

CJ047-03/18 IMPLEMENTATION OF A THREE BIN SYSTEM FOR THE CITY OF JOONDALUP

WARD	All
RESPONSIBLE DIRECTOR	Mr Nico Claassen Infrastructure Services
FILE NUMBER	11393, 101515
ATTACHMENT	Attachment 1 <i>Better Bins - Kerbside Collection Guidelines</i>
AUTHORITY / DISCRETION	Executive - The substantial direction setting and oversight role of Council, such as adopting plans and reports, accepting tenders, directing operations, setting and amending budgets.

PURPOSE

For Council to consider the implementation of a three bin system for the City of Joondalup.

EXECUTIVE SUMMARY

The Western Australian Waste Strategy '*Creating the Right Environment*' calls for best practice and continual improvement in managing municipal solid waste. The strategy sets targets of diverting 50% of municipal solid waste from landfill by 2015 and 65% by 2020. While the City's current diversion target is 50%, reaching 65% as per the strategy will be a challenge unless change to current practices are made.

The *Better Bin - Kerbside Collection Guidelines* (Attachment 1 refers) was developed by the Waste Authority to help local governments select kerbside collection systems that can achieve increased resource recovery rates. The guidelines are based on the experiences of Western Australian and interstate local governments and contain information on bin types, colours and collection frequencies and expected performance benchmarks. The guidelines identify that in the short to medium term, higher recovery is likely to be delivered through:

- source separation using a three-bin collection system, with separate bins for general waste, dry recyclables and garden organics
- collection systems where general waste is processed through an alternative waste treatment facility.

At its meeting held on 16 February 2016 (CJ024-02/16 refers), Council endorsed the City of Joondalup *Waste Management Plan 2016 - 2021 Increasing diversion from landfill* (the Plan).

Targets identified for the Plan align with the State Government waste recovery targets included in the *Western Australian Waste Strategy: Creating the Right Environment*. The Plan focuses on improving the City's management of waste, increasing diversion from landfill and providing the groundwork to inform long term planning for waste.

The *Waste Management Plan 2016 – 2021* recognises that the management of waste is a significant and rising cost for the City and its ratepayers, is subject to high community expectations, and can have a significant impact on the environment.

MRC manages the treatment and disposal of general household waste on behalf of the seven Member Councils of the MRC. Increases in landfill levy and reduction in tonnages of general waste has seen a significant increase in the MRC gate fee from \$120 per tonne in 2013-14 to \$180 per tonne in 2017-18. Indications from the MRC is that there will be a further sharp increase in 2018-19 and will continue to rise.

In response to the rising cost and to increase diversion from landfill to meet the Waste Authority targets, the City has reviewed its kerbside collection services and is proposing the introduction of a three bin system in alignment with the *Better Bins - Kerbside Collection Guidelines* funding method Preference 1 which is as follows:

- A 140 litre red lidded general waste bin with an option for householders to opt out of the 140 litre red lidded general waste bin and select a 240 litre general waste bin to be collected weekly.
- A 240 litre lime green lidded bin for green waste to be collected fortnightly.
- A 240/360 litre yellow lidded bin for recycling to be collected fortnightly on the alternate week.

It is therefore recommended that Council:

- 1 *ENDORSES the implementation of a three bin system as per Option 1 as detailed in Report CJ047-03/18 with rollout commencing in the 2018-19 financial year;*
- 2 *NOTES that the three bin system, in alignment with the Better Bins funding method Preference 1, will consist of the following:*
 - 2.1 *one 140 litre red lidded general waste bin, with an option for householders to opt out of the 140 litre red lidded general waste bin and select a 240 litre red lidded general waste bin;*
 - 2.2 *one 240 litre lime green lidded garden waste bin;*
 - 2.3 *one 240 litre or one 360 litre yellow lidded recycling bin;*
- 3 *APPROVES the implementation of a differential pricing system which charges households a lower amount for a 140 litre red lidded general waste bin when compared to a 240 litre red lidded general waste bin;*
- 4 *NOTES that the refuse charge/s will be set as part of the City's annual budget;*
- 5 *REQUESTS the Chief Executive Officer to make an application to the Waste Authority on behalf of the City for grant funding for the rollout of the three bin system;*
- 6 *NOTES the results of the 360 litre bin trial;*
- 7 *ENDORSES the further roll out of the 360 litre recycling bins until the implementation of the three bin system;*
- 8 *REQUESTS that the Chief Executive Officer undertake a review of the bulk green waste collection methodology prior to 30 June 2020.*

BACKGROUND

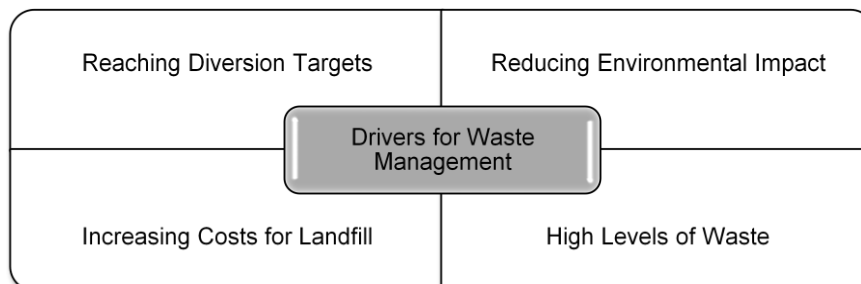
The major legislation relating to waste management in Western Australia is the *Waste Avoidance and Resource Recovery Act 2007* (WARR Act) which establishes the Waste Authority and its functions. The WARR Act has a particular focus on local government functions, and contains mechanisms relating to local government waste services, including waste local laws, waste plans and collection permits.

