

Scheme design and roll-out

It is important that the roll-out of the service runs smoothly, including delivery of bins, caddies and information material, and that legitimate grievances of residents are dealt with promptly. Major problems with the roll-out or the first collections can result in dissatisfied residents and negative press, putting at risk the success of the organics recycling scheme, at least in the short term.

Things to consider prior to roll-out

- 1 **A facility** processing garden organics may not be suitable or licensed for the processing of food organics.
- 2 **Trialling** a combined food and garden organics services on a proportion of the local government area may be useful in encouraging community debate, fine tuning program components such as education, communication and waste infrastructure. Sequential rollout of services may be easier for householders.
- 3 Ensuring **access to appropriate equipment**, such as containers and often liners, is a fundamental consideration for organics collection services. In order to maximise yields, it is important to provide practical and convenient methods to make organics collections easy for householders.
- 4 A **well-designed communication and education program** is essential for explaining why a service change is being implemented and how householders are affected. Councillors, senior council staff, customer service staff, waste staff and community leaders may all be important in conveying messages to and from householders.

Smooth implementation with minimal adverse media coverage may be assisted by commencing the communication and education strategy many months before roll out of the service and ensuring enough people are on hand to answer queries during the initial phases.

- 5 **Designing efficient rounds** that match the capacity of the collection vehicles and collection crew is important, as rounds with too many households risk service quality issues because the crew will struggle to finish rounds on time. Rounds set at low pass rates would mean the overall cost of collection becomes relatively high, as vehicles and crews are not fully utilised.
- 6 Planning of the rollout should **ensure that the timing is appropriate** - impacts such as seasons, potential extreme weather conditions holidays, elections, roadworks or local events should be considered.
- 7 **Measuring performance** over time (for example tonnes diverted and contamination levels) will be important in evaluating the success of the scheme.

It is essential to allow for **flexibility** in services, as it may help cater for a diverse community with different attitudes about organics. For example:

- ✓ Supplying non ventilated bench top kitchen caddies means that they can be used with and without liners
- ✓ Making liner bags available on request for those householders who would like to participate in a food collection services can help address the 'yuk' factor
- ✓ Continuing to support home composting when a kerbside food collection service is available will provide best outcomes
- ✓ Increasing food and garden organics collection frequency during summer when hotter weather may cause increased complaints about odour, fermentation flies and maggots, can help address nuisance issues.

An opt-out style service is recommended where all householders are provided with the service but are under no obligation to use it. This approach may result in some containers not being used, but participation rates will be improved and round efficiencies maximised.

Many issues relevant to a full roll-out are similar to those considered for a pilot trial in Factsheet 9 – *Conducting and Evaluating a Pilot Trial*.

1 Accessing suitable processing facility

The type of organics collection scheme introduced (for example food organics only or food organics combined with garden organics) will have a major impact on the treatment options. It is advisable to engage with as many technology providers as possible, in order to gain a solid understanding of the options available and which might be most appropriate. Sites receiving food and garden organics separately may be better positioned to manage the blend of feed stocks for processing, allowing greater control over the quality of end products. Depending on their chemical and physical characteristics, different types of organic residues lend themselves better for combustion (incl. gasification), composting or anaerobic digestion.

Combustion	Composting	Anaerobic Digestion
Wood		
Tree & Shrub Prunings		
Land Clearing		
Vegetation Management		
Park & Garden Residues (winter - summer)		
Mixed Garden & Food Organics (rural - urban)		
Commercial Organics		
Kitchen Organics		
Food Scraps		

Increasing Moisture Content

Increasing Porosity and Structural Stability

Preferred processing options of organics

When introducing a collection scheme, it is advisable to:

- ✓ Seek to fix treatment costs by securing gate fees (or a portion of gate-fees, for example covering core processing costs but not other factors, like landfill levy impacts on residual waste) for the organics over the duration of the trial
- ✓ Check that markets have been secured for the finished compost
- ✓ Ensure arrangements for dealing with contamination are specified in the contract (for example responsibilities, contamination limits, and who pays if loads are rejected).

Detailed information on processing technologies can be found in Factsheet 5 – *Understanding the Processing Options*.

