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LOCAL AUTHORITY CONTACT DETAILS

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Cambridgeshire County Council
Shire Hall,
Castle Hill,
Cambridge,
CB3 0AP.

Tel: (01223) 717111

Status: Waste Disposal Authority
Waste Planning Authority
County Planning Authority

Peterborough City Council
Bayard Place,
Broadway,
Peterborough,
PE1 1FB.

Tel: (01733) 747474

Status: Waste Disposal Authority
Waste Collection Authority
Waste Planning Authority
Local Planning Authority

South Cambridgeshire District Council
South Cambridgeshire Hall,
Cambourne Business Park,
Cambourne,
Cambridge,
CB23 6EA.

Tel: 08450 450 500

Status: Waste Collection Authority
Local Planning Authority

Cambridge City Council
The Guildhall,
Cambridge,
CB2 3QJ.

Tel: (01223) 457 000

Status: Waste Collection Authority
Local Planning Authority

East Cambridgeshire District Council
The Grange,
Nutholt Lane,
Ely,
Cambridgeshire,
CB7 4PL.

Tel: (01353) 665555

Status: Waste Collection Authority
Local Planning Authority

Huntingdonshire District Council
Pathfinder House,
St Mary's Street,
Huntingdon,
Cambridgeshire,
PE29 3TN.

Tel: (01480) 388388

Status: Waste Collection Authority
Local Planning Authority

Fenland District Council
Fenland Hall
County Road
March
Cambridgeshire
PE15 8NQ

Tel: (01354) 654321

Status: Waste Collection Authority
Local Planning Authority

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REFERENCE DOCUMENTS

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Cambridgeshire and Peterborough Joint Waste Management Strategy

The Cambridgeshire and Peterborough Waste Partnership was formed in 1999 and the first Strategy for written in 2002 outlining current and planned arrangements for waste collection, recycling, composting and other waste treatments for 2002 through to 2022.

The strategy is now due for revision and a new strategy document will be available in 2007.

Cambridgeshire and Peterborough Minerals and Waste Local Development Framework

This Framework will set out land use policies and allocations for both minerals extraction and waste management encompassing all waste streams over the period 2003 to 2021. It will be a set of comprehensive documents which when adopted in 2010 will supersede the Cambridgeshire Aggregates (Minerals) Local Plan (1991) and the Cambridgeshire and Peterborough Waste Local Plan (2003).

Cambridgeshire and Peterborough Structure Plan

This document has provided the strategic framework for land use planning in Cambridgeshire and Peterborough. Cambridgeshire County Council and Peterborough City Council jointly adopted the Cambridgeshire and Peterborough Structure Plan 2003 on 22nd October 2003. The Plan gives strategic guidance on housing provision, employment, the countryside and other land uses for the period 2001-2016.

However as of Autumn 2007 the Structure Plan will be superseded by the East of England Plan (Regional Spatial Strategy), though several saved policies, as determined by the Secretary of State, have been extended.

Cambridgeshire and Peterborough Waste Local Plan

The Cambridgeshire and Peterborough Waste Local Plan was adopted on 22 October 2003. The Waste Local Plan covers all of Cambridgeshire and Peterborough. It is set to run from 1998 until the year 2011, with reviews approximately every five years. The plan assists in:

- Deciding where the best locations for new waste management sites are
- Forming policies against which planning applications for new waste management will be judged

Cambridgeshire Design Guide for Streets and Public Realm

This document is being produced by Cambridgeshire Horizons in collaboration with Cambridgeshire County Council, Cambridge City Council and the District Councils within Cambridgeshire. It is intended to play a key role in the design of new places.

It is currently in draft format and undergoing consultation.

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Cambridgeshire Local Transport Plan

The Cambridgeshire Local Transport Plan (LTP) sets out how Government capital funding allocated to the county for transport will be spent. There have to date been three Cambridgeshire Local Transport Plans. The current LTP covers the period between 2006/07 and 2010/11.

Cambridgeshire County Council Household Waste Recycling Centre Strategy

This document sets out Cambridgeshire's Waste Disposal Authority strategy for delivering Household Waste Recycling Centres as a resource to the public and as an aid to meeting statutory waste to landfill diversion targets.

Local Development Frameworks

Each District Council and Unitary Authority are required to produce a portfolio of Local Development Documents (LDDs). Together the LDDs comprise the Local Development Framework and determine the spatial planning strategy for the area. Matters relating to minerals and waste for the area are jointly addressed by Cambridgeshire County Council and Peterborough City Council and, together, the Cambridgeshire and Peterborough Minerals and Waste Local Development Framework has been drafted.

Manual for Streets

The Department of Transport Manual for Streets was launched in March 2007 and supersedes Design Bulletin 32 and Places, Streets and Movement, which are now withdrawn. The manual should be used for the design, construction, adoption and maintenance of new residential streets, but it is also applicable to existing residential streets subject to re-design.

Planning Policy Statement 10: Planning for Sustainable Waste Management

Planning Policy Statement 10 (PPS10) set out the Government's national policy on waste management land-use planning in England. It replaces Planning Policy Guidance Note 10, *Planning and Waste Management*, published in 1999 and forms part of the national waste management plan for the UK.

Supplementary Planning Document - The Location and Design of Major Waste Management Facilities

Cambridgeshire County Council and Peterborough City Council adopted this supplementary planning document (SPD) on 28 April 2006. This SPD has been prepared to assist in the delivery of high quality sustainable waste management facilities. The document sets out a series of key development principles based on recognised good planning and design practice.

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The East of England Plan (draft Regional Spatial Strategy)

The East of England Regional Assembly (EERA) is the governing body responsible for preparing The East of England Plan (Regional Spatial Strategy) which was submitted for consultation early in 2005 and the subject of a public inquiry from November 2005 to March 2006. Adoption of the new regional plan is the responsibility of GO-East. The plan will supersede previous regional planning guidance and Structure Plans formerly produced in each of the six counties in the region.

Waste Strategy for England 2007

Waste Strategy 2007 superseeds Waste Strategy 2000 and broadly seeks to ensure that England will meet and exceed Landfill Directive Diversion Targets for biodegradeable municipal waste in 2010, 2013 and 2020. A key proposal for the new strategy is to incentivise efforts to reduce, reuse and recycle waste and to improve local governance to deliver better co-ordinated action on the ground.

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EXECUTIVE SUMMARY

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This Guide is consistent with a drive towards sustainable waste management. In the short term it is intended that this Guide will be adopted by each of the participating RECAP Local Authorities as council policy for the purposes of guiding development control. In the longer term it is proposed that the Guide be adopted as a Supplementary Planning Document (SPD) under the new Cambridgeshire and Peterborough Minerals and Waste Local Development Framework following its likely adoption in 2010, having been subjected to all necessary procedural arrangements.

A number of key points can be drawn from this document and should be regarded as essential considerations when designing for effective waste management.

1. This Guide puts significant emphasis on timely consultation with the relevant Local Authority. This forms the backbone of ensuring effective design for waste management. In most cases this should form part of the collaborative process outlined in the *Cambridgeshire Design Guide for Streets and Public Realm*.

   The Guide also offers a significant opportunity for innovation in waste management design and actively welcomes proposals from developers for alternative waste management solutions. Such proposals will form part of the consultation process and should be well researched, demonstrate realistic solutions and be clearly presented. Accurate costing will also be required and developers must note that they will be required to fund any such schemes where costs exceed the amount the Local Authority would otherwise pay for a standard service.

2. Within residential developments, developers are required to provide adequate space for internal and external storage of waste based on figures outlined in this document. In both cases, developers will also have to provide appropriate containers.

   For commercial developments adequate external space will have to be provided based on consultation with the Local Authority. Additional storage space will also have to be provided at commercial developments to satisfy legislative requirements.

3. Waste 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 resident transit. In developments of flats and apartments typical options will be resident transit, waste chutes 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.

4. Multi-occupancy dwellings present a challenging issue to waste management and various options are open to a developer beyond the provision of hard infrastructure and typical methods of treatment. Waste management in such

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developments requires an integrated approach and innovation is welcomed. Reference should be made to AN INTEGRATED APPROACH TO WASTE MANAGEMENT IN FLATS AND APARTMENTS in this document and the Case Studies also presented.

5. Waste storage systems should be provided developments of flats and apartments and at commercial developments as appropriate. Initial design of such systems should provide assessment of (amongst others): on-site treatment options; access; health and safety; security; and protection of the environment.

   Developers are encouraged to evaluate the potential for underground waste storage in their developments – serving multi-occupancy dwellings or as bring sites for wider public use. An underground waste storage Case Study is presented in this document.

6. Though contemporary urban design is shifting away from the dominance of places by roads, access for Local Authority waste collection vehicles must be a significant consideration in highways design. Wherever possible, access should be adequate and avoid the need for vehicles to undertake unnecessary or difficult manoeuvres. However, it is recognised that the passage of a large waste collection vehicle may not offer the best solution for a particular development. In such cases, opportunities for innovation exist and the Local Authorities of the RECAP partnership welcome alternative waste collection ideas (though it must be noted that any such alternatives will only be part funded by the Local Authority).

7. Local Authority waste collection will not commence until road surfaces are complete to final layer and access is not unreasonable (refer to Environmental Protection Act S.45) and not hindered by ongoing construction work. In these circumstances, and where a development requires a waste collection service, provision will have to be made by the developer at their cost.

8. A network of Recycling Centres is operational across the Cambridgeshire and Peterborough area. Continued development will put pressure on the existing facilities and require development of the network. Reasonable financial contributions, in accordance with Circular 05/05, will be secured from developers using Section 106 Agreements or other legal agreements as appropriate. Where applicable, developers will also have to make land available at strategic locations.

9. Developers may be required to provide additional Bring Site facilities, upgrade existing facilities in the locality or, in accordance with Circular 05/05, pay a reasonable financial contribution 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 (such as through a waste audit).

10. RECAP are actively seeking to engage developers in schemes of education to promote the aims of effective waste reduction and recycling. It should be recognised that a developers marketing strategy can be enhanced by developing education schemes in partnership with RECAP.

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PART 1

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INTRODUCTION

This Waste Management Design Guide (the Guide) addresses the issue of waste management in new developments and redevelopments of a residential, commercial or mixed (residential and commercial) nature. It is to be used by:

- Developers and designers to ensure effective segregation, storage and collection of waste materials; and
- Planning Authorities in assessing each planning application to ensure that waste management needs are adequately addressed.

It is intended that this Guide will be adopted by each of the participating Local Authorities as council policy for the purposes of guiding development control. In due course, following the preparation and adoption of Local Development Frameworks, this Guide will be jointly reviewed and taken forward as a formal Supplementary Planning Document (SPD).

It has been produced by the Recycling in Cambridgeshire and Peterborough (RECAP) partnership (comprising of Cambridgeshire County Council, Peterborough City Council and the district Councils in Cambridgeshire) and WISER Waste Information Services Ltd.

1.1 Purpose of the Guide

Policy MW34 of the emerging Minerals and Waste Local Development Framework states:

> *All proposals which are likely to generate significant volumes of waste through construction and operational phases will be required to demonstrate through a waste audit how waste will be minimised and managed in a sustainable manner in accordance with the waste hierarchy.*

This Guide has been created to:

1. Detail the waste segregation, storage and collection requirements that designers and developers need to satisfy.
2. Provide a strategic tool for use by Planning Authorities when assessing development applications.
3. Address the unique waste management problems presented by high density developments.
4. State the requirements for developer contributions to waste management infrastructure.
5. Highlight the financial implications of waste management upon developers.
6. Highlight examples of good practice demonstrating what can be achieved.
7. Contribute to sustainability and reduced environmental impact.

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Therefore it is anticipated that a waste audit will also be used as a mechanism for demonstrating developer proposals meeting the requirements of this Guide.

1.2 Compliance with this Guide and the RECAP Waste Management Design Guide Toolkit

This Guide contains the RECAP WASTE MANAGEMENT DESIGN GUIDE TOOLKIT that will allow a developer, in consultation with the Local Authority, to make an effective evaluation of the waste management requirements upon them and demonstrate compliance as necessary. All proposals must demonstrate use of the toolkit and submit it, as complete, with their plans. As indicated above

The Toolkit is presented from p.31 and is made up of 3 tools as described in Table 1 below. The tools are interlinked and refer to each other as appropriate.

TABLE 1: The RECAP Waste Management Design Guide Toolkit

Toolkit Components		
DESIGN STANDARDS CHECKLIST	**ASSESSMENT CRITERIA**	**POTENTIAL CONDITIONS AND AGREEMENTS**
Developers will be expected to demonstrate that their proposals satisfy the requirements of this Guide by assessing their proposals against the expected standards which are brought together under the DESIGN STANDARDS CHECKLIST.	Depending upon development proposals, it may be that a developer is required to conduct a wider assessment of the impact of their scheme (or aspects thereof). Criteria for such an assessment are presented under the ASSESSMENT CRITERIA.	For some developments it may be appropriate to apply planning conditions or negotiate S106 agreements relating to several factors as detailed under the POTENTIAL CONDITIONS AND AGREEMENTS.

The TOOLKIT should be used as follows:

DESIGN STANDARDS CHECKLIST TOOL	Applies to all developments. To be used and completed by the **developer** and supported by plans and/or documents as appropriate.
ASSESSMENT CRITERIA TOOL	To be completed by the **developer** where proposals involve: the construction of waste storage compound(s); and/or installation of Bring Site infrastructure; and/or alternative schemes.
POTENTIAL CONDITIONS AND AGREEMENTS	To be utilised by the **Local Planning Authority** as appropriate in relation to: the provision of waste storage containers; the Recycling Centre network; and the Bring Site network.

Where appropriate, the Toolkit will supplement a waste audit.

