

Waste storage & collection

Guidance for Developers



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GREATER CAMBRIDGE
SHARED WASTE

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1.0 Introduction

1.1 Background

This guide has been prepared by Greater Cambridge Shared Waste Service (GCSWS). The service was formed in 2016 and delivers waste collections for Cambridge City Council and South Cambridgeshire District Council.

The purpose of this guide is to provide information for developers about what to consider when planning and designing new developments, and the minimum requirements needed to achieve effective waste storage and collections following completion of sites.

1.2 Consultation

It is essential that developers consult with GCSWS as early as possible in the planning stages to ensure that waste and recycling provision meets the needs of both residents and the waste collection service.

Experience has shown that the best approach when planning waste requirements for large developments is for GCSWS meet with developers as early as possible in the planning process and review plans. Developers can request a meeting by email and meetings where possible can be organised virtually.

Contact information for requesting a meeting can be found at [Appendix F](#).

1.3 Developers minimum standards checklist

You are advised to complete and submit the **'Developers minimum standards checklist'** included in this guide at [Appendix G](#) alongside your planning application to ensure you avoid delays with the planning process.

1.4 Planning Conditions

Section 70(1)(a) of the Town and Country Planning Act 1990 enables the local planning authority to grant planning permission to impose "such conditions as they think fit". This power needs to be interpreted in light of material considerations such as the National Planning Policy Framework, this supporting guidance on the use of conditions, and relevant case law.

Paragraph 55 of the National Planning Policy Framework makes clear that planning conditions should be kept to a minimum, and only used where they satisfy the following tests:

1. necessary;
2. relevant to planning;
3. relevant to the development to be permitted;
4. enforceable;
5. precise; and
6. reasonable in all other respects.

These are referred to as the 6 tests, and each of them need to be satisfied for each condition which an authority intends to apply.

Rigorous application of the 6 tests can reduce the need for conditions and it is good practice to keep the number of conditions to a minimum wherever possible. Early engagement and positive dialogue between the local planning authority and the developer can also result in planning permission being granted with fewer waste conditions attached.

Effective pre-application discussions can help to establish early in the process what may need to be the subject of conditions.

A Planning Performance Agreement can be used to set a timetable for when discussions about conditions will take place.

1.5 Recycling guidance

In addition to this guide we encourage developers to consider the recommendations within BS5906:2005, which outlines the need to separate waste for the purposes of recycling. In section four it sets out the general principles of the design of facilities, stating that designers should consider:

- Easy and safe access for waste producers, including older persons or those with disabilities
- Easy and safe access for collectors and collection vehicles
- Location and space (including avoidance of opportunity to cause nuisance or injury)
- Protection against animal scavenging of waste
- Aesthetics of the development
- Noise (e.g. glass handling/collection) and sound insulation
- Ease of maintenance, including cleaning
- Robust construction
- Safety from fire risk and smoke
- Lighting
- Ventilation
- Special requirements (e.g. separate storage and collection of healthcare waste and bulky items)

1.6 Recycling targets

At the time of writing Greater Cambridge Waste Service has a 1921_22 Key Performance Indicator (KPI) of recycling and composting 52% of its domestic rubbish. In addition, there is a KPI for collecting at least 99.8% of bins as scheduled.

Continuous development of the area has a big influence on our performance. Ensuring waste management provision and collection routes are designed to be suitable and minimise future collection difficulties is key to maintaining a good quality of service and minimising complaints.

1.7 Resources and Waste Strategy

In 2018 the Government published a Resources and Waste Strategy which could result in a series of changes being required for waste collection, recycling, and disposal along with how waste collection and disposal is funded.

The proposed changes have been consulted on for a second time during 2021 and the refined requirements are due to be published at the end of 2021 or early 2022. It is anticipated that they will become changes in legislation once the Environment Bill has passed through Parliament.

Key changes will be about what materials should be collected and how, and this will impact on the design of waste collection services for both residents and businesses.

The introduction of domestic and commercial food waste collections coming into effect from 2023 would mean that food waste could be mandated as a separate collection on a weekly basis rather than comingled with garden waste, which is the current service offered to most residents.

GCSWS dry recycling collections include items such as paper, card, glass, cans and plastic packaging. It is likely that a new recognised list will be developed stating the recyclable materials that must be collected at the kerbside alongside changes to how we collect it e.g more separation. Changes such as these will affect the number of containers required and the types and numbers of vehicles used.

This document will be updated as when the implications of the Environment Bill becomes clear.

1.7.1 The impact of changes for large developments

Developers should consider the impact of the proposed changes should they become legislation, and as further information becomes available, work towards accomodating them when planning and designing new developments.

Further information about the Resources and waste strategy can be viewed here:

[Resources and waste strategy for England - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/consultations/resources-and-waste-strategy-for-england)

1.8 Section 106 contributions:

A S106 financial contribution is a sum of money secured against the landowner of a development by way of an agreement or undertaking (pursuant to section 106 of the Town and Country Planning Act 1990) and payable to a local planning authority so as to facilitate the grant of planning permission for a development.

Typically S106 funds for waste are secured for:

- Bins- traditional or underground
- Skips for temporary increase in waste during occupation
- Vehicles- where we the development if significant and exsiting vehicles are not sufficient
- Provision of recycling points if required.

Developers are required to provide additional Bring Sites and upgrade existing facilities in the locality in accordance with planning leaflets Circular 05/05 or as required as part of the Community Infrastructure Levy, pay financial contributions to the relevant Local Authority for provision or

upgrade. The choice will be dependent on an assessment by the developer of the need for such facilities and the impact of the development on existing infrastructure.

2.0 Overview

2.1 Residential developments

Developers are required to provide adequate internal and external storage of waste, based on figures outlined in this document and fund such provision where additional costs will be incurred by the waste collection authority.

2.2 Waste storage areas

Storage areas should be accessible to all users and should not present an unnecessary health and safety risk. The method of transit of waste to a storage point will depend upon the type of development.

For single houses it will typically be residents transferring their waste to containers located within the boundaries of their property.

In developments of flats and apartments residents will usually transfer their waste to communal bins, or a Facilities Management service.