2 Trialling

Any new kerbside organics collection system should be trialled before full-scale implementation in order to identify any local issues or knowledge gaps. Trials can encourage community debate and help fine tune program / service components such as education, communication and infrastructure. Factsheet 9 provides information on the main steps involved in setting up and running a pilot trial.

3 Providing equipment

Delivery of kerbside bins and caddies can be time-consuming and costly. The following items may need to be distributed as part of the organics collection scheme:

- ✓ Kerbside bin
- ✓ Kitchen caddy
- ✓ Liners
- ✓ Education materials (these are discussed in the following section).

Residents must be provided with a rigid plastic bin in which food and garden organics can be stored for collection. The lid should be secure enough to prevent leakage and scavengers (cats, dogs, birds) and vermin from gaining access.

Factsheet 3 provides more information on container types and sizes.



Kerbside bin (Leichhardt City Council)

It is recommended that liners are used and that local authorities provide a free supply of liners at the start of the scheme. If budget is available, then councils can continue to provide liners at the householders' request. The supply and use of 2–3 bags per week is considered typical, although the number may vary depending upon the number of people per household, food storage, preparation and their food consumption. If a council decides to supply liners to residents free of charge, then they should budget for at least 150 liners per household per year. As liners do degrade over time, especially in damp conditions, it is recommended that liners are not kept too long and supplied more regularly rather than annually in bulk.



Bin sticker (The Hills Shire)

With one truck and three staff, containers could be distributed to 500 to 600 households per day. Distribution to multi-unit dwellings can take two to three times longer in comparison to other residential housing.

A collection scheme can be introduced on either an opt-in or an opt-out basis. Under an opt-in system, the householder is given the choice of whether to use the service. Only those households who have expressed an interest will be given a collection container. This approach is not preferred as it is likely to result in a lower overall take up of the service. Lower set out rates will diminish round efficiencies, with more unproductive time incurred travelling between fewer set-outs. An opt-out style service is recommended. All householders are provided with the service but are under no obligation to use it. This approach may result in some containers not being used but participation rates will be improved and round efficiencies maximised.

More information on types of equipment required can be found in Factsheet 3 – *Understanding the Collection Options*.

4 Implementing communication and education

When introducing new services, the education and engagement strategy must be staged and maintained over a period of time. There are a number of clear stages including:

- ✓ Pre-launch communications
- ✓ Information when the service is rolled out
- ✓ A monitoring and evaluation program
- ✓ On-going education and communications to householders throughout the life of the collection service.



Bin sticker (Numurkah - Resource GV)

Key issues to consider:

- ✓ Prepare a communications plan (12 months before service commences) including a budget and scheduling of when activities should take place (and by who)
- ✓ Engage the communications/PR departments of council early on when planning and developing communications
- ✓ Senior council management and councillors need early involvement in planning new services to ensure their support
- ✓ Allow sufficient funding for the first few years of the new service with the resourcing levels decreasing over time
- ✓ Consider a partnership approach with the collection or processing contact to help resource the communications and to obtain their input in communications.

If a pilot trial was conducted, consider that the roll-out stage for the full implementation may occur over a longer period of time, has a much larger target audience and will involve much more time and resources. Therefore it is important to ensure that the pilot trial results are comparable. Although the pilot trial should have tested communication and engagement methods that can be replicated at a larger scale, it may be necessary to modify methods for the full roll-out. For example:

- ✓ Glossy brochures of multiple pages may need to be scaled back to a smaller flyer for the full LGA roll-out to reduce costs
- ✓ The staff time for door to door discussions may mean this communication method needs to be limited to households having troubles with the new service rather than all households receiving the new services
- ✓ Councillors, community leaders and the media may require more in-depth briefing on a new service than what they received for a small trial or pilot
- ✓ Hot-stamping of caddies and bins or more durable stickers may be more appropriate for permanent services
- ✓ Communications material may need to be reproduced in several languages to suit the larger target audience.

Detailed information on communication strategies can be found in Factsheet 11 – *Conducting Community Education and Engagement*.



Communication through door-stepping

5 Designing collection rounds

A key challenge is designing efficient rounds that match the capacity of the collection vehicles and collection crew. Rounds with too many households risk service quality issues as the crew will struggle to finish rounds on time. Rounds set at low pass rates would mean that the overall cost of collection becomes relatively high as vehicles and crews are not fully utilised.