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1.3 Consultation

This Guide puts significant emphasis on timely consultation with the relevant Local Authority. This forms the backbone of ensuring effective design for waste management. In most cases, consultation should form part of the collaborative process outlined in the *Cambridgeshire Design Guide for Streets and Public Realm.*

1.4 Alternative Schemes

This Guide offers a significant opportunity for innovation in waste management design and 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 amenable to a particular development than typical methods of storage and collection. Whatever the situation, alternative proposals must be discussed with the Local Authority and be well researched, demonstrate realistic solutions and be clearly presented. Accurate costing will also be required and developers must note that they will be required to fund any such schemes where costs exceed the amount the Local Authority would otherwise pay for a standard service and provide any non-standard infrastructure for the scheme.

Any such schemes must, at the very minimum, be assessed against the criteria detailed under ASSESSMENT CRITERIA (p. 37).

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POLICY AND PLANNING CONTEXT

The documents listed in the section entitled 'Reference Documents' (above) have all influenced the production of this Guide. A number of these documents are highlighted below because of either their national/regional importance or because of the considerable future importance they will have. They demonstrate the increasing importance of waste management and the continuing shift both within the region and nationally towards sustainable waste management practice – something that this Guide can make a positive contribution towards.

2.1 Waste Strategy for England 2007

Waste Strategy for England 2007 is a national government document that sets the tone for waste management across England. It supersedes Waste Strategy 2000.

The fundamental principle behind the strategy is the waste hierarchy which seeks to encourage wherever possible waste prevention (ultimate aim) followed by re-use, recycling/composting and energy recovery. Disposal features in the waste hierarchy as the least favoured option.

The strategy sets a number of national targets for waste management (detailed under Part 3) and seeks to achieve several Government key objectives:

- *decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention and re-use;*
- *meet and exceed the Landfill Directive diversion targets for biodegradable municipal waste in 2010, 2013 and 2020;*
- *increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste;*
- *secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste; and*
- *get the most environmental benefit from that investment, through increased recycling of resources and recovery of energy from residual waste using a mix of technologies.*

The main elements of the strategy, in order to achieve the key objectives can be summarised as:

- *incentivise efforts to reduce, re-use, recycle waste and recover energy from waste;*
- *reform regulation to drive the reduction of waste and diversion from landfill while reducing costs to compliant businesses and the regulator;*
- *target action on materials, products and sectors with the greatest scope for improving environmental and economic outcomes;*

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- *stimulate investment in collection, recycling and recovery infrastructure, and markets for recovered materials that will maximise the value of materials and energy recovered; and*
- *improve national, regional and local governance, with a clearer performance and institutional framework to deliver better coordinated action and services on the ground.*

2.2 Planning Policy Statement 10: Sustainable Waste Management

Planning Policy Statement 10 (PPS10) makes specific reference to the importance of good design in waste management:

> *35. Good design and layout in new development can help to secure opportunities for sustainable waste management, including for kerbside collection and community recycling as well as for larger waste facilities. Planning authorities should ensure that new development makes sufficient provision for waste management and promote designs and layouts that secure the integration of waste management facilities without adverse impact on the street scene or, in less developed areas, the local landscape.*
>
> *36. Waste management facilities in themselves should be well-designed, so that they contribute positively to the character and quality of the area in which they are located. Poor design is in itself undesirable, undermines community acceptance of waste facilities and should be rejected.*

2.3 The East of England Plan (draft Regional Spatial Strategy)

The Government's Proposed Changes to the East of England Plan were published in December 2006. New Waste Policies were developed after a significant amount of additional work was carried out by the East of England Regional Assembly (EERA) with the advice of the Regional Technical Advisory Body on Waste.

Policy WM1 details regional objectives for waste management which include:

- *to minimise the impact of new development, particularly the concentrations of growth in the Key Centres of Development and Change, on regional waste management requirements*

- *to enlist and encourage community support and participation in promoting responsible waste behaviour, viewing waste as a resource and maximising re-use, recycling and composting of waste, while responding positively to the need to manage the remainder;*

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Policy WM3 (Waste Management in Development) specifies that:

> *Development will be designed and constructed in such a way as to…….facilitate the ongoing separate collection, sorting, recycling, composting and recovery of waste that arises from the completed development and from surrounding areas where appropriate.*
>
> *Within major developments, especially in the Key Centres for Development and Change, provision will be made……..to enable the achievement of the sustainable management of waste through innovative approaches to local waste reduction, recycling and management.*

Policy WM11 relates to actions for waste disposal and collection authorities and in the supporting text states:

> *Separate collections of different waste streams should be introduced for both residential and commercial developments to enable the re-use and recycling of disguarded materials.*
>
> *In order to maximise recycling and composting, waste disposal authorities and private sector waste management companies should encourage composting or biodigestion of biodegradable wastes where appropriate.*

2.4 Cambridgeshire and Peterborough Minerals and Waste Local Development Framework

The Cambridgeshire and Peterborough Minerals and Waste Plan is currently being developed. It will be a comprehensive document and will supersede the Cambridgeshire Aggregates (Minerals) Local Plan and the Cambridgeshire and Peterborough Waste Local Plan.

Preferred option 1 Policy MW30 (November 2006) indicates a strong drive towards sustainable waste management:

> *The Waste Planning Authorities will encourage waste minimisation wherever practicable. All waste development proposals must demonstrate that practicable integrated proposals have been incorporated to maximise waste recovery and recycling. Such proposals should seek to drive waste management up the waste hierarchy, and be in accord with the proximate management of waste and regional self-sufficiency.*

Reference is also made to the importance of providing an adequate network of Household Waste Recycling Centres:

> *In delivering HWRCs the WPA's* [Waste Planning Authorities] *will look to district and city councils, developers and landowners to support and help facilitate the provision of this important community service.*

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2.5 Local Development Framework

The LDF will comprise a portfolio of Local Development Documents (LDDs), prepared by District and County Councils**,** which together will provide the framework for delivering the spatial planning strategy for the area. LDDs comprise:

- **Development Plan Documents (DPDs)** - spatial planning documents prepared by the relevant planning authority and subject to independent examination by a Planning Inspector appointed by the Secretary of State
- **Supplementary Planning Documents (SPDs)** - cover a wide range of issues on which the planning authority wishes to provide guidance to supplement the policies and proposals in the DPDs. They will not form part of the Development Plan or be subject to independent examination, but their programme of preparation must be set out.
- **Statement of Community Involvement (SCI)** - sets out the standards for involving the community in the preparation, alteration and continual review of all LDDs. Such statements will be subject to independent examination.

2.6 Current Status of this Design Guide

This Guide is consistent with a drive towards sustainable waste management at a local, regional and national level and in its current form is a best practice guidance document. In the short term it is intended that this Guide will be adopted by each of the participating RECAP Local Authorities as council policy for the purposes of guiding development control and meeting the objectives of the Guide. In the longer term it is proposed that the Guide be adopted as a Supplementary Planning Document (SPD) under the new Cambridgeshire and Peterborough Minerals and Waste Local Development Framework following its likely adoption in 2010, having been subjected to all necessary procedural arrangements.

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WASTE MANAGEMENT IN CONTEXT

3.1 Introduction

The ever increasing popularity of the Cambridgeshire and Peterborough areas to both the wider population of the UK and businesses alike is leading to a continual influx of people. This means changes in the way waste is managed and a renewed effort to further the significant strides that have already been made towards the reduction, reuse and recycling of waste in the area.

As costs of waste management rise, the increasing number of businesses and commercial developers attracted to the area need to seriously consider increased segregation of wastes and the recovery of value that this can bring.

The following section outlines the likely influences on waste generation and the predicted quantities that we will have to manage.

3.2 Generation of Waste

3.2.1 At a Local Level

The *Cambridgeshire and Peterborough Waste Local Plan* (2003) predicted that, for the plan period (1998 – 2011), approximately 5.4 million tonnes of municipal waste would arise. This work has since been updated with latest forecasts suggesting that between 2003 and 2021, approximately 9.5 million tonnes of waste generated in Cambridgeshire and Peterborough will need to be managed *(Source: Jacobs Babtie).*

In the 12 month period 2006 – 2007 the following quantities of household waste were collected:

- Cambridgeshire County Council ~306,032 tonnes.
- Peterborough City Council ~93,670 tonnes.

(Source:RECAP)

The following table shows how this waste was disposed of during the 2006/07 period.

TABLE 2: Waste Destinations in Cambridgeshire and Peterborough 2006 - 2007

Waste Destination	Cambridgeshire County Council	Peterborough City Council
	% of Total Household Waste	% of Total Household Waste
Landfill	51.5	56
Recycle/Compost	48.5	44

(Source: RECAP)

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It is clear that excellent progress has been made in diverting waste materials from landfill, with recycling a well established practice within the area. This Guide seeks to reinforce and further this good practice by enabling increased waste segregation, providing appropriate storage for materials and allowing efficient collection.

3.2.2 National Targets

The UK Government sets a number of national targets for the management of wastes. The targets can be summarised as follows:

Landfill Directive Targets:

- 2010 – to reduce the amount of waste going to landfill to 75% of 1995 levels
- 2013 – 50% of 1995 levels
- 2020 – 35% of 1995 levels

(Source: DEFRA)

The *Waste Strategy for England 2007* sets National Targets for recycling and composting:

- To recycle/compost at least 40% by 2010
- At least 45% by 2015
- At least 50% by 2020

Also set are national targets for the recovery of municipal waste:

- To recover 53% of municipal waste by 2010
- 67% by 2015
- 75% by 2020

(Source: DEFRA)

This Guide will contribute to ensuring that the area satisfies and exceeds these targets wherever possible.

3.2.3 Landfill Allowance Trading Scheme Targets

The Waste and Emissions Trading Act (2003) places a duty on Waste Disposal Authorities to reduce the amount of biodegradable municipal waste going to landfill.

Landfill allowances have been allocated to each authority at levels appropriate to allow England to meet its contribution to the UK Landfill Directive targets (as illustrated above) through the Landfill Allowance Trading Scheme (LATS). The table below illustrates LATS targets for Cambridgeshire and Peterborough:

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Table 3: LATS Targets for Reductions in Biodegradable Municipal Waste to Landfill

Authority	2009 Target (tonnes of biodegradable municipal waste)	2013 Target (tonnes of biodegradable municipal waste)	2020 Target (tonnes of biodegradable municipal waste)
Cambridgeshire County Council	109,638	73,026	51,099
Peterborough City Council	34,135	22,736	15,909

(Source: RECAP)

Though landfill allowances can be traded, saved or borrowed, they are not infinite in supply and where an authority fails to meet its targets they will be liable to a financial penalty of £150 (as currently set for 2007) for each tonne of waste over their allowance.

3.2.4 Recycling Targets in Cambridgeshire and Peterborough

RECAP has established long term voluntary targets for recycling across Cambridgeshire and Peterborough. These are illustrated in Table 3 below.

TABLE 4: Recycling Targets for Cambridgeshire and Peterborough (Voluntary)

Year	Destination	% of Total Household Waste
2010	Recycle/Compost	45 – 50
2015	Recycle/Compost	50 – 55
2020	Recycle/Compost	55 - 60

(Source: RECAP)

The Local Authorities in the area demonstrate high performance in recycling and the diversion of waste from landfill and though future waste management requirements present a challenge, every confidence exists that targets can be achieved.

3.3 Population and Housing in Cambridgeshire and Peterborough

By 2021, the total population for Cambridgeshire and Peterborough is predicted to be 858,300 (*East of England Regional Assembly*) representing an increase of 146,200 from the 2001 figure. This increase in population will increase the total number of dwellings for the area to 387,100. From 2001, this represents an increase of 89,300.

Dwelling distribution is detailed in the following table.

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TABLE 5: Dwellings Required in Cambridgeshire and Peterborough (2001 – 2021)

Area	Distribution of Additional Dwellings (2001 – 2021)
Cambridge City	19,000
East Cambridgeshire	8600
Fenland	11,000
Huntingdonshire	11,200
South Cambridgeshire	23,500
Peterborough	25,000
Total	**98,300**

(Source: East of England Regional Assembly)

Current predictions suggest that future annual growth in waste per household will fall from 4% (2005 – 2006) to 3.9% by 2011 and then to 1.1% by 2021 (*Source: Jacobs Babtie*). The combination of increased population, increased dwellings and (though falling) a per-household growth in waste quantities presents both a challenge to waste management and a significant opportunity to increase segregation and recycling rates.

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WASTE STORAGE CAPACITY

4.1 Introduction

The amount of waste storage required for any given development type is determined by a number of factors including:

- Volume and composition of waste;
- Segregation;
- Any on-site treatment; and
- Collection frequency.

It is essential that adequate provision is made for waste segregation, storage and collection to encourage participation in effective waste management and to act as a frontline tool in waste education. However, this approach must be pragmatic and address actual needs of a particular development without sacrificing valuable space unnecessarily.

4.2 Residential Developments

The storage capacities illustrated here are applicable to single houses and multi-occupancy dwellings (such as blocks of flats/apartments).

4.2.1 Internal Storage Capacity

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

An internal capacity of 35 to 40 litres should be provided within the kitchen of a dwelling. Typically, this capacity should be divided to allow segregation of residual waste, mixed dry recyclables and, where appropriate, organics for composting. This means that developers should provide internal waste storage containers that are easily replaceable.

As an aid to the design process and to enable a sensible choice of kitchen furniture, APPENDIX A contains detail and specifications on a selection of internal waste storage containers.

4.2.2 External Storage Capacity

At the very least, developers will be required to provide the appropriate amount of space into which will fit the required external storage containers. As a guide to external container size, specifications are presented at APPENDIX A.

