



Residential Waste and Recycling Guidelines

For New Developments
December 2010

1 Table of Contents

1	Table of Contents	2
2	Acknowledgements	3
3	Purpose of this guideline	4
4	Waste Service Type	5
	Classification Overview	5
	Important Notes	6
5	Service Type A – Standard Council Service (3 bin system)	7
	Description	7
	Standard Council Service Requirements	8
	Design Guidelines	11
	Examples of 3 bin system arrangements	15
6	Service Type B – Non Standard Council Service	17
	Description	17
	Acceptable Variations or Exceptions	20
	Design Guidelines	22
	Examples of non-standard Council Service arrangements	27
7	Service Type C – Alternative Waste Service	28
	Description	28
	Design approach	29
	Design Guidelines	30
	Examples of Service Type C Systems & Equipment	37
	Appendix A: City of Charles Sturt Waste & Recycling Services	39
	Waste Collection Vehicles & Road/Pavement Design Standards	40
	A.1 Waste Collection Vehicles	40
	A.2 Road/Pavement Design Requirements	42
	Appendix B: Kitchen Waste Bin Design	44
	B.1 Number, Type & Size of bins	44
	B.2 Waste Station Design Principles/Concepts	44

Appendix C:	Waste System Design Checklists	45
Waste System Design Checklist		46
Service Type A – Standard Council Service (3 bin system)		46
Waste System Design Checklist		48
Service Type B – Non standard Council service		48
Waste System Design Checklist		50
Service Type C – Alternative waste service		50
Waste System Design Checklist		53
Land Divisions		53
Appendix D:	Waste & Recycling Generation rates	55
Appendix E:	Waste Management Plan Contents.....	56
Appendix F:	Further Reading and References.....	57
F.1	References used in this document.....	57
F.2	Further Reading	58
Appendix G:	Standard indemnity for on property waste vehicle access	59

2 Acknowledgements

The City of Charles Sturt would like to acknowledge the assistance provided by Rawtec Pty Ltd in the preparation of these guidelines.

Assistance from the following organisations has also been greatly appreciated:

- Adelaide City Council
- KESAB
- Land Management Corporation
- Northern Adelaide Waste Management Authority
- Sita Environmental Solutions
- Solo Resource Recovery
- Transpacific Industries (Cleanaway)
- Urban Pacific Pty Ltd
- Zero Waste SA

3 Purpose of this guideline

This guideline has been prepared to help you develop effective and efficient waste and recycling systems for new developments within the City of Charles Sturt, and their future residents.

To ensure waste and recycling issues are not overlooked, all new residential developments are required to provide Council with information on their proposed waste and recycling systems when they apply to Council for development consent.

This handbook provides information on the three bin system offered by Council to residential premises. In the majority of cases, it is expected that residential premises will make use of this Council service. Within this guide you will find essential information, including the number and size of bins and access requirements for waste collection vehicles used by the Council. These requirements must then be factored into residential development proposals that are put forward for consideration by Council. A number of non-standard options are also outlined – noting that these will only be offered in limited circumstances.

The City of Charles Sturt recognises that, while effort has been made to provide a range of services to suit the majority of residential developments, there may be some situations in which the Council service is not the most effective or efficient way to manage waste and recycling for a given development. This may include, for example, larger apartment buildings where there is little space available on-site to store bins.

This guideline therefore provides flexibility to allow site-specific waste and recycling solutions to be put forward for larger residential developments that elect not to use Council's waste and recycling services.

In addition to helping you to comply with Council's Development Plan requirements for waste and recycling, this guideline will ensure that waste systems in new residential developments deliver the following benefits or outcomes.

- | | |
|-----------------------|--|
| For the developer: | <ul style="list-style-type: none">• Provide 'fit-for-purpose', functional and low-build cost waste systems• Avoid unnecessary delays due to omissions in development proposals put to Council for consideration |
| For future residents: | <ul style="list-style-type: none">• Facilitate access to a Council waste and recycling service for the majority of new developments• Facilitate access to a cost effective and convenient waste and recycling service for new residential developments• Provide an opportunity to participate in recycling |
| For the community: | <ul style="list-style-type: none">• Maximise sustainability of residential development by:<ul style="list-style-type: none">○ Providing recycling opportunities in new developments○ Reducing the disposal of waste to landfill |

4 Waste Service Type

Classification Overview

For the purpose of these guidelines, the type of waste service that may be provided to a new residential development is classified into three types.

Note: All proposed new dwellings with individual (not shared) driveway access to a public road will be assumed to have sufficient space to store and present bins, and will receive a Standard Council (3 bin) service.

Type of Waste & Recycling Service	Key Service Threshold Requirements	Typical examples
<p>A. 'Standard' Council Service</p> <p>3 bin waste and recycling service</p> <p>Collection vehicle will pick up bins containing waste and recycling from public road verge</p> <p>Expected for the majority of developments</p>	<ul style="list-style-type: none"> Space on the property to store 3 wheelie bins during the week Street access available for council waste collection vehicle Verge at the front, side or rear of the allotment can accommodate 2 bins for collection each week Collection is from a public road 	<ul style="list-style-type: none"> Traditional Detached Dwellings Maisonettes and narrow Torrens-titled developments Small townhouse developments, group dwellings or subdivisions (where sufficient space is available)
<p>B. 'Non-standard' Council Service</p> <p>Each variation from the 'standard' Council service will require negotiation and approval by Council.</p> <p>These options will only be offered in limited circumstances.</p>	<p>May include:</p> <ul style="list-style-type: none"> Shared bins Alternative collection points (other than from public roads at the front, side or rear of allotment) May use standard 140L/240L bins or larger 660 or 1100L bins On-property collection (infirm residents only) 	<ul style="list-style-type: none"> Medium-sized townhouse developments, group dwellings or subdivisions Small buildings containing flats and/or apartments Higher density residential developments (where sufficient space is available)
<p>C. Alternative Waste Service</p> <p>Private commercial service - for larger, multi-storey, and/or mixed use developments where the Council waste or recycling service may not be the most effective or efficient option.</p> <p>Note: Developments that are set up to allow adequate storage and access will be offered a Council waste and recycling service wherever reasonable and practical (see service types B and C).</p>	<ul style="list-style-type: none"> Dwellings > 6, and/or Building storeys > 3 Any other development where a Council service cannot be provided in a safe and effective manner. Provided at the landowner's expense. 	<ul style="list-style-type: none"> Larger developments, multi-unit and multi-storey buildings

Important Notes

- (a) These guidelines are provided to help you design effective and efficient waste and recycling systems for a residential development and to help you meet the standard requirements of a Council service. Following these guidelines does not necessarily result in automatic approval by Council of a waste and recycling system proposed in a development application.
- (b) The City of Charles Sturt reserves the right to request additional information in relation to a proposed waste and recycling system for a development.
- (c) Any requirement or expectation in these guidelines does not supersede other requirements for a property development or building to comply with any other:
 - Council or State Government planning, development or building principle, requirement or regulation;
 - Other Council requirements, including through the Council Waste Management Policy;
 - Applicable National building codes and standards.

Where the guidelines are believed to conflict with any other such requirement, Council's advice should be sought to clarify how the guidelines should apply.

If you require additional information or feedback, please contact the City of Charles Sturt on 8408 1111.

5 Service Type A – Standard Council Service (3 bin system)

Description

The three bin system is the City of Charles Sturt's standard waste and recycling service. This service:

- Provides residential dwellings with three bins as summarised in Table 3.1 below;
- Requires that on a given day each week, two (of the three) bins from each dwelling will be presented on a public road at the front, side or rear of the property for collection; and
- Requires that bins are emptied on the same day by 'side-loading' council waste collection vehicles – using a robotic arm.

Note: Whilst an organics service may be optional for residents in the City of Charles Sturt area, residential waste systems for all developments must be designed on the assumption that this service will be required.

Further details for City of Charles Sturt's standard waste and recycling services are included in Appendix A.



Table 3.1: Standard waste and recycling service – Bin sizes and collection frequencies

Bin content	Bin type	Lid colour	Collection frequency
Recycling	240 L mobile garbage bin (MGB)	Yellow	Fortnightly (alternating with Organics bin)
Organics (Optional)	240 L MGB	Green	Fortnightly (alternating with Recycling bin)
General (or Residual) Waste	140 L MGB	Blue	Weekly

Standard Council Service Requirements

For a property to access the standard council waste and recycling service, the following must be available.

1. Storage area within the property: this area must be large enough to store all three bins during the week, and screened from public view
2. Street Access: The Council waste collection vehicle must be able to access the street (enter, traverse and exit, with room to empty bins) where the development is located.
3. Verge area for bin presentation: The kerbside or 'verge' area must be able to accommodate the bins that are presented and allow the bins to be safely accessed and picked up by the collection vehicle.

Storage area within the property

Bin storage areas on a property must:

- (i) Be at least 2m wide and 1m deep – to be large enough to store all three bins;
- (ii) Be screened from public view;
- (iii) Be located away from windows and doorways, to minimise noise and odour impacts;
- (iv) Permit residents to easily carry waste from their dwelling to the storage area and empty it directly into the correct bin; and
- (v) Allow bins to be easily moved by residents to and from the collection point, without passing through the interior living areas of a dwelling, moving up or down steps or up slopes greater than 1:5.

Street access

Streets or roads on which bins will be presented for collection must be wide enough to allow access by waste and recycling vehicles, and constructed to allow for access and regular use by 22.5 tonne trucks.

Existing public roads can be assumed suitable unless Council has advised otherwise. For new roads proposed as part of a land division application, advice should be sought from Council to confirm that your street is designed to allow waste vehicle access. The land division checklist in Appendix C will provide some guidance as to what is expected.

Notes:

- Standard council services are provided on public roads only. If collection from a private road is sought, special permission from Council will be required. Please see Chapter 4 – non-standard Council services.
- Appendix A provides examples of the typical dimensions of the City of Charles Sturt's waste collection vehicles, showing street widths and turning circles required for these vehicles to operate.

- Full details of Council's road design standards are available in its Engineering and Open Space Development Guidelines (City of Charles Sturt 2009).

Verge area for bin presentation

Bin presentation areas on a road verge must meet the following requirements:

- (i) Retain a 1.2m wide pedestrian thoroughfare on the verge, in addition to the space required to set out bins for collection
- (ii) Provide a kerbside 'verge' area that can accommodate a bin presentation zone for each dwelling = 1m deep × 1.6m wide (see Figure 3.2).
- (iii) Ensure that the above bin presentation zone does not obstruct driveway access for other residents and is a sufficient distance from trees, street furniture, light poles, etc. to allow bins to be collected
- (iv) Ensure that parking arrangements do not unduly restrict waste vehicle access on collection days.

It is not generally acceptable for bins to be located in the street itself or on the pedestrian path. If a 1.2m wide pedestrian thoroughfare cannot be achieved, direction must be sought from Council.

An example illustrating these requirements is shown in Figure 3.2. Table 3.3 presents a table indicating the width of frontage that would need to be set aside for up to 6 dwellings on a property.

Developers must demonstrate in their development application that the above requirements for presentation of bins at the kerbside can be achieved.

