/utility room
	Food waste - external	23 litre medium green bin	Near to house, able to be easily moved to kerbside for collection
	Garden and food waste	Compost bin	Rear garden, away from the house, directly on soil
7+ person house	Household waste	One 240 litre wheeled bin (black)	Near to house, easily wheeled to kerbside for collection
	All other materials	Same as for 1-6 person house	

[4] WEEE stands for Waste Electrical & Electronic Equipment

4.1 Storage capacity and design considerations for houses

To enable occupants to manage their residual waste and materials for recycling, developers should provide the necessary internal and external storage space.

The following receptacles could be stored inside the house or on the plot providing they are under cover in order to be kept dry (see Table 2 for suggested locations):

- One 55 litre green box
- Two x 55 litre white bags and 55 litre clear plastic sacks (two plastic sacks could easily get filled up between collections)

The following needs to be stored on the plot but do not need to be covered:

- One 180 litre (or 240 litre) black general waste bin
- One 240 litre brown garden waste bin
- One 23 litre food caddy

Consideration should also be given to a home composter to be located on soil and away from the house. See section 4.2.

To avoid bins being left out on the kerbside between collections, it is recommended that they have a dedicated storage area. This may be a purpose-designed space within the building envelope or an enclosure on the outside of the building or within the garden. It may be designed into a garage near the house as long as the garage size is adequate to maintain space to park a vehicle and wheel bins past the car.

The storage area should be on an adequate area of hard standing, ideally screened and near the kitchen door for ease of use by residents. Bin stores with a roof should have enough vertical clearance to allow the lids to open fully. It should be easy for residents to move the bins to the kerbside for collection.

Figure 4 provides an example of a combination store for two bins, the recycling box and the 23 litre food caddy. It would be ideally located in a rear garden near the kitchen – provided there is easy access to the collection point. These types of bin stores come in single, double or triple units in different designs and materials to suit different needs. Dimensions are approximate.

When it is appropriate to have storage areas at the front of houses, they should be integrated with the architecture, well screened and unobtrusive. Particular attention to external storage is necessary for mid terraced houses and town houses due to the lack of external access between the front and rear gardens.

In the layout design of any house, it must be easy to transfer bins from the rear of the plot to the collection point. If access is provided through an integral garage there should be a wide enough path way next to the parked vehicle.

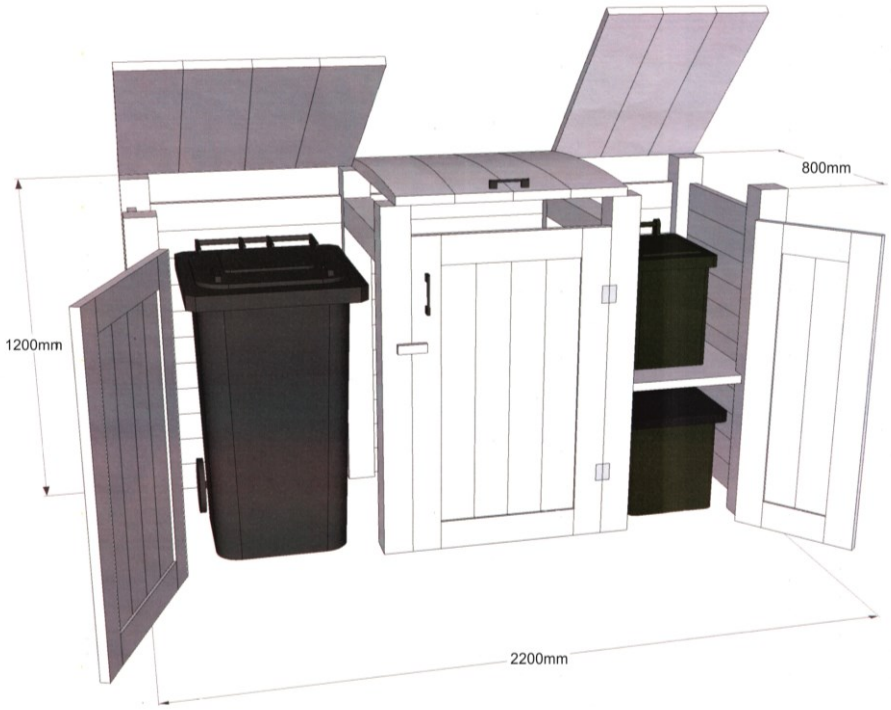


Figure 4. A free standing combination bin store with opening doors and lids (lids not essential).

The ground floor plan of a planning application should show the location of adequate, dedicated storage space for at least the black bin, the brown bin, the green box and the 23 litre food caddy.