The WARR Act also provides a hierarchy of waste management options based on their general environmental desirability. The hierarchy is a useful guide to aid in decision making and should be applied in the context of other economic, social and environmental constraints. The most preferred option for waste management under the waste hierarchy is to avoid or to minimise the generation of waste in the first instance. The second preferred option is to recover the resources in the waste through reuse, reprocessing, recycling and energy recovery. The final and least preferred option is to dispose of the waste to landfill.

At its meeting held on 16 February 2016 (CJ024-02/16 refers), Council endorsed the City of Joondalup *Waste Management Plan 2016 - 2021 Increasing diversion from landfill* (the Plan). Targets identified for the Plan align with the State Government waste recovery targets included in the *Western Australian Waste Strategy: Creating the Right Environment*. The *Western Australian Waste Strategy* targets for the Perth Metropolitan area are for:

- 50% of municipal solid waste to be diverted from landfill by 2015.
- 65% of municipal solid waste to be diverted from landfill by 2020.

The Plan identifies the following four key drivers for improving the City's waste management practices:



Reaching Diversion Targets

The *Waste Management Plan 2016 – 2021* has set a 65% landfill diversion target of household waste by 2020 to align with the *Western Australian Waste Strategy* targets. While the City made a significant achievement in reaching the *Western Australian Waste Strategy 2015* target of 50% diversion, reaching the 65% target will be a challenge and the City is unlikely to reach this target if it continues with business as usual.

Reducing Environmental Impacts

The creation of waste and the disposal of waste can have a significant impact on the environment for a number of reasons, including the following:

- Resources, materials and energy used to produce, package and transport products are lost when products are disposed to landfill.
- Landfills take up large amounts of land and can be noisy, odorous and unsightly. Landfills (and the land surrounding them) are likely to become less usable land for many years into the future.

- Waste materials in landfill can take from months to hundreds of years to break down, or may not break down at all, meaning the environmental impacts of landfills will last for generations.
- The breakdown of waste within landfill can create pollutants and toxins which can contaminate groundwater, surface water and the atmosphere.
- The breakdown of waste in landfill also creates methane, a greenhouse gas. Waste can continue to emit methane for well over 50 years after it has been landfilled. By diverting waste from landfill the City is reducing landfill emissions.
- Transport associated with the collection of waste creates greenhouse gas emissions and other air pollutants. Efficiencies in reducing transport costs will have a positive environmental impact by reducing greenhouse gas emissions and air pollutants.

There are significant environmental controls relating to landfill sites to reduce their potential environmental impact including lining and capping of landfills, monitoring of groundwater and controls on what can be disposed.

Increasing Costs of Waste Disposal

It costs significantly more to dispose of waste to landfill than it does to recycle waste. The increase in the Waste Levy and MRC gate fee is shown in the table below.

Year	Waste levy per tonne (\$)	MRC gate fee per tonne (\$)	Increase in MRC gate fee (%)	COJ refuse charge (\$)	Increase in COJ refuse charge (%)
2013-14	28.00	120.00		333.00	
2014-15	28.00 55.00*	116.00 138.50*	15.4	346.00	3.9
2015-16	55.00	155.00	11.9	346.00	0
2016-17	60.00	165.00	6.5	346.00	0
2017-18	65.00	174.00 180.00**	5.5	346.00	0

* From 1 January 2015

** From 1 February 2018

The current MRC gate fee as of 1 February 2018 is \$180 per tonne compared to \$25 per tonne for processing of recyclables and approximately \$30 per tonne for processing of green waste. The cost of disposing waste to landfill will again significantly increase in 2018-19 and future years. Increasing the proportion of household waste that is not sent to landfill will not only increase diversion from landfill rates to align with the *Western Australian Waste Strategy* targets it will also provide significant ongoing cost savings for the City and its ratepayers.

High Levels of Waste

The City of Joondalup has been shown to be a high generator of waste, particularly in regard to the previous scheduled bulk waste collection service. This will only increase as the City's population increases and the amount of waste households generate increases. In order to reach diversion targets, reduce environmental impact and reduce the cost of delivering waste services, steps need to be taken to reduce the amount of waste generated within the City of Joondalup.

City of Joondalup Waste

The City of Joondalup provides a broad range of waste services to the community including collecting and processing household waste, providing and emptying street bins, removing litter from public areas, providing waste services at City events and managing the City's corporate waste. The City spends approximately \$20 million per annum on waste services and in 2016-17 collected just under 90,000 tonnes of waste.

The City's *Waste Management Plan 2016 -21* includes 16 projects which were developed to guide the City actions in meeting the 65% landfill diversion target. This proposal aligns with the following four projects:

- Project 1 'Recycle 360 - A Better Bins Project'. This project aims to increase the amount of recyclable material collected through the yellow lidded bin collection.
- Project 4 'Community Waste Behaviour Change Program'. This project aims to improve community knowledge of the City's waste management services, increase participation in recycling and reduce recycling contamination rates.
- Project 6 'Household Waste Composition Audit'. This project aims to improve the City's understanding and knowledge of household waste composition and to ensure that the City's waste management processes and activities are informed by sound analysis and understanding of waste generated.
- Project 15 'Continued review and improvement of household waste services'. This project aims to continually review and improve the City's household waste services and to remain aware of changing policy, regulation and best practice in household waste services.

Current Two Bin System

The City currently operates a two bin system for the collection of household waste, with a weekly collection of general waste in a green lidded bin and a fortnightly collection of recyclable waste in a yellow lidded bin.