The suggested positioning and area for the bin presentation zone on the kerbside, and bin storage area within the allotment, must be drawn on a scale plan and checked with Council staff to determine whether the suggested positioning and areas are acceptable. In higher density developments and rear laneways where space is limited, residents will be permitted to present bins within their own driveways for collection.

Table 3.2: Bin zone offset requirements

Feature	Offset	Rationale/comments
A. Street furniture or infrastructure	0.5m	Minimise potential for inadvertent damage during waste collection
B. On-street car parking	1m	Ensures truck side-loading arm access to bin on kerbside and prevents possible damage to parked vehicles
C. Tree canopy extent @ vertical height < 3.5 m	0m	Avoid damage to trees and truck loading arm during bin pick-ups (i.e. the bins must not be placed directly beneath the canopy of a street tree)

Non-compliant assessment outcome

Where the access requirements for a standard Council service cannot be achieved, the application will be referred back to the developer for review. In limited circumstances, the development may be considered for assessment as Service Type B or C.

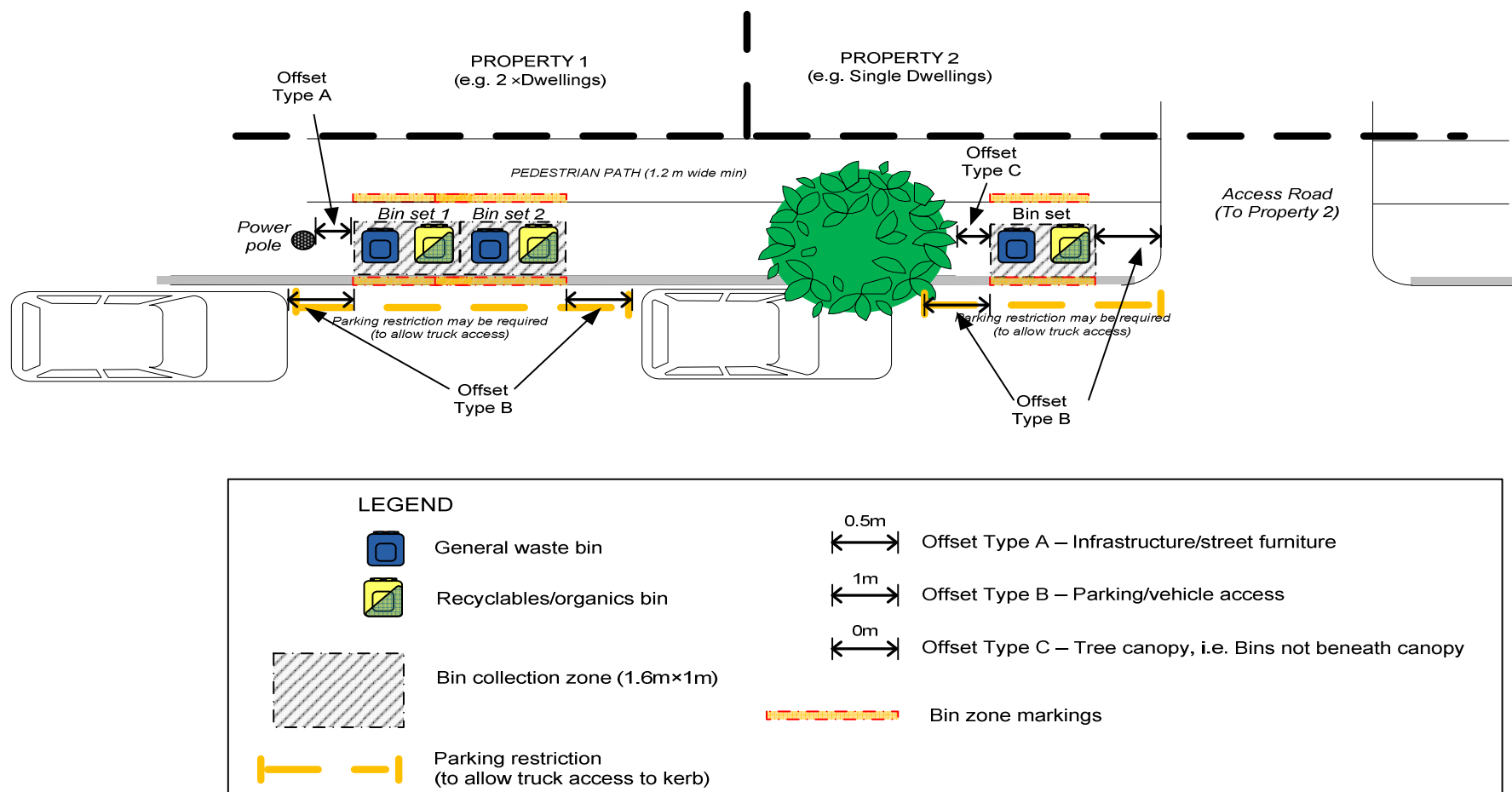


Figure 3.2: Illustration of typical arrangement of bin zones on road verges suitable for a Standard Council (3 bin) service. This diagram illustrates the range of issues that should be considered when laying out allotments and streetscapes in new developments. Note: in some circumstances (such as in rear laneways) residents may need to present bins across their own driveways (but not across shared driveways or those used by other residents).

Table 3.3: Required bin collection zone widths for up to 6 dwellings on a property

No. Dwellings	Max. bins for collection each week	Bin zone width
1	2	1.6m
2	4	3.2m
3	6	4.8m
4	8	6.4m
5	10	8m
6	12	9.6m

Design Guidelines

Property bin storage area

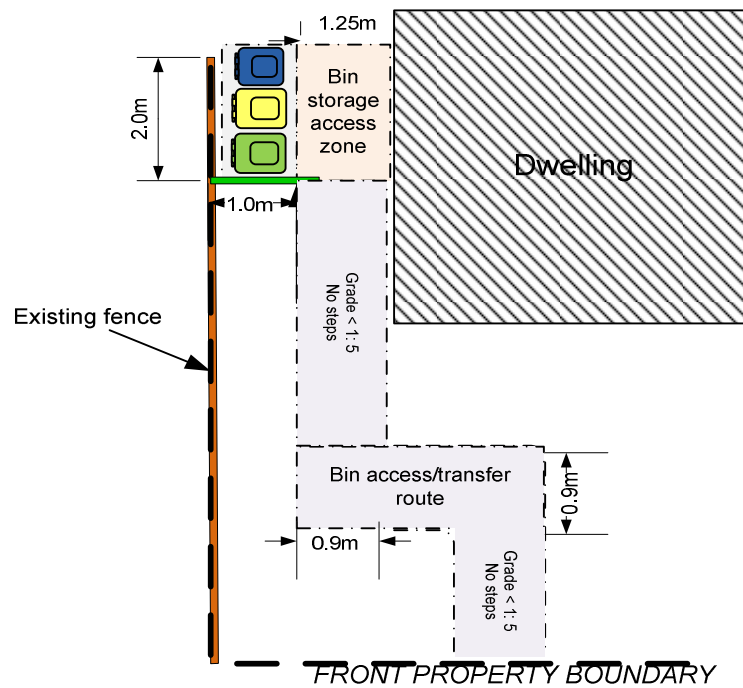
A3.1 Each dwelling in a development will need to store its own designated council waste service bin-set as indicated in Table 3.1.

A3.2 Each set of 3 bins will require a designated bin storage area on the property– minimum size per bin-set = 2m wide × 1m deep – see Figure 3.3 for illustration

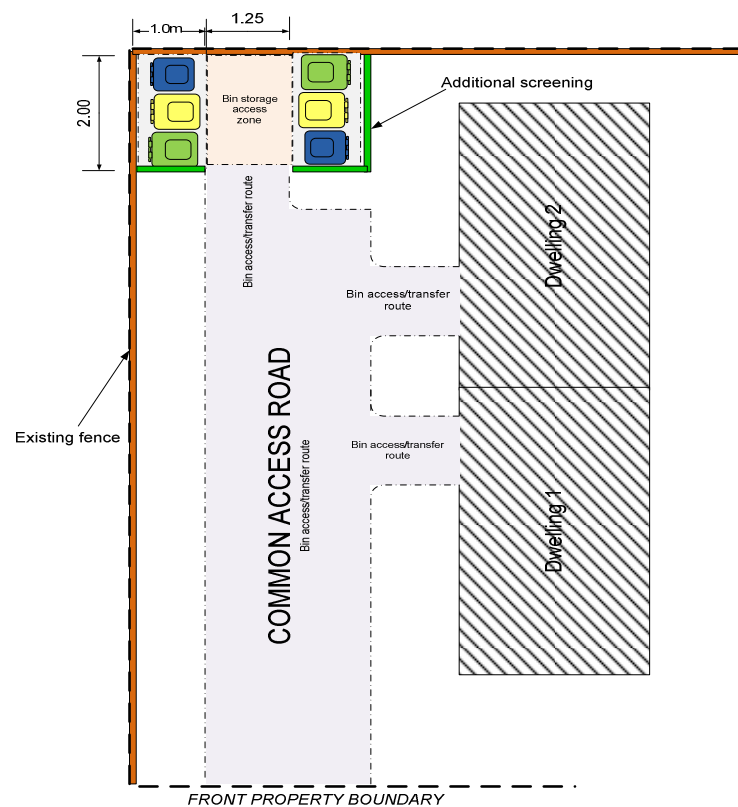
(a) The designated bin storage area for these bins should be located outside the home, within the allotment or in designated part(s) of the Common Property (where available), but not on public land.

Note: Where bin sets are located inside garages, in-building car parking areas, adjacent windows or below balconies, care must be taken to ensure adequate ventilation, and limit potential for odour and noise.

A3.3 The bin storage area should provide additional and adequate area in front of bins to allow bins to be moved easily. The minimum space required to move bins is a corridor of 1.25 m wide. Figure 3.3 gives examples of some typical arrangements for bin storage areas illustrating these requirements.



(a)



(b)

Figure 3.3: Illustration of bin storage area, access from dwelling and transfer route to property boundary: (a) Single dwelling property; (b) Two dwelling property with bin storage area on common property.

A3.4 The bins storage area(s) should be positioned such that:

- (a) It is screened from public view

- (b) Occupants of a dwelling do not have to travel distances of greater than 50m from the front door of each dwelling to the bin storage area for disposal of waste to storage bins;
- (c) Carting of bins to the collection point does not involve distances of greater than 50m;
- (d) Bins are accessible to all residents;
- (e) Positioning in proximity to walls, windows and/or balconies of dwellings or other properties avoids or minimises potential complaints arising from bin use or carting due to:
 - noise;
 - odour;
 - reduction of amenity for residents, neighbours or the public.

A3.5 Access routes from the designated ground floor access point of a dwelling to the bin storage area should:

- (a) ensure dignified access and use of the bin storage area for people with a disability;
- (b) comply with requirements of the Building Code of Australia;
- (c) as a minimum and unless otherwise allowed or required by the Building Code of Australia, access routes must:
 - (i) Be a width of 0.9 m wide or greater;
 - (ii) Have a grade no more than 1:5.

A3.6 Transfer routes from the bin storage area to the collection point should be free of obstructions and designed to allow residents, including the aged or persons with limited mobility impairment, to easily and safely cart the bins:

- (a) Be a width of 0.9 m or greater;
- (b) Have a grade no more than 1:5 and no steps;
- (c) Not pass through the interior living areas of a dwelling.