Developers may also be required to provide the external containers or pay a reasonable financial contribution to the relevant Local Authority for their provision, through for example appropriate Section 106 agreements in

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accordance with Circular 05/05. Developers should discuss these issues with the Local Planning Authority and Waste Collection Authority at the earliest opportunity, prior to submitting their planning application. Reference should be made to the POTENTIAL CONDITIONS AND AGREEMENTS (p.42) which details potential conditions or agreements that a developer may be legally obligated to satisfy.

In any case, external containers must be in place in-time for occupation of a property and must be in place prior to the commencement of any Local Authority waste collection service.

The following table illustrates recommended external storage capacities for various types of residential development based on alternate weekly collections. Where reference is made to a '1 room unit', '2 room unit', etc all 'living' rooms (i.e. lounge, dining room, bedrooms) are counted. The kitchen and bathroom are excluded.

TABLE 6: Recommended External Storage Capacities (Residential)

Residential Development Type	**Aggregated Capacity Provision**		**Guidance Notes**
Single House	775 litres		Capacities detailed are maximum capacity 'footprints'. Developers should ensure that sufficient space is provided for the appropriate external storage containers. The relevant Local Authority must be consulted on capacity split and the types of external storage containers that the developer will be required to provide. It should be noted that capacity 'footprints' and splits will change overtime as each Local Authority works towards national targets.
Low-rise (to 4 floors) With communal gardens	For each 1 room unit	320 litres	
	For each 2 room unit	420 litres	
	For each 3 room unit	520 litres	
	For each 4 room unit	620 litres	
	For each 5 room unit	720 litres	
Low-rise (to 4 floors) Without communal gardens	For each 1 room unit	240 litres	
	For each 2 room unit	340 litres	
	For each 3 room unit	440 litres	
	For each 4 room unit	540 litres	
	For each 5 room unit	640 litres	
High-rise (above 4 floors)	For each 1 room unit	240 litres	
	For each 2 room unit	340 litres	
	For each 3 room unit	440 litres	
	For each 4 room unit	540 litres	
	For each 5 room unit	640 litres	

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For flats/apartments, capacity is unlikely to be provided on an individual residence basis. Capacity calculated for each unit should be combined giving a total. This should then be converted to the required number of communal bins (where calculations result in a fraction, figures should be rounded up or down as appropriate).

For example:

> *A developer has constructed a low-rise 4 floor development (without communal gardens) of 16 flats – 8 are 2 room units and 8 are 3 room units. Waste capacity should be:*
>
> *(8 x 340 litres) + (8 x 440 litres)*
>
> *= 6240 litres total capacity*
>
> *In terms of external storage containers this may equate to:*
>
> *3 x 1100 litre bins for residual waste;*
> *4 x 660 litre bins for dry recyclables;*
> *1 x 360 litre bins for compostables.*

Flats/apartments (particularly those of a high-rise nature) represent a challenging issue for waste management and these are further addressed under AN INTEGRATED APPROACH TO WASTE MANAGEMENT IN FLATS AND APARTMENTS (p. 45).

4.2.3 Commencement of Collection Service

Arrangements must be made with the Local Authority to ensure waste containers are in place on occupation of any properties to enable a collection service to commence. Further considerations for the commencement of a collection service, are outlined under Part 7.5.

4.3 Commercial Developments

4.3.1 Typical Capacities

Recommended total waste storage capacities for a number of commercial development types are summarised in the table below. These volumes are not generally applicable minimums due to the variations in activity and output that can occur across and within these development types. It is essential that consultation is undertaken with the relevant authority as to anticipated waste arisings in order to establish an effective waste management programme.

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TABLE 7: Recommended Storage Capacity (Commercial)

Commercial Development Type	Waste Storage Capacity	Fraction of Capacity for Storage of Recyclables
Offices	2600 litres per 1000m^2 gross floor space	Minimum of one third
Retail	5000 litres per 1000 m^2 gross floor space	Minimum of one third
Restaurants/Fast Food Outlets	1500 litres per 20 dining spaces	Variable
Hotels	5000 litres per 20 dining spaces	Variable

(Source: City of Westminster Council)

Typically, commercial developments are provided with large 4-wheel bins, but provision will be dependent upon anticipated waste generation. Specifications of typical waste storage containers are detailed at APPENDIX A.

4.3.2 Further Considerations - Commercial

Three pieces of key legislation further affect commercial enterprises:

- The Hazardous Waste Regulations 2005 make it a legal requirement to separate all hazardous wastes before collection for disposal. This includes fluorescent tubes, computer monitors and batteries.
- The Waste Electrical and Electronic Equipment (WEEE) Regulations 2006 make the recycling and recovery of such waste types compulsory.
- The Landfill Directive makes the initial separation of waste types essential prior to any landfilling.

Waste storage arrangements at commercial premises need to reflect these stringent demands and should allow additional space and infrastructure for the separate storage of these waste types.

4.4 Skip Containers and Waste Compaction Systems

It may be appropriate to make use of skip containers and waste compaction systems at high-rise multi-occupancy developments and in commercial developments. Details on skip containers/compaction systems are presented at APPENDIX B.

It must also be noted that where the use of a compactor is being considered, evaluation must be given to servicing and wider infrastructure requirements – i.e. adequate access for suitable collection vehicles must be provided along with adequate working areas and the wider road network must be capable of accommodating the required service vehicles. The relevant Local Authority should always be consulted where the use of skip containers and waste compaction systems are being considered.

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WASTE STORAGE POINTS AND LOCATION

5.1 Introduction

Waste is typically taken from its point of generation to a temporary storage point outside the building. From here it is then moved to a point for collection. In developments of flats and apartments waste is typically taken from the point of generation straight to the point of collection.

In all cases, collection points should be convenient for the user to access and for service crews to access without presenting a risk to health and safety. For developments of flats and apartments the developer should make adequate arrangements for the management and maintenance of all communal waste transit and storage infrastructure. The developer should demonstrate these arrangements to the satisfaction of the Local Planning Authority.

5.2 Underground Storage of Waste

As an alternative, developers are encouraged to consider underground storage of waste. Such systems may be particularly suitable for use within multi-occupancy residential developments.

The use of underground storage systems for bring sites may also be suitable (discussed under PART 9) and indeed, it may be possible to combine systems to provide specific development needs and serve the wider community as a bring site. Such proposals will require careful evaluation in conjunction with the relevant Local Authority.

5.3 Residential Storage Points

5.3.1 Single Houses

For single houses wherever possible, and when stored within the boundaries of the property, waste containers should:

- Be housed within a designated area or structure as appropriate;
- Be easily accessible to the occupier;
- Not have to be moved through a building to the collection point;
- Be located in a shaded position and away from windows; and
- Be located in a well ventilated area.

In terms of distances and gradients, the following should be observed:

- Residents should not have to move waste more than 30m to any designated storage area within the boundaries of the property;
- Any designated storage area within the boundaries of the property should not be more than 30m distance from the collection point;

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- Collection crews should not have carry individual waste containers or move wheeled containers more than 25m;
- Passage of a wheeled container should avoid steps, but where not possible should avoid transfer over more than 3 steps; and
- In all cases, gradients should not exceed 1:12.

5.3.2 Flats/Apartments - Options

For flats/apartments, temporary storage of waste is unlikely to occur immediately outside each flat/apartment. Waste is normally transferred straight to the point of collection which comprises a communal storage facility (be that above or below ground).

A number of transit options are typically available and are illustrated in the table below.

TABLE 8: Transit of Waste to Communal Storage Facility (Flats/Apartments)

Option	Description
Resident Transit	In low-rise blocks (up to 4 floors) it is typical for residents to transfer their waste to communal compounds, within which are located a number of bins to receive the waste. Residents should not have to transfer waste more than 30m (excluding vertical distance). Best practice is to install bins allowing the segregation of material types from residual waste. Waste compounds should form a designated structure and their design is covered in PART 6.
Chutes	In high-rise blocks (above 4 floors) waste chutes can be installed for the deposit of waste. The chute system then conveys the waste (by gravity) to a point of storage. This may be a compactor, a skip or large bin. Spacing between the chutes should be no more than 60m intervals. Specifications for refuse chutes are detailed in BS1703.
Facilities Management Complete Collection Service	Residents deposit their waste, in bags, outside their door from where it is collected by a management team. Service lifts should be installed.

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In addition to the above, where it is necessary for collections crews to move bins from the communal storage facility to tip into a vehicle, they should not have to move large containers a distance exceeding 10m.

Option choice, and therefore the waste transit method open to residents should be assessed against:

- User convenience and efficiency;
- Health, safety and security; and
- Risk of environmental harm.

The challenging issues posed by multi-occupancy dwellings (particularly those of a high-rise nature) are further addressed under AN INTEGRATED APPROACH TO WASTE MANAGEMENT IN FLATS AND APARTMENTS (p. 44).

5.4 Commercial Storage Points

For commercial developments the same criteria as outlined above for multi-occupancy dwellings should be used when assessing waste storage location options. In addition evaluation against the anticipated nature of the activities (waste volume, waste types, storage methods and capacity, size and type of waste container, segregation requirement and collection frequency) should also be made.

Collection crews should not have to move large containers a distance greater than 10m.

5.5 Collection Frequency

Current collection frequencies by Local Authority are detailed at APPENDIX C.

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WASTE STORAGE INFRASTRUCTURE

6.1 Introduction

Where waste is collected on a communal or commercial basis it is good practice to construct a storage compound to house the waste containers. Any such compounds must be functional allowing ease of use by those resident/working at the property and those serving it.

Where waste storage compounds are to be utilised the developer should make adequate arrangements for their management and maintenance to the satisfaction of the Local Planning Authority.

Though the information contained in this part is particularly applicable to the creation of communal waste storage compounds at residential developments of flats and apartments and commercial developments, the general principles can be applied to the creation of areas for housing waste receptacles at single houses - those general principles being:

1. Adequate space for function;
2. Use of suitable building materials;
3. Health and Safety;
4. Security; and
5. Environmental protection

6.2 Minimum Specifications for Waste Storage Systems

6.2.1 Above-ground Storage Compounds

The size of any given enclosure will be dependent on waste generation, container size to be used and collection service provided. However, the following minimum specifications should be adhered to when designing waste storage compounds:

- Sufficient clearance provided to allow full opening of the container lid;
- 150mm clear space between and around containers;
- Minimum working headroom of at least 2m (where compound is covered); and
- Layout such that any one receptacle can be serviced without having to move any other receptacle.

At its most basic, a waste storage compound may comprise a slatted fence surround with gate over an impervious floor with suitable drainage (open-air compound). At the opposite end of the scale, a storage compound may comprise an enclosed structure (enclosed compound).

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6.2.2 Underground Storage Systems

Sizing of underground storage systems will be determined by likely waste generation and the availability of useable space – i.e. free from services below ground and clear space above to allow emptying of containers. The latter point is of particular importance as underground storage systems will typically be serviced by special vehicles fitted with crane arms to lift the underground units out of the ground and above the vehicle for emptying.

Given the above, the evaluation and development of underground systems must take place in consultation with the relevant Local Authority.

6.3 Assessment of Storage System Type and Location

For flats and apartments and commercial developments, the method of waste storage and its location must be assessed against the criteria as detailed under ASSESSMENT CRITERIA (p.36). This is a fundamental requirement and evidence of such an assessment must be submitted with planning applications.

6.4 Construction of Storage Systems

6.4.1 Above-ground Storage Compounds

Specific construction requirements are addressed at APPENDIX D but, in general, it must be clearly demonstrated that:

- Permanent ventilation has been provided at the top and bottom;
- An impervious floor has been provided;
- Walls are constructed of/lined with, a hard impervious material suitable for washing down; and
- Adequate drainage has been provided.

In addition, it is preferable that storage areas are covered.

6.4.2 Underground Storage Systems

Typically such units consist of a pre-fabricated concrete casing into which fits a large steel container. This is all concealed beneath a flat-walk platform onto which a ‘street furniture’ receiver unit is mounted. Construction and installation specifications are detailed at APPENDIX G but exact requirements must be discussed with the relevant Local Authority.

6.5 Additional Storage Areas

For managed high density multi-occupancy residential developments it is recommended that additional storage space should be provided for bulky household items.

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WASTE COLLECTION

7.1 Introduction

Waste collection is an essential service – without this provision, public health issues arise. Developers and designers must remember this and make appropriate provision.

An essential tool for designers and developers when addressing the wider issue of highways development is the *Cambridgeshire Design Guide for Streets and Public Realm.*

7.2 Key Aspects of Highway Design

Contemporary urban design is shifting away from the dominance of places by roads. However, the basic principles running through the changing approach to highways clearly value the importance of vehicle access. Routes should:

- Interlink with each other;
- Make direct connections between developed facilities;
- Connect to existing routes and facilities;
- Facilitate traffic management; and
- Offer convenience to users.

Typical specifications for a waste collection vehicle are detailed in Part 7.3 below and are intended as a guide only. With change in mind, the passage of a large waste collection vehicle may not offer the best solution for a particular development. In such cases, opportunities for innovation exist and the Local Authorities of the RECAP partnership welcome alternative waste collection ideas.

7.3 Waste Collection Vehicle Specifications

A typical waste collection vehicle has the following specifications:

- 26 tonnes gross vehicle weight (GVW);
- Length of 11m;
- Width of 2.4m;
- Operating height of 4m; and
- Wall to wall turning circle of 21.9m.

Clear space around the vehicle should be sufficient to allow efficient operation. For example, a minimum working area of 3.5m width and 4m in length should be sufficient where the emptying of containers takes place.

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7.4 Highway Design

7.4.1 Construction

When constructing highways, reference should be made to:

- Manual for Streets (Department of Transport); and
- Design Manual for Roads and Bridges (Highways Agency).

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 and gully gratings (and other such infrastructure) should also be formed from materials capable of withstanding such weight.