4.2 Home composting

Home composting is the best method both environmentally and economically to manage garden and some kitchen waste. All new housing developments should incorporate facilities for composting to complement the green bins and the kitchen caddies. Compost bins can be purchased from http://www.essex.getcomposting.com/.

5 Collection requirements for apartments and flats

The materials collected from flats and apartments are shown in Table 3. This table also shows the bin types used together with the storage capacity required for each 1, 2 and 3 bedroom unit in a scheme. Appendix 2 provides a worked example of the storage capacity required for a medium sized scheme.

Figure 5 shows how the bins could be laid out for an example scheme of 10 x 2 bedroom flats. Appendix 1 contains recycling and waste receptacle dimensions and diagrams.

Table 3 Recycling and waste collection provision for flats and apartments[5]

Material	Bin type	Storage capacity required (litres) per unit		
		1 bedroom	2 bedroom	3 or more bedrooms
Non-recyclable general waste	240, 360, 660 or 1100 litre wheeled bins	72.0	108.0	180.0
Food waste	140 litre wheeled bins (green)	6.9	11.5	23.0
Glass (clear)	240 or 360 litre wheeled bins (green)	8.2	11.9	18.3
Glass (coloured)		8.2	11.9	18.3
Cans, foil, aerosols		8.2	11.9	18.3
Plastic and cartons		57.2	79.2	110
Mixed paper & cardboard	660 litre wheeled bins (blue), 360 litre two wheeled green bins can be used in smaller schemes	57.2	79.2	110

5.1 Garden waste

Some flats have individual gardens and an appropriate number of brown bins will be provided to collect compostable waste from these. Adequate storage space needs to be considered. The Council is unable to collect the waste generated as a result of grounds maintenance from flats and apartments with a communal garden. This waste does not fall within the definition of household waste and is therefore the responsibility of the landlord, managing agent or housing association. Grounds maintenance contractors will usually remove this waste.

As a complement to having garden waste taken away, home composting is a cost-effective and environmentally friendly way of dealing with the waste generated from communal gardens.

[5] Data based on a DCLG Survey of English Housing (2007).