The developer should make adequate arrangements for the management and maintenance of all communal waste transit and storage infrastructure in all developments of flats and apartments.

2.3 Waste management for flats and apartments

Managing waste is challenging and various options are open to a developer beyond the provision of hard infrastructure and typical methods of collection. Waste management in flats and apartments requires an integrated approach and innovation is welcomed. Further guidance is provided in the section entitled 'Waste collection service for flats and apartments.'

2.4 Waste storage systems

Storage systems should be provided within developments of flats and apartments and at commercial developments in accordance with the minimum requirements of this guide. Initial design of such systems should provide assessment of (amongst others; access; health and safety; security; and protection of the environment).

It is vital that adequate space and arrangements for the storage and collection of waste and recycling are considered at the earliest stage. The design must take space requirements and the on-going operational arrangements into account.

Internal storage capacity is fundamental in ensuring that residents have sufficient space to undertake segregation at the point of waste production and it is expected that developers will provide containers for use inside dwellings.

2.5 Access for waste collection vehicles

Vehicle access must be considered in relation to the design of new highways.

Wherever possible, access should avoid the need for vehicles to undertake unnecessary or difficult manoeuvres.

Waste collections will not commence until road surfaces are complete to base layer and access is not unreasonable (refer to Environmental Protection Act S.45) and not hindered by ongoing construction work. Until these criteria are met, and where a development requires a waste collection service, provision will have to be made by the developer at their cost.

2.6 Household Recycling Centres

Household Recycling Centres are operational across Cambridgeshire and provided by County Council. Continued development will put pressure on the existing facilities and require expansion of the network. Financial contributions will be required in accordance with Planning Obligations Circular 05/05 or as required as part of the Community Infrastructure Levy and will be secured from developers using Section 106 agreements or other legal agreements as appropriate.

Developers may be required to make land available at strategic locations and the provision of these will be of interest to the GCWS.

2.7 Bring Sites

Developers will be required to provide additional space for Bring sites, upgrade existing facilities in the locality in accordance with Planning Obligations Circular 05/05, or as required as part of the Community Infrastructure Levy, pay financial contributions to the relevant Local Authority for provision or upgrade. The choice will be dependent on an assessment by the Local Authority of the need for such facilities and the impact of the development on existing infrastructure (including the preparation of a waste audit as required by Policy CS28 of the Minerals and Waste Core Strategy).

3.0 Waste collection service for houses

3.1 Collection frequency

GCSWS operates an alternate, fortnightly collection of refuse and recycling. In week one recycling is collected (dry mixed recycling and food / garden waste) and in week two refuse and non-recyclable waste is collected.

3.2 Waste streams and bin colours

The three waste streams are collected in these bins:

- **Blue bins** – week one for dry mixed recycling (paper, cans, glass, plastic and cardboard.)
- **Green bins** – week one for compostable waste (food and Garden waste.)
- **Black bins** – week two for refuse, and non-recyclable items.

3.3 External bin storage (houses)

Each house is required to have a minimum of three 240-litre wheelie bins. However residents can order additional bins so it is essential that suitable off-street areas are provided for each house. Collection points should be avoided for houses and the onus should be on owners to take their bins to the kerb for collection.

Where collection points cannot be avoided these should be discussed with GCSWS to ensure they are well placed and adequate in size.

Measurements for 240 litre bins can be found at [Appendix A](#).

3.4 Internal bin storage (houses)

Space is needed, within the house to store a set of bins of a practical size (at least 50 litres each) that allow segregation of residual waste and mixed dry recyclables.

In addition, a suitable location for residents to keep a 5 litre kitchen caddy is needed as GCSWS provide these to residents for the purposes of collecting food waste.

Developers should provide internal waste storage containers that are easily replaceable.

3.5 Kerbside collection

We operate a kerbside collection – **meaning all bins for houses need to be presented at the kerbside of an adopted road** which has adequate access for the collection vehicle.

There needs to be access to take the bins to the kerbside on collection days (ie: not taken through the house.)

Any pathways should take the most direct route possible to the kerbside and avoid the need to pull bins past parked cars or parking bays where possible. Pathways should be of smooth, solid surface.

4.0 Waste collection service for flats and apartments

4.1 Collection frequency

GCSWS operates an alternate, fortnightly collection of refuse and recycling. In week one recycling is collected (dry mixed recycling and food / garden waste) and in week two refuse is collected.

4.2 Waste streams and bin colours

The three waste streams are collected in these bins:

- **Blue bins** – week one for dry mixed recycling (paper, cans, glass, plastic and cardboard.)
- **Green bins** – week one for compostable waste (food and Garden waste.)
- **Black bins** – week two for refuse, and non-recyclable items.

4.3 External bin storage (flats and apartments)

Flats usually require large communal bins for all residents to share. Flat blocks containing four or less properties can either have their own bins if there is adequate space or share 240 litre or 360 litre bins. Flat blocks containing more than four flats would share larger communal bins (660 or 1100 litre). Bins can be stored in outdoor bin areas or indoor bin stores. Developers are responsible for purchasing bins prior to residents moving in.

- **Bin options** - developers should contact GCSWS to confirm the best mix of bins for each development.
- **Bin measurements** - measurements for all bin sizes can be found at [Appendix A](#).
- **Waste capacities** – average yields for flats and apartments can be found at [Appendix B](#).

4.4 Internal bin storage (flats and apartments)

Space is needed, within flats and apartments to store a set of bins of a practical size (at least 50 litres each) that allow segregation of residual waste and mixed dry recyclables.

In addition, a suitable location for residents to keep a 5 litre kitchen caddy is needed as GCSWS provide these to residents for the purposes of collecting food waste.

Developers should provide internal waste storage containers that are easily replaceable.

4.5 Bin store design

The following is a summary of essential bin store design. GCSWS will not be responsible for non-collections if bin store design and access is not to an acceptable standard.

- **Pull distances** - GCSWS reserves the right to refuse collections where pull distances for crews are greater than 10 metres. Pull distances should be under 10 metres from bin store to kerb collection point.
- **Excessive pull distances** - bin stores more than 10 metres from kerbside collection points will require arrangements by owners or managing agents for bins to be moved to a point where a collection vehicle and crews can easily gain access which is less than 10 metres.
- **Underground bin stores** - If bins are to be stored in underground car parks a managing agent will need to be employed to move the bins to a suitable collection point for the crews to empty the bins which is less than 10 metres.