7.4.2 Tracking

While *BS5906:2005* requires a minimum of 5 metres street width for waste vehicles, there may be instances where a lesser width may be appropriate providing vehicle tracking is undertaken and it can be demonstrated to the satisfaction of the Local Planning Authority that the waste collection vehicle to be employed can pass through narrower street widths. Where a development is to be served by a Local Authority waste collection this clearly means being capable of accommodating a vehicle with typical dimensions as described above.

Tracking:

- Has the arrangement of buildings as its starting point;
- Uses footway layouts to reinforce the arrangement of buildings;
- Allows a road to flow through a development without becoming the dominant feature.

As such, the appropriateness for function of carriageway width is checked by plotting vehicle tracking paths. An illustration of design by tracking is presented at APPENDIX F.

7.4.3 Routing

BS5906:2005 states that routes should permit collection vehicles to continue mainly in a forward direction and should not require vehicles to reverse more than 12m. Where this distance is exceeded turning heads will be provided in accordance with the principles of tracking as considered above.

The basic principles of highway design outlined above (those of interlinking and direct connections) are well capable of satisfying these requirements. The key is to design building locations with servicing in mind – the ultimate aim being to allow a smooth service passage without excessive reversing and the need to double-back and turn full circle.

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7.5 Commencement of Collection Service

Local Authority waste collection will not commence until road surfaces are complete to base layer and access is unhindered by ongoing construction work and materials delivery. Where this is not the case and a development requires a waste collection service, provision may have to be made by the developer at their cost.

7.6 Alternative Methods of Collection

Where passage through a completed development is inconsistent with the existing Local Authority waste collection arrangement, a developer must ensure adequate waste collection provision is made. It is recognised that, by design, this may be the case and that given the character of some streets it would be impractical to utilise existing Local Authority waste collection methods. It is therefore important that timely consultation is undertaken with the Local Authority concerned for the consideration of alternative arrangements and any cost implications that may require developer funding.

It should be noted that Waste Collection Authorities within the area will fund schemes up to a maximum amount (based on a calculated cost of providing waste collection services for individual households). Beyond this amount, a developer will have to provide the rest of the funding.

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RECYCLING CENTRES

8.1 Introduction

A network of Recycling Centres are provided by Cambridgeshire County Council and Peterborough City Council (responsible as Waste Disposal Authorities). The sites are positioned in strategic locations and enable the public to bring and deposit bulky wastes and other waste types that are not normally taken as part of the normal collection round.

In Cambridgeshire and Peterborough facilities are available for the collection of materials such as: bulky household wastes, timber, garden wastes, waste electrical equipment (such as televisions, computers and batteries), fluorescent tubes, hardcore and soil, scrap metal and textiles.

8.2 Current Infrastructure

As required by the Refuse Disposal (Amenity) Act 1978, each Local Authority must provide sites for the reception of excess household and garden waste free of charge. It follows that provision should be sufficient for the needs of the locality. Cambridgeshire County Council currently operate 10 Recycling Centres and Peterborough City Council operate 1.

Continued development in the area will require development of the network through the provision of further infrastructure.

8.3 Contribution to Waste Management

Of the waste received at the Recycling Centres during 2005 – 2006, 55% (Cambridgeshire County Council) and 49% (Peterborough City Council) was recycled.

Across Cambridgeshire and Peterborough, the development of Recycling Centres represents a success and has contributed to the county being ranked the highest recycling county in the UK during 2005 – 2006.

8.4 Future Provision of Recycling Centres

To adequately serve the growing population of the area, the existing network of sites is to be upgraded by making improvements, relocating sites and constructing new sites between now and 2021.

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Developers will not be expected to construct Recycling Centres, however they will be expected to contribute reasonable finances in accordance with Circular 05/05 proportionate to their development. At strategic locations Developers could also be required to provide land. Of primary consideration will be:

- Finance for upgrading existing Recycling Centres – contributions from developers will be calculated on a per dwelling basis;
- Finance for new Recycling Centres – contribution from developers will be calculated on a per dwelling basis; and
- Making land available for strategically located Recycling Centres

Section 106 Agreements or other suitable legal agreements, will be used to secure contributions and ensure that adequate infrastructure exists. Reference should be made to POTENTIAL CONDITIONS AND AGREEMENTS (p.42) which detail potential conditions and agreements that a developer may, in discussion with the Local Planning Authority, be legally obligated to satisfy. Such issues must be discussed at the earliest possible opportunity.

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BRING SITES

9.1 Introduction

Bring sites are an essential element of the RECAP waste strategy, extending resident choice by providing additional recycling opportunities for a range of materials, not all of which are collected by existing kerbside recycling services provided by individual waste collection authorities.

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.

9.2 Current Infrastructure

There are currently 380 bring sites operating within the RECAP area collecting a range of materials for recycling (Source: Atkins, 2007). Site densities typically vary between 1 per 500 households and 1 per 2000 households. (Source: Aylesford Newsprint, 2004)

In 2006/07 bring sites contributed approximately 3% to the overall RECAP recycling rate of 47% and have contributed to the RECAP area being historically the highest recycling area in the country

9.3 Provision of Bring Sites in Future Developments

This Guide seeks to ensure that adequate temporary and permanent bring site facilities are provided to serve new 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 through, for example, a waste audit or waste management plan.

Developers may be required to provide additional bring site facilities, upgrade existing facilities in the locality, or, in accordance with Circular 05/05, pay a reasonable financial contribution to the relevant local authority for provision or upgrade. Developers should discuss these issues with the Local Planning Authority and Waste Collection Authority at the earliest opportunity, prior to submitting their planning application and reference should be made to POTENTIAL CONDITIONS AND AGREEMENTS (p. 42) which details potential conditions and agreements that may be applied by a Local Planning Authority through, for example, Section 106 Agreements.

For new developments Local Planning Authorities will seek to achieve a maximum density of one bring site facility per 800 households, the first facility being operational on occupation of the 800th property. Temporary facilities should also be provided during the construction phase on occupation of the 50th property

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until each permanent facility is operational. However, in both cases, variation from the maximum recommended densities may be considered where a developer can demonstrate to the satisfaction of the Local Planning Authority (such as through a waste audit) that the needs of the occupiers of the development are adequately met.

9.4 Location of Bring Sites

Temporary and permanent bring site facilities should be suitably located so as to be easily and conveniently accessible to site users but should be at least 20m distance from the nearest dwelling to prevent disturbance to residents. In terms of servicing, Bring Sites must be accessible to service vehicles by adoptable roadways and footways, and situated so as to avoid damage to overhead services during servicing. Location of facilities must be identified to the Local Planning Authority (refer to POTENTIAL CONDITIONS AND AGREEMENTS on p. 42).

9.5 Management and Maintenance

The developer should make adequate arrangements for the management and maintenance of all temporary facilities. The developer should demonstrate to the satisfaction of the Local Planning Authority that adequate arrangements are in place for the future management and maintenance of all permanent facilities (see the POTENTIAL CONDITIONS AND AGREEMENTS on p. 42).

9.6 Underground Bring Sites

When considering the provision of permanent Bring Sites, consideration should be given to the provision of underground recycling bank facilities. These have small posting units above ground and have the advantage over traditional banks of reduced visual impact and of enabling access by those with restricted mobility.

A seven-container underground recycling bank facility will typically occupy a site area of between 40 – 50 square metres, excluding roadways. The precise number, capacity and nature of the containers required should be identified by the developer as part of the assessment of the waste impact of their development and through discussions with the Local Planning Authority and Waste Collection Authority.

An indicative generic specification of an underground Bring Site facility is attached as APPENDIX G.

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EDUCATION SCHEMES AND ADDITIONAL OPTIONS

A number of additional options that a developer may wish to consider in order to provide an effective system of waste management within their development are suggested below. They represent options that may assist in establishing effective and sustainable methods of waste management.

10.1 Education Schemes

RECAP are actively seeking to engage developers in schemes of education to promote the aims of effective waste reduction and recycling especially where alternative waste collection systems are to be employed. It should be recognised that a developers marketing strategy can be enhanced by developing education schemes in partnership with RECAP.

Local Authorities in the RECAP partnership run a wide range of education and awareness initiatives all year round to encourage residents to minimise waste and recycle more. RECAP has experience in developing educational materials, as well as implementing recycling awareness campaigns. National recognition has been given to the RECAP partnership for their success in engaging with residents and community organisations, as all RECAP partners were awarded Beacon Council Status in the category of waste and recycling.

RECAP has dedicated officers in all partner authorities who are able to provide advice on engaging local communities to encourage sustainable waste management. RECAP also has an extensive network of Master Composter Volunteers who provide help and advice in their communities on home composting and gardening. In addition, Cambridgeshire County Council run two 'Recycling Buses' which assist in delivering the environmental messages to pupils and community groups in the area.

10.2 Additional Waste Treatment Options

10.2.1 Composters and Wormeries

Composting is the process of producing compost through aerobic decomposition of biodegradable organic matter. All of the Local Authorities in the RECAP partnership collect waste for composting on a large scale, but home composting is to be encouraged. To this end, developers should evaluate the potential for providing compost bins to individual dwellings as appropriate providing the immediate opportunity for householders to actively partake in waste reduction.

Typically, home composting is achieved passively (such as through piling or containing suitable wastes and leaving them to decompose). However, more active methods include vermicomposting (worm composting). Compostable waste is added to a container filled with moistened bedding and redworms which, along with micro-organisms, eventually turn the waste into a rich compost.

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10.3 Community Schemes

10.3.1 Cambridgeshire Community Reuse and Recycling Network (CCORRN)

CCORRN (www.ccorrn.org.uk) is a partnership between the community, public and private sector and was started in 2003. Financial support was awarded to Cambridgeshire County Council for its establishment, from DEFRA's Recycling Challenge Fund and Enventure.

CCORRN's goal when incepted was to successfully increase the quantity of community reuse and recycling projects in the County. The network aims to:

- Share knowledge and skills and disseminate best practice;
- Assist projects in accessing funding to secure long-term viability;
- Build and strengthen partnerships between all those interested;
- Provide regular easy access to information;
- Work with other parties on wider joint projects; and
- Raise awareness and profile of the Network.

10.3.2 Community Recycling Network

The Community Recycling Network UK (www.crn.org.uk) is the national umbrella organisation for community-based, not-for-profit and co-operative waste management groups which work in reduction, re-use and recycling.

CRN helps its members by:

- co-ordinating networks for groups to share information and ideas;
- organising events to bring people together;
- offering advice for members to develop operations and infrastructure;
- lobbying decision-makers; and
- providing advice, training, information and support.

10.3.3 Groundwork

Groundwork (www.groundwork.org.uk) supports communities in need, working with partners to help improve the quality of people's lives, their prospects and potential and the places where they live, work and play.

Groundwork East of England covers 6 counties: Essex, Hertfordshire, Bedfordshire, Cambridgeshire, Norfolk and Suffolk. The regional office is based within the Forest Centre, in the heart of the Forest of Marston Vale, Bedfordshire, with staff working alongside the established Community Forest team.

Groundwork East Lancashire supported the development of Offshoots, a community scheme collecting catering waste from households for composting.

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10.4 Recycling Networks

10.4.1 RECAP Swap and Sell Scheme

RECAP hosts a swap and sell service on its website (www.recap.co.uk). It is a free online exchange service where the public can access details about unwanted or surplus items and view requests for wanted goods. It's main aim is to help users get rid of unwanted items or to enable users to find goods that others no longer need.

10.4.2 Freecycle UK

The UK Freecycle Network (www.ukfreecycle.org) is made up of many individual groups across the globe. Freecycle groups match people who have things they want to get rid of with people who can use them.

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HOW TO USE THE TOOLKIT

The TOOLKIT will allow effective evaluation of the waste management requirements for a development.

COMPONENTS

The Toolkit is made up of 3 tools as described below. The tools are interlinked and refer to each other as appropriate.

Toolkit Components		
DESIGN STANDARDS CHECKLIST	**ASSESSMENT CRITERIA**	**POTENTIAL CONDITIONS AND AGREEMENTS**
Developers will be expected to demonstrate that their proposals satisfy the requirements of this Guide by assessing their proposals against the expected standards which are brought together under the DESIGN STANDARDS CHECKLIST.	Depending upon development proposals, it may be that a developer is required to conduct a wider assessment of the impact of their scheme (or aspects thereof). Criteria for such an assessment are presented under the ASSESSMENT CRITERIA.	For some developments it may be appropriate to apply planning conditions or negotiate S106 agreements relating to several factors as detailed under the POTENTIAL CONDITIONS AND AGREEMENTS.

APPLICABILITY AND USE

DESIGN STANDARDS CHECKLIST	Applies to all developments. To be used and completed by the **developer** and supported by plans and/or documents as appropriate.
ASSESSMENT CRITERIA	To be completed by the **developer** where proposals involve: the construction of waste storage compound(s); and/or installation of Bring Site infrastructure; and/or alternative schemes.
POTENTIAL CONDITIONS AND AGREEMENTS	To be utilised by the **Local Planning Authority** as appropriate in relation to: the provision of waste storage containers; the Recycling Centre network; and the Bring Site network.

Where appropriate, the Toolkit will supplement a waste audit.

PROCESS

The diagram on the following page illustrates the process for completing the Toolkit and shows responsibilities.