In 2016-17 the City collected 52,282 tonnes of general waste from the green lidded bin. This represents approximately 58% of the City's total waste stream. The contents are delivered to either the Neerabup Resource Recovery Facility (RRF) or the Tamala Park landfill. The current diversion rate for the RRF is approximately 51%.

In 2016-17 the City collected 16,383 tonnes of recycling waste from the yellow lidded bin of which 14,085 tonnes was recycled. This represents 18% of the City's total waste stream. The contents of the yellow lidded bin are delivered to the Materials Recovery Facility (MRF) operated by Cleanaway. The current diversion rate for this facility is approximately 85%.

Current Bulk Waste Collection Services

The City's bulk hard waste collection service is undertaken by Cleanaway and consists of the following:

- One three cubic metre skip bin per financial year (delivered on-request).
- One white good collection per financial year (collected on-request).
- One mattress collection per financial year (collected on-request).

The material collected is sent to a processing facility where it is recycled. This service was implemented in October 2016. In 2016-17 the City collected 2,805 tonnes of bulk hard waste and achieved a diversion rate of approximately 48% at a cost of approximately \$1.02 million. The diversion rate of the previous service was only 2%.

The City's bulk green waste collection service is currently undertaken by Incredible Bulk and consists of one scheduled verge pick up per financial year. In 2016-17 the City collected 6,335 tonnes of bulk green waste with a diversion rate of 100% and a cost of approximately \$1.2 million. The contract end date is 30 June 2020.

Residents are also provided with four green waste tipping vouchers and two mulch vouchers which are delivered annually via the City's Waste Guide. These vouchers can be redeemed at the Wangara Greens Recycling Centre which is operated by the City of Wanneroo. Residents can deliver clean greens up to 500kg (per tipping voucher) and collect (subject to availability) up to 500kg of mulch per mulch voucher. A standard operation and management fee is charged per month. In 2016-17 this service cost the City \$234,000.

360L Recycling Bin Trial

As part of Project 1 of the *Waste Management Plan 2016 - 2021*, the City is currently undertaking a trial of supplying a larger 360 litre yellow lidded recycling bin to residents upon request. The project commenced in June 2016 and as of the end of December 2017, the City had delivered 4,800 360 litre capacity recycling bins. To determine the success of the trial, a kerbside audit was undertaken which concentrated on use, weights and presentation rates. The audit results indicated an increase in the amount of recycling presented for collection with the introduction of the larger recycling bin. Recycling increased by an average of 3.6kg (26%) per fortnight collected in the 360 litre bin compared to the smaller 240 litre recycling bin.

In March 2017, the City sought feedback from participants of the 360 litre recycling bin trial via an online survey. The survey was sent to 2,218 participants and the City received 1,227 valid responses, giving a 55% response rate. An analysis of the results from the respondents showed that 82.8% rated the experience with the larger 360 litre bin as excellent and 94.6% of the respondents agreed that the larger 360 litre bin resulted in increased recycling of household waste and a reduction of waste that could be recycled in the general waste bin.

Waste Composition Audit

The Mindarie Regional Council (MRC), on behalf of the City is undertaking a waste composition audit of the City's household waste. The MRC used an aggregate sampling method as this provided a larger sampling area of approximately 1,000 bins to provide a statistically significant and reliable result. The audit was devised to be undertaken in two parts (a summer and winter audit) and will be used to quantify the amounts and types of waste being generated, including a breakdown of the different types of materials within the green lidded bin (general waste). This information will be used to improve waste management processes, guide waste education messages and help monitor the success of any improvements.

The winter audit was undertaken and the results are as follows:

Winter Audit of Green Lidded Bin (General Waste)		
Type of material	Weight (kg)	Percentage (%)
Recyclables	3,975.6	26
Non-recyclables	11,310.5	74
TOTAL	15,286.1	100

Of the 11,310.5 kg of non-recyclables in the green lidded bin, 8,623.2 kg (56.4%) was organic waste. A further breakdown of the organic waste is provided in the table below.

Organic Content of Non-recyclables		
Type of material	Weight (kg)	Percentage (%)
Food waste	3,638.4	23.8
Green waste	4,984.8	32.6
TOTAL	8,623.2	56.4

The summer audit is scheduled for the third quarter of 2017-18.

The results of the winter audit highlighted that a significant portion of recyclables and green waste is currently being placed in the general waste (green lidded bin). Placement of these items into the correct bin will not only increase the City's diversion rate but will also reduce cost.

Better Bins - Kerbside Collection Guidelines

The *Better Bins - Kerbside Collection Guidelines* (Attachment 1 refers) were developed by the Waste Authority to help local governments select better practice kerbside collection systems by:

- presenting options for kerbside collection systems, including expected performance benchmarks
- containing 'complementary measures' (including information provision and community engagement, training and enforcement) to ensure the community understands the benefits of the system and how to use it effectively
- being flexible, recognising that different local governments have particular characteristics that will influence decisions about collection systems
- supporting a three bin system (general waste, co-mingled recycling and green waste) because it encourages source separation, which is important to maximising recovery.

The guidelines further identify that in the short to medium term, higher diversion from landfill is likely to be delivered through the following:

- Source separation using a three-bin collection system, with separate bins for general waste, dry recyclables and garden organics.
- Collection systems where general waste is processed through an alternative waste treatment facility.

The *Better Bins: Kerbside Collection Guidelines* specify the funding criteria for local governments to be eligible for the Better Bins funding as per the extract below:

"Better Bins funding is determined by the type of kerbside services provided by local governments and the number of households to which services are provided.