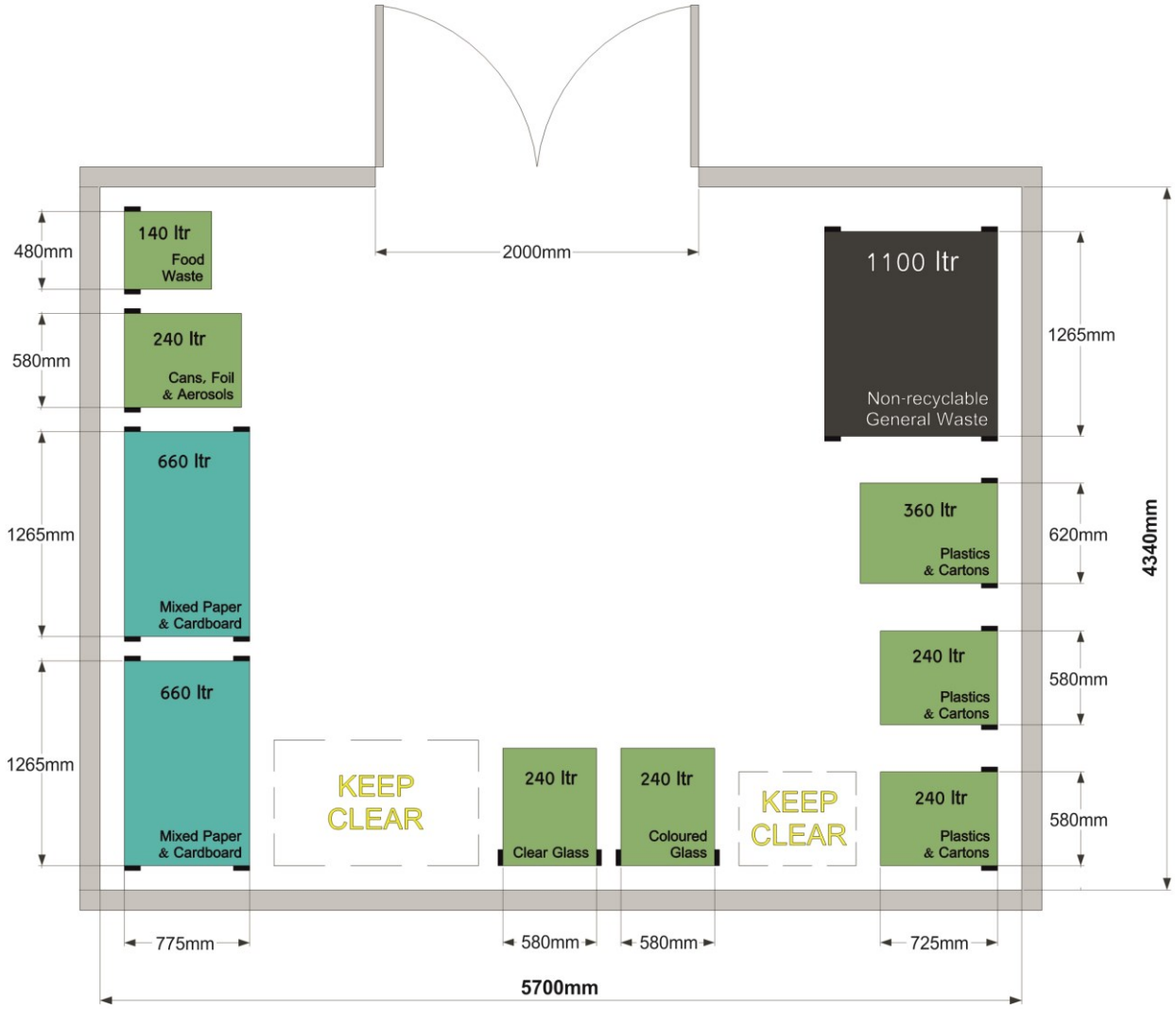


Figure 5. An example layout of a communal bin store for a scheme of 10 x 2 bedroom flats. Bin sizes may vary.

5.2 Internal and external storage capacity and design considerations

All units in a scheme will be provided with a grey food caddy and a recycling bag which the occupiers are expected to take to a communal bin store for sorting.

- Adequate, communal bin storage should be provided on site and designed into the scheme at an early stage
- Multiple bin stores should be considered where appropriate.
- Communal bin stores should be in the form of dedicated bin store rooms in the ground floor of buildings or external storage buildings.

To be effective for both residents and collection operatives, and to be secure and as unobtrusive as possible, they should meet the following criteria:

Appearance

- The store to be sited in an unobtrusive location and where possible screened with soft landscaping and/or integrated with other features such as brick walls
- External compounds to be of a robust construction and covered
- Compounds should have a minimal visual impact on the public realm and should not detract from the use of communal gardens.
- Materials should be in keeping with the surrounding residential development

Security

- Secured entrance door is preferable with a lock using F1/F2 keys (fire brigade keys) or electronic key access
- Good lighting on motion sensors to allow usage of the store at all times

Access to the stores for collection operatives

- Stores should be easily accessible from the adopted highway (see also Table 1) and the walking distance from the collection vehicle to the storage area should not exceed 20 m, if four-wheeled containers are used, the distance should preferably be even shorter
- The route between the collection vehicle and the storage area should be level (no incline greater than 1:12), avoid steps and kerbs and be free of obstructions such as parked cars
- Doors to be double doors and open outwards without causing obstruction
- Doorways and alleyways on the route from storage to collection point should be at least 2 m wide to allow for manoeuvrability

Access to communal storage for residents

- Maximum carry distance for individual residents should be no more than 30 m
- Internal storage rooms should be located within 20 m of stairwells
- The internal height should be at least 2 m, but with enough clearance to allow the lids of the largest bins to be opened for filling

Layout, cleanliness and noise

- Spacious layout with easy access to all bins for residents and collection operatives, 15 cm clearance between bins is recommended and it should be possible to remove any of the bins without having to remove other bins
- The floors should be hard, even and easy to clean
- Stores to be permanently ventilated at high and low level
- Detached stores should be at least 5 m away from flats and houses to minimise noise disturbance to residents during use and collection.

For some examples of bin storage solutions within the City of Chelmsford, see Appendix 3.

6 Non-residential uses

The Council provides a recycling and waste collection for non-residential uses. From November 2013 the Council collects non-recyclable general waste, food waste, glass (coloured and clear), paper and cardboard and plastic. The receptacles required depend on the type of business. Capacity must be considered for the separate storage of materials for recycling and waste.

6.1 Recycling and waste collection provision by the Council

The Council provides bins of the capacities listed in Table 4 below. Private waste contractors may be contracted to collect recycling and waste from non-residential premises. They will provide the bins required based on predicted volumes of waste and materials for recycling.