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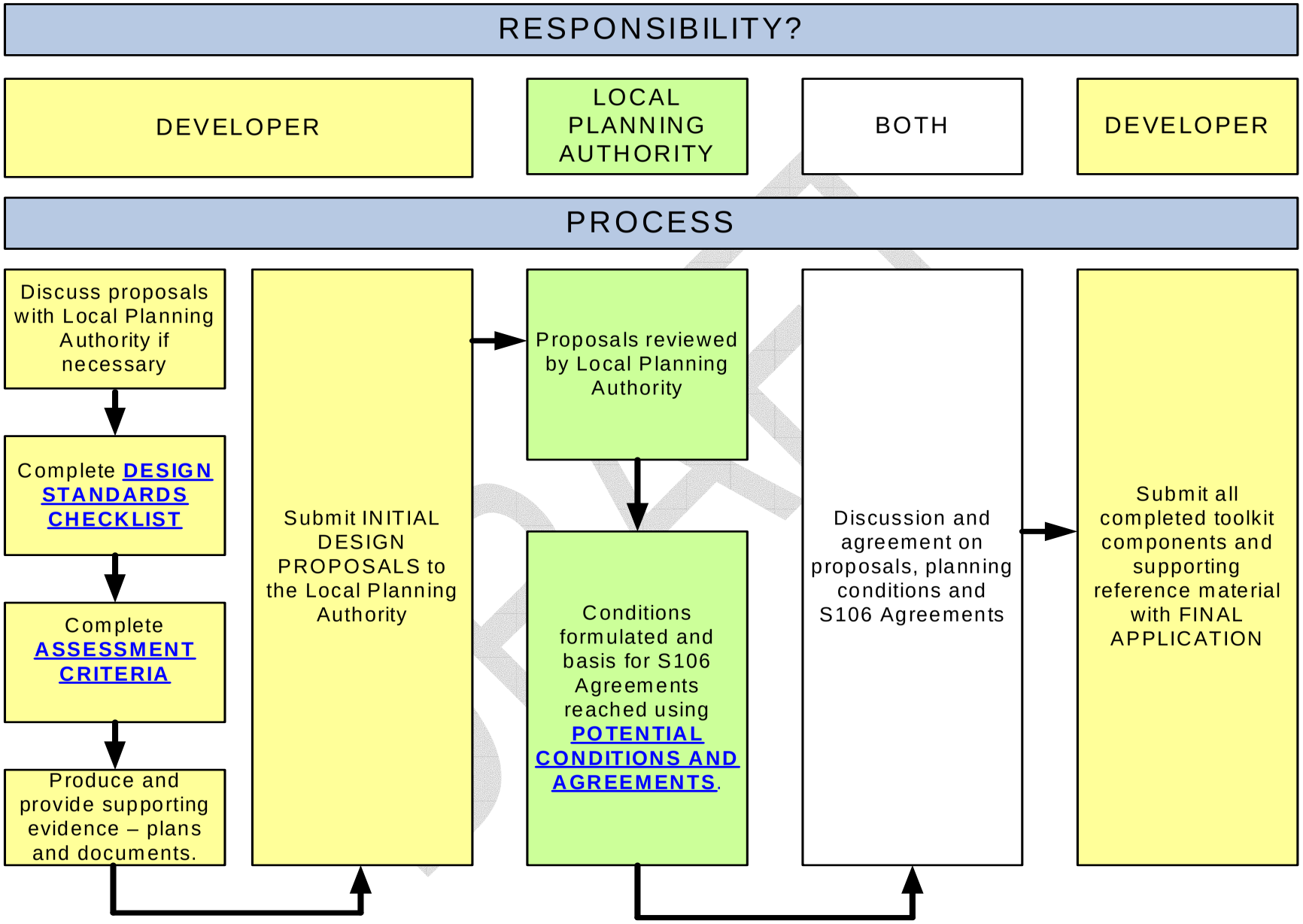
RESPONSIBILITY?
DEVELOPER
LOCAL PLANNING AUTHORITY
BOTH
DEVELOPER
PROCESS
Discuss proposals with Local Planning Authority if necessary
Complete DESIGN STANDARDS CHECKLIST
Complete ASSESSMENT CRITERIA
Produce and provide supporting evidence – plans and documents.
Submit INITIAL DESIGN PROPOSALS to the Local Planning Authority
Proposals reviewed by Local Planning Authority
Conditions formulated and basis for S106 Agreements reached using POTENTIAL CONDITIONS AND AGREEMENTS.
Discussion and agreement on proposals, planning conditions and S106 Agreements
Submit all completed toolkit components and supporting reference material with FINAL APPLICATION

DESIGN STANDARDS CHECKLIST

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INSTRUCTIONS

USAGE

To be completed by the developer and submitted to the Local Planning Authority with all supporting plans and/or documents.

The DESIGN STANDARDS CHECKLIST applies to all developments of a residential, commercial or mixed residential/commercial nature regardless of scale.

COMPLETION

Completion involves 2 distinct steps:

STEP 1 This is the standard required. Developers should ensure that they are aware of the minimum expectations the Design Guide places upon them. A tick should be placed in the adjacent box to signify that an issue has been considered at the stage of initial design proposals. Where a standard is not met, the developer must state why.

STEP 2 Evidence of design specifications/details should be provided to the Local Authority with reference to the necessary relevant plans and/or documents made in the final box.

NOTE: Consultation with the Local Authority is encouraged, particularly where proposals relate to large scale development.

SUBMISSION

The completed DESIGN STANDARDS CHECKLIST must be submitted with all initial design proposals and will be reviewed by the Local Planning Authority.

The DESIGN STANDARDS CHECKLIST will then be submitted with all final development applications following any discussion with the Local Planning Authority and necessary amendments.

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RECAP WASTE MANAGEMENT DESIGN GUIDE - DESIGN STANDARDS CHECKLIST

KEY CONSIDERATION	STEP 1		STEP 2
	AWARE OF STANDARD MINIMUM EXPECTATIONS?	DOES THIS APPLY TO YOU? √ or X	SUBMIT PROPOSALS TO PLANNING AUTHORITY (PROVIDE PLAN/DOCUMENT REFERENCE)
Residential - Internal Storage Requirement Refer to Part 4.2 of the Design Guide.	35 – 40 litres for single dwellings and multi-occupancy developments (low-rise and high-rise) permitting segregation of waste as appropriate. Typical container specifications are detailed at APPENDIX A.		
Residential - External Storage Requirement Refer to Part 4.2 of the Design Guide.	**Single Dwelling -** Space for containers allowing 775 litres of capacity must be provided. Typical container specifications are detailed at APPENDIX A. Provision of containers and/or financial contributions towards may also be required.		
	Low-rise with communal gardens - Space for containers allowing between 320 and 720 litres of capacity per unit (depending on room number) must be provided. Typical container specifications are detailed at APPENDIX A. Provision of containers and/or financial contributions towards may also be required.		
	Low-rise without communal gardens - Space for containers allowing between 240 and 640 litres of capacity per unit (depending on room number) must be provided. Typical container specifications are detailed at APPENDIX A. Provision of containers and/or financial contributions towards may also be required.		
	High-rise - Space for containers allowing between 240 and 640 litres of capacity per unit (depending on room number) must be provided. Typical container specifications are detailed at APPENDIX A. Provision of containers and/or financial contributions towards may also be required.		
Commercial - Storage Requirements Refer to Part 4.3 of the Design Guide.	**Offices** 2600 litres per 1000m gross floor area. Typical container specifications detailed at APPENDIX A.		
	Retail 5000 litres per 1000m gross floor area. Typical container specifications detailed at APPENDIX A.		
	Restaurants/Fast Food Outlets 1500 litres per 20 dining spaces. Typical container specifications detailed at APPENDIX A.		
	Hotels 5000 litres per 20 dining spaces. Typical container specifications detailed at APPENDIX A.		
Waste Storage Point - Single Houses Refer to Part 5.3 of the Design Guide.	• Waste should not have to be moved more than 30m to storage area; • Storage location should not be more than 30m distance from the collection point; • Passage of a 240l wheelie-bin from store to collection point should avoid steps, but where not possible should avoid transfer over more than 3 steps. • Gradients over which containers must traverse should not exceed 1:20. • Not have to be moved through a building to the collection point.		
Waste Storage Point – Flats and Apartments and Commercial Developments Refer to Part 5.3 of the Design Guide Refer to Part 5.4 of the Design Guide.	• Waste should not have to be moved more than 30m (excluding vertical distance) to storage area; • Storage location should not be more than 10m distance from the collection point; • Passage of waste containers from store to collection point should avoid steps, but where not possible should avoid transfer over more than 3 steps. • Gradients over which containers must traverse should not exceed 1:12		
Waste Storage Infrastructure Refer to Part 6 of the Design Guide.	Where infrastructure is installed for the communal storage of waste a **SIMPLE** assessment of the location and proposed infrastructure must be made against the key factors as specified in the accompanying ASSESSMENT CRITERIA . The size of any storage area should be capable of accommodating the required number of waste receptacles (and their associated dimensions) or provide adequate capacity. General design features for **above-ground storage compounds:** • Sufficient clearance provided to allow full opening of the container lid; • 150mm clear space between and around containers; • Minimum working headroom of at least 2m (where compound is covered); and • Layout such that any one receptacle can be serviced without having to move any other receptacle. Specific design requirements are detailed at APPENDIX D and should be referred to. **Underground storage systems** require: • Area(s) of ground free from services; and • Sufficient clear space above and around to allow emptying of containers. An indicative generic specification of an underground Bring Site facility is attached as APPENDIX G.		
Highways Refer to Part 7.4 of the Design Guide.	Where development proposals will seek to utilise a standard service as provided by the Waste Collection Authority, highways should: • Have a minimum width of 5m; • Permit collection vehicles to continue mainly in a forward direction; • Not require vehicles to reverse more than 12m; • Be constructed in accordance with relevant guidance; and • Allow at least 4m vertical clearance. In addition a minimum working area of 3.5m width and 4m in length should be allowed where the emptying of containers takes place.		
Recycling Centre Requirement Refer to Part 8.4 of the Design Guide.	Where appropriate, developers will be expected to: • Provide finance for upgrading existing Recycling Centres; or • Provide finance for new Recycling Centres; and/or • Make land available for strategically located Recycling Centres Section 106 Agreements or other suitable legal agreements, will be used to secure contributions/land and ensure that adequate provision is made.		
Bring Site Requirement Refer to Part 9.3 of the Design Guide Refer to Part 9.4 of the Design Guide.	Where appropriate, to ensure provision of 1 bring site per 800 households, developers may be required to: • Finance and/or provision of infrastructure for new sites; or • Provide finance for upgrading existing facilities. Developers will also need to provide temporary facilities by occupation of the 50th property. Both temporary and permanent Bring Site facilities should be located at least 20m distance from the nearest property, accessible by service vehicles and located so as to avoid damage to overhead services during servicing. Section 106 Agreements or other suitable legal agreements, will be used to secure contributions and ensure that adequate provision is made. A **SIMPLE** assessment of the location and proposed infrastructure must be made against the key factors as specified in the accompanying ASSESSMENT CRITERIA .		
Alternative Waste Management Schemes Refer to Part 1.4 of the Design Guide.	A **DETAILED** assessment of the scheme must be made against the key factors as specified in the accompanying ASSESSMENT CRITERIA . A developer will be required to fund such schemes beyond the amount the Local Authority would otherwise pay for standard service and pay for and provide non-standard infrastructure.		

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ASSESSMENT CRITERIA

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INSTRUCTIONS

USAGE

To be completed by the developer and submitted to the Local Planning Authority with all supporting plans and/or documents.

The assessment criteria tool only has to be used where development proposals involve:

- Construction of a waste storage compound; and/or
- Installation of Bring Site infrastructure; and/or
- An alternative scheme.

However, where the ASSESSMENT CRITERIA TOOL would otherwise not apply, a developer may still wish to voluntarily assess the waste management aspects of their development proposal against several or all of the key factors.

COMPLETION

Completion of the ASSESSMENT CRITERIA TOOL should be as follows:

Waste Storage Compound	Complete Sheet A. Provide a SIMPLE assessment
Installation of Bring Site Infrastructure	Complete Sheet B. Provide a SIMPLE assessment. Discussion with Local Planning Authority required for issues of accessibility and health and safety.
Alternative Scheme	Complete Sheet C. Provide a detailed assessment. Consultation with Local Planning Authority mandatory for all issues.

SIMPLE Assessments – adequate amount of information to demonstrate suitability of proposals required.

DETAILED Assessments – detailed information must be provided to demonstrate the suitability of proposals.

SUBMISSION

The completed ASSESSMENT CRITERIA tool must be submitted with all initial design proposals and will be reviewed by the Local Planning Authority.

The ASSESSMENT CRITERIA tool will then be submitted with all final development applications following any discussion with the Local Planning Authority and necessary amendments.

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RECAP WASTE MANAGEMENT DESIGN GUIDE
ASSESSMENT CRITERIA

SHEET A

WASTE STORAGE COMPOUND

ASSESSMENT FACTOR	INFORMATION REQUIRED – SIMPLE ASSESSMENT	SUBMIT ASSESSMENT TO PLANNING AUTHORITY (PROVIDE DOCUMENT REFERENCE)
Quality Place Making	Design should also be assessed for consistency with the wider development framework and the promotion of quality place making.	
Proposals for On-site Treatment	On-site treatment (e.g. bailing, compaction or other treatment that may be utilised in an alternative scheme) may be beneficial on larger sites. In such cases, a clear illustration must be provided of (where appropriate): • Sustainability of treatment methods; • Waste volume reduction; • Beneficial use of waste (recovery of value, energy, etc); • Implications for Waste Collection Authority and Waste Disposal Authority.	
Accessibility	Depending upon the waste infrastructure employed, it must be demonstrated that: • The location chosen offers convenience and efficiency for all users; • An assessment of potential user conflict has been made with appropriate solutions provided; and • Marking and signage is adequate for function.	
Health and Safety	All proposals must be accompanied by a health and safety risk assessment and account must be made of (where appropriate): • Lighting; • Steps and gradients; • Marking and signage; • User conflicts; • Risks from equipment/technology utilised; • Training requirements (operators);	
Security	It must be clearly demonstrated that proposals: • Will not jeopardise the security of the wider area; and • Infrastructure will, as appropriate, feature security measures that permit efficient user operation but are robust enough to deter vandalism, arson and other forms of misuse. Notes on waste compound security are presented at APPENDIX E.	
Protection of the Environment	Assessment must be made of the impact proposals may have in terms of: • Nuisance and amenity (including visual impact); and • Pollution threat to environmental media (i.e. air, land and water). Suitable mitigation measures must be outlined.	
Maintenance	Where maintenance responsibility lies with the developer they must: • Submit proposed maintenance schedules (routine and non-routine); • Submit proposals for maintaining records of works undertaken; and • Submit details of third party contractors to be employed.	