Kerbside Collection Preference	Kerbside Collection Services - Households			Funding allocation per household
	General waste Red lid	Comingled recycling Yellow lid	Green Waste Lime green lid	
Preference 1 Three bin system, small general waste	140 litre or less weekly	240 litre or more fortnightly	240 litre or more fortnightly	\$30
Preference 2 Three bin system, standard general waste	240 litre or less weekly	240 litre or more fortnightly	240 litre or more fortnightly	\$24
Preference 3 Two bin system, small general waste	140 litre or less weekly	240 litre or more fortnightly	Nil	\$10
Preference 4 Two bin system, standard general waste	140 litre or less weekly	240 litre or more fortnightly	Nil	\$4

Local Governments are eligible for the maximum funding of \$30 per household if:

- a local government offers Preference 1 services to households with an option for householders to 'opt out' of the smaller (140 litres or less) general waste service; and
- the local government implements a differential pricing system which charges households a lower amount for a general waste service of 140 litres or less per week, and a higher amount for a general waste service of more than 140 litres per week."

DETAILS

Household waste is a key area of waste management for the City as it represents the largest amount of waste generated (76%) and based on the results of the waste composition audit provides the greatest opportunity for the City to increase diversion from landfill to meet the *Western Australian Waste Strategy* target of 65% diversion by 2020.

The Waste Authority recognises, and strongly supports, source separation of waste as best practice. Source separation involves separating household waste in common material streams or categories for separate collection. One of the ways to achieve greater separation of household waste is to provide households with separate bins. The *Better Bins: Kerbside Collection Guidelines* supports a three bin system (general waste, comingled recycled waste and green waste) as it encourages source separation which is important to maximise diversion of waste from landfill.

In alignment with the *Better Bins: Kerbside Collection Guidelines*, the City has reviewed its kerbside collection services and is proposing the introduction of a three bin system based on the Better Bins funding method Preference 1 which is as follows:

- A 140 litre red lidded general waste bin with an option for householders to opt out of the 140 litre red lidded general waste bin and select a 240 litre general waste bin to be collected weekly.

- A 240 litre lime green lidded bin for green waste to be collected fortnightly.
- A 240/360 litre yellow lidded bin for recycling to be collected fortnightly on the alternate week.

Moving to a three bin system for the collection of household waste will have an impact on other waste services currently provided by the City. It is therefore important to consider the impact on the following services when changing to a three bin system:

- Bulk green waste collection.
- Weekend greens vouchers.

It is considered that there would be no impact to the following services which would continue as per current arrangements:

- Bulk hard waste services.
- Litter collection.
- E-waste days.
- Charity drop off events.

Based on these considerations, the following five options were developed:

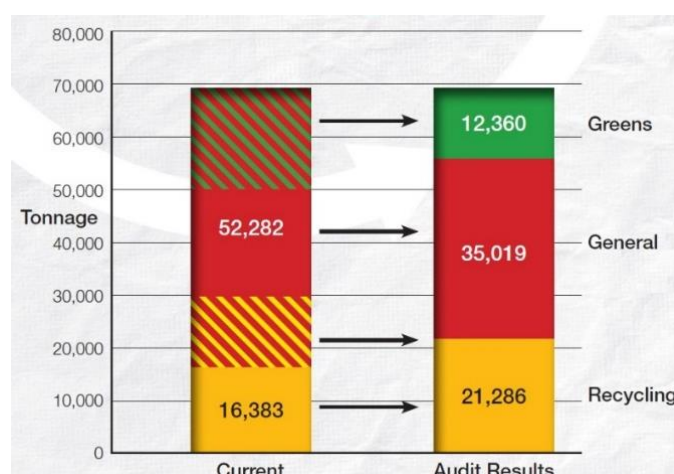
Option Parameters	Current (two bins)	Option 1	Option 2	Option 3	Option 4	Option 5
Three bin system	X	✓	✓	✓	✓	✓
Bulk green waste collection	✓	✓	On Request	X	X	✓
Weekend greens vouchers	✓	✓	✓	✓	X	X

The City has developed a financial model to assist in comparing the options above. This model for the three bin system is based on the tonnages of material from 2016-17 as tonnages have not increased significantly and this was the last full year of collection data available.

In 2016-17, 68,665 tonnes of municipal solid waste (MSW) was collected in the yellow and green lidded bins. Approximately 52,282 tonnes of domestic waste (green lidded bin) and 16,383 tonnes of recycling waste (yellow lidded) bin. Outcomes of the waste composition audit undertaken in Winter 2017 and lessons learnt from other local authorities when implementing a three bin system has enabled the City to form a number of assumptions in order to calculate the tonnage of material for inclusion in a three bin scenario for the City of Joondalup:

- The waste composition audit revealed that 26% of the material in the green lidded bin was recyclable material that should have been placed in the yellow lidded bin. Based on the total tonnes of 52,282 collected in 2016-17 in the green lidded bin, 13,593 tonnes were therefore recyclables. Under a three bin scenario it is assumed that 31% of all waste will be placed in the yellow lidded bin in alignment with the experience of other local governments when moving to a three bin system. This would mean that 4,903 tonnes of the 13,593 tonnes of recycling material would be placed in the yellow lidded bin. This would result in the tonnage of recyclable material collected via the yellow lidded bin increasing from 16,383 tonnes to 21,286 tonnes (31% of the overall waste stream).