- **Drop kerbs** - must be provided outside bin stores for all developments using four-wheeled bins.
- **Parking** – there must be no parking bays or spaces outside of bin stores. Developers should avoid the need to pull bins past parked cars or parking bays.
- **Pathways** - pathways between bin stores and vehicle collection points should take the most direct route. Paths should be a suitable width to enable the easy passage of wheeled bins. For two-wheeled bins this should be one metre, and for four-wheeled bins this should be two metres wide. Gradients should be a maximum of 1:12. Trees should not hinder the route.
- **Collection area** - collection area surfaces should be uninterrupted and level with no gravel or similar covering and no steps.
- **Bin segregation** - domestic bins must be kept separate from bikes and commercial bins.
- **Lighting** - adequate lighting is required – preferably by automatic switches. Light switches should be protected so they cannot be damaged by bins.
- **Hygiene** - adequate ventilation, drainage and a tap are required so that the store can be kept clean.
- **Door size** – bin stores require double doors to accommodate 1100 litre bins (if required) with a minimum opening of 150cm.
- **Access** - doors must fold back for ease of access/egress. Door hooks or floor bolts should be provided so that doors can be kept open during collections.
- **Bin store Keys** – Please consult with GCSWS when choosing bin store keys. It is not the responsibility of crews to ensure external bin store doors are locked following collections.
- **Code pads** – where provided should be well lit. Codes must be provided to GCSWS prior to occupation. Code pad numbers are limited to two fixed four number combinations. Please contact GCSWS for these.
- **Timed locking systems** – automatic locking systems are acceptable. Managing Agents will need to change timed locks when collections day change due to Bank holidays. There are usually a minimum of eight bank holidays per year.
- **Damage protection** - metal strips should be provided to protect doors, walls, and protection is also needed for and pipes and light switches to prevent damage caused by the movement of large bins. Protection strips need to be placed level with the height of the rim of the bin.
- **Bin store space** - there should be a minimum of 15cm clear space between and around bins. There should be sufficient space to enable each bin to be moved independently by collection crews, i.e. without moving other bins. There should be sufficient overhead clearance provided to allow full opening of container lids. This should be a minimum working headroom of at least 2m (where the bin store is covered.)
- **Bin positioning** - all bins open along the width. This is therefore the front of the bin and it must be positioned with the front edge facing forward, so that the bin can be opened for residents to place waste and recycling inside.
- **Internal access to bin stores** - internal doors between accommodation and bin stores need to be accessible for the residents. Keys and codes are acceptable for ensuring the security of residents. It is not the responsibility of the collection crew to ensure that internal bin store doors are locked at the end of the collection day.
- **Fly-tipping** - GCSWS do not remove any items placed on the ground of bin stores. This is the responsibility of the managing agent. To help reduce fly-tipping bin stores must not be larger than necessary.
- **Bin store signs** -GCSWS can supply A2 signs to attach to bin store walls that explain what to put into which bin, and leaflets that provide residents with recycling information.

Illustrations of good and bad bin store design can be found at [Appendix C](#).

Contact information for requesting signs, leaflets and code pads can be found at [Appendix F](#).

5.0 Bulky household goods and fly-tipping

Fly-tipping can create an eye-sore and nuisance. Providing adequate waste storage should alleviate fly-tipping activities. Secluded areas and storage areas can be prime locations for fly-tipping. Dumping of bulky items by residents can interfere with the emptying of communal recycling and waste containers. Developers are advised to have sufficient space for storage of bulky items on site (away from the normal bins) where items can be safely put for collections. This should be a separate storage room accessible only to residents and large enough to store bulky items such as sofas and fridges.

6.0 Ordering bins

All bins must be ordered from GCSWS **ten weeks** in advance of occupation to ensure they are available for delivery to the development prior to residents moving in. Delivery will be no earlier than two weeks prior to occupation.

The following information is required prior to occupation and delivery of bins:

- **Location** - plot and postal address (preferably an address schedule)
- **Bin type** - state if the bins are for houses or flats.
- **Delivery location** – state if the bins will be delivered straight to the houses/bin store, or to a compound in batches.
- **Contact** - a site manager's phone number that we may call on the day of delivery if needed.
- **Date** - when bins are required. Please note we do not deliver communal flat bins to bin stores more than two weeks before occupation.
- **Date of occupation**- the expected occupation date - when collections need to start.
- **Site information** - development maps and occupation schedules.
- **Managing Agent information** - If bins are for flats please advise who the managing agent will be and supply contact details.
- **Sales Office information** - please supply Sales office contact, so that leaflets can be delivered.

Contact information for ordering bins can be found at [Appendix F](#).

7.0 Commencement of collection services

Arrangements must be made with the Council to ensure bins are in place before occupation of any properties (allowing sufficient time for these to be delivered) to enable a collection service to commence and all codes/keys are given to the GCSWS. If GCSWS do not receive keys or codes prior to the collection day developers will have to pay an additional fee for extra collections. A clearance fee will be requested if bin stores are full because of failure to notify GCSWS that collections need to commence.

8.0 Occupation during construction

If properties will be occupied whilst building work continues, and this restricts access to bins or bin stores, temporary bin collection points will need to be set up by the developer. Sites will be issued with bins and the site team will need to put the bins at the agreed collection points by 6am on the morning of collection until access is clear.

GCSWS will not collect bins where roads surfaces are unfinished or access is hindered due to fencing. We will not enter restricted construction sites.

Developers should contact GCSWS to arrange a site visit if they are unsure about the ability for vehicles to collect from a new development due to unfinished roads. This will ensure that arrangements are agreeable and collections can be made.

Contact information for requesting a site visit can be found at [Appendix F](#).

9.0 Vehicles and roads

9.1 Vehicle weights

Developers need to be aware that the collection vehicles weigh up to **32 tonnes**, so without suitable road construction we may be unable to travel on un-adopted highways and would accept no liability for damage. Un-adopted highways, where required, should be constructed to an adoptable weight-bearing standard.