For multiple storage points/methods, this table should be copied and completed as appropriate.

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RECAP WASTE MANAGEMENT DESIGN GUIDE
ASSESSMENT CRITERIA

SHEET B

PROVISION OF BRING SITE INFRASTRUCTURE

ASSESSMENT FACTOR	INFORMATION REQUIRED – SIMPLE ASSESSMENT	DISCUSSED WITH LOCAL AUTHORITY? √ or X	SUBMIT ASSESSMENT TO PLANNING AUTHORITY (PROVIDE DOCUMENT REFERENCE)
Quality Place Making	Design should also be assessed for consistency with the wider development framework and the promotion of quality place making.		
Proposals for On-site Treatment	On-site treatment (e.g. bailing, compaction or other treatment that may be utilised in an alternative scheme) may be beneficial on larger sites. In such cases, a clear illustration must be provided of (where appropriate): • Sustainability of treatment methods; • Waste volume reduction; • Beneficial use of waste (recovery of value, energy, etc); • Implications for Waste Collection Authority and Waste Disposal Authority.		
Accessibility	Depending upon the waste infrastructure employed, it must be demonstrated that: • The location chosen offers convenience and efficiency for all users; • An assessment of potential user conflict has been made with appropriate solutions provided; and • Marking and signage is adequate for function.	√	
Health and Safety	All proposals must be accompanied by a health and safety risk assessment and account must be made of (where appropriate): • Lighting; • Steps and gradients; • Marking and signage; • User conflicts; • Risks from equipment/technology utilised; • Training requirements (operators);	√	
Security	It must be clearly demonstrated that proposals: • Will not jeopardise the security of the wider area; and • Infrastructure will, as appropriate, feature security measures that permit efficient user operation but are robust enough to deter vandalism, arson and other forms of misuse. Notes on waste compound security are presented at APPENDIX E.		
Protection of the Environment	Assessment must be made of the impact proposals may have in terms of: • Nuisance and amenity (including visual impact); and • Pollution threat to environmental media (i.e. air, land and water). Suitable mitigation measures must be outlined.		
Maintenance	Where maintenance responsibility lies with the developer they must: • Submit proposed maintenance schedules (routine and non-routine); • Submit proposals for maintaining records of works undertaken; and • Submit details of third party contractors to be employed.		

For provision of multiple Bring Sites, this table should be copied and completed as appropriate.

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RECAP WASTE MANAGEMENT DESIGN GUIDE
ASSESSMENT CRITERIA

SHEET C

ALTERNATIVE SCHEMES

ASSESSMENT FACTOR	INFORMATION REQUIRED – DETAILED ASSESSMENT	CONSULT LOCAL AUTHORITY	SUBMIT ASSESSMENT TO PLANNING AUTHORITY (PROVIDE DOCUMENT REFERENCE)
Development Density and Scale	A developer must demonstrate that their proposals: • Will adequately serve the population density of their development and, if applicable, the wider population; • Allocate sufficient land to allow their proposals to function efficiently; • Provide sufficient capacity to account for anticipated density changes in the short-term.	√	
Infrastructure Design	It must be demonstrated that infrastructure employed: • Is adequate to execute function; • Is robust and durable; • Is compliant with all relevant standards; and • Avoids unnecessary complexity.	√	
Quality Place Making	Design should also be assessed for consistency with the wider development framework and the promotion of quality place making.	√	
Proposals for On-site Treatment	On-site treatment (e.g. bailing, compaction or other treatment that may be utilised in an alternative scheme) may be beneficial on larger sites. In such cases, a clear illustration must be provided of (where appropriate): • Sustainability of treatment methods; • Waste volume reduction; • Beneficial use of waste (recovery of value, energy, etc); • Implications for Waste Collection Authority and Waste Disposal Authority.	√	
Accessibility	Depending upon the waste infrastructure employed, it must be demonstrated that: • The location chosen offers convenience and efficiency for all users; • An assessment of potential user conflict has been made with appropriate solutions provided; and • Marking and signage is adequate for function.	√	
Health and Safety	All proposals must be accompanied by a health and safety risk assessment and account must be made of (where appropriate): • Lighting; • Steps and gradients; • Marking and signage; • User conflicts; • Risks from equipment/technology utilised; • Training requirements (operators);	√	
Security	It must be clearly demonstrated that proposals: • Will not jeopardise the security of the wider area; and • Infrastructure will, as appropriate, feature security measures that permit efficient user operation but are robust enough to deter vandalism, arson and other forms of misuse.	√	
Protection of the Environment	Assessment must be made of the impact proposals may have in terms of: • Nuisance and amenity (including visual impact); and • Pollution threat to environmental media (i.e. air, land and water). Suitable mitigation measures must be outlined.	√	
Maintenance	Where maintenance responsibility lies with the developer they must: • Submit proposed maintenance schedules (routine and non-routine); • Submit proposals for maintaining records of works undertaken; and • Submit details of third party contractors to be employed.	√	

Where several alternative schemes are proposed, this table should be copied and completed as appropriate.

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POTENTIAL CONDITIONS AND AGREEMENTS

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INSTRUCTIONS ON USE

USAGE

To be used by the Local Planning Authority when assessing initial design proposals as submitted by the developer.

It may be appropriate to apply conditions or reach agreement on several factors in relation to the development and this tool is a platform for negotiating suitable solutions to arrangements for:

- Financial Contributions;
- Infrastructure and Land Provision;
- Location Issues; and
- Infrastructure ownership and maintenance.

INFORMING DEVELOPER

Any conditions or agreements should be applied in accordance with standard planning mechanisms.

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RECAP WASTE MANAGEMENT DESIGN GUIDE
POTENTIAL CONDITIONS AND AGREEMENTS

FACTOR	BASIS FOR CONDITION OR AGREEMENT	APPLICABLE TO?		
		RESIDENTIAL DEVELOPMENTS	BRING SITE	RECYCLING CENTRE
Finance-A	Finance will be provided by the developer sufficient to allow for the provision of appropriate waste containers.	√	N/A	N/A
Infrastructure-A	Provision of appropriate waste containers shall be made by the developer sufficient to meet the needs of the development.	√	N/A	N/A
Finance-B	Finance will be provided by the developer sufficient to allow the upgrade of facilities or the creation of new facilities.	N/A	√	√
Infrastructure-B	Infrastructure suitable for the creation of both temporary and permanent facilities (as appropriate) will be provided by and installed by the developer. In the case of temporary facilities, the developer shall also be responsible for removal of infrastructure and developing the land in a manner that is either consistent with their wider development as agreed with the Local Planning Authority or in accordance with Local Planning Authority specifications.	N/A	√	N/A
Land	An area of land/areas of land will be provided by the developer sufficient in size to allow the creation of new facilities.	N/A	√	√
Location*	Suitable locations shall be provided for the provision of both temporary and permanent facilities so as to be easily and conveniently accessible to site users and service vehicles. Such locations shall be identified to the Local Planning Authority.	N/A	√	N/A*
Ownership	Land and infrastructure ownership shall be retained by the developer until such time as the developer has demonstrated to the satisfaction of the Local Planning Authority that adequate arrangements governing future ownership are in place.	N/A	√	N/A
Management & Maintenance	The developer should make adequate arrangements for the management and maintenance of all temporary facilities. The developer should demonstrate to the satisfaction of the Local Planning Authority that adequate arrangements are in place for the future management and maintenance of all permanent facilities.	N/A	√	N/A

* The location of a Recycling Centre must meet the needs of the Mineral and Waste Local Development Framework and Waste Disposal Authority.

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AN INTEGRATED APPROACH TO WASTE MANAGEMENT IN FLATS AND APARTMENTS

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Introduction

Today, development types are shifting towards high density across the UK due to constraints on available space. This presents a number of issues to effective waste management for a range of stakeholders – developers, residents and service providers alike.

Three key aspects arise:

- Residents – *convenience*;
- Local Authorities – *efficiency and cost effectiveness of service*;
- Developers – *space*.

The above aspects should be viewed as opportunities for innovation and creativity and co-operation.

Waste management in high-density developments is a challenging issue and it is therefore of prime importance that users of this Guide are aware that the authorities in the RECAP Partnership welcome the proposal of creative and innovative schemes.

The solution proposed below is a simple fictional scenario from which developers may take useful ideas and develop further in their own designs. This model is not the fundamental solution but a guide for the way forward and importantly highlights the need for integrated solutions.

Example Scenario

Of principle importance to the creation of a successful waste management scheme in a high density development allowing for effective segregation, storage and collection of waste is consultation with the Local Authority. Though encouraging innovation, consultation will allow for realism and an achievable solution.

The Development

The proposed development comprises a 10 storey apartment block (high-rise) of 40 apartments and a 4 storey apartment block (low-rise) of 16 apartments. A breakdown of apartments by size is illustrated in the table below.

High-rise Apartment Block	Low-rise Apartment Block
10 x 1 room units	4 x 2 room units
10 x 2 room units	8 x 3 room units
10 x 3 room units	8 x 4 room units
10 x 4 room units	

The high-rise apartment block has a carpark and landscaped areas. The low-rise apartment block has a carpark and communal gardens. The single dwellings are formed in a row and immediately front onto the footway. The development is accessible by 2 main routes within the area.

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The Planning Process Regarding Waste

The developer utilised the RECAP WASTE MANAGEMENT DESIGN GUIDE TOOLKIT which was completed, as appropriate and submitted in its entirety with the proposals. Completion of the Toolkit was done in close consultation with the Local Planning Authority.

Contributions were secured by the council for upgrading the network of Recycling Centres in the area and a Section 106 Agreement was utilised to ensure the installation of a Bring Site. It was agreed that the Bring Site would be adopted by the Local Authority upon completion of the development.

Established Waste Services

After discussions with the Local Authority, the developers have established that the following services will be provided:

- Collection of mixed dry recyclables; and
- Collection of residual waste.

The Waste Collection Authority operates an alternate weekly collection for residual waste and mixed dry recyclables.

In addition, a Community Trust composting scheme is established in the area. They accept green garden waste and are willing to collect food waste from households for composting. The trust is supported by the Local Authority who use the compost for their public parks and gardens. The trust also offers a service for the collection of bulky household waste items.

Internal and External Waste Storage

Internal waste containers (i.e. waste receptacles in the kitchen) will be provided by the developer for the high-rise and low-rise block and for the single dwellings. This will comprise:

- 1 x 20 litre kitchen caddy for residual waste in each kitchen
- 1 x 20 litre kitchen caddy for mixed dry recyclables in each kitchen
- 1 x 10 litre caddy with compostable liner for each kitchen provided by the Community Trust.

External waste capacity will be as detailed in the table below. Finance towards the provision of waste containers has been secured through a Section 106 Agreement.

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High-rise Apartment Block	Low-rise Apartment Block
Capacity Capacity equivalent to 14,600 litres *See Table 6 (PART 3) for recommended external storage capacities.* Following discussion with the Local Authority the capacity split will be 60% (8760 litres) for residual waste and 40% (5840 litres) mixed dry recyclables. ***Storage Units*** 1 x 9.5m^3 portable skip compactor for residual waste. 1 x 9.5m^3 enclosed skip for mixed dry recyclables.	***Capacity*** Capacity equivalent to 1560 litres *See Table 6 (PART 3) for recommended external storage capacities.* Following discussion with the Local Authority the capacity split will be 50% (780 litres) for residual waste, 40% (624 litres) for mixed dry recyclables and 10% (156 litres) for green (garden) waste. ***Storage Units*** 1 x 3m^3 underground waste storage unit for residual waste. 1 x 3m^3 underground waste storage unit for mixed dry recyclables. 1 x 240 litre wheelie bin for garden waste.

Systems, Supporting Infrastructure and Additional Provision

The systems used to convey waste from the point of generation to the point of temporary storage are detailed in the table below. Facilities Management is a fundamental requirement for both blocks – essential for maintenance and servicing.

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High-rise Apartment Block	Low-rise Apartment Block
Residual Waste and Mixed Dry Recyclables	***Residual Waste and Mixed Dry Recyclables***
Chute system accessible from each floor. The system comprises 2 separate chutes allowing the segregation of waste - one chute feeding the portable skip compactor with residual waste, the other feeing the enclosed skip with mixed dry recyclables.	Resident transit. Residents are required to carry their waste from the point of generation and deposit it through the ground level receptacle to the appropriate underground storage container – i.e. for residual waste or mixed dry recyclables.
Food Waste	***Food Waste***
Collected on a door to door basis in the caddy provided by the Community Trust. Caddy replaced.	Collected on a door to door basis in the caddy provided by the Community Trust. Caddy replaced.
Bulky Waste	***Garden Waste***
Residents are advised to contact Facilities Management where bulky waste items arise. A store room is provided for bulky waste items. The store is checked periodically by Facilities Management and collection arrangements made with the Community Trust as appropriate.	Collected by the Community Trust for composting. ***Bulky Waste*** Residents are advised to contact Facilities Management where bulky waste items arise. They will then transfer it to the store room at the high-rise block.

As regards the Community Trust and the collection of food waste, the high-rise and low-rise apartment blocks have each been provided with a motorised flat bed trolley by the developer to which a suitable frame and containment structure has been added. This enables them to easily collect and replace receptacles on a door to door basis utilising the service lifts installed in each block.