- The waste composition audit also revealed that 32.6% of the materials in the green lidded bin (general waste) is green waste. Based on the total tonnes of 52,282 collected in 2016-17 this equates to 17,043 tonnes of green waste. It is assumed that not all this green waste would be placed in the lime green lidded bin and only 12,360 tonnes would be included in this bin, being 18% of the total waste stream. This assumption again reflects the experience of other local governments when moving to a three bin system.
- The general waste (red lidded) bin would contain the remainder of the 52,282 tonnes of waste when 12,360 tonnes of green waste and 4,903 tonnes of recycling waste is removed as per above. This equates to 35,019 tonnes (51% of the total waste stream) as depicted below.



- The provision of a lime green lidded bin specifically for green waste will see a reduction in the amount of green waste collected as part of the scheduled bulk green waste collection and the amount taken to the weekend greens facility as per the table below.

Green Waste Type	Current	Option 1 All green waste services (tonnes)	Option 2 On- request bulk green (tonnes)	Option 3 No bulk green waste (tonnes)	Option 4 No bulk or weekend greens (tonnes)	Option 5 No weekend greens (tonnes)
Weekend greens	6,927	3,464	3,464	3,464	0	0
Bulk collection green	6,330	3,165	1,899	0	0	2,965
Lime green lidded bin	0	18,988	20,254	20,254	24,578	21,613
Total	13,257	25,617	25,617	23,718	24,578	24,578

It should be noted that under Options 3 to 5 there is a requirement for residents to self-manage a percentage of the green waste produced due to a reduction in service.

Based on the above assumptions, the tonnage of municipal solid waste stream for each option can be summarised as follows:

Waste Stream	Current	Option 1 All green waste services (tonnes)	Option 2 On- request bulk green (tonnes)	Option 3 No bulk green waste (tonnes)	Option 4 No bulk or green waste (tonnes)	Option 5 No weekend Greens (tonnes)
Yellow lidded bin (recyclables)	16,383	21,286	21,286	21,286	21,286	21,286
Green lidded bin (current)	52,282	0	0	0	0	0
Red lidded bin (general waste)	0	35,019	35,019	35,019	35,019	35,019
Lime green lidded bin (green waste)	0	18,988	20,254	20,254	24,578	21,613
Bulk green collection	6,330	3,165	1,899	0	0	2,965
Weekend greens	6,927	3,464	3,464	3,465	0	0
Total	81,922	81,922	81,922	80,023	80,883	80,883

For each of the options identified and based on the tonnages per waste stream, the cost for delivering this service is estimated as follows:

Cost (\$1,000)	Current	Option 1 All green waste services	Option 2 On- demand bulk green	Option 3 No bulk green waste	Option 4 No additional green waste	Option 5 No weekend Greens
Yellow lidded bin (recyclables)	\$2,021	\$2,150	\$2,150	\$2,150	\$2,150	\$2,150
Green lidded bin (current)	\$12,745	\$0	\$0	\$0	\$0	\$0
Red lidded bin (general waste)	\$0	\$9,456	\$9,456	\$9,456	\$9,456	\$9,456
Lime green lidded bin (green waste)	\$0	\$2,160	\$2,198	\$2,217	\$2,300	\$2,239
Bulk green collection	\$1,176	\$1,081	\$431	\$0	\$0	\$1,075
Weekend greens	\$241	\$241	\$241	\$241	\$0	\$0
Bulk hard waste and operational cost	\$4,335	\$4,659	\$4,659	\$4,659	\$4,659	\$4,659
Total Cost	\$20,518	\$19,747	\$19,135	\$18,723	\$18,545	\$19,559
Potential Saving	\$0	\$771	\$1,383	\$1,795	\$1,973	\$959

Note: Costs quoted are estimated costs and are in 1,000's. Potential saving is based on budget for 2017-18 of \$20,518,000.

Capital cost

There is an opportunity for the City to apply for grant funding from the Waste Authority for the rollout of the three bin system. This application needs to be submitted and approved by the Waste Authority prior to the end of March 2018, with the project implementation completed by June 2020. The table below summarises the one-off costs, potential grant proceeds and net impact.

	\$ms
New 360 litre yellow lidded bins (recycling)	(2.1)
New 140/240 litre red lidded bins (general waste)	(2.8)
Changeover to lime green lids (green waste)	(0.8)
Community engagement and education	(0.1)
Capital Costs	(5.7)
Potential grant from Waste Authority (based on Preference 1 funding method)	1.8
Net impact	(3.9)

The net cost will be funded using the Waste Management Reserve which has a current balance of \$10 million.

Taking into account the potential operational cost savings of between \$771,000 and \$1.973 million per annum, depending on the option selected, the change to a three bin system will have a payback period of between two to four years.

Timeframes

The provision of appropriate waste infrastructure is only one component of an effective waste service. Householder behaviour and participation is critical to ensuring the waste system works, which includes reducing the amount of waste generated and placing waste in the correct bin. Improving household waste behaviour and participation in waste management will be a challenge for the City. Waste education and waste programs will need to be based on behaviour change principles and an understanding of the community's attitudes and perceptions towards waste.

To ensure the proposed change to a three bin system is successful, the City will embark on an extensive community engagement campaign to inform, educate and promote the new service. It is anticipated that this program will be delivered over a six to eight month period prior to the implementation of a three bin system. The rollout of this system will be phased suburb by suburb and will take an additional six months to complete. It is anticipated, should the proposal be endorsed by Council, that the rollout of the three bin system could commence as early as January 2019.

Issues and options considered

Council can choose to either:

- remain with the current two bin system
- implement the three bin system as recommended (Option 1)
or
- implement the three bin system based on one of the other options detailed in this report.

The advantages and disadvantages of the various options are summarised below.