In general terms the foundations and surfaces of any highway should be hardwearing and capable of withstanding the maximum anticipated fully loaded gross vehicle weight. Any covers over manholes, gully gratings and other such infrastructure should also be formed from materials capable of withstanding such weight.

Vehicular access in terms of vehicle weight, turning circles, visibility splays, width, etc., needs to be taken into account in the design. Building roads to adoptable standards and submitting them for adoption will ensure they are suitable for large refuse collection vehicles and this is preferred.

Vehicle specifications can be found at [Appendix D](#).

GCSWS reserve the right to refuse collections that require travelling on non-adopted roads. Where this is not possible developers will be required to have designated bin collection points that are on

or next to roads built to adoptable standards. **Appropriate locations for collection points need to be agreed with GCSWS.**

9.2 Vehicle reversing

Vehicles should be able to enter and exit a site in forwards motion and any reversing manoeuvres should be kept to a minimum and **not more than 12m.**

It is important that the Highways Authority is happy with the proposed access into and out of a site onto the highway regardless of whether they adopt any new road.

9.3 Road design

All roads should be constructed to facilitate waste collections prior to occupation. This is particularly important to consider when waste collections occur from the rear of properties or from a different street than the main entrance to the properties.

- **Road width** – highways should have a minimum width of 5 metres.
- **Road standards** - roads should be constructed to an adoptable standard.
- **Vehicle clearance** - There needs to be enough clear space around the vehicle to allow efficient operation. Allow at least 4m vertical clearance, and a minimum of 3.5m width and 4m in length should be allowed where the emptying of containers takes place.
- **Turning heads** -where applicable must be sufficient in size to turn without reversing and have no option for vehicle parking within them as this prohibits access for refuse vehicles.
- **Bollard installations** -should allow crews to enter and exit roads quickly. Any bollards that will remain standing should be spaced widely enough to allow the vehicle to pass between them unhindered.
- **Barriers** - where barriers are fitted crews should be able to access sites easily, either by pressing a button or by ANPR systems.
- **Hammer heads** -should be avoided due to the additional time taken to manoeuvre the vehicle and the number of reverses required when using them.
- **Yellow lines** -or traffic management measurements should be taken where necessary to preserve the turning capacity for the vehicles when parked cars are present.
- **Drainage ditches** – swales drainage ditches must have hard standing built across them for access.

9.4 Vehicle tracking documents

Please supply complete tracking documents as early as possible in the planning process and no later than the pre-application planning stage.

Tracking documents should include:

- **Full plans** - showing the vehicles journey throughout the development for a 32 tonne refuse vehicle, including where it enters and leaves ([Appendix D](#): Vehicle information).
- **Crew pulling distances** - measurements of distances for all bins.
- **Vehicle reverses** – where reverses are planned, distance measurements.
- **Collection points** - that show the residents route to take bins to kerbside from their property.
- **Bin store locations** – and vehicle access.
- **On street car parking** – spaces and bays.
- **Street furniture** - e.g Trees and lamposts etc.
- **Road dimensions** – lengths and widths

10.0 Underground bins

10.1 Background

10.1.1 What are underground bins?

Underground bins enable a large volume of waste to be stored in a single container, whilst keeping it out of sight below ground. The system originates from Continental Europe, where the prevalence of flats instead of houses means that communal bin systems are popular. The basic system comprises of a concrete bunker set in the ground, a bin-liner or container which holds the waste and is located in the bunker, and a surface entry point or input receptacle (which often looks like a conventional street waste bin) mounted on a section of paving or platform. All that is visible at street level is the input receptacle, and the dedicated paving section or platform which covers the main underground container.

10.1.2 GCSWS approach to underground bins

GCSWS actively welcomes proposals from developers for alternative waste management solutions. For example, underground storage of waste or alternative methods of waste collection may be more appropriate for a development than conventional/traditional methods of storage and collection. Whatever the situation, alternative proposals must be discussed with us and be well researched, demonstrate realistic and workable solutions and be clearly presented. Developers are advised to speak to suppliers when establishing the best solution and costs for underground systems since these will vary depending on the environment in which the bins are to be placed.

10.2 Underground bins and housing types

Underground bin systems are in general more suited to higher density areas. If the area is too low in density, then the bins may produce insufficient waste volumes to provide acceptable walking distances to individual residences, resulting in inefficient collections. Alternatively if the collection volume is large enough to provide efficiencies of collection, the walking distances may still be unacceptably far.

GCSWS request that developers of high density housing consider installing underground bin systems as their first option before looking towards conventional wheelie bin systems. Experience has shown that underground bins are efficient and cost effective for both developers and collection authorities and are therefore our preferred system for high density housing.

Where there is mixed density an underground system may still be the best option and can be used by all types of properties. Bin location is key to a successful underground collection, therefore its essential that developers contact GCSWS as early in the planning stages as possible to discuss plans.

Density	Typologies	Underground bin rationale
'High' density	Flats and Apartments	Communal collection is the norm for flats. Underground bins will be similar in operation for residents whilst removing unsightly large bin stores. Underground systems provide the most efficient and cost effective model of collecting waste for this type of property, are low maintenance and improve streetscapes
'Medium' density	Terraced houses- no flats	Residents walking distances and the low level of waste generated will mean that underground systems are not an efficient collection method for this type of property
'Low' density	Semi-detached and detached houses - no flats	Residents walking distances and the low level of waste generated will mean that underground systems are not an efficient collection method for this type of property
'Mixed' density	Significant flats alongside streets of houses	Where properties are mixed (flats and houses) there is an opportunity to avoid the use of wheeled bins and use underground systems. The design of the site and accessibility is important for a successful underground collection system

Fig 1: Summary of suitability of underground collections for different housing types

10.3 Types of underground bins

Underground bins use either hook-lift systems or hydraulic platforms to raise them from the ground and empty the waste. The type of system used influences the types of collection vehicle and the number of containers needed underground.

The hook-lift system houses bigger containers and requires a crane-lift vehicle to empty the bins. Hook -lift systems are used for collecting general waste and recycling. They are not appropriate for collecting garden waste or bring bank materials such as textiles.