A3.7 Bin storage areas located within 3 m of property boundaries should:

- (a) Be screened from public view by a visual barrier of at least 1.5 m high or to match the height of surrounding fences (a fence on a property boundary may be considered acceptable for the purposes of a screening barrier);
- (b) In the case of community/strata title developments, include screening to avoid line-of-sight views of bins from windows or balconies of dwellings.

A3.8 The bin storage area, access routes from dwellings and transfer routes to collection point should be appropriately paved and graded for water run-off to avoid water pooling from rain or irrigation on these areas.

Bin presentation zones

A3.9 The bin presentation zone should be located on the kerbside road verge, taking account of positioning and offset requirements set out in Figure 3.2.

- A3.10 Any potential requirements for on-street parking restrictions in front of presentation zones should be checked with the City of Charles Sturt.
- A3.11 Bin presentation areas should be level and constructed as stable all-weather surfaces that do not erode with time.

Street Access Requirements

- A3.12 Street access for waste collection vehicles should be confirmed with Council in line with requirements of page 8. Note: existing public roads can be assumed to be suitable for waste vehicle access unless Council advises otherwise.
- A3.13 If collection from a private road is sought, special permission from Council will be required – refer to Chapter 4 Service Type B – Non-standard Council Services (see also Appendix H: standard indemnity for on property waste vehicle access).

Kitchen Waste Station

- A3.14 Each dwelling in a residential development should include a kitchen (waste and recycling) bin station in line with the design advice and recommendations set out in Appendix C.

Documentation of Waste System Design

- A3.15 For development assessment purposes, it will be assumed that all proposed dwellings with individual driveway access to a public road will have sufficient space to store and present bins. These dwellings will automatically be provided with a Standard Council (3 bin) service. No waste system design documentation is required to be submitted with development applications of this kind.
- A3.16 All other kinds of residential developments for which a 3 bin service is sought must submit design details and specifications to demonstrate compliance with the above requirements. This information should be appropriately documented on scale plans submitted to Council for approval showing:
- (a) Bin storage area(s) within the property;
 - (b) Access and transfer routes to and from dwellings, the bin storage area(s) and presentation area;
 - (c) Bin presentation area on the verge at the front, side or rear of the property;
 - (d) Relevant pavement and/or road design specifications or note confirming that Council has indicated that street is suitable for access by council waste collection vehicles (noting that all existing public roads can be assumed suitable unless Council has advised otherwise).
- A3.17 The Waste System design checklist for Service Type A in Appendix C must also be completed and submitted with all development application seeking provision of a 3 bin service, but which do not meet the description provided in A3.15 above.

Examples of 3 bin system arrangements

The following photos illustrate several compliant residential waste system arrangements existing in the City of Charles Sturt. These photos are provided to aid developers with understanding and complying with requirements, but should not be relied upon or reproduced without reference to the above Design Guidelines.



Photos above: Example of 3 bin system compliant bin storage area. This area is correctly sized to store the three Council service bins. It also has adequate space in front of the bins to allow access by residents and for the bins to be removed and manoeuvred so they can be transferred to the presentation area.

The bins are adequately screened by an existing 1.8m fence and signs instruct residents how to use bins correctly.



Photo adjacent: Example of compliant bin presentation area with bins placed for collection.

This presentation area is located on a road verge where there is sufficient width between 1.2m pedestrian path and road kerb for bin presentation.

The bins are placed so they are safely offset from adjacent power pole and spaced so there is room on either side and between the bins for the arm from the collection vehicle to access and 'clasp' around bins.

This is not a busy road so temporary parking restrictions in front of this bin presentation area would not be required by Council.



Photo above: Example of the impact of waste collection on residential streets. In this situation, there is sufficient room for bin presentation and waste collection to occur, but the footpath does not leave enough space for disability access on collection day. Narrow footpaths such as this may be permissible in quiet streets, but are not desirable where high levels of pedestrian traffic are anticipated.

Note: In the situation pictured above, dwellings share a common driveway which is located at the rear of the development. For this reason, the waste system design documentation outlined in A3.16 and A 3.17 above is required to be submitted to Council with the development application. If each dwelling had its own private driveway, direct to the public road, this documentation would not be required.

6 Service Type B – Non Standard Council Service

Description

Non-standard Council services may be offered by Council in limited circumstances only. The 'non-standard' nature of the Council service may include the following:

- (a) Council may allow use of shared 140L and/or 240L bins where the development is community or strata titled (shared bins are not suitable for Torrens-titled developments)
- (b) Council may allow the bin presentation zone to be located away from the front, side or rear of a property, if a suitable and convenient location can be found
- (c) Council may allow the collection of bins from a private road or property in some circumstances

Criteria for non-standard options

The City of Charles Sturt has applied the following criteria to guide property developers in determining which developments may be considered for non-standard services. In general, these options may be suitable for development that cannot achieve all of the requirements of a 3 bin system, but could be made to work with some relatively minor service adjustments.

Shared bins – an option for strata and community titled developments with shared common areas

Alternative presentation zones – an option for developments that are otherwise difficult to access, but have suitable areas available within 50 metres

Bulk bins – may be offered by Council for developments of 10 or more dwellings. Note these bins require the use of a rear-loading collection vehicle, and are a relatively expensive option for Council to provide. For this reason they are only offered where considered justified by Council.

On property collection of bins – offered for approved bulk bin collections and approved elderly and infirm residents only.

Collection from a private road – will only be offered from appropriately designed and constructed roadways, and requires the submission of a signed indemnity form.

In general, larger developments (over 6 dwellings and/or over 3 storeys) opt to provide their own site-specific waste and recycling services, on a private commercial basis. Appropriately designed larger developments may however be offered a standard or non-standard Council service.

All large developments will be required by Council to submit a waste management plan as part of the Development Assessment process. This is to ensure that the systems proposed for these situations are

appropriate and effective for the circumstances, and provide sufficient access to waste and recycling services by future residents, and commercial tenants where applicable.

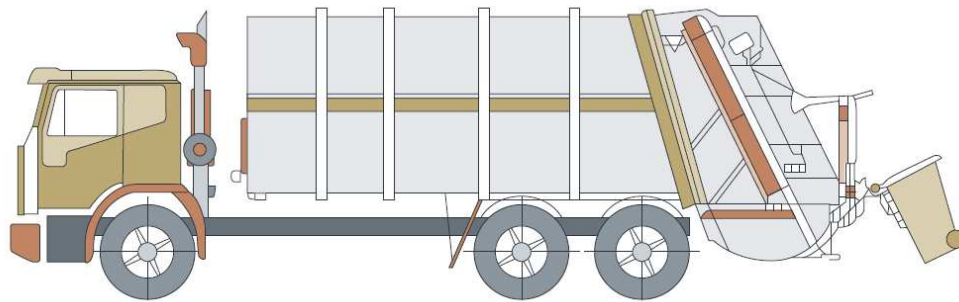


Figure 4.1: Example of rear-lifting waste collection vehicle. Source: NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008).

Design Approach

Requirements and considerations for a non-standard Council service will be the same as for a standard Council service except to the extent that Council has considered and approved a service variation or exception.

- (a) It should be confirmed with Council whether a service variation or exception may be applied to the proposed development. Council may provide advice or specify requirements for how a variation or exception could be achieved.
- (b) Designers and developers should apply the 3 bin system design requirements in Chapter 3 of these guidelines.
- (c) Relevant section(s) of these Service Type B Design Guidelines should be applied to the service variation or exception, which may involve some site specific design considerations.
- (d) Where site-specific design of the variation or exception is complex, additional design information or advice may need to be sought:
 - By reference to the NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008) or other similar resources (see Appendix G: Further reading and references); and/or
 - From waste industry professionals.
- (e) The developer should consult with Council on the design of the waste and recycling system to negotiate and approve the variation or exception prior to submission of a development application.

Non-standard Service Outcomes

When assessing the design for a non-standard Council service put forward by a developer, Council will apply the following standards.

- (a) The waste and recycling system must be functional, and fulfil its intended operating purpose.
- (b) The waste and recycling system must be safe, accessible, convenient and easy for residents to use, including for persons who are disabled, aged or mobility impaired.
- (c) The waste and recycling system must be designed to minimise environmental nuisances, including noise, and other adverse impacts on the safety or amenity of residents, neighbours or the public.

Non-compliant Assessment Outcome

Where the consultation with Council deems that non-standard Council Service options will either not be offered by Council, or cannot be achieved any reason, the development will either be of Service Type A (Standard Council Service – refer Section 3) or Service Type C – (Alternative Waste Service - refer Section 5).

Acceptable Variations or Exceptions

Council is not required to approve non-standard service options, and will only do so at its absolute discretion, and where it can be demonstrated that the resulting waste and recycling service will be safe, convenient and cost-effective for residents and the community. Approvals for non-standard service options require consultation and negotiation with Council. These should be sought prior to lodging your development application.

Use of shared (or communal) bins

Use of shared bins will only be considered by Council in the following situations:

- (a) For community/strata titled developments.
- (b) For 240L shared bins, where all other bin storage area and collection point requirements are met.
- (c) For larger, e.g. 660L, 1100L, bins where Council agrees to provide a bulk bin service, and where storage areas and collection point access requirements for these types of bins are met.

Table 4.1 in these guidelines sets out the number of shared bins required by Council where their use is approved.

Table 4.1: Equivalent no. of 240, 660 or 1100L shared bins that may be used to replace individual 140 or 240L bins for multiple dwellings under Service Type B, assuming collection frequency in Table 3.1

No Dwellings	Type of Individual-Bin replaced	Equivalent no. of shared bins		
		240L	660L	1100L
2	140L General Waste	1	Bulk bins are not offered to developments of less than 10 dwellings.	
	240L Recycling/Organics	2		
3	140L General Waste	2		
	240L Recycling/Organics	3		
4	140L General Waste	3		
	240L Recycling/Organics	4		
5	140L General Waste	3		
	240L Recycling/Organics	6		
6	140L General Waste	3		
	240L Recycling/Organics	6		
10	140L General Waste	5	2	1
	240L Recycling/Organics	8	3	2
15	140L General Waste	7	3	2
	240L Recycling/Organics	10	4	3
20	140L General Waste	9	4	2
	240L Recycling/Organics	14	5	3
25	140L General Waste	11	4	3
	240L Recycling/Organics	18	6	4

Note: developments with small lawn and garden areas (less than 50m² per dwelling) may be permitted to reduce storage space provided for organics bins. As a guide, in these circumstances a single 240L organics bin may be shared between 2-3 dwellings, or more where no garden areas exist and the organics bins are to be used for the recycling of food waste only.

Alternative presentation zones for 140/240L Bins

If bins cannot be presented at the front, side or rear of an allotment for collection, an alternative bin presentation zone may be required.

Alternative presentation zones may be considered for 140/240L bins where a public realm road verge area meeting the requirements for Service Type A (3 bin system) can be provided within 50m of each residence but only where it does not impact adversely on other residents, ratepayers or the public.

Note: Where provided, bulk bins (660 litre, 1100 litre) are generally collected from within the property.