	Advantages	Disadvantages
Current (two bins)	<ul style="list-style-type: none"> No change to current services and staffing 	<ul style="list-style-type: none"> Highest cost Diversion from landfill targets not met
Option One	<ul style="list-style-type: none"> Highest diversion from landfill Reduced cost to deliver all waste services Less change for residents 	<ul style="list-style-type: none"> Lowest savings Potential over servicing of green waste
Option Two	<ul style="list-style-type: none"> Increased diversion from landfill Reduced cost to deliver all waste services 	<ul style="list-style-type: none"> Potential over servicing of green waste
Option Three	<ul style="list-style-type: none"> Increased diversion from landfill Reduced cost to deliver all waste services 	<ul style="list-style-type: none"> 1,899 tonnes of green waste will need to be self-managed Potential over servicing of green waste
Option Four	<ul style="list-style-type: none"> Increased diversion from landfill Reduced cost to deliver all waste services 	<ul style="list-style-type: none"> 1,039 tonnes of green waste will need to be self-managed Residents lose the ability to collect mulch
Option Five	<ul style="list-style-type: none"> Increased diversion from landfill Reduced cost to deliver all waste services 	<ul style="list-style-type: none"> 1,039 tonnes of green waste will need to be self-managed Potential over servicing of green waste Residents lose the ability to collect mulch

Taking into consideration the merits of each, Option 1 is the preferred option. This option has the highest diversion rate from landfill, reduces the cost of the overall waste services, less change for residents and is the lowest implementation risk. This option is also in alignment with the Waste Authorities *Better Bins Kerbside Collection Guidelines*.

Legislation / Strategic Community Plan / policy implications

Legislation	<i>The Waste Avoidance and Resource Recovery Act 2007.</i>
Strategic Community Plan	
Key theme	Financial Sustainability. The Natural Environment.
Objective	Effective management. Environmental resilience.
Strategic initiative	Seek out efficiencies and regional collaborations to reduce service delivery costs. Demonstrate current best practice in environmental management for local water, waste, biodiversity and energy resources.

Policy*Waste Management Plan 2016 – 2021.***Risk management considerations**

The following risks have been identified when considering current and future waste collection services provided by the City:

- Not meeting the diversion from landfill targets set by the Waste Authority and included in the *Western Australian Waste Strategy*. The City will not be able to achieve the 65% diversion from landfill target by 2020 if the current two bin system for the collection of household waste is retained.
- Increasing MRC gate fee and landfill levy which increases the cost of sending waste to landfill. The introduction of the three bin system will increase the diversion of waste from landfill and therefore reduce the financial impact of the increasing MRC gate fee and landfill levy.
- Community acceptance of a three bin system. Householder behaviour and participation is critical to ensuring the waste system works, which includes reducing the amount of waste generated and placing waste in the correct bin. To ensure the proposed change to a three bin system is successful, the City will embark on an extensive community engagement campaign to inform, educate and promote the new service.
- Successful rollout of a three bin system. The roll out of a three bin system is complex and will involve extensive change. Additional resources will be allocated to ensure that the system is rolled out in a timely manner and that there is a seamless transition to the new service. Lessons learnt from other local governments indicated that dedicated resources are required and that a phased roll out is the optimum method as it ensures that any operational issues can be rectified prior to the bins being rolled out to all suburbs.
- Impact on bulk green waste collection service and the weekend greens. To mitigate this risk, it is proposed to review these services prior to the conclusion of the current bulk green waste collection contract in June 2020.
- Not successful in securing grant funding. In order to secure grant funding the City must submit an application to the Waste Authority prior to the end of March 2018 with the project implementation to be completed by June 2020. To maximise the potential grant the City must align its proposal as closely as possible to the *Better Bins - Kerbside Collection Guidelines Preference 1*.

Financial / budget implications

The City has budgeted \$20.5 million in 2017-18 for the provision of all waste services. The cost of the service is spread across all ratepayers as part of the separately charged refuse charge (\$346 per annum).

Based on the financial evaluation the potential cost saving varies between \$771,000 to \$1.973 million per annum depending on the option selected. The estimated saving for 2018-19 will be less than this as it is proposed that the implementation of a three bin system will only commence half way through the year and will take six months for the rollout to be completed. The full saving will only be realised after the rollout of a three bin system is completed.

20 Year Financial Assessment

The whole-of-life cash flows have been projected up to 2037-38, this covers the period of implementation and 20 years of operation. By evaluating over such a long period ensures that the long-term impacts including renewals can be evaluated. The table below summarises the overall cash flow impacts.