Hydraulic-lift systems use standard wheeled bins that can be emptied by a traditional vehicle. Hydraulic-lift systems are used for collecting garden and food waste and bring bank materials such as small electrical appliances (Weee) and textiles.

GCSWS has experience of operating both systems and are keen to expand these where possible. Underground systems work better in high density developments where walk distances are kept to a minimum and developers are able to save by replacing standard bin stores with underground systems.

Examples of different underground bin systems can be found at [Appendix E](#).

10.4 The benefits of installing underground bins

Experience has shown that developers, residents and Collection Authorities all benefit from the installation of underground bins:

- **Developer savings** – space is not required for wheeled bins or bin stores resulting in greater build space and cost savings. (one underground bin replaces around 20 wheeled bins)

- **Carbon reduction** - removing traditional stop-start collections reduces carbon emissions and the number of vehicle visits to site can be reduced.
- **Recycling rates**- recycling rates are higher in underground developments than in standard developments.
- **Residents feedback** -states that the main benefits of the scheme are the improved visual impact of the bins and not having to store or drag bins out for collection.
- **Collection policies** – no reliance on residents’ co-operation regarding which bin to present, or forgetting to place out their bin on time.
- **Improved streetscape** – the waste collection system is embraced, not tucked away but integrated.
- **Quality of recycling is good as contamination with the wrong waste is** bins is rare.
- **Flexible collections** - for residents and the council, as waste is deposited/collected when needed.
- **Missed bins** - no calls about collection problems and the council doesn’t have to return to site for any missed bins. Less vehicle movements
- **Fly-tipping** - less fly-tipping to collect. No hidden bin stores or compounds creating waste accumulation.
- **Damaged bins** - no operational or financial burden for regular replacement of missing or broken bins.
- **Improved H&S** - less manual handling of containers, with potential health benefits for staff.
- **Reduced staffing** – one operative replaces a crew of three.
- **Positive media coverage** – underground bins attract positive media coverage in the local and national press.

10.5 Underground bin collection vehicles

- **Hydraulic platforms** - usually house 1100 litre bins and these are collected using standard collection vehicles.
- **Hook lift bins** -are collected using a specialist 32 tonne Hi-ab vehicle.

It is essential that developers consult with GCSWS prior to installing underground bins so that we can ensure compatibility with underground collection vehicles.

Underground vehicle specifications can be found at [Appendix D](#).

10.6 Developer considerations when designing underground bin schemes

Experience of running underground bin schemes has shown that there are a number of factors to consider at the planning stage of the development:

- **Fill monitoring** – systems should be installed to maximise productivity and minimise unnecessary journeys and carbon emissions.
- **Cleaning** – as with flats and apartments Managing Agents need to be employed to keep areas surrounding bins and bin gulleys clear.
- **Maintenance** – costs need to be factored into S106 agreements.
- **Street furniture** – hinders collections, trees and lampposts should be positioned away from bins.
- **Site layout** – developments with hook-lift systems should allow for a one man operation and therefore reverse manoeuvres should be avoided.
- **Cardboard** – alternative arrangements need to be considered for collecting large cardboard during occupation phases.

- **Type of development/type of collection** – some sites are better suited to hydraulic bins due to location and existing street furniture. This should be discussed with GCSWS and bin suppliers as early as possible in the planning stages.
- **Food and Garden waste management** – Hydraulic system is better suited to this type of waste due to it's heavy and wet nature.
- **Road surfaces** -no cobbles and uneven road surfaces – lorry feet need a flat surface and the weight of the vehicle may destroy cobbles.
- **Layby size** – there should be sufficient room to pick up bins eg wide enough road or layby, however it is better to put in half width laybys or a wider road so that cars do not have space to park beside bins and hinder collections.
- **Additional big vehicles** – roads need to be wide enough to accommodate other large vehicles passing the refuse vehicle - eg Buses.
- **Parking enforcement** - laybys require parking signage/enforcement – parked cars hinder collections.
- **Bin positioning** – need to be close to roadside – not set back – crane reach is limited.
- **Bunker opening directions** – not to open onto street furniture, footpaths or parking spaces.
- **Bin lid opening directions** (hook lift)-require consideration because hinges will get damaged if lids open the wrong way
- **Road Bollards** – need to be sunken and easy to operate eg remote control.
- **Walking distances** -ideally residents should not walk further than 30 metres to place waste in bins. Anything over 30 metres discuss with GCWS.
- **Platform positioning** – the edge of platforms need to be at least 2m from the nearest building to ensure bins don't hit buildings when lifted.
- **Platform positioning** - Need to consider what is above platforms as well as beside them eg windows
- **Assisted collections** – ideally those who require help with depositing waste will have access to support to do so through manging Agents or friends and neighbours.

If you require further information about underground bin schemes, contact details can be found at [Appendix F](#).

11.0 Bring Sites

11.1 Introduction

Bring Sites are places where members of the public can bring their waste and separate it into large containers (e.g. Textile and small electrical appliance banks.) They are generally located within publicly accessible areas such as a supermarket or public car parks and typically comprise a number of containers allowing separate collection of materials for recycling. They are serviced by or on behalf of individual Waste Collection Authorities.

11.2 Provision of Bring sites

Developers are required to provide funding towards adequate temporary and permanent bring site facilities to serve new residential developments.

Developers should assess the impact of their proposals on existing Bring Site facilities and in particular whether the development creates or increases the need for such facilities in the local area. This should be done by seeking advice from GCSWS relating to the current capacity of existing Bring Sites.

The requirement for Bring sites is calculated on a per dwelling basis. One bring site may be required once developments reach 800 dwellings and for every additional 800 dwellings thereafter, dependent on their location and proximity to other Bring sites or household Recycling Centres.

As a general rule GCSWS requests that developers provide one area of hardstanding in public realm areas for each 800 dwellings, where approximately four large recycling banks can be placed. Harstanding areas should be located in areas that are easy for residents to deposit items and off-takers to collect them. There should not be any barriers or gates that impede entry to the site. It is helpful for developers to provide access to electricity as this allows flexibility at the site in terms of maintenance and types of banks.