Factors affecting collection rounds include:

- ✓ Travel to start of round
- ✓ Crew breaks
- ✓ Travel to treatment facility
- ✓ Travel back to round or return to depot
- ✓ Ancillary time for vehicle checks and cleaning
- ✓ Demographics and geography of the area
- ✓ Number of set outs
- ✓ Location of set outs
- ✓ Loading time for each set out
- ✓ Work rate of operatives
- ✓ Fill rate of vehicles.



Organics collection truck

Setting out bins in appropriate locations

Giving residents clear guidance on where to leave kerbside bins for collection is important in reducing the amount of time spent collecting bins. It is also important to leave emptied bins in a tidy manner and in the same place they were presented. This reinforces good behaviour by residents in setting out their bins, and helps to maximise levels of satisfaction with the collection service.

Collection crew

The most significant cost element of running a collection service is related to the number of staff and their salaries. Ensuring good crew productivity is very important. When determining crewing levels it is also important to ensure that staff can carry out their work safely and efficiently.

The collection crews are ambassadors of the service, both by providing an efficient service on the street and in dealing with queries or concerns about the collections and explaining the service to residents. Providing good and appropriate training can help to foster a positive attitude amongst collection crews, enabling them to have ownership and pride in the service.

6 Appropriate timing

Planning of the rollout should ensure that the timing is appropriate. Consider impacts of the seasons, potential extreme weather conditions and ensure that the commencement period does not coincide with holidays, elections, roadworks or local events. A staged roll-out occurring progressively for each collection area of the LGA over a period of several weeks will allow for major issues to be identified and improvements made to the process.

7 Measuring performance

One of the main reasons you will undertake monitoring and evaluation is to understand how a service, scheme or communications campaign is performing so that you can identify opportunities for improvement. This applies to both the waste management services and the communications activities undertaken to promote them.

There are various methods that can be employed to demonstrate the effectiveness of a scheme including:

Method	How?
1 Tonnage data analysis	Request data from facility operator
2 Waste auditing	Contract specialist company to undertake composition analysis
3 Set out & participation rate monitoring	Identify area, conduct visual inspection on (3 consecutive) collections, record households who have placed bin(s) out for collection.
4 Organics capture analysis	As method 2, conduct a tailored waste audit
5 Stakeholder feedback	Conduct focus groups and / or surveys (door to door, roadshows, events, public places)
6 Communication evaluation	Compare baseline data and results of above methods in areas you targeted with your communications campaign

Detailed information about monitoring and evaluation can be found in Factsheet 13.

Case Studies

Kempsey Shire Council –

Getting the system right for your own community

Kempsey Shire Council (KSC), located in northern NSW, implemented a food and garden organics collection service in late October 2011. The existing garden organics collection serviced approximately 7,476 households using 240L MGBs. The collection contract with JJ Richards, which commenced several years previously, made allowance for acceptance of food organics and included a \$30,000 per annum education contribution from the contractor. The council's organics processor, the Remondis ORRF facility at Cairncross, already accepted food organics from the neighbouring Port-Macquarie Hastings Council (PMHC) area and so had planned to accommodate the additional input of food.

The council undertook minimal consultation and testing prior to the roll-out because the scheme in nearby PMHC had been working successfully for many years. KSC decided to follow the same system design, providing residents with the same aerated kitchen caddies and Biobag liners. However, in order to simplify the roll-out process, the scheme was made voluntary for households and participation required residents to come in person to the council to receive their starter pack and educational flyer. This arrangement was intended to ensure some interest and commitment from participants and also allowed residents to discuss the scheme with a staff member.

Within a short time of the initial roll-out, problems with the kitchen caddy design became apparent. There were a large number of complaints and returns of the caddies due to the flimsiness of the design, with lids breaking or parts being lost easily. Also, these items were delivered to council in four parts and needed to be assembled by council staff prior to distribution. By early 2012, KSC decided to discontinue use of the initial caddy design and moved to distribution of the 'Source Separation Systems' kitchen caddy. This allowed residents to choose from a ventilated design with biodegradable liner bags or a completely enclosed design that does not require liners. A major advantage of the newer design was that it could be hot-stamped with the council logo and other information as a reminder to participants.