Collection from a private road or property

Collection from a private road or private property may be considered by Council in the following situations:

- (a) Where extra assistance is required by elderly and infirm residents (medical evidence from residents will be required by Council prior to offering an on-property collection service for infirm residents);
- (b) Where Council agrees to its waste collection vehicles using a private road or vehicular areas on a property to access a collection point (noting that this will require that internal roads comply with road design requirements for Council's waste collection vehicles).

In either of the cases above, Council will require the specific agreement of its waste and recycling contractor. Council will also require documentation from the landholder to indemnify Council and its contractor from any damage that may be caused to private property during the collection process.

For these reasons, developments wishing to access an on-property collection service are advised to contact Council for advice at an early stage.

Design Guidelines

Design Principles

- B4.1 The Design Guidelines for a non-standard Council service are exactly the same as those for a standard Council (3 bin) service, except to the extent that Council has considered and approved a variation or exception.
- B4.2 The following design guidelines for a non-standard Council service refer to the variations or exceptions that might occur.
- B4.3 For technical information, advice and examples regarding waste and recycling system design concepts and data outside of these guidelines, developers should refer to the NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008) or other similar resources (see Appendix G: Further reading and references).
- B4.4 Professional advice may need to be sought by developers where a waste and recycling system design becomes complex.

Rear-lifting vehicles

- B4.5 Rear-lifting vehicles must be used to empty bulk bins. Where a rear-lifting waste collection vehicle is proposed, vehicle specifications and the area required by the waste contractor at the collection point for lifting bins should first be confirmed with Council. Appendix B includes typical vehicle specifications of a rear-lifting waste collection vehicle. Rear-lifting vehicles are not used in conjunction with Council's smaller 140L/240L waste and recycling bins, due to the high costs incurred.

Shared Bins – Number required

- B4.6 The number of 240, 660 and 1100L shared bins required is specified in Table 4.1 unless otherwise agreed by Council.

Shared bin designations and colour schemes

- B4.7 Shared bins should be colour-coded in line with those given in the Table below. For other waste or recyclable components not listed in this table, the colour-coding should be consistent with Australian Standard 4123.7—2008 (Standards Australia 2008) as listed in Table 4.2 below.

Table 4.2: Colour coding required for shared bins for general waste, recycling and/or organics:

Waste Category	Bin body colour	Bin lid colour
Garbage/general waste	Dark green or black	Blue
Recycling (commingled or containers)	Dark green or black	Yellow
Organics (including food)	Dark green or black	Lime green or plain

Location of presentation areas

B4.8 140/240L bins may be presented for collection:

- (a) On a road verge (if they meet Service Type A requirements for kerbside presentation zones);
- (b) On the property (elderly and infirm residents only – prior Council approval required)

B4.9 660/1100L shared bins are to be presented for collection on the property and not on pedestrian paths, road verges or on-street unless specifically approved by Council.

On-property presentation areas

B4.10 Design of presentation areas for waste and recycling bins on a property:

(a) Location to:

- (i) be at an accessible location within the property, but in such a way as to minimise impact on the surrounding streetscape (refer Figure 4.2);
- (ii) ensure that carting distance to the collection point does not exceed 50m;
- (iii) minimise potential for odour, noise and visual amenity impacts on residents and/or the public.

(b) Size to:

- (i) contain all bins being required for collection on a single day;
- (ii) arrange and ensure adequate spacing between bins to allow access and manoeuvring of bins for transfer and/or collection.

Table 4.3 gives typical dimensions of different sized waste bins which may be used as a guide for initial sizing and dimensioning of on-property presentation areas.

(c) Include visual screening if within 10m of a property boundary or a dwelling.

Collection from properties

B4.11 Where the collection point from a property is located on the street, confirmation from Council must be obtained to confirm whether or not parking restrictions will be required. Parking restrictions are sometimes used to ensure collection vehicles can safely park and position bins at rear of truck to pick up bins, without unreasonably interfering with pedestrian or vehicular access to the property.

B4.12 Where the collection point from a property is located on the property, this will require that:

- (a) The collection vehicle must be able to easily access the collection point with limited need to reverse or potential to:
 - (i) unnecessarily impede vehicular access in or to a street or to other properties;
 - (ii) cause damage to public realm infrastructure, buildings or other property.

- (b) There is adequate vertical clearance for the travel height of the waste collection vehicle along the route to and from the external entry and/or exit point(s) and collection point area and in any manoeuvring areas.
- (c) The grade for vehicular zones do not exceed the capabilities of the waste collection vehicle.
- (d) The sealed vehicular areas of public realm and property are designed to carry the load of the waste collection vehicle –Council requirements for design of road/pavement areas are given in Appendix B.

B4.13 The collection point should be positioned to minimise impacts on residents, neighbours and the public arising from noise or odour associated with bin collection.

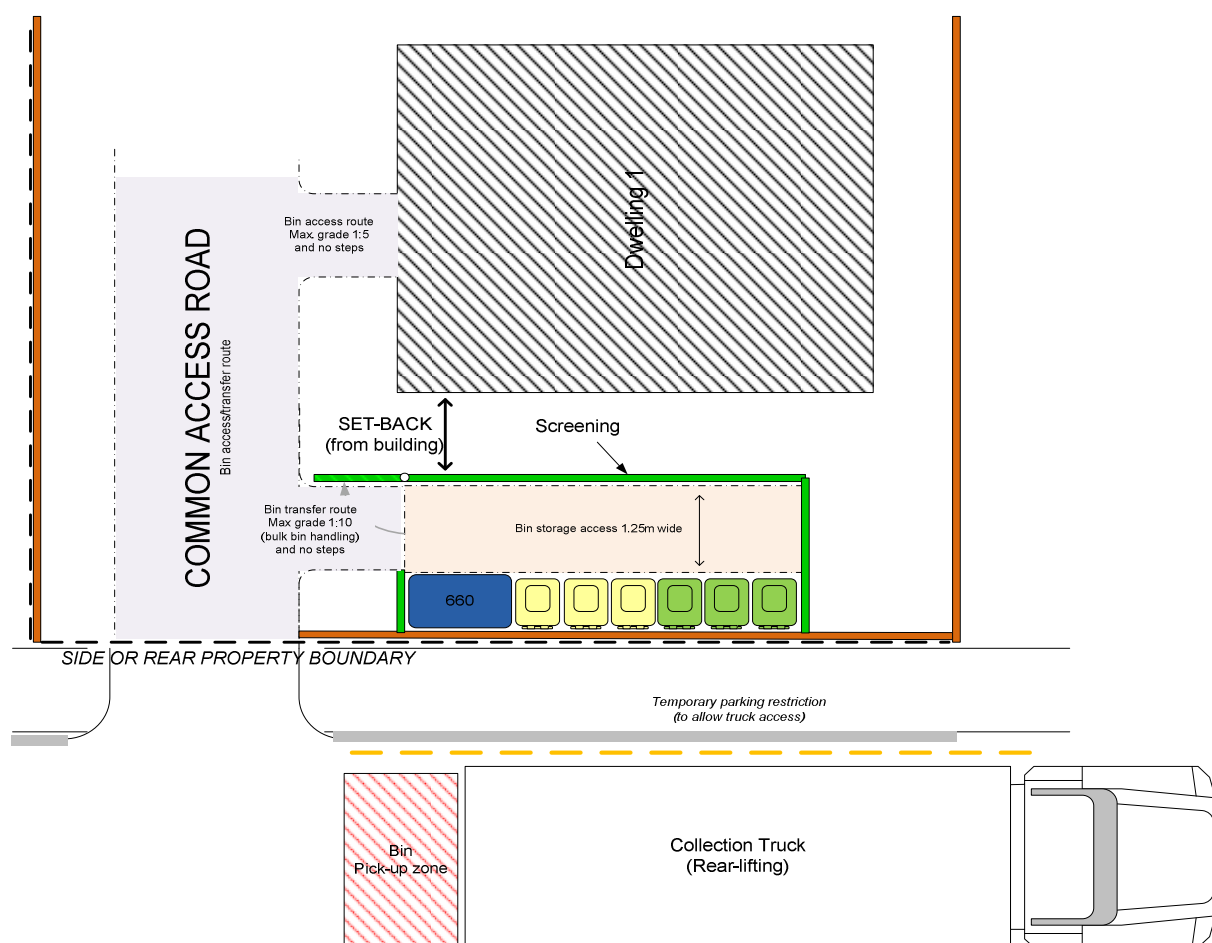


Figure 4.2: Example of on-property shared bin presentation area for 3 dwelling property where bins are collected from this area and taken directly to a collection point on the street. In this example, this area also serves as the property's bin storage area.

Table 4.2: Typical bin dimensions:

Size	140L	240L	660L	1100L
Height	920mm	1060mm	1200mm	1390mm
Width	535mm	580mm	1360mm	1360mm
Length	640mm	730mm	770mm	1090mm
Weight	11.4	15.5	45	58

Source: Mastec (2010)

Bin storage areas

B4.14 Design of bin storage areas should follow the same design principles as those for a standard Council service – refer Design Guidelines in Chapter 3 – taking into account the different storage and access requirements if larger 660 and 1100L bulk bins are used. These design principles will include:

- (a) Appropriate sizing of storage area to hold the required number bins (see Figure 4.4 for typical dimensions) to:
 - Allow residents to access bins for disposal of waste, recycling and organic waste;
 - For manoeuvring and transfer of the bins to presentation area and/or collection point.

Figure 4.4 gives typical dimensions of different sized waste bins which may be used as a guide for initial sizing and dimensions of bin storage areas.

- (b) Positioning on the property to reduce odour and noise problems, and use visual screens;
- (c) Providing correctly sized and paved access and transfer routes to and from dwellings, the bin storage area(s) and presentation area.

B4.15 Under-croft or parking area bin storage areas may be acceptable so long as access, bin-transfer and amenity issues are properly addressed.

Community/strata title developments

B4.16 The by-laws filed with the community plan for a community/strata title developments should clearly set out the management responsibilities for the waste and recycling system on a property where shared bins, common bin storage areas or on-property bin presentation and/or collection are proposed.

Additional documentation requirements

B4.17 Design details and specifications to demonstrate compliance with the above requirements should be appropriately documented on scale plans submitted to Council for approval showing:

- (a) Bin storage area(s);
- (b) Access and transfer routes to and from dwellings, the bin storage area(s) and presentation area;
- (c) Bin presentation area at the front, side or rear of the property;
- (d) Relevant pavement and/or road design specifications or note confirming that Council has indicated that street is suitable for access by council waste collection vehicles (noting that existing public roads can be assumed suitable unless Council has advised otherwise).

Note: Council reserves the right to request additional information from developers for the purposes of development assessment.

B4.18 The Waste System design checklist for Service Type B in Appendix D should be completed and submitted with a development application.

Examples of non-standard Council Service arrangements

The following photos illustrate several non-standard options for residential waste arrangements offered in the City of Charles Sturt. These photos are provided to aid developers with understanding and complying with requirements but should not be relied upon or reproduced without reference to the above Design Guidelines.

Photo to right: These bins are not placed at the front, side or rear of each allotment. The bin presentation zone is therefore a 'non-standard' feature of this service. The location of the bin collection zone, and its convenience for residents and neighbours, would need to be agreed with Council prior to development approval.