GCSWS will source the banks and manage them once they are in position.

11.3 Bring bank dimensions and site space

Developers should ensure that hardstanding areas provided for Bring Banks are sufficient in size to accommodate four large banks.

Bring banks differ in size depending on what they collect and who supplies them, but average small and large bank dimensions are as follows:

Size of bank	Height (mm)	Width (mm)	Depth (mm)
Small (typically collects shoes only, batteries or bulbs)	1500	1300	1300
Large bank (Typically collects multiple recycling items or textiles and shoes together)	1900	1500	1200

Fig 2 Bring bank dimensions

11.4 Cardboard

Due to the amount of large cardboard generated on new developments cardboard skips should be provided during occupation phases. Developers should approach GCSWS for further information on what to provide as this will vary from site to site.

12.0 Household Recycling Centres

12.1 Introduction

Household Recycling sites (HRCs) are positioned in strategic locations and enable the public to bring and deposit bulky household wastes and other waste types of household waste that are not normally taken as part of the normal collection round. Sites encourage the segregation of waste for recycling and reuse.

12.2 Provision of Household Recycling Centres

The delivery of new dwellings in the County will increase the demand for recycling facilities and developers may be required to contribute towards the delivery of the network of recycling facilities by providing a financial contribution on a per dwelling basis in relation to the Household Recycling Centre network through a Section 106 agreement.

Household recycling sites are managed by Cambridgeshire County Council. Further information can be found by visiting the website below:

<https://www.cambridgeshire.gov.uk/residents/waste-and-recycling/household-recycling-centres>

13.0 Commercial premises

13.1 Background

All non-residential properties require scheduled waste collections from a waste contractor. This is not included in businesses rates.

It is enforceable by multiple agencies including the Local Authority under Section 34 of the Environmental Protection Act 1990 & Clean Neighbourhoods Act 2005.

Collection providers - the facilities management / owner / store manager etc can choose to use either The Greater Cambridge Waste Service or a private company.

- **Waste streams** - to satisfy DEFRA's national pre-treatment regulations a minimum of two streams of waste collection (general waste / dry recycling) are required for non-residential / commercial developments.
- **Change of use** - where an existing site is being changed from one business (non-residential) to another it is important to consider the impact that will make on waste storage and collection.
- **Waste levels** - a block previously used as office space will have very different waste requirements to a fast-food restaurant, and a clothes shop will produce far more cardboard requiring frequent collections than a bank.
- **Capacities** - the location, style, type and size of the building/s will determine the size of the waste storage space (bin store).
- **Building layouts** – The layout of interior/ external/ ground floor/ subterranean binstores need to be placed next to or near the commercial/ retail/ restaurant unit that requires them – the further away they are the greater the risk of waste (bags/ broken furniture/ cardboard/ pallets etc) being deposited in corridors/ corners and other not-safe areas by poorly trained/ behaving staff.
- **A waste management plan** -for the site's intended use (rather than during construction) should be provided detailing the design, likely number of containers, the split between waste types, vehicle access and egress etc.
This should be included in the planning application for comment/ approval, together with tracking documents showing the journey a collection vehicle will take to access and empty bins.
- **Storage levels** - the space for waste storage should be sufficient to store a minimum of two days of waste generated by the business/es as well as the containers provided by the chosen contractor.
- **Collection frequency** - the frequency of collections will be determined by the user of the site.
- **Compactors** – GCSWS do not encourage the use of compactors.

13.2 Commercial bin store Design

Detailed drawings of proposed bin stores should be included with the application, complete with all measurements.

Developers should refer to **section 4.5** when designing commercial bin stores, but should also note the additional requirements below :

- **Collection times**- Collections may occur anytime in the 24hr clock (by any contactor) so bin stores should be accessible. If crews cannot access bin stores at any time all containers/ bins/ sacks will need to be presented on the street at close of business for the following morning.
- **Key codes/locks** -If the store is accessible directly from the street it needs to be secured by key-code locks rather than physical keys. This provides greater security at a lower long-term cost. Waste collectors must be updated when new codes are installed rather than having to replace & send keys.
- **Internal security** - Users of the site should be able to enter the bin store through internal door/s. This improves security and reduces risks associated with only external access.
- **Bulky item storage** - consideration of bulky item storage should be given, it is not uncommon for larger office/ retail blocks to require occasional storage for items such as:
 - Pallets
 - broken desks/ chairs
 - drums of waste oil from food preparation
 - electrical equipment
- Bulky items **cannot be disposed of in regular bins**. Alternative arrangements need to be made with contractors to dispose of it.

Appendix A: Bin types and sizes

Sizes are the same for black, blue, green and brown bins. Illustrations are for sizing purposes and do not necessarily represent the correct colours used.

Container type	Image	Dimensions
140 Litre bin (used for commercial food waste, or food waste at flats)		H = 106.7 cm W = 48.3 cm D = 55.9 cm
240 Litre bin (standard bins for houses)		H = 106.7 cm W = 58 cm D = 74 cm
360 Litre bin (Suitable for less than two apartments)		H = 111.8 cm W = 58.4 cm D = 86.4 cm

<p>660 Litre bin (suitable where 1100 litre bins wont fit, or for residents unable to use larger bins)</p>		<p>H = 121.9 cm W = 137.2 D = 78 cm</p>
<p>1100 Litre bin (standard bins for flats)</p>		<p>H = 135.4 cm W = 121 cm D = 107.3 cm</p>

Fig 3 GCSWS bin types and sizes

Appendix B: Waste volumes for flats and apartments

Property type	Refuse (Black bin)	Mixed Recycling (Blue bin)	Green organic (with communal gardens)	Green organic (with no gardens)
1 bed flat	110	110	30	20
2 bed flat	165	165	30	20
3 bed flat	200	200	40	30
4 bed flat	250	250	40	30

Fig 4 Waste volumes for flats and apartments shown in litres

Waste requirements for flats are based on the following assumptions:

- there will be a maximum of **two** people living in a one-bedroom flat
- there will be a maximum of **three** people living in a two-bedroom flat
- there will be a maximum of **four** people living in a three-bedroom flat
- there will be a maximum of **five** people living in a four-bedroom flat

Example:

A block of 10 x 1 bed flats and 4 x 2 bed flats would be calculated as follows:

- $10 \times 110 = 1100$
- $4 \times 165 = 660$

Total of 1,760 divide by bin size of either 1100 litre (or another bin size), rounding up, so this would be 1.6 bins, round up to 2 x 1100 for refuse and 2 x 1100 for recycling.