Facilities Management and Maintenance

The developer had written into the property deeds a requirement for the provision of a Facilities Management service. This is provided on a contract basis for the upkeep of the apartment blocks (and in the case of the low-rise development this includes upkeep of the communal gardens). A maintenance charge is levied upon residents for this service.

As part of their contract, it has been agreed that the Facilities Management service provider will monitor and maintain records on waste from the developments. Waste audits are undertaken periodically and allow for adjustments to be made in waste management (such as collection frequency) ensuring the most efficient service possible is provided.

In addition, Facilities Management work in partnership with the Local Authority to provide education and information to residents on a range of matters including waste management. Up-to-date information is made available in common areas.

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Waste Collection

For the high rise development, access to the waste compound where the skips are located is via a separate road from that to the residents carpark. The collection vehicle reverses down the access road to collect the unit. The replacement unit is delivered in the same way.

The bulky waste store is located adjacent to the waste compound.

For the low-rise development, the underground waste storage units are accessible from the road and are lifted out by crane arm, emptied and replaced.

Bring Site

The new development entails the installation of a new Bring Site to serve the development itself and the wider area. Four underground banks each with a capacity of $5m^3$ have been installed. They are located close to the road and can be serviced in the same manner as that outlined for the low-rise development.

Summary and Conclusion

For multi-occupancy dwellings it is unlikely that any one option will provide a complete solution to segregation, storage and collection of waste. An integrated and consider approach is required.

To ensure adequate waste management this model demonstrates:

- Consultation with the Local Authority;
- Completion of the RECAP Waste Management Design Guide Toolkit;
- The use of legal agreements;
- Appropriate design;
- Co-operation with Community Groups; and
- The use of a variety of waste infrastructure.

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CASE STUDIES

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Access Planning, Huntingdon

A block of flats to 3 floors and a community centre were constructed in the centre of Huntingdon. Huntingdonshire District Council were consulted extensively on the development from the design stage through to project completion. Through the Environment and Planning Department, contact was made with Waste Collection.

Following consultation, designers ensured:

- Sufficient width at access points and along access corridors to permit the type of refuse vehicle employed by the council;
- Short distances between the public highway and the waste storage compound;
- Unobstructed access to refuse collection points – e.g. car-parking located away from waste storage compound;
- Short distances for collection crews to move waste receptacles;
- Flat or very low-graded surfaces from the public highway to the waste storage compound;
- Dropped kerb lines and rounded corners permitting improved access for collection vehicles.

In addition, in their original plans, the designers were looking to create an archway, spanning the entrance providing access to the waste chambers. After consultation, it was decided to drop this feature due to minimum height requirements of the refuse collection vehicles.

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Underground Storage of Waste, Peterborough

Peterborough City Council have installed a number of underground waste storage banks at various areas across the city. The scheme is being run in partnership with Huntingdonshire District Council.

Underground units have been installed at multi-occupancy residential developments and within areas of mixed use acting as bring sites. In residential locations, the units are being used to collect mixed dry recyclables and residual waste. Where installed in mixed use areas, the units are used to collect segregated recyclables.

A hiab vehicle services the unit. Via remote control, the crane arm raises the unit up above the storage container of the vehicle. Trap doors at the bottom are released, again by remote control, and the waste deposited.

The underground system has a number of advantages:

- Unobtrusive visible street furniture with storage unit located below ground and out of sight;
- Large capacity;
- Modular construction minimises risk of pollution to the environment – reinforced concrete liner with galvanized steel container with welded joints;
- Problems from waste odours and noise from waste deposit are reduced due to contained nature of the system.

Across Peterborough the underground waste storage solution is held as having high potential.

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Waste Recycling Chutes in Paddington

Westminster City Council has successfully converted a refuse collection chute at a high-rise residential estate (Hallfield Estate) in Paddington.

Since installation in November 2006, recycling rates on the estate have tripled and Westminster City Council is considering introducing the scheme across the borough.

The chute system now allows residents to segregate recyclable materials from residual waste and accepts all recyclable material types collected by the council as mixed dry recyclables. Deposited materials fall into a soundproof bin which significantly reduces noise nuisance.

For further information see www.westminster.gov.uk/councilgovernmentanddemocracy/councils/pressoffice/news/pr-3583.cfm.

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Tower Hamlets Community Recycling Consortium (THCRC)

THCRC is a not-for-profit local community recycling company in Tower Hamlets. Its broad aim is to increase level of recycling from households and other sectors within the area. THCRC was formed partly to satisfy the strategy of the local authority who were determined that partnership working with local community groups was the best way to meet the recycling needs of a borough with many high-rise flats. THCRC is a member of London Community Recycling Network and the National Community Recycling Network.

They operate a large scale door to door recycling scheme serving a great number of residents in high-rise flats. They currently collect 13 types of waste material for recycling from residents doorsteps using a 'green box' system. Working in partnership with Estate Management Boards, Tenant Management Associations and local residents, 30000 green boxes and information leaflets have been distributed to households in the high rise estates.

Residents are asked to leave their green boxes outside their front doors in the corridors on the appointed day of collection. On the day of collection trained operatives, utilising a special high rise-recycling trolley, pass through the buildings via the lifts and corridors and sort the contents of the green box into various compartments (bulk bags are hung by their straps on a top frame divided into seven sections). which can then be removed from the trolley when full and left, after securing it with a bungee cord, in a side alley on each floor, until the whole floor is completed.

For further information see www.thcrc.co.uk.

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Offshoots Community Composting Scheme

The Offshoots project is a community project in Burnley, Lancashire. It is managed by Groundwork East Lancashire and by its own committee of local people.

This project involves collecting household kitchen waste and taking it back to Offshoots and turning it into compost using three machines called 'Rockets' which have been engineered by Accelerated Compost Limited. Instead of taking several months to make compost (as standard processes allow), the Rockets take only 2 weeks.

Compost officers first go out and collect the kitchen waste from participating households in a bio-diesel powered vehicle and then add the kitchen waste into the 'Rockets' with wood chip to provide the correct balance of carbon material (wood chip) to nitrogen material (kitchen waste). The mixture then spends 2 weeks within the 'Rockets' slowly decomposing. When ready, the compost is stored prior to being sold to the council's Parks Department for use within the grounds of Towneley Hall.

For further information see www.offshoots.org.uk.

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Recycling in Flats Everyday (RIFE), Bristol

Out of the 173,000 households in Bristol, 27,000 are flats with most not suitable for kerbside collection of recyclables.

However, with the development of over 200 Mini Recycling Centres (MRCs) across the city,residents living in multi-occupancy dwellings can now recycle their paper, cans and glass. Since its inception in 2004, the RIFE project has worked at a community level with residents, caretakers, scheme managers, housing officers and agents encouraging them to use the MRCs for all their recyclables.

During 2005 RIFE workers distributed thousands of recycling 'Green Bags' to over 100 households served by a MRC. The bags are made from woven polypropylene and are re-usable, washable and can be easily stored when not in use. They come in two sizes and are designed to hold a week's worth of recyclables. The bags carry information about all the materials that can be recycled at the MRC.

There are now nearly 250 on-site MRCs where residents recycle paper, cans and glass. Sites served range from high to low rise blocks and include everything from prestigious city centre apartments to suburban sheltered housing schemes.

For further information see www.recyclingconsortium.org.uk/community/rife.htm.

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APPENDIX A

EXTERNAL AND INTERNAL STORAGE UNITS

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External Storage Containers

Dimensions

Two-wheeled Containers and Boxes	
Container Type	**Essential Dimensions (l x w x h) (mm)**
140 litre wheelie bin	500 x 555 x 950
240 litre wheelie bin	580 x 740 x 1100
360 litre wheelie bin	480 x 880 x 1100
55 litre box	395 x 585 x 375
38 litre box	385 x 585 x 275

Four-wheeled Containers	
Container Type	**Essential Dimensions (l x w x h) (mm)**
1280 litre	1280 x 1000 x 1445
1100 litre	1270 x 1000 x 1380
820 litre	1250 x 1800 x 1370
770 litre	1265 x 810 x 1360
660 litre	1265 x 740 x 1320
500 litre	1305 x 745 x 1145

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Underground Systems

Typical dimensions are as follows:

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

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Internal Storage Containers

A wide range of internal bins are available and below only a selection of dimensions are illustrated.

Single Compartment Examples - Freestanding	
Container Type	**Essential Dimensions (mm)**
40 litre bin (semi-cylindrical)	435 (l) x 302 (w) x 716 (h)
30 litre bin (cylindrical)	722 (h), 293 (Ø)
20 litre bin (cylindrical)	717 (h), 251 (Ø)
38 litre bin (cuboid)	400 (l) x 310 (w) x 648 (h)
45 litre (cuboid)	400 (l) x 280 (w) x 737 (h)

Multi-Compartment Examples - Freestanding	
Container Type	**Essential Dimensions (mm)**
Two Compartments 30 litre capacity (1x19 litre and 1 x 11 litre housed in one unit)	47 (l) x 25 (w) x 44 (h)
Three Compartments 33 litre capacity (3 x 11 litre housed in one unit)	47 (l) x 25 (w) x 44 (h)

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Multi-Compartment Examples - Fitted	
Container Type	**Essential Dimensions** **(mm)**
Three Compartments 40 litre capacity (1 x 19 litre, 1 x 12 litre and 1 x 9 litre seated in single wire frame housing)	For installation in hinged door cabinents. To fit cabinet with minimum of 500mm horizontal clear space and a height of 525mm.
Four Compartments 39 litre capacity (1 x 12 litre and 3 x 9 litre seated in single wire frame housing)	For installation in hinged door cabinents. To fit cabinet with minimum of 500mm horizontal clear space and a height of 525mm.
Three Compartments plus 2 Cleaner Baskets 43.2 litre capacity (1 x 18 litre and 2 x 8.5 litre plus 2 x 4.1 cleaner baskets housed in one unit)	For installation in drawers or door front fixing cabinets. Minimum 433mm depth and height of 320mm.
Three Compartments plus 2 Cleaner Baskets 37.2 litre capacity (1 x 12 litre and 2 x 8.5 litre plus 2 x 4.1 cleaner baskets housed in one unit)	For installation in drawers or door front fixing cabinets. Minimum 433mm depth and height of 320mm.

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APPENDIX B

COMPACTOR USE, DESCRIPTIONS AND SPECIFICATIONS

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Use of Compactors

For both multi-occupancy residential developments and commercial developments it may be prudent to use compactors.

It must be noted that where the use of a compactor is being considered, evaluation must be given to servicing and wider infrastructure requirements – i.e. adequate access for suitable collection vehicles must be provided along with adequate working areas and the wider road network must be capable of accommodating the required service vehicles. The relevant Local Authority should always be consulted where the use of skip containers and waste compaction systems are being considered.

For commercial developments in particular, the following recommendations are made:

Development Type and Floor Space	Equipment Recommendation
*Offices over 10,000m^2	Rotary Compactor
*Offices over 15,000 m^2	Portable Skip Compactor
Light Industrial Units with Combined Floorspace over 1500 m^2	Small Sack Compactor
Retail Premises – up to 5000 m^2	Small Sack Compactor
Retail Premises – over 10,000 m^2	Portable Skip Compactor or a large Static Compactor
Fast Food Restaurants (eat in facility)	Small Sack Compactor
Fast Food Restaurants (high output)	Rotary Compactor
Hotels – up to 250 beds	Small Bag Compactor
Hotels – over 250 beds	Rotary, Portable Skip or Static Compactor

* For all offices over 2500m^2 some form of waste compaction is recommended.
(Source: City of Westminster Council)

Descriptions and Specifications

The information in the following table has been adapted form the City of Westminster document *Clean Streets, Waste and Recycling Storage Requirements*.

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Compactor Type and Description	Typical Dimensions
Small Sack Compactor Waste is tipped into the cylinder cabinet, which is lined with a plastic waste sack, and compacted. Available as a cylindrical or cabinet type. A compaction ratio of up to 4:1 can be achieved.	Dimensions (m): Width 0.78 Length 0.98 Raised Height (standard model) 2.68 Raised Height (short model) 2.38 Floor area 1m^2
Wheeled Bin Compactor Bins are wheeled beneath the compaction plate of the unit which then compacts the waste while in the bin. Two types are available – one using 360 litre bins, the other using 660 or 1100 litre bins. A compaction ratio of up to 3:1 can be achieved. It must be noted that compacted waste in a wheeled bin must not exceed weight limits or be too compacted so as not to empty.	Dimensions for compactor to fit 360 litre bins (m): Width 0.9 Length 1.6 Working Length 2.9 Height 2 Floor area 2.6m^2 Dimensions for compactor to fit 660 and 1100 litre bins (m): Width 1.5 Length 1.9 Working Length 4 Height 2.5 Floor area 7.2m^2
Rotary Compactor Waste is placed into the compactor which features a spiked rotating head which tears and subsequently compacts the waste. High compaction ratios can be achieved.	Typical dimensions for a bag type rotary compactor (m): Width 1.35 Working Length 2.37 Raised Height 3.08
Portable Skip Compactor These effectively form an enclosed skip combined with a fixed compactor unit. The entire unit may be removed. Range of sizes with typical capacities being 9.5m^3 and 27m^3. A Compaction ratio of up to 4:1 can be achieved.	Dimensions for 9.5m^3 portable skip compactor (m): Width 1.75 Length 4.28 Height 2.34 The area where such a compactor is to be located should have the following minimum dimensions (m): Width 4.5 Length 5.8 Height 4.9 Dimensions for 27m^3 portable skip compactor (m): Width 2.5 Length 6.63 Height 2.75 The area where such a compactor is to be located should have the following minimum dimensions (m): Width 5 Length 8.63 Height 6