Photo to left: Example of bin storage area for a community/ strata title development where larger bulk bins have been used for general waste. Because of the larger bulk bins, additional access space in front of bins has been provided to allow their removal and manoeuvring for transfer for collection.

This storage area is conveniently located for residents as they enter and leave the building,

provides wide and level access for the bin collection contractor, and is screened from public view by 1.8m fence.



Photo to left: Example of bulk bin collection by rear-lifting truck.

7 Service Type C – Alternative Waste Service

Description

Residential waste systems for larger multi-storey, mixed use or multi-unit developments may be classified by the City of Charles Sturt as either Service Type B (non-standard Council service) or Service Type C (alternative waste service). Alternative waste services under Service Type C are provided to a development privately at the landowner's expense.

As a general rule, it is expected that most residential developments will make use of Council's waste and recycling services, as outlined in previous chapters. There are, however, some circumstances in which severe spatial restrictions and/or high or unusual waste volumes or types at a given site may mean that a Council service is not the most effective or efficient approach. Private service provision may also be required where a developer is unable to provide sufficient space and access for bin storage and presentation.

If you are unsure which waste service options are available for your development, check with Council staff.

Whether or not a Council service is used, waste and recycling systems for developments of this size and complexity require careful thought and planning.

Service Type C aims to:

- Provide flexibility for the developer to tailor site-specific solutions to waste issues at high density, mixed use and multi-storey residential developments;
- Ensure adequate care has been taken to ensure these solutions are practical, effective and convenient for future residents;
- Provide future residents with the opportunity to participate in recycling.

These residential developments are expected to involve site-specific design of their waste and recycling system(s) and may need to consider an alternative waste service to that which Council can provide. For instance, Service Type C waste and recycling system(s) may include:

- A collection point inside a building, such as in a basement car park;
- Waste and recycling chutes in multi-storey buildings for residents to dispose of waste and recyclables to the waste storage bins at ground level or in a basement – e.g. see Figure 5.2;
- Compaction equipment to reduce waste volume which can decrease storage area size and/or collection frequency (refer Figure 5.3);
- Larger bins or skips, such as 660L, 1100 L, 1.5 or 3m³, which may require different types of waste collection equipment, such as front-lift trucks, bin lifting equipment and/or trolleys – e.g. see Figures 5.4 and 5.5.

Design approach

Residential waste and recycling systems for these kinds of developments are difficult to standardise. A development may have unique requirements that dictate what type of system is best for its particular circumstances.

For this reason, the requirements set out for Service Type C waste systems are generally performance or outcome-based. It is intended that this approach will also facilitate innovation and uptake of new technologies where available and suitable.

Developers must include details with their development application that explain and justify the waste/recycling system design of their choosing and how it will be catered for at the development site.

When assessing the design put forward by a developer, Council will apply the following standards:

- (a) The waste and recycling system must be functional, and fulfil its intended operating purpose.
- (b) The waste and recycling system must be safe, accessible, convenient and easy for residents to use, including for persons who are disabled, aged or mobility impaired.
- (c) The waste and recycling system must be designed to minimise environmental nuisances, including noise, and other adverse impacts on the safety or amenity of residents, neighbours or the public.

Design & assessment framework

As a consequence of the additional flexibility and complexity associated with Service Type C developments, a more rigorous waste system design process is needed.

This process will involve:

- (a) Design by the developer of a site-specific waste and recycling system, which includes assessment and selection of a suitable collection service for waste and recyclables from the property;
- (b) Consultation with Council to confirm that the proposed waste and recycling system and collection service will meet development requirements; and
- (c) Preparation and submission of a Waste Management Plan to accompany the development application – which will describe the waste and recycling system details and waste collection service arrangements.

Design Guidelines

Design Principles

- C5.1 Design of the waste and recycling system should consider the same design principles as Council waste systems taking into account site specific design and alternative waste service requirements which might apply.
- C5.2 The following design guidelines for Service Type C refer to variations or exceptions that might occur and any additional requirements that might apply.
- C5.3 Wherever possible and unless reasonably justified and otherwise indicated, the development should seek to comply with the requirements or intent of Service Type A and B Design Guidelines, in addition to Service Type C Design Guidelines relevant to any proposed variation or exception.
- C5.4 The developer should first use these Design Guidelines to plan and design a Service Type C waste and recycling system, prior to consultation with Council staff.
- C5.5 In developing Service Type C waste and recycling systems, developers may wish to refer to the NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008), and other similar resources (see Appendix G: Further reading and references).
- C5.6 It is recommended that developers consider obtaining advice from experienced waste management professionals when designing or selecting equipment for the proposed waste and recycling system.

Minimum service expectation

- C5.7 As a minimum, Service Type C developments must be provided with the same service options as the standard council service:
 - (a) Comingled recycling (required service),
 - (b) General waste (required service), and
 - (c) Green organics/food waste (optional service – to be encouraged where practical).
- C5.8 Where a green organics service is provided for a development, it must be designed to include provision for the future inclusion of food waste as part of the organics collection.

Estimating waste & recycling generation rates

- C5.9 Estimates for waste and recycling volumes (for sizing and selection of bins) should be based on the waste and recycling generation rates provided in Appendix E.

Calculating number of bins

- C5.10 The number of bins calculated from waste and recycling volume estimates should be rounded up, and not down.

Waste chutes

- C5.11 Where waste chutes are used, these should be provided for both the waste and recycling streams (a third chute for food organics may be considered, but is not a requirement).
- C5.12 The waste chute(s) must be installed in (or as part of) a 'fire-rated' duct in accordance with building requirements of the Building Code of Australia.
- C5.13 The waste chute(s) should be positioned so that access points or openings are conveniently located in entry halls, lift foyers, or a separate room.
- C5.14 The access points or opening for waste chutes should be selected and designed to be easy to access, clean and maintain.
- C5.15 Design of waste chute installations – including the maximum number of floors – should comply with the waste chute manufacturer's technical specifications and/or operational limitations including installation design features and ancillary equipment required to prevent blockages and noise disturbances to residents.

Waste compactors

- C5.16 Waste compactors for the recycling stream should ensure that recyclables do not exceed a maximum compaction rate of 200kg per cubic metre, during storage and collection. This is to ensure the recyclables can be effectively separated and sorted following delivery to the recycling facility.
- C5.17 Waste compactors should be selected to operate with minimal downtime and maintenance, to avoid service interruptions.

Contingency requirements for waste chutes and compactors

- C5.18 Where waste chutes or compactors are used, the design of the waste system should include contingency to allow continuation of disposal and collection of waste in the event of substantial service interruptions that could arise in the event of equipment failure.

Waste storage rooms

- C5.19 Where internal rooms are used for storage of bins:
- (a) Design should consider potential problems that might arise from odour nuisances and the need to maintain the cleanliness and hygiene of bins and surfaces;

- (b) Facilities must comply with building requirements of the Building Code of Australia (ASCB 2010) and relevant Australian standards and local codes and regulations.
- (c) Design issues that need to be considered include:
 - (i) Proper structural design of floors;
 - (ii) Ventilation systems;
 - (iii) Lighting;
 - (iv) Fire safety systems and requirements;
 - (v) Suitable flooring and wall finishes;
 - (vi) Floor grading and drainage (to sewer);
 - (vii) Security to prevent interference with bins and equipment;
 - (viii) Access by residents (where required) or building staff for maintenance purposes;
 - (ix) Convenience, efficiency and occupational safety in use of equipment, access and collection of bins for building management staff and/or waste and recycling service providers.
- (d) Where these areas are not located at ground level, a separate service lift may be required that is adequately sized and designed to carry full bins.

Basement waste storage

C5.20 Basement storage areas should be designed in line with the same guidelines and principles as for waste storage rooms except that screens or fences may partition these areas from other parts of the basement for security and public safety purposes.

C5.21 If collection point is external to a basement storage, the bins will need to be transferred from basement to ground-level:

- (a) Where manual carting:
 - (i) Maximum bin sizes should not exceed 660L for uncompacted waste and 240L for compacted waste.
 - (ii) A suitable egress route for bins from the basement to ground-level must be provided.
 - (iii) The egress route must be clearly marked and free of obstructions.
 - (iv) Ramps must be of an adequate width and with a gradient of no more than 1:10. Ideally, a separate ramp to that provided for vehicular access should be provided.
 - (v) If a service lift is used, it must be adequate size and load capacity.

Alternative waste service

- (vi) If a separate mechanised lifting platform, connecting the basement with ground-level external to building is used, it must be adequate size and load capacity.
- (b) Where using mechanically assisted carting, the same requirements as for manual carting should apply except that in addition:
 - (i) The lifting equipment or trolley to pick-up bins must be appropriately sized and designed to manoeuvre within the access areas available and lift the bins;
 - (ii) A secure storage area for lifting equipment or trolley should be provided to prevent theft or damage by third parties.

C5.22 Direct collection from a basement bin storage area would require that the collection vehicle is able to access the basement, adequately manoeuvre into position, load bins and exit the basement:

- (a) Adequate vertical clearance:
 - (i) In the basement for the travel height of the waste collection vehicle along the route to and from the external entry and/or exit point(s) (including vehicular ramps) and collection point area and in any manoeuvring areas (usually 4m clearance);
 - (ii) In the basement at the collection point area to meet the clearance height for loading of bins by the waste collection vehicle;
- (b) The collection vehicle must be able to manoeuvre easily in the basement to position itself for collection of bins and also to enable it to exit – this should be achieved with limited need to reverse or potential to damage the building or other property in the basement;
- (c) The grades of entry and exit ramps must not exceed the capabilities of the waste collection vehicle;
- (d) The floor of the basement must be suitably designed to carry the load of the collection vehicle.

The NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008) is a useful reference for advice regarding the design of basement areas for access by waste collection vehicles.

External bin storage

C5.23 Where external storage areas are proposed extra care should be taken when locating the external storage area to:

- (a) Provide convenient access and security (including lighting) for residents;
- (b) Minimise potential for odour and noise nuisances and preserve visual amenity for residents, neighbours and the public (including visual screening of bin storage areas).

Colour coding of bins and chutes

B4.17 Shared bins should be colour-coded in line with those given in the Table below. For other waste or recyclable components not listed in this table, the colour-coding should be consistent with Australian Standard 4123.7—2008 (Standards Australia 2008).

Table 5.1: Colour coding required for shared bins for general waste, recycling and/or organics

Waste Category	Bin body colour	Bin lid colour
Garbage/general Waste	Dark green or black	Blue
Recycling (commingled or containers)	Dark green or black	Yellow
Organics (including co-collected food and garden organics)	Dark green or black	Lime green or plain

C5.24 The above lid colours should also be used with bin chutes and other educational signage wherever possible, to ensure clear and consistent information is communicated to users.

Additional source-separation of recyclable components

C5.25 Additional source-separation of recyclable components, such as newspaper, cardboard, plastics, glass and metals may be considered:

- As these individual constituents may be less costly to arrange collection for and will reduce the cost of collection for the comingled dry recyclables, and thus costs of waste disposal may be (but not necessarily) decreased.
- To allow compaction of the recyclables, which may reduce areas required for storage and decrease collection costs;
- Where a building is seeking an environmental or sustainability accreditation such as NABERS or Green star rating, and is therefore aiming to meet a higher standard of environmental performance.