Organic waste (food and garden):

We use 140 litre or 240 litre bins only (due to weight of organic matter)

- Without gardens = $10 \times 20 + 4 \times 20 = 280$ litre (2 x 140 litre bins)
- With gardens = $10 \times 30 + 4 \times 30 = 420$ litres (2 x 240 litre bins)

Appendix C: Bin store illustrations



Fig 5 Double doors do not stay open and swing shut fast, hindering collections



Fig 6 Double doors – stay open while collection takes place, with door bolts, hooks or automatic opening systems



Fig 7 No drop kerb & pavement too narrow for 1100 litre bins

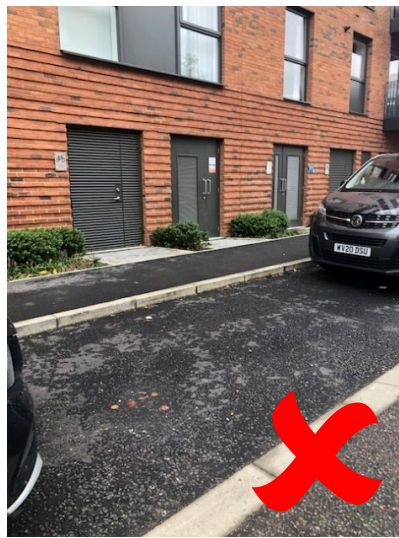


Fig 8 No drop kerb – parking bay will restrict access



Fig 9 Drop kerb directly outside bin stores



Fig 10 Swales mean there is no smooth access from bin store & bins have to be dragged across grass



Fig 11 Swales is slabbed to allow 1100 litre bins to be easily moved to the roadside for collection



Fig 12 Bad bin store design – too much space in store allowing fly-tipping of cardboard



Fig 13 Good bin store design – bins fit in the bin store without too much excess space



Fig 14 Alternative bin store designs – suitable for smaller blocks of apartments

Appendix D: Vehicle information

Please use the vehicle specifications below for tracking purposes when planning and designing new developments.

Vehicle make	Vehicle type	Gross vehicle weight	Height	Width	Length	Turning circle
Dennis Eagle	RCV	32000	3,600mm (with hazard beacons)	2,500mm (without mirrors) 3,000mm (with mirrors)	12,000mm (from front to rear of bin lift)	23.88 metres wall to wall
Dennis Eagle	Underground	32000	3,830mm	2,500mm (without mirrors) 3,000mm (with mirrors)	12,000mm (from front to rear of bin lift)	23.88m metres wall to wall

Fig 15 GCSWS vehicle information

Appendix E: Underground bin system types, (hydraulic and hook-lift)

Hydraulic bins can be used for both domestic collections and to collect items of recycling at bring bank sites. Typically an 1100 litre bin is housed within the platform and can be wheeled out and emptied using standard collection vehicles.



Fig 16 Single Hydraulic bring banks collecting mixed recycling



Fig 17 Double Hydraulic bring banks collecting small electrical appliances

Hook-lift underground systems are typically used for domestic collections of recycling and general waste.



Fig 18 Underground bins hook-lift system streetscape



Fig 19 Underground bins hook-lift system in the ground



Fig 20 Underground bin hook-lift system out of the ground showing 5m3 container

Underground systems typical dimensions are as follows:

Unit Capacity	Typical Dimensions (mm)
3m ³ Capacity	Below Ground Component 1430l x 1430w x 1604h Above Ground Component 900l x 620w x 890h Ground Area Required 1720mm ²
4m ³ Capacity	Below Ground Component 1430l x 1430w x 2139h Above Ground Component 900l x 620w x 890h Ground Area Required 1720mm ²
5m ³ Capacity	Below Ground Component 1430l x 1430w x 2674h Above Ground Component 900l x 620w x 890h Ground Area Required 1780mm ²

Fig 21 Underground bin dimensions

Appendix F: GCSWS Contact information

1. For general enquiries at the planning stage please email:

Waste.planning@scambs.gov.uk

2. To order bins, bin store signs and leaflets or to arrange a site visit please email:

emma.will@scambs.gov.uk

3. For enquiries about underground bins please email:

dee.wood@scambs.gov.uk

4. To arrange a meeting with GCSWS to discuss plans for large developments please email:

dee.wood@scambs.gov.uk

Appendix G: Developers Minimum Standards Checklist

This checklist should be used by developers as a tool to satisfy themselves and GCSWS that developments will meet the minimum standards needed for waste to be collected once built, as detailed in the **GCSWS Developers Guidance**.

1. Minimum standards Checklist – Developers will be expected to demonstrate that their proposals satisfy the **minimum requirements** set out in the guidance document by assessing them against the questions in the 'Minimum Standards Checklist' below. They should ensure they have read the guidance in full and are aware of all **minimum requirements** the guidance places upon them before completing the checklist. Where distances are referred to within the guidance it is worth noting that **any maximum distances stated should be the exception not the norm**.

2. Basis for Conditions and Agreements – This checklist will be used by GCSWS as the basis for initial discussions that may relate to planning conditions being imposed where they are deemed necessary and the 6 tests satisfied.

Minimum Standards Checklist Instructions Usage

The checklist should be completed by the developer and submitted to the Planning Department with all supporting plans and/or documents. It applies to all residential and commercial developments.

Standards met - when completing the checklist a **'yes'** should be placed in the adjacent box to signify that the standard has been considered at the stage of initial design proposals and will be met once developments plans are finalised.

Standards not met - where a standard will not be met, the developer should place a **'No'** in the adjacent box and must explain briefly why it will not be met in the notes section of the checklist. Developers should then fully justify why the standard will not be met as part of the Design and Access Statement which will be submitted with the planning application.