Despite a very minimal initial advertisement of the scheme, by early April 2012 approximately 3,500 households, or over half of the households receiving kerbside collections, had chosen to participate in the scheme. Since the introduction of the new kitchen caddy design (known as the 'Handy Bin'), complaints have decreased significantly and the council now also provides the 'Handy Bin' to every rateable address, including rural properties and businesses.

Lessons Learnt: It was assumed that a system design that had been extremely successful in the neighbouring council area would be equally suitable for Kempsey residents, but this was not the case. Fortunately, the council was able to change its supplier to a more suitable product, which had the unintended benefit of being a useful education and promotion tool.

Woollahra Municipal Council –

Tailoring a collection scheme for high-density populations

Woollahra Municipal Council, in Sydney's Eastern Suburbs, originally started a combined food and garden organics collection trial in 2007, but since then has rolled out a permanent 'Kitchen to Compost' service to the entire council area of over 26,000 residential dwellings.

Most households used their existing garden organics bin, a 240L MGB, for the weekly combined organics collection; however the option of 120L MGB was also made available for properties with less garden waste. Residents were also provided with a 5L enclosed 'kitchen bucket' and were encouraged to use newspaper as lining. Residual waste continues to be collected weekly in a 120L MGB, while dry recyclables are collected weekly in two crates.

**FOOD AND GARDEN ORGANICS BEST PRACTICE COLLECTION MANUAL:
IMPLEMENTING YOUR SCHEME – FACTSHEET 10 – SCHEME DESIGN AND ROLL-OUT**

Waste audits conducted in 2009 found about 38% of households overall were participating in the service by placing food in the organics bin. About 36% of bins from single dwellings contained food, compared to 52% of multi-unit dwellings. The participation rate was highest in the suburb of Woollahra (60%) and lowest in Watson's Bay (25%). Yields of food organics averaged 2.55 kg/hhld/week for single dwellings and 1.64 kg/hhld/week for multi-unit dwellings, but captured only 14.5% and 9.5% of total food disposed by these dwelling types respectively. Contamination was extremely low at 0.2% overall.

After several years, the council found that although the collection service was extremely popular amongst residents who already used it, a key barrier preventing take-up by residents in dense rows of terrace houses was the size of MGBs and lack of storage area to keep them.

In 2011, the council rolled out a new 60L kerbside bin to single dwellings in the Monday collection area of Paddington, West Woollahra and Edgecliff. The small caddy is used primarily for food organics and is collected manually by council's day labour crew. Some households use the same caddy both in the kitchen and at the kerbside.



60 litre MGB collected from terrace houses

Since this new collection system was introduced, over half of the 3,000 eligible households have taken up the service. Initial survey results indicate that 85% participate weekly and 65% claim that they no longer place any food scraps in the residual garbage bin. Although audits have not yet been undertaken, this indicates a higher participation and recovery rate than the rest of the council area using MGBs for the combined food and garden service.

Feedback from residents suggests the 60L bin is more suitable when used only for food as the lid can be locked closed to reduce odour escape, and it can be easily cleaned indoors. It also captures garden organics from dwellings with small garden spaces that would otherwise not have a garden organics bin.

One draw-back of the 60L collection caddy is the impact on council's waste collection staff. Enclosed bins containing only loose food scraps become very odorous and are unpleasant to empty by hand. Collection is found to be much easier when bins are lined, food is wrapped in newspaper and/or food is mixed with garden organics. Use of biodegradable liners is an improvement that both collection staff and many residents would appreciate for the prevention of odours, although council has chosen not to introduce provision of liners in order to reduce contamination by plastic bags, simplify logistics, and maintain a cost-effective waste service.

Lessons Learnt: By not being locked into a particular collection system, Woollahra Municipal Council has been able to roll out its collection service progressively and tailor its approach over time. Performance of the service has been significantly improved by providing a range of collection options for the wide diversity of dwelling types in its municipality.

NB: Information in this factsheet is taken from the *Food and Garden Organics Best Practice Collection Manual* (2012) published by the Department of Sustainability, Environment, Water, Population and Communities. The full document is available on the department's website www.environment.gov.au/wastepolicy/publications/organics-collection-manual