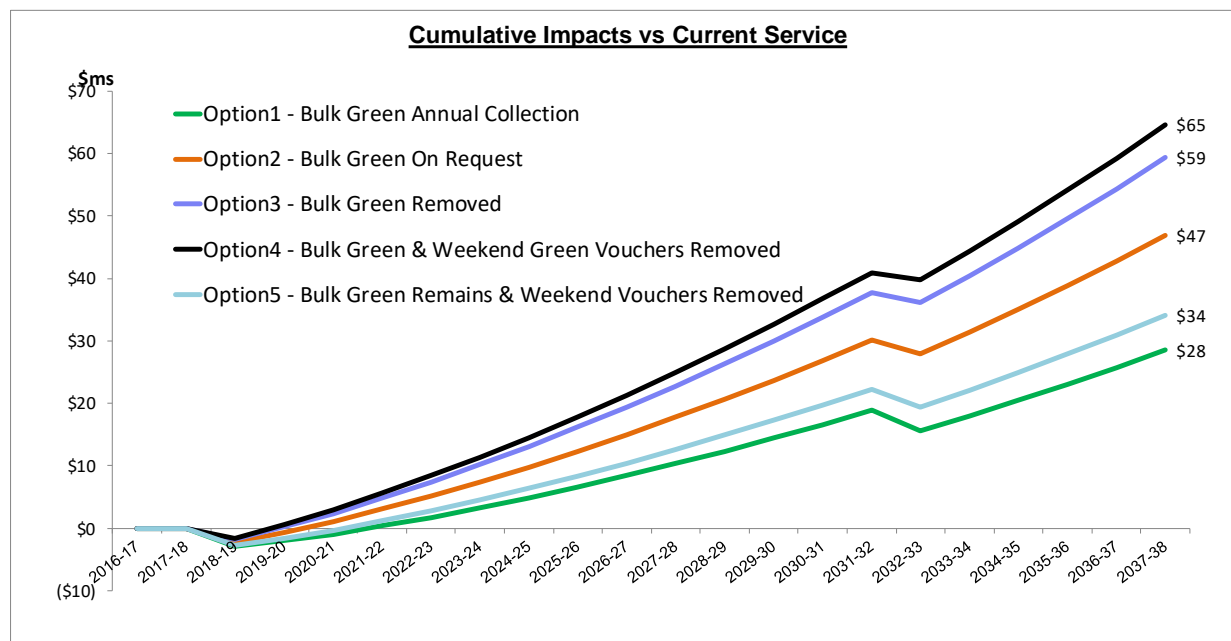
Option Summary Total up to 2037-38 including escalation		AsIs	Option1	Option2	Option3	Option4	Option5
		As Is - Continue with 2 bin system	Bulk Green Annual Collection	Bulk Green On Request	Bulk Green Removed	Bulk Green & Weekend Green Vouchers Removed	Bulk Green Remains & Weekend Vouchers Removed
1	One-off Surplus/(Deficit) <i>\$ms</i>		(\$3.8)	(\$3.8)	(\$3.8)	(\$3.8)	(\$3.8)
Operating Expenses							
2	Domestic (MRC) - Collection <i>\$ms</i>	(\$89.4)	(\$89.4)	(\$89.4)	(\$89.4)	(\$89.4)	(\$89.4)
3	Domestic (MRC) - Processing <i>\$ms</i>	(\$344.0)	(\$236.7)	(\$236.7)	(\$236.7)	(\$236.7)	(\$236.7)
4	Recycling - Collection <i>\$ms</i>	(\$51.1)	(\$51.1)	(\$51.1)	(\$51.1)	(\$51.1)	(\$51.1)
5	Recycling - Processing <i>\$ms</i>	(\$13.8)	(\$17.7)	(\$17.7)	(\$17.7)	(\$17.7)	(\$17.7)
6	Green Waste Bin - Collection <i>\$ms</i>		(\$47.8)	(\$47.8)	(\$47.8)	(\$47.8)	(\$47.8)
7	Green Waste Bin - Processing <i>\$ms</i>		(\$17.1)	(\$18.3)	(\$18.9)	(\$21.3)	(\$19.5)
8	Green Bulk - Collection <i>\$ms</i>	(\$31.8)	(\$31.8)	(\$13.4)	(\$2.1)	(\$2.1)	(\$31.8)
9	Green Bulk - Processing <i>\$ms</i>	(\$6.0)	(\$3.2)	(\$2.0)	(\$0.3)	(\$0.3)	(\$3.0)
10	Green Weekend Vouchers <i>\$ms</i>	(\$7.7)	(\$7.7)	(\$7.7)	(\$7.7)	(\$0.5)	(\$0.5)
11	Bulk Hard Waste - Collection <i>\$ms</i>	(\$36.0)	(\$36.0)	(\$36.0)	(\$36.0)	(\$36.0)	(\$36.0)
12	Bulk Hard Waste - Processing <i>\$ms</i>	(\$20.1)	(\$20.1)	(\$20.1)	(\$20.1)	(\$20.1)	(\$20.1)
13	Materials & Contract Other <i>\$ms</i>	(\$41.4)	(\$41.4)	(\$41.4)	(\$41.4)	(\$40.9)	(\$40.9)
14	Employment Costs <i>\$ms</i>	(\$36.8)	(\$37.6)	(\$37.6)	(\$37.6)	(\$37.6)	(\$37.6)
15	MRC Increased Gate Fee <i>\$ms</i>		(\$2.7)	(\$2.7)	(\$2.7)	(\$2.7)	(\$2.7)
16	Total Operating Expenses <i>\$ms</i>	(\$678.2)	(\$640.4)	(\$621.9)	(\$609.5)	(\$604.2)	(\$634.7)
Operating Income							
17	Total Operating Income <i>\$ms</i>	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8	\$0.8
18	Operating Surplus/(Deficit) <i>\$ms</i>	(\$677.4)	(\$639.5)	(\$621.1)	(\$608.7)	(\$603.4)	(\$633.9)
Asset Replacement							
19	Total Asset Replacement <i>\$ms</i>		(\$5.6)	(\$5.6)	(\$5.6)	(\$5.6)	(\$5.6)
20	Overall Cash Surplus/(Deficit) - <i>\$ms</i>	(\$677.4)	(\$648.9)	(\$630.5)	(\$618.1)	(\$612.8)	(\$643.3)
21	Ranking <i>Rank</i>	6	5	3	2	1	4
22	Difference to Optic \$000s <i>\$ms</i>		\$28.5	\$46.9	\$59.3	\$64.6	\$34.1
23	% <i>%</i>		-4.2%	-6.9%	-8.8%	-9.5%	-5.0%

The cash flow table above indicates that Option 1 would have a 4.2% reduction in overall costs compared to the 'as is option', but this steadily improves for the other options if some of the other fixed services are reduced. Option 4 provides the best financial outcome with a 9.5% improvement in costs, a total of \$64.6 million saved over a 20-year period.