Table 4 Recycling and waste receptacles offered to non-residential uses

Material for collection	Bin type	Material for collection	Bin type
Non-recyclable general waste	240, 360, 660 and 1100 litre bins	Cans	240, 360, 660 and 1100 litre bins
Plastic & cartons	240 and 360 litre bins	Glass (coloured and clear glass separated)	240, 360 and 660 litre bins
Food waste	140, 240 and 360 litre bins	Paper and cardboard	240, 360, 660 and 1100 litre bins
Garden and food waste	Compost bins		

6.2 Design considerations for storage areas

Storage areas should meet the following criteria:

- Storage areas should be easily accessible from the adopted highway but should be as unobtrusive as possible and preferably away from the main entrance
- Storage areas should be located at vehicle access level avoiding slopes, steps and kerbs
- Receptacles should not have to be moved through a building
- Storage areas should have a minimum height of 2 m and there should be a clear space of 15 cm between bins
- It should be possible to remove any of the bins without having to remove other bins first
- Door and alleyways should be at least 2 m wide, avoiding kerbs, steps, inclines and obstructions such as parked cars
- If the storage area is internal, it should preferably have two access points with an internal security lock
- External doors should have a lock using F1/F2 keys (fire brigade keys) or electronic key access.

Appendix 1 – Recycling and waste receptacle dimensions

The following recycling and waste receptacles are provided by the Council. Receptacle and bin sizes may vary depending on manufacturer.

A) Standard individual two wheeled bins (one black 180 or 240 litre and one brown 240 litre)

	180 litre bin	**240 litre bin**
Height	1066 mm	1075 mm
Height lid open	1525 mm	1720 mm
Depth	550 mm	725 mm
Width	480 mm	580 mm

B) Green box 55 litre

	55 litre
Height	380 mm
Depth	390 mm
Width	590 mm

C) Individual kitchen caddies (one 7 litre and one 23 litre caddy)

		7 litre small	23 litre medium
	Height	234 mm	406 mm
	Height lid open	360 mm	630 mm
	Depth	229 mm	400 mm
	Width	252 mm	320 mm

D) Bags and Sacks

55 litre re-usable white bag (houses)

Approximate dimensions when full: W450 x D450 x H800 mm

55 litre re-usable white bag (houses)

Approximate dimensions when full: W450 x D450 x H800 mm

55 litre clear bag (houses)

Approximate dimensions when full: W450 x D450 x H700 mm

45 litre square bag for dry recycling (‘flats bag’)

Approximate dimensions when full: W330 x D260 x H480 mm

E) Communal 2 wheeled bins

	140 litre bin	**240 litre bin**	**360 litre bin**
Height	990 mm	1075 mm	1090 mm
Height lid open	1510 mm	1720 mm	1940 mm
Depth	540 mm	725 mm	850 mm
Width	480 mm	580 mm	620 mm

E) Communal 4 wheeled bins

	660 litre bin	**1100 litre bin**
Height	1165 mm	1300 mm
Height lid open	1370 mm	2280 mm
Depth	775 mm	1070 mm
Width	1265 mm	1265 mm

Appendix 2 – An example of storage requirements for a medium sized scheme of flats or apartments

Material	**20 x single bedroom units**	**10 x 2 bedroom units**	**5 x 3 or more bedroom units**	**Total capacity required**
	Capacities in litres			
Non-recyclable general waste	1440	1080	900	3420, rounded up to **4 x 1,100 litre** bins (or 3 x 1,100 litre and 1 x 240 litre bin)
Food waste	138	115	115	368, rounded up to **4 x 140 litre** bins
Glass (clear)	164	119	91.5	374, rounded up to **2 x 240 litre** bins
Glass (coloured)	164	119	91.5	374, rounded up to **2 x 240 litre** bins
Cans, foils, aerosols	164	119	91.5	374, rounded up to **2 x 240 litre** bins
Plastic and cartoons	1144	792	550	2486, rounded up to **7x360 litre** bins
Mixed paper and cardboard	1144	792	550	2486, rounded up to **4 x 660 litre** bins

Total number of bins required for this scheme:

- Black four wheeled 1,100 litre bins: 4
- Blue four wheeled 660 litre bins: 4
- Green two wheeled 360 litre bins: 7
- Green two wheeled 240 litre bins: 6
- Green two wheeled 140 litre bins: 4

Appendix 3 - Local examples of communal bin storage solutions

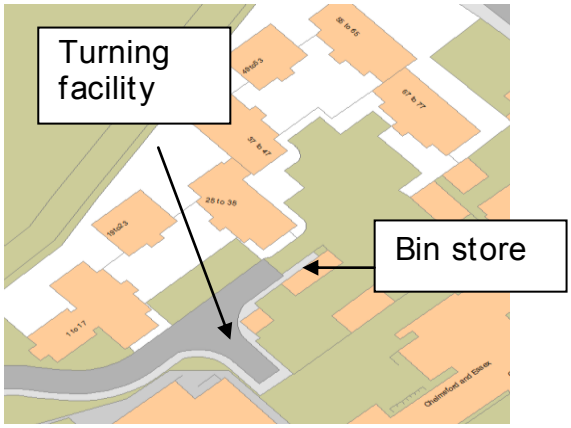
Unobtrusive and well integrated with built form