Standards not applicable - where a standard is not applicable, the developer should place a **N/A** in the adjacent box, and add a brief explanation about why the standard will not be met in the notes section of the checklist. Developers should then fully justify why the standard is not applicable as part of the Design and Access Statement which will be submitted with the planning application.

Completed minimum standards checklists should be emailed to dee.wood@scambs.gov.uk With the developments name in the heading.

Developers minimum standards Checklist



V1.00 – Nov 2021



GREATER CAMBRIDGE
SHARED WASTE

Developers minimum standards check List Please refer back to the relevant section within the guidance when completing this document. (Developers are advised to review ALL of the guidance as the points in this checklist are just a selection of key requirements)	Standard Met? YES / NO / NA	Notes:
1. External storage containers (pages 7 ,11, 12 sections 2.4, 3.3, 4.3)		
Has the number of containers required been calculated?		
Has sufficient space to accommodate containers been calculated?		
2. Internal storage containers (pages 7, 9, 10 sections 2.4, 3.4, 4.4)		
Has sufficient space to accommodate containers been calculated?		
3. Crew pull distances (pages 10, 11 section 4.5)		
Houses - Are all bins able to be presented kerbside? If not, what arrangements have been made for collection points? Has this been discussed/agreed with GCSWS?		
Flats - Are all pull distances for collection crews less than 10 metres from bin store to kerb collection point?		
Flats - Where any pull distances are more than 10 metres from bin store to kerb collection point, have alternative arrangements been made with managing agents to transport the bins to the collection points? (Please state what the arrangements are in the notes box.)		
4. Pathways & collection areas (page 11 section 4.5)		
Are paths from bin stores to kerb side collection points direct, smooth and level?		
Do paths from bin stores to kerb side collection points avoid hazards such as parked cars?		
Are gradients between the bin store and collection point no more than 1:12?		
Are steps avoided between the bin store and collection point?		
5. Bin stores (page 10 section 4.5)		
Has sufficient space been allocated for the number of bins required?		
Does the bin store meet bin store design requirements?		
Do bin store keys/codes/automatic locking systems meet the required standards?		
If bin stores are housed in underground car parks have managing agents been appointed to move bins to the collection point?		

Are bin stores free from parking spaces, parked cars and parking bays?		
Are bins segregated from bike stores or other types of bins eg commercial ?		
Will adequate lighting be provided in the bin store?		
Will external bin store doors be wide enough, do they fold back and have floor bolts and door hooks fitted?		
Will internal doors between accommodation and bin stores be easily accessible and have coded entry systems or similar for residents including those with disabilities ?		
Will bin store doors and walls be protected from damage with metal strips?		
Will dropped kerbs be installed outside bin stores or within 10m of bins store?		
Do bins take the most direct route from bin store to refuse vehicle? And avoid need to move around trees, for example?		
6. Non commercial Bulky items (page 12 section 5)		
Has space been planned in to store bulky items prior to collection?		
7. Vehicles and roads (page 13 section 9)		
Will all roads be built to adoptable standards?		
If roads will not be built to adoptable standards have designated bin collection points been planned that are on or next to roads built to adoptable standards?		
Are access routes both wide and high enough to accommodate all collection vehicles?		
Is there sufficient clear space around the vehicle to allow efficient operation ?		
Has development design taken into account the risk of residential parking (either on the public highway outside the development site or inside the development) impeding collection vehicle access?		
Are there restrictions on vehicle parking along access routes used by collection vehicles in the development?		
Can collection vehicles turn around in the development or reverse in line with the guidance?		
Have hammer heads, turns and reverse manoeuvre's been avoided where possible?		
If turning heads or hammer heads have not been avoided is there sufficient space to turn without reversing and will parking restrictions be in place where turning heads and hammer heads will be located?		
If bollards will be installed, do they allow easy access and will spacing between bollards be wide enough to accommodate vehicles?		
If barrier systems will be installed will they allow collection crews to access sites easily (e.g. ANPR) and out of hours?		
Will traffic management measures (e.g yellow lines) be in place where the risk of parked cars exists ?		

Are roads free from drainage ditches (Swales)? If not, will there be hard standing areas outside bin stores?		
8. Vehicle tracking documents (page 15 section 9.4)		
Have vehicle tracking documents been designed and submitted which detail the vehicle journey, crew pulling distances, vehicle reverses, collection points, bin store locations, parking, road dimensions and street furniture?		
Has a meeting been arranged with GCSWS to go through all documents (large developments only)		
9. Underground bins (page 16 section 10)		
If the development has high density properties, have underground bins been considered as a priority?		
If underground bins are being considered has the developer consulted directly with GCSWS about them?		
Have fill monitoring systems been considered?		
Have maintenance methods and costs been factored into plans?		
Are bin locations free from street furniture e.g. trees and lampposts?		
Will large cardboard be managed during occupation phases?		
Have bin types been considered and discussed with GCSWS?		
Has food and garden waste management been considered?		
Are roads sufficient in size for a large collection vehicle and are road surfaces even?		
Are lay-bys beside bins wide enough for a large vehicle to pull in but not wide enough for a car to park?		
Will parking enforcement be in place?		
Are bins close enough to roads and not too close to buildings?		
Have bunker and receptacle lid opening directions been considered?		
Are road bollards or barriers easily accessible by collection crews?		
Has the management of those requiring an assisted collection been considered?		
10. Commercial premises (page 22 section 13)		
Bin stores design is the same for commercial properties as it is for domestic properties. Has the developer completed questions on section 5 of this checklist?		

Has the likely level of waste been calculated?		
Will storage space be sufficient to store a minimum of two days waste for two waste streams?		
Will bins be accessible to collection crews 24/7?		
If the store is accessible directly from the street will doors be secured by key-code locks rather than physical keys?		
Can site users enter bin stores through internal doors?		
Has space been planned in to store bulky items prior to collection?		
11. Mixed Use Developments (Domestic and Commercial) (page 11 section 4.5)		
Has segregated waste storage been provided for the commercial and residential elements of the development?		
12. Bring banks (page 20 section 11)		
Have bring bank requirements been established?		
Will cardboard skips be required during occupation phases?		