Hard waste storage areas

C5.26 Residents in higher density, multi-storey and mixed use developments typically have little private space available to store hard waste items until the annual Council hard waste collection. For this reason, such developments may consider the option of providing residents with sufficient space to store these items for short periods, or an alternative method for residents to conveniently dispose of these items. It should be noted, however, that this is a private matter, and not part of the development assessment.

Waste collection service

C5.27 Where a Council service is not accessible or suitable for the proposed waste system, a commercial waste service will need to be provided and paid for on a private basis by the property owner/s.

C5.28 Selection of an alternative waste collection service should consider:

- (a) Strategies to increase recycling and reduce disposal of waste to landfill;
- (b) Bin sizes available;
- (c) Collection vehicles and what access requirements will be required;
- (d) Days of the week when services are available;
- (e) Collection frequency;
- (f) Supplementary waste collection services such as:
 - (i) Where truck operators will transfer bins from a bin storage area to collection point, empty them and return them to the storage area;
 - (ii) Compactor systems for general waste;
- (g) Price per service;
- (h) Price per unit volume or weight of waste or recyclables collected;
- (i) Contract conditions including duration.

C5.29 The design of the waste system and selection of alternative waste collection service should be assessed to identify which offers the best overall service and recurrent cost outcome to residents for collection of waste and recycling from a development.

Management

C5.30 The management of the waste and recycling system should be considered as part of the design of the waste and recycling system and alternative waste collection service.

Communication with residents

C5.31 The building manager, strata or community corporation should put in place systems and documentation that ensure information provided to residents upon purchase of the property (and/or included in the operating manual for a dwelling) adequately describes the waste and recycling system, and its use.

Additional documentation requirements

- C5.32 Developments proposing to opt for a private waste and recycling service under Service Type C are required to prepare and submit a Waste Management Plan with their development application. Sample contents for this Waste Management Plan are listed in Appendix E.
- C5.33 The Waste System design checklist for Service Type C in Appendix C should also be completed and submitted with the development application.

Examples of Service Type C Systems & Equipment

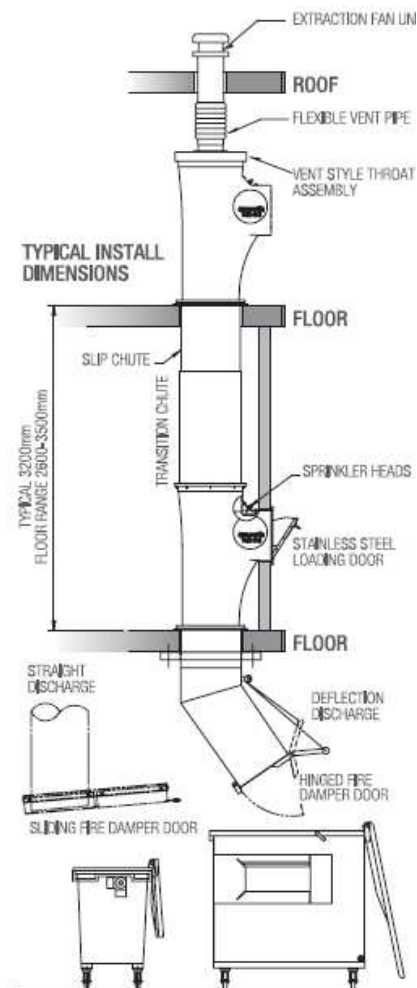


Figure 5.1: Schematic illustrating a waste chute. Source: Waste Tech Engineering (2010a)



Figure 5.2: Example of general waste compactor with carousel to rotate 240L bins. Source: Waste Tech Engineering (2010b)



Figure 5.3: Example of lift platform which could be used to transfer bins from a basement to ground level. Source: Platform Lift Company (2010)



Figure 5.4: Example of mechanised pallet truck which could be used for lifting and moving bins from storage area to presentation area or collection point. Source: Crown (2010)

Appendix A: City of Charles Sturt Waste & Recycling Services

Kerbside 3 bin system:

The City of Charles Sturt offers a 3 bin waste and recycling service to residents as follows:

Bin content	Bin type	Lid colour	Collection frequency
Recycling	240 L mobile garbage bin (MGB)	Yellow	Fortnightly (alternating with Organics bin)
Organics (Optional)	240 L MGB	Green	Fortnightly (alternating with Comingled Recycling bin)
General (or Residual) Waste	140 L MGB	Blue	Weekly

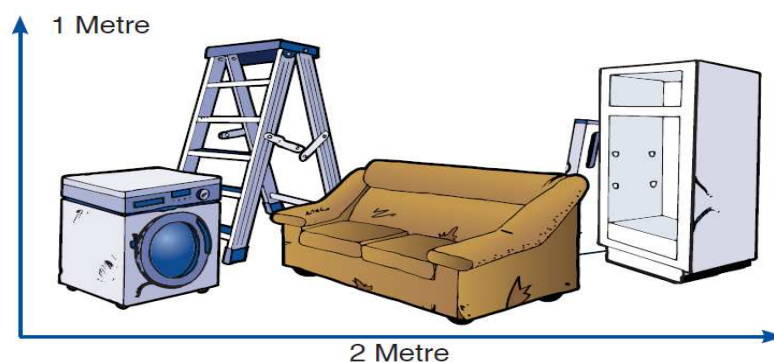
In limited circumstances Council also offers a range of non-standard waste and recycling options, as outlined in Chapter 6 of this document.

Kerbside hard waste service:

This service is offered to all residents on a ward by ward basis from October to December each year.

Items accepted for hard waste collection include furniture and bedding, whitegoods, electrical appliances, old timber, tools and equipment.

Residents are limited to placing a maximum of 2m³ on the kerb for hard waste collection, and must maintain waste placed outside their residents in a safe and tidy manner until it is collected by Council.



Drop-off waste and recycling services:

Waste and recycling services are also available to residents at the Council Waste Management Centre, which is located on Toogood Avenue in Beverley.

For more information:

More information on Council's waste and recycling services is available by calling 8408 1111 or on the Council website as follows: www.charlessturt.sa.gov.au

Waste Collection Vehicles & Road/Pavement Design Standards

A.1 Waste Collection Vehicles

A.1.1 Side-loading Waste Collection Vehicles – Standard Council Service

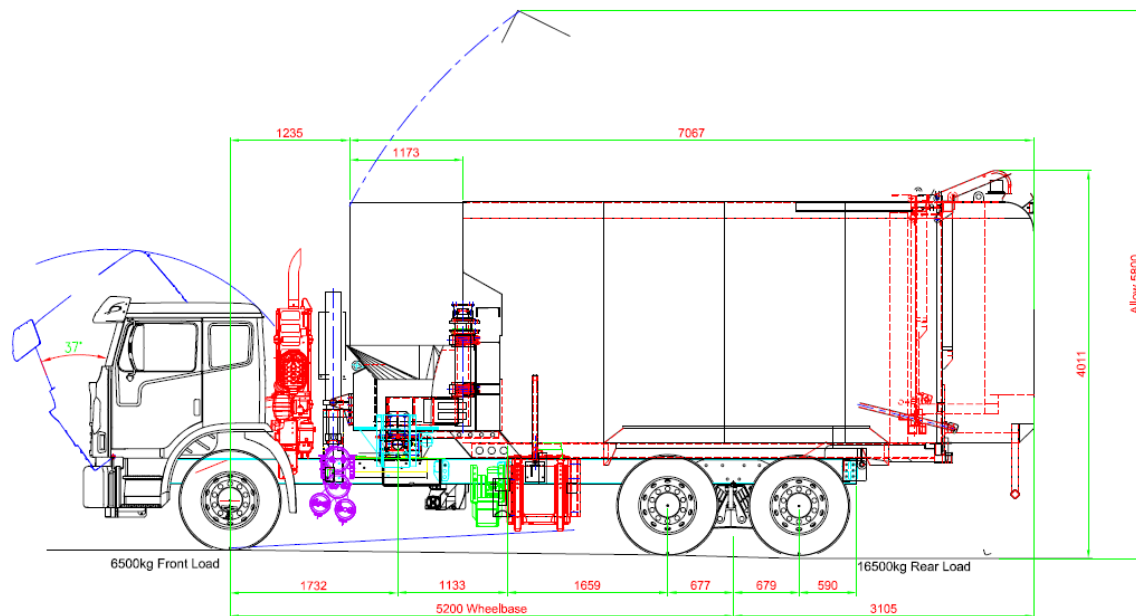


Figure B.1: Diagram and dimensions of City of Charles Sturt’s waste and recycling vehicles (showing 35m³ compactor body).

Side-loading collection vehicle	
Wheel base	5200mm
Driving width – vehicle only (mirror to mirror)	3300mm
Operating width – when emptying bins	4900mm (minimum required) 5500mm (at widest point of lifting arc)
Track width (wheel to wheel)	Front 2307mm (outside to outside) and 2024 (centre to centre) Rear 2467mm (outside to outside) and 1852 (centre to centre)
Height – vehicle only (when driving)	4000mm
Operating height – when emptying bins	4500mm
Turning circle	18644mm
Total length of recycling vehicle	10 metres
Gross weight (when fully loaded)	22.5 tonnes

Figure B.2: Truck dimensions and turning circle requirements for Council side-loading waste collection vehicles.

A.1.2 Rear-lift Waste Collection Vehicles (for bulk bins) – Non-standard Council or commercial Service

Typical specifications for these types of vehicles that may be used by commercial waste contractors, or as part of a non-standard Council service (in specified circumstances only) are given in Figure B.3.

Rear loading collection vehicle	
Length overall	10.24m
Width overall	2.5m
Operational height	3.5m
Travel height	3.5m
Weight (vehicle only)	12.4 tonnes
Weight (payload)	9.5 tonnes
Turning circle	18.0m
Gross vehicle weight (when full)	21.9 tonnes

Figure B.3: Typical specifications for rear-lifting waste collection vehicles. Source: NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008)

A.2 Road/Pavement Design Requirements

Appropriate heavy vehicle standards should be incorporated into the design of roads and paved areas for waste collection vehicle access as set out in Council's Engineering and Open Space Development Guidelines (City of Charles Sturt 2009), which are based on relevant Australian and the Austroads' standards.

Designers are encouraged to consult with Council prior to the design of roads or paved areas to ascertain specific requirements for the proposed development. However, relevant issues when designing roads or paved areas for waste collection vehicles will include, among other thing, the following.

- Road gradients;
- Road width;
- Provision of road verge area for presentation of bins for collection, e.g. see Figure B.4 for example of rear laneway cross-section;
- Turning or manoeuvring areas, e.g. see Figure B.5 for example of a turning circle template;
- Local area traffic management requirements (for example speed humps);
- Clearance heights;
- Design load and structural design of pavement; etc.

The NSW Better Practice Guide for Waste Management in Multi-unit dwellings (DEC, 2008) provide advice regarding design and assessment of the above issues for residential waste systems.