- Brick and pitched roof building matching the design of the residential development, forming built frontage and continuity with boundary wall
- Partly screened by wall and vegetation
- Robust construction

- Store room with unobtrusive (doors in keeping with the development and walls covered by art

- Integrated store room with internal access for residents. Only side door visible.

Easy access for collection operatives



- Only a few metres walk from collection vehicle to storage area
- Vehicles can turn and leave site in forward gear

- Very short route to bin store from collection point along even surface

Easy access for residents

- Short distance for all residents to nearest bin store, stores adjacent to stairways to underground car park

Well lit, well ventilated and easy to clean floor

- Well lit on motion sensors
- Easy to clean floor
- Louvre doors provide good ventilation

Visually prominent and intrusive

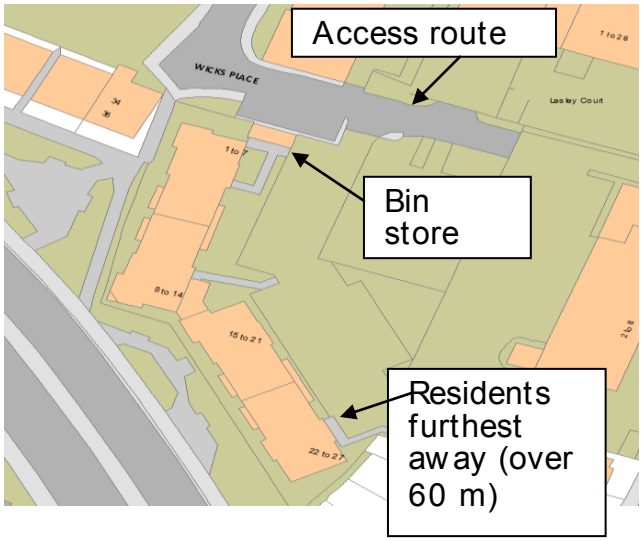
- Store is robust and materials are in keeping with the surrounding development but the bin store occupies restricted outdoor space
- Adverse effect on outlook from flats

- Store is robust and in materials in keeping with the flats behind, but it unnecessarily intrusive

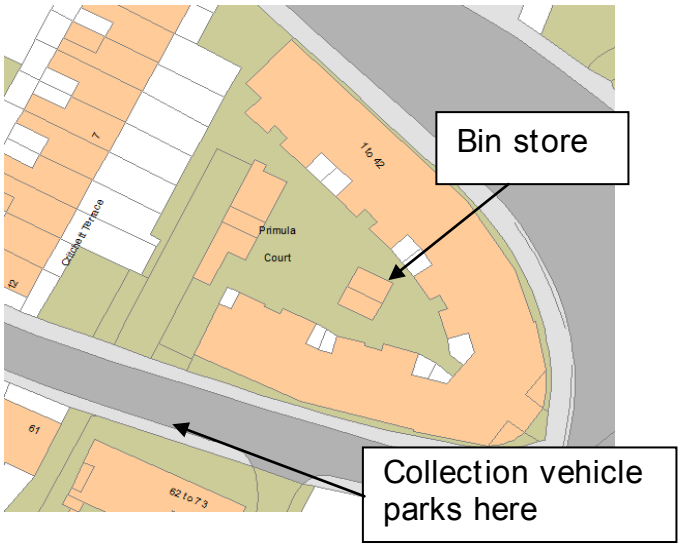
- Stores have railings but no walls or doors – unnecessarily conspicuous and insecure

Difficult to access for operatives and residents

- Store is of a robust construction and materials in keeping with the block of flats and near the road but access may be restricted by parked cars
- No turning circle, operatives have to reverse
- Store on the edge of the development, inconvenient for large number of residents



- Stores near to slopes and kerbs and parking bays
- Several small stores at this site rather than a few large



- Relatively long distance for collection operatives to walk to central store from road
- Gated access
- Parked cars on road may obstruct collection

Bin stores were surveyed in January 2013.

Contact details for the Council's Recycling, Waste Management and Street Care Services:

Recycling, Waste Management and Street Care
Chelmsford City Council
Freighter House
Drovers Way
Boreham
CM2 5PH

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Chelmsford City Council