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Compactor Type and Description	Typical Dimensions
Static Compactor The compactor is secured to the ground and compacts waste in a removable fully enclosed skip. Range of sizes with typical capacities being $10.5m^3$ and $27m^3$. A compaction ratio of up to 5:1 can be achieved.	Dimensions for $10.5m^3$ static compactor (m): Width 1.8 Length 6.6 Height 2.4 The area where such a compactor is to be located should have the following minimum dimensions (m): Width 4.5 Length 8 Height 4.9 Dimensions for $27m^3$ static compactor (m): Width 2.5 Length 10.2 Height 2.8 The area where such a compactor is to be located should have the following minimum dimensions (m): Width 5 Length 12.2 Height 6

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APPENDIX C

CURRENT LOCAL AUTHORITY COLLECTION FREQUENCIES

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Authority	Residential Collection Frequency	Commercial Collection Frequency
Cambridge City	*Residual Waste* Alternate weekly *Kerbside Dry Recyclable Service* Fortnightly *Kerbside Organic Waste Service* Alternate Weekly	As Required
East Cambridgeshire	*Residual Waste* Weekly *Kerbside Dry Recyclable Service* Fortnightly *Kerbside Organic Waste Service* Fortnightly	Private Contract
Fenland	*Residual Waste* Alternate weekly *Kerbside Dry Recyclable Service* Fortnightly *Kerbside Organic Waste Service* Alternate Weekly	As Required
Huntingdonshire	*Residual Waste* Alternate weekly *Kerbside Dry Recyclable Service* Fortnightly *Kerbside Organic Waste Service* Alternate Weekly	Weekly
South Cambridgeshire	*Residual Waste* Alternate weekly *Kerbside Dry Recyclable Service* Fortnightly *Kerbside Organic Waste Service* Alternate Weekly	3 times a week
Peterborough	*Residual Waste* Alternate weekly *Kerbside Dry Recyclable Service* Fortnightly *Kerbside Organic Waste Service* Alternate Weekly	As required

(Source: RECAP)

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APPENDIX D

DESIGN SPECIFICATIONS FOR WASTE STORAGE COMPOUNDS

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Feature	Design
Walls and Roofs	To be made of a non-combustible, robust, secure and impervious material with a fire resistance of 1 hour (as tested in accordance with BS 476-21).
Floors	To be made from a hard impervious material with a smooth finish and a minimum thickness of 100mm. There should not be any steps or projections present at he entrance.
Doors	Width to be 1.8m – 2m (minimum). To be made of steel or of some other material with a fire resistance of 30 minutes (as tested in accordance with BS 476-22). Should also be self-closing except where they communicate directly with the outside air. Should be hung so that hinges are not damaged where the doors are allowed to swing wide. Should be capable of being opened from the inside and outside to prevent the risk of individual users becoming trapped.
Door Frames	To be metal, hardwood or metal clad softwood. Door frames should also be situated in the external wall and rebated into the reveals of the opening.
Junctions of Walls with Floors	To be coved with the coving formed to prevent damage to the walls from the containers - in accordance with BS 1703
Drainage	To be via a trapped gully connecting to the foul sewer. Floors should have an appropriate fall towards the drainage point.
Ventilation	Areas for ventilation to be situated as near to the top and bottom of the container as possible with the total ventilation area to be not less than $0.2m^2$.
Lighting	Electrical lighting to be provided by bulkhead fittings within the storage compound with housings rated to IP65 in BS EN 60529:1992. Luminaires to be low energy light fittings and switching should be via proximity detection or time delayed.
Cleansing	A hose union tap with water supply should be provided at the compound.
Access Paths	Should be a minimum of 2m wide and feature a hard finished surface.

(Adapted from: BS 5906:2005)

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APPENDIX E

WASTE STORAGE COMPOUND SECURITY

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Compound Location

Subject to carry distances, it is preferable that storage compounds be separate and located away from the main building(s).

Where this can not be achieved, it should be possible to secure the main building from the compound. *BS 5906:2005 Waste Management in Buildings – Code of Practice* recommends that where a storage compound forms part of a building it should have 2 access points – one internal with a secure lock, the other external allowing access for collection (also acting as the only point of egress from the compound).

Compound Locks

It is preferable that compounds are secured by a universal lock and key mechanism (standard Fire Brigade mortise lock and key). Though keys for these locks are widely available, they represent the best option in terms of operational efficiency.

Other options include electronic key code entry systems or call systems. However, these systems may present issues in terms of operational efficiency – for example where the key code is changed but no notification given to the Waste Collection Authority or where management are absent and unable to permit entry of a collection crew.

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APPENDIX F

WASTE COLLECTION VEHICLE TRACKING PATH

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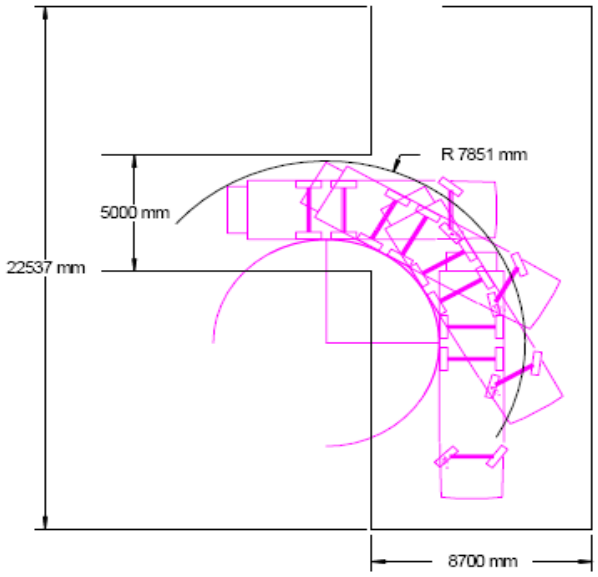
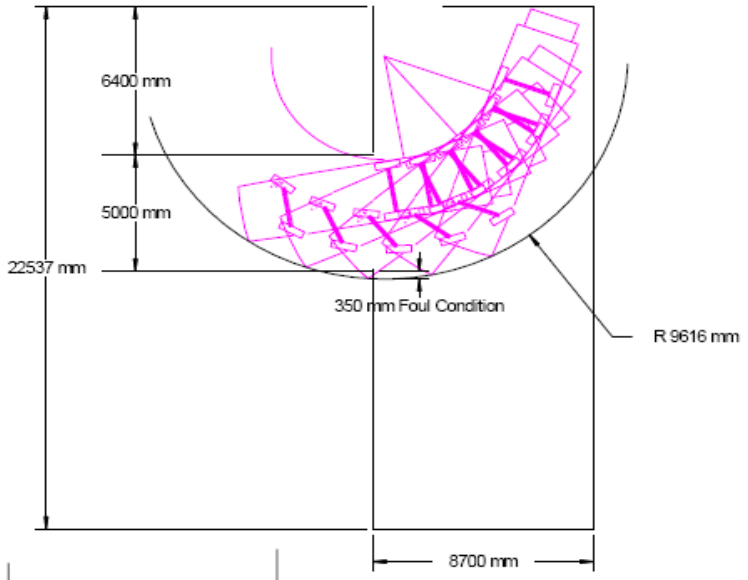
Driving in to cul de sac



Reversing in to cul de sac



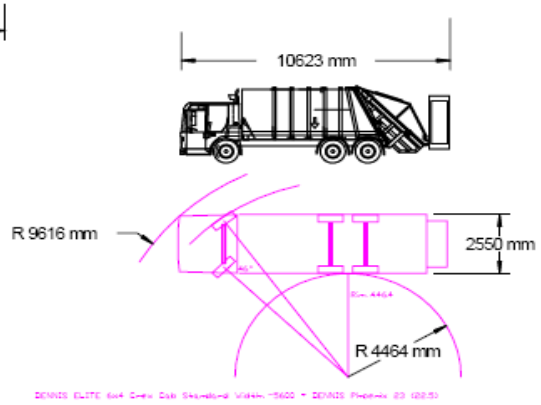


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Diagram courtesy of Dennis Eagle.

APPENDIX G

GENERIC SPECIFICATIONS FOR AN UNDERGROUND BRING SITE

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GENERIC SPECIFICATION. FOR SUPPLY OF UNDERGROUND BRING SITE FACILITIES

The Specification

1. Systems must be suitable for paper, cans, plastics and glass recycling.

2. The Underground bank walk-on platform must be:

I. Manufactured using a welding construction, which is hot-tip galvanised, and

II. Non slip (to a degree), and

III. Highly durable, and must not move or give in any way and is capable of withstanding a weight of least 150kg, and

IV. Be constructed in such a way to prevent the ingress of water into the storage container or concrete casing, such as through an overlapping design.

3. Underground banks must be provided with an automatic rising safety platform, the safety platform must:

I. Platforms must be made of galvanised steel, and

II. Platform must be able to carry a load of at least 150-kg – suitable for two persons when the storage container is not in place and

III. The empty shaft must be fully sealed when the safety platform seal is raised to ensure maximum safety.

4. The underground storage container must be housed in a Concrete Casing, the concrete casing must be:

I. 100% waterproof, and

II. If the underground bank is sited in an area with a high water table or on Pulverised Fuel Ash (PFA) it must be fully secured or set with stilts to avoid any movement after installation, and

III. The casing must be fully approved under the relevant European directive(s) and either UK or equivalent industry standard such as BSI or KEMA (Dutch) or equivalent must be held. Peterborough city council reserves the right to choose whether the standard held by the contractor is defined as “equivalent”.

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5. The storage container must be:

I. Manufactured from galvanised steel and Sealed with fully welded joints, and

II. Fitted with a trap door to allow emptying of container, and

III. The contractor or supplier must also be able to provide maintenance works for the container if required; such as for broken "trap door", and

IV. The container should be available in sizes of $4m^3$ and $5m^3$.

V. Be fitted with remote fill level alarms/indicators

6. The "column" or "refuse receptacle" should:

I. Be available in a range of styles and colours that best match the surrounding built environment, and

II. Be available with a range of receptacles which best suit the specific material such as a "multiple different coloured circular receptacles" for glass or "single circular receptacle" for glass, and

III. Be available with a clear visually appealing marking which indicates which type of material should be placed in the receptacle.

7. Lifting mechanism to aid emptying of storage container should be available:

I. To integrate with District Council lifting equipment e.g. with 2 exposed apertures for use with a hook and hydraulic arm arrangement.

8. It must be possible to empty liquid and solid residues from the container by providing suitable access for pipes from a vacuum tanker.

9. During Installation, the contractor must:

I. Take full responsibility for the installation [(1)] of the underground banks, and be able to provide a turn key arrangement and therefore provide their own staff for this purpose of installation

[(1)] Installation is defined as including the process of checking correct and proper levelling of excavation works, arrangement and fixing of outer concrete casing into one solid unit, lowering of concrete casing, fixing concrete casing to ground in high water table to avoid post installation movement of casing.

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BIBLIOGRAPHY

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DRAFT

Achieving Recycling Targets: Best Practice in Materials Recycling, Aylesford Newsprint (2000)

Baseline Report (DRAFT) on Waste in Cambridgeshire and Peterborough, Atkins (2007)

BS 5906:2005 Waste Management in Buildings – Code of Practice, British Standards Institute (2005)

Cambridgeshire and Peterborough Statistical Basis for the Waste Development Document, Jacobs Babtie (2006)

Cambridgeshire and Peterborough Structure Plan, Cambridgeshire County Council and Peterborough City Council (2003)

Cambridgeshire and Peterborough Waste Local Plan, Cambridgeshire County Council and Peterborough City Council (2003)

Cambridgeshire Design Guide for Streets and Public Realm (DRAFT), Alan Baxter Associates (2007)

Cambridgeshire Household Waste Recycling Centre (HWRC) Cost Review 2007, Mouchel Parkman (2007)

Cambridgeshire Local Transport Plan, Cambridgeshire County Council (2006)

Cambridgeshire Minerals Local Plan, Cambridgeshire County Council (1991)

Demographic Forecasts for the East of England, East of England Regional Assembly (2006)

Drainage and Waste Disposal – Approved Document H, Office of the Deputy Prime Minister (2002)

Easi-Guide on Refuse Containment Storage and Collection, London Borough of Islington

Household Waste Recycling Centre Strategy, Cambridgeshire County Council (2006)

Household Waste: Storage Provision and Recycling, Shouler M. C. (2005)

Joint Municipal Waste Management Strategy, RECAP (2005)

Landfill Allowance Trading Scheme (LATS): A Practical Guide, DEFRA (2005)

Managing Waste in New Developments (Supplementary Planning Document), Luton Borough Council and Bedfordshire County Council (2006)

Planning for Resource Sustainable Communities Volume 1: Waste Management and Infrastructure, The Institution of Civil Engineers, Forward Scotland & EnviroCentre

DRAFT

Planning Obligations Strategy: Draft for Public Consultation, Peterborough City Council (2006)

Planning Policy Statement 10: Planning for Sustainable Waste Management, Office of the Deputy Prime Minister (2005)

Recycling Atlas: England and Wales, Aylesford Newsprint (2004)

The East of England Plan (draft Regional Spatial Strategy), East of England Regional Assembly (2004)

The Location and Design of Major Waste Management Facilities, Cambridgeshire County Council and Peterborough City Council (2006)

The Secretary of State's Proposed Changes to the Draft Revision to the Regional Spatial Strategy for the East of England and Statement of Reasons, Government Office for the East of England (2006)

Urban Design Compendium, Llewelyn-Davies & Alan Baxter Associates (2000)

Waste & Recycling – Storage and Collection Requirements, Lambeth Council (2006)

Waste and Recycling Storage Requirements, City of Westminster Council (2006)

Waste Collection and Storage Facilities (DRAFT), Cardiff City Council (2006)

Waste Strategy Guidance: Best Value & Waste Management, DETR (2000)

Waste Strategy for England and Wales 2000, DETR (2000)

Waste Strategy for England 2007, DEFRA (2007)

DRAFT