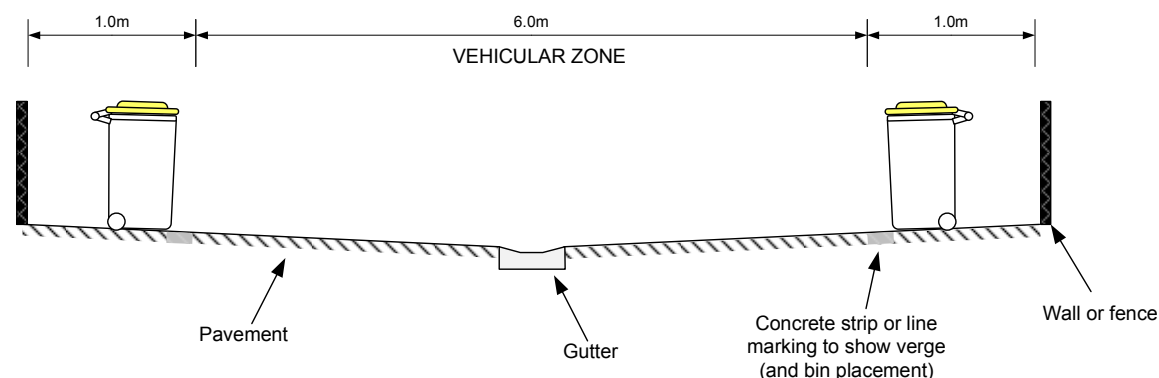


Figure B.4: Example of a narrow rear laneway with provision of 1.0m verge area for bin presentation on both sides. The space between bin and wall or fence is required for 'kick-back' of the bin during pick-up by the waste collection vehicle. The vehicular zone provides adequate width for a waste collection vehicle to safely traverse the laneway even if cars are occasionally (illegally) parked on verge areas.

Note: this design would not be appropriate for laneways where high rates of pedestrian use were anticipated.

[to be inserted]

Figure B.5: Turning circle required by Council's waste and recycling vehicles, provided by Council's waste collection contractor (Solo Resource Recovery)

Appendix B: Kitchen Waste Bin Design

B.1 Number, Type & Size of bins

Effective source separation by residents of recyclables is essential to maximising diversion of waste from landfill. It is recommended that each dwelling include in the design of its kitchen a bin station, which provides sufficient space for the following bins:

- (a) Commingled recycling waste bin - at least 40L in size
- (b) General waste bin – at least 20L in size
- (c) Food organics bin (see picture below)

B.2 Waste Station Design Principles/Concepts

The kitchen bin station should be easy for residents to access and convenient to use. The following design concepts or issues could be considered.

- (a) Bins are co-located in pull-out drawer or racks, built-in to a kitchen cabinet (see picture below)
- (b) Bins are labelled and/or colour coded to indicate the type of waste or recyclable, i.e.
 - General waste = red or blue
 - Comingled recyclables = Yellow
 - Food waste = Green
- (c) Bins, especially for comingled recyclables where plastic-film bags are not to be used, should be equipped with handles, allowing easy carriage by residents to the property bin storage area.



Pictured at left: Container for collection and aggregation of kitchen food waste



Pictured above: Kitchen waste bin station example: Pull-out draw with bins

Appendix C: Waste System Design Checklists

4 checklists provided below as follows:

- Service Type A - Standard Council service (3 bin system)
- Service Type B – Non-standard Council service
- Service Type C – Alternative waste service
- Land divisions



Waste System Design Checklist

Service Type A – Standard Council Service (3 bin system)

Applicant/Proponent:			
Contact details:			
Proponent's representative:			
Contact details:	Phone:	Email:	Mobile:
Development ID: (for Council use only)			
Location/Address:			
Item	Check	Brief Comments (if and where applicable)	
1. Street access for Council waste and recycling vehicles confirmed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Note: existing public roads can be assumed suitable unless Council has advised otherwise.	
2. Bin storage area (on property): <ul style="list-style-type: none"> • Screened from public view (to height of 1.5m)? • 2m wide x 1m deep per allotment? • Located away from windows and doorways? • On a flat paved or sealed surface? • Easy for residents to access? • Has a flat, 0.9m wide pathway to the presentation zone, with no steps? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		
3. Bin presentation area (on verge): <ul style="list-style-type: none"> • On a public road? • Located at front, side or rear of each allotment? • 1.6m wide x 1m deep per allotment? • On a flat, stable surface? • At least 1m from shared or communal driveways? • Located outside the canopy of street trees (i.e. not under trees)? • Unlikely to be blocked by parked cars? • Allows 1.2m wide pedestrian thoroughfare? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		

Note: For development assessment purposes, it will be assumed that all proposed dwellings with individual driveway access to a public road will have sufficient space to store and present bins. These dwellings will automatically be provided with a Standard Council (3 bin) service. No waste system design documentation (including this checklist) is required to be submitted with development applications of this kind.

4. Documentation included with development application: <ul style="list-style-type: none"> • Scale plans show bin storage area design details (on property)? • Scale plans show bin presentation area design details (on verge)? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
--	--	--

Signed and authorised by:

Name:
Authorised Signature:
Date:

For Council use only:

Contracted Services:	
Engineering and Construction:	
Planning and Development:	
Recommendation:	<input type="checkbox"/> More information required (listed below) <input type="checkbox"/> Approve <input type="checkbox"/> Approve with conditions (listed below) <input type="checkbox"/> Refuse (list grounds for refusal below) Comments:



Waste System Design Checklist

Service Type B – Non standard Council service

Applicant/Proponent:		
Contact details:		
Proponent's representative:		
Contact details:	Phone:	Email: Mobile:
Development ID: (for Council use only)		
Location/Address:		
Item	Check	Brief Comments (if and where applicable)
1. Street access for Council waste and recycling vehicles confirmed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Note: existing public roads can be assumed suitable unless Council has advised otherwise.
2. Bin storage area (on property): <ul style="list-style-type: none"> • Screened from public view? • 2m wide x 1m deep per allotment? • Located away from windows and doorways? • On a flat paved or sealed surface? • Easy for residents to access? • Has a flat, 0.9m wide pathway to the presentation zone, with no steps (min. 1.2m path for bulk bins)? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Bin presentation area (on verge): <ul style="list-style-type: none"> • On a public road? • Located at front, side or rear of each allotment? • 1.6m wide x 1m deep per allotment (or as required for shared bins, including bulk bins)? • On a flat, stable surface? • At least 1m from shared or communal driveways? • Located outside the canopy of street trees (i.e. not under trees)? • Unlikely to be blocked by parked cars? • Allows 1.2m wide pedestrian thoroughfare? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Documentation included with development application: <ul style="list-style-type: none"> • Scale plans show bin storage area design details (on property)? • Scale plans show bin presentation area design details (on verge)? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	

Non-standard Council service requested:	Check	Justification
1. Additional bins (at extra cost)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. Shared/communal bins?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3. 140L recycling bins?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4. 660 L capacity waste bins?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5. 1100L capacity waste bins?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6. Alternative presentation area (other than at the front, side or rear of the property)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Collection from a private road or property?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8. Rear-loaded collection?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Other (please provide details)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Note: Council reserves the right to accept or refuse the provision of non-standard waste and recycling services at its absolute discretion.

Signed and authorised by:

Name:
Authorised Signature:
Date:

For Council use only:

Contracted Services:	
Engineering and Construction:	
Planning and Development:	
Recommendation:	<input type="checkbox"/> More information required (listed below) <input type="checkbox"/> Approve <input type="checkbox"/> Approve with conditions (listed below) <input type="checkbox"/> Refuse (list grounds for refusal below) Comments:



Waste System Design Checklist

Service Type C – Alternative waste service

Applicant/Proponent:	
Contact details:	
Proponent's representative:	
Contact details:	Phone: Email: Mobile:
Development ID: (for Council use only)	
Location/Address:	

Item	Check	Brief Comments (if and where applicable)
1. Street access for commercial waste and recycling vehicles confirmed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Note: existing public roads can be assumed suitable unless Council has advised otherwise.
2. Total number of dwellings within the development?	(enter number)	
3. Waste bin size and number?	0 x 140L 0 x 240L 0 x 660L 0 x 1100L 0 x 1.5 m ³ 0 x 3 m ³ 0 x other (please specify)	Collection frequency:
4. Recycling bin size and number?	0 x 140L 0 x 240L 0 x 660L 0 x 1100L 0 x 1.5 m ³ 0 x 3 m ³ 0 x other (please specify)	Collection frequency:
5. Organics bin size and number? (optional service)	0 x 140L 0 x 240L 0 x 660L 0 x 1100L 0 x 1.5 m ³ 0 x 3 m ³ 0 x other	Collection frequency:

	(please specify)	
6. Are waste and recycling chutes being used?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Are waste compactors being used?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8. Are recycling compactors being used? (Note maximum compaction 200kg per m ³)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Bin storage area (on property): <ul style="list-style-type: none"> • Screened from public view? • Fits all waste and recycling bins? • Allows space to access and remove bins? • Well ventilated? • Located away from windows and doorways? • On a flat sealed surface? • Easy to access for residents (within 50m of each dwelling)? • Secure to prevent unauthorised use? • Has a flat pathway to the bin collection area - no steps and a gradient of no more than 1:5 (or 1:10 for bulk bin handling)? • Proper access for residents and/or building management for cleaning and maintenance? • Appropriate bin transfer route to presentation zone? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
10. Location of bin collection area: <ul style="list-style-type: none"> • Within the development, outside the building at ground level? • Inside the building at ground level with a minimum vertical clearance of no less than 4m? • Inside the building, in an undercroft basement with a minimum vertical clearance of no less than 4m? • Within the public realm? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
11. Design of bin collection area: <ul style="list-style-type: none"> • Large enough for bins and vehicle to operate effectively? • On a flat paved or sealed surface? • At least 1m from driveways? • At least 0.5m from street tree canopies? • Unlikely to be blocked by parked cars? • Allows 1.2m wide pedestrian thoroughfare? • Other (please specify) 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
12. Documentation included with development application: <ul style="list-style-type: none"> • Scale plans show bin storage area design details and access and bin transfer routes • Scale plans show bin collection area design details • Copy of waste management by-laws filed with 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	

community/strata plan	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<ul style="list-style-type: none"> Waste Management Plan (consistent with requirements of City of Charles Sturt Residential Waste and Recycling Guidelines – Appendix F) 	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Signed and authorised by:

Name:
Authorised Signature:
Date:

For Council use only:

Contracted Services:	
Engineering and Construction:	
Planning and Development:	
Recommendation:	<input type="checkbox"/> More information required (listed below) <input type="checkbox"/> Approve <input type="checkbox"/> Approve with conditions (listed below) <input type="checkbox"/> Refuse (list grounds for refusal below) Comments:



Waste System Design Checklist

Land Divisions

Applicant/Proponent:			
Contact details:			
Proponent's representative:			
Contact details:	Phone:	Email:	Mobile:
Development ID: (for Council use only)			
Location/Address:			
Item	Check	Brief Comments (if and where applicable)	
5. Existing street access for Council waste and recycling vehicles confirmed (with no modifications to carriageway proposed)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Note: existing public roads can be assumed suitable unless Council has advised otherwise.</p> <p>If you have answered 'yes' to this question, no additional assessment is required.</p>	
6. 2 way street, with kerb/gutter: <ul style="list-style-type: none"> • Carriageway min 6m wide? • Parallel parking bays min. 2.1m wide (if required)? • Verge min 2.5m wide both sides (or 3.5 if serving more than 100 allotments)? • Verge min 4.5m wide – trunk collector roads (serving 900 allotments) • Minimum vertical clearance of 4.5m (or 4m on roads where no bins are being lifted)? • Road pavement constructed to carry a 22.5 tonne truck? • Through-way or turning circle provided? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	<p>Guidance on angle parking is available by reference to AS\NZS 2890.1.</p> <p>Note: verge widths include min 1.2 m pedestrian pathway and 1m for bin placement.</p>	
7. 1 way local street, with kerb/gutter: <ul style="list-style-type: none"> • Carriageway min 4m wide? • Parallel parking bays min. 2.1m wide (if required)? • Verge min 2.5m wide (or 3.5 if serving more than 100 allotments) on one side? • Minimum vertical clearance of 4.5m (or 4m on roads where no bins are being lifted)? 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No		

<ul style="list-style-type: none"> • Road pavement constructed to carry a 22.5 tonne truck? 		
8. 2 way rear lane: <ul style="list-style-type: none"> • Laneway min 8m wide? • Parking restrictions applied (no parking)? • No verge or kerb/gutter treatment – can drive on full width if required? • Minimum vertical clearance over carriageway of 4.5m (or 4m on roads where no bins are being lifted)? • Road pavement constructed to carry a 22.5 tonne truck? • Corners cut for turning circles • Throughway (no dead-ends) 	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Private roads requesting waste vehicle access: <ul style="list-style-type: none"> • Standard indemnity form signed and submitted with development application? 	<input type="checkbox"/> Yes <input type="checkbox"/> No	A copy of Council's standard indemnity form is included as Appendix H of the 'Residential Waste and Recycling Guide'.

Signed and authorised by:

Name:
Authorised Signature:
Date:

For Council use only:

Contracted Services:	
Engineering and Construction:	(Note: road widths and turning circles to be checked and approved)
Planning and Development:	
Recommendation:	<input type="checkbox"/> More information required (listed below) <input type="checkbox"/> Approve <input type="checkbox"/> Approve with conditions (listed below) <input type="checkbox"/> Refuse (list grounds for refusal below) Comments:

Appendix D: Waste & Recycling Generation rates

Table E.1: 'Peak' per dwelling generation rates in L/dwelling/week which should be used for sizing shared bins in residential waste systems at different development scales – (a) with no food waste collection and (b) with food waste collection.

Service	2-5 Dwellings		6-10 Dwellings		> 10 Dwellings	
	(a) no food collection	(b) with food collection	(a) no food collection	(b) with food collection	(a) no food collection	(b) with food collection
General/residual waste	135	105	120	100	100	80
Recyclables (Comingled)	100	100	90	90	80	80
Organics/Food Waste	95	125	65	85	35	55

Notes:

- The rates in the Table assume:
 - Average occupancy rates in a development of 2.1 persons per dwelling;
 - 'Uncompacted' waste and recycling volumes – compaction would reduce the storage volume required;
- The following comments and qualifications apply to data in the Table.
 - Diversion rates shown in Table for (b) with food waste collection will take several years to achieve from the date of introduction of this service.
 - For dwellings where 'green' or garden areas on the property exceed 50 m² per dwelling, 'peak' organics/food waste generation rates for 6-10 Dwellings are recommended.
 - Where 'average' occupancy rates for a property exceed 2.1 persons per dwelling, 'peak' waste and recycling generation rates should be increased proportionally.

Note: developments with small lawn and garden areas (less than 50m² per dwelling) will be permitted to reduce storage space for organics bins. As a guide, in these circumstances 1 organics bin may be shared between 2-3 dwellings, or more where no garden areas exist and the organics bins are to be used for food organic waste only.

Appendix E: Waste Management Plan Contents

The following is the expected format and content that must be included in a Waste Management Plan (WMP) for a Service Type C residential waste system.

Section	Expected content
1. Development details	Location; name of developer; description of development including buildings, dwellings and occupancy data
2. Type of Waste System	Council Service or Alternative Waste Service; Individual bin sets or shared/communal Bins; Waste Service Provider; Location of Bin Storage Area and Collection Point; rationale for selection and design of waste system
3. Waste System Sizing	Number & type of waste and recycling bins per dwelling and for development; Method for system sizing, including per dwelling generation rates, peaking factors and design factors assumed; Calculation worksheet for waste generation estimates appended
4. Bin storage location	Description of design methodology, addressing key issues of: sizing, positioning; resident access; bin removal for collection; bin labelling and signage; and noise, odour and amenity. Calculation worksheet for number of bins and sizing of area appended
5. Presentation & collection points	Summary of design methodology, addressing key issues of: sizing; positioning; collection frequency and timing; collection vehicle access; and public safety. Details of waste service provider appended including correspondence confirming suitability of proposed collection arrangements
6. Specialised Facilities & Equipment	Where specialised facilities and equipment, such as waste chutes, compactors, lifting equipment, etc., are proposed, provide brief description of design and technical rationale for why and how they were selected and sized, and how they are incorporated into and function as part of the residential waste system.
7. Management	Description of waste system management responsibilities and operations for when development complete, including details of any property management contracts
8. Resident communication	Methods to educate residents about waste and recycling systems and use. Append copies of proposed tenancy agreements or residents' manuals explaining the use of the waste system.

Estimation of service costs for residents, and how the proposed waste and recycling system minimise the recurrent cost to residents for the waste collection service, should be considered in the preparation of the Waste Management Plan, but is not part of the development assessment undertaken by Council.

If you require assistance in the development of a Waste Management Plan, please contact the Waste Management Association of Australia (SA Branch) on phone (61) 2 8746 5000 or email: sa@wmaa.asn.au

Appendix F: Further Reading and References

F.1 References used in this document

Australian Building Codes Board (ABCB) (2010); Building Code of Australia (BCA) - 2010; ABCB, Canberra, ACT

City of Charles Sturt (2009); Engineering and Open Space Development Guidelines, July 2009;

<http://www.charlessturt.sa.gov.au/site/page.cfm?u=472>, Accessed 29/06/2010

Crown (2010); Rider Pallet Trucks – Specifications, GPC 3000 Series;

http://www.crown.com/Europe/products/pdfs/specs/GPC3000_GB_09_07.pdf, Accessed 02/07/10.

Department of Environment and Conservation (DECC), NSW Government (2008); Better Practice Guide for Waste Management in Multi-unit dwellings

Mastec (2010); Mastec – Our Products: 140L, 240L, 660L, 1100L bins;

<http://www.mastec.com.au/products.html>, Accessed 09/07/2010

Platform Lift Company (2010); Platform Lift E-Type product sheet;

http://www.platformliftco.com.au/content/platform_lift_e_type.html, Accessed 21/06/2010

SITA Environmental Solutions (2010); Rear Lift Collection System;

http://www.sita.com.au/media/17735/rear%20lift_2pp220307.pdf, Accessed 05/06/10

Standards Australia (SA) (2008); AS 4123.7—2008: Mobile waste containers – Colours, markings and designation requirements

Waste Tech Engineering (2010a); Catalogue – Products & Solutions for the Recycling & Waste Industries: Smooth Tubes – Garbage & Linen Chutes; Waste Tech Engineering, Hallam, Victoria

Waste Tech Engineering (2010b); Catalogue – Products & Solutions for the Recycling & Waste Industries: Eco-Pack Waste Chute Compactor Tech Engineering, Hallam, Victoria

F.2 Further Reading

Commonwealth Environment Protection Agency (1992); National Waste Minimisation and Recycling Strategy, Australia

Council of Australian Governments (1992); National Strategy for Ecologically Sustainable Development

Department of Environment & Climate Change (2010); Accessed from

www.environment.nsw.gov.au/warr/BetterPracticeMUDCaseStudies2.htm 29 March 2010

Department of Environment and Conservation, NSW Government (2008); Model "Waste Not" Development Control Plan (DCP) Chapter 2008

Department of Planning and Local Government (DPLG), South Australian Government (2010); 30-yr plan for Greater Adelaide

Department of Urban Services (1999), ACT Government; Development Control Code for Best Practice Waste Management in the ACT

Environment Heritage & Protection Council (2009); National Waste Policy: Less Waste, More Resources

Resource Smart, Sustainability Victoria, Victorian Government (2009); Draft Best Practice Guide for Waste Management in Multi-unit Developments

South Australian Government (2007); South Australia's Strategic Plan

Standards Australia (SA) (1998); AS/NZS 3831:1998: Waste management - Glossary of terms

Sydney City Council (SCC) (2005); Policy for Waste Minimisation in New Developments

Zero Waste SA (2005); South Australia's Waste Strategy 2005 – 2010

Appendix G: Standard indemnity for on property waste vehicle access



88-88 Chinderah Bay Drive
Chinderah NSW 2487
P.O. Box 1427
Kingscliff NSW 2487
AUSTRALIA.

Services: 02 6676 7647
Admin: 02 6674 7656
Fax: 02 6674 7657
Email: solorr@solo.com.au
Web: www.solo.com.au

INDEMNITY

This deed poll is executed on the:

Day / Month / Year

By the party:

(Body Corporate)
Community Corporation Name. or Strata Corporation Name.

(Address)
Address

(Plan Number)
Community Corporation Plan Number or Strata Corporation Plan Number

With respect to waste services that are to be provided by:

The City of Charles Sturt (Council)

and:

Rico Enterprises Pty Ltd (trading as Solo Resource Recovery) (Solo)
of 181 Morphet Road, North Plympton, SA

Whereas:

- (a) The Body Corporate has requested the Council, through Solo, to provide waste removal and/or other services to the Property.
- (b) The Council and Solo have agreed to provide those services subject to the Body Corporate entering into this Deed of Indemnity.
- (c) The Body Corporate and its member owners grant to the Council and Solo the right for the Council and Solo to enter the Property, including private roads (Roads) within the Property, and to pass and repass over the Roads with or without vehicles of any kind for the purpose of providing waste removal and/or other services.
- (d) The Body Corporate and its member owners acknowledge that Solo or the Council will use heavy and wide vehicles in the provision of these services, and warrants that the Roads are and will, while this Deed remains in effect, be structurally suitable for access by those vehicles.

**The Body Corporate agrees to:**

Indemnify and keep indemnified the Council and Solo and the servants and agents of each of them against all liabilities, actions, proceedings, claims, demands, costs and expenses which Council or Solo may now, or at any time hereafter incur or sustain in connection with, or arising from or in respect of any claim relating to death or personal injury caused to anyone on the Property or damage to any property of the Body Corporate or of its servants, agents, licensees, tenants, lessees or invitees or any property of all or any of the proprietors of any of the Lots in the Property or any property of the servants, agents, licensees, tenants, lessees and invitees of any of those proprietors in consequence of the provision of waste services, except that the indemnity provided in respect of death or personal injury caused to anyone on the Property is limited to the extent that the injury or death was caused by a negligent or wilful act or omission of Solo.

Authorised signature:**(1) Authorised Representative of the Body Corporate**

Signature _____
Name _____
Plan Number _____
Plan Name _____

(2) The address of the plan: _____