For Options 3 and 4 where the green bulk collection and processing costs are shown (lines 8 and 9) even though the services would discontinue, the costs in the table above are the baseline costs (2016-17 and 2017-18). Likewise, for Options 4 and 5 where the green weekend vouchers (Line 10) would discontinue, the costs shown are only for 2016-17 and 2017-18.

Cumulative Cash Flows

The graph below shows the impact of each option on a cumulative basis, versus the 'as is' option. This has the same impact by 2037-38 as the table above but just shows how the savings build up over time. Each option would initially have a negative impact due to the one-off costs. Option 1 would take four years to become positive, Option 2 and Option 5 would take three years and Option 3 and Option 4 would take two years. The spike downwards in 2032-33 relates to the replacement costs of the third bin and increased replacement costs of the recycle bin.



Waste Management Reserve – Projections

The table below provides a snapshot of the Waste Management Reserve for specific years. This shows that after implementation the reserve may be reduced to \$5.8 million, but would then increase over time as interest is earned on the reserve. The snapshot also shows the impact in 2032-33 for the replacement for the third bin.

		Yr -6	Yr 1	Yr 2	Yr 3	Yr15	Yr16	Yr21
		2011-12	2017-18	2018-19	2019-20	2031-32	2032-33	2037-38
A Opening balance	\$ms	3.0	9.0	9.2	5.8	9.6	10.1	5.8
Operating Surpluses	\$ms	1.2	0.1					
Projects	\$ms	(0.2)	(0.2)					
B Net Transfers	\$ms	1.1	(0.1)					
Potential Capital Projects								
360 Litre Recycle Bin	\$ms			(2.0)				
3rd Bin	\$ms			(2.6)				
Lime Green Lid and Changeover cost	\$ms			(0.7)				
Communications	\$ms			(0.1)				
Grant from Waste Authority	\$ms			1.8				
3rd Bin Replacement	\$ms						(5.6)	
C Net Projects	\$ms			(3.6)			(5.6)	
Average Balance, used for Int Calc	\$ms		9.0	7.4	5.8	9.6	7.2	5.8
D Interest	\$ms		0.3	0.2	0.1	0.5	0.4	0.3
E Closing Balance, after Interest	\$ms	4.1	9.2	5.8	5.9	10.1	4.8	6.1

Regional significance

Most of the City's general waste is currently processed at the Resource Recovery Facility (RRF) managed by the MRC on behalf of its seven Member Councils. In 2007, the MRC entered into a 20 year agreement with BioVision whereby BioVision would design, build and operate an RRF on behalf of the MRC. The RRF is designed to process 100,000 tonnes per annum of Municipal Solid Waste (MSW) into a soil enhancer, and currently diverts 51.3% of the material processed from landfill.

The MRC has modelled the impact on the RRF diversion rate and the MRC gate fee if the City of Joondalup introduced a three bin system. The modelling suggests that the RRF diversion rate will reduce from 51.3% to 47.4% and the MRC gate fee will increase by \$2.75 per tonne. If this figure was realised it would reduce the savings by approximately \$96,000. This has been included in the financial assessment.

Sustainability implications

Environmental

The change from a two bin to a three bin system will increase the diversion from landfill and reduce the environmental impacts by reducing the volume of material disposed to landfill and therefore reducing the production of methane and greenhouse gasses.

Community Engagement

The management of waste is a key service provided to all City of Joondalup residents and is subject to high community expectations. Changing to a three bin system for the collection of household general waste is primarily driven by State Government landfill diversion targets, increasing costs to dispose of waste collected and expectations that the City will achieve best practice in alignment with the *Better Bins - Kerbside Collection Guidelines*.

Market research commissioned by the Waste Authority shows that 90% of residents are concerned about the volume of waste produced in Western Australia and are committed to doing what they can to address it. The research further indicates that residents would be willing to use a three bin system if it is supported by an education and information campaign and if feedback is provided to users on the performance of the system.

It is therefore proposed that the City embark upon an extensive community engagement campaign to inform, educate and promote the new service prior, during and post the rollout. The proposed timeframe will allow adequate time for the City to develop the community engagement plan.

COMMENT

Changing from a two bin system to a three bin system provides an opportunity to generate both cost savings for the City and therefore its ratepayers and to reduce the amount of waste that is diverted to landfill.

Looking forward, it is likely that all Waste to Energy facilities will have the requirement to source separate the waste streams and divert as much waste as possible prior to treatment. The introduction of a three bin system will assist the City in meeting this requirement.

Further consideration will need to be given as to whether the bulk green waste vergeside collection service and the weekend greens services remain as are currently provided.

VOTING REQUIREMENTS

Simple Majority.

RECOMMENDATION

That Council:

- 1 **ENDORSES** the implementation of a three bin system as per Option 1 as detailed in Report CJ047-03/18 with rollout commencing in the 2018-19 financial year;
- 2 **NOTES** that the three bin system, in alignment with the Better Bins funding method Preference 1, will consist of the following:
 - 2.1 one 140 litre red lidded general waste bin with an option for householders to opt out of the 140 litre red lidded general waste bin and select a 240 litre red lidded general waste bin;
 - 2.2 one 240 litre lime green lidded garden waste bin;
 - 2.3 one 240 litre or one 360 litre yellow lidded recycling bin;
- 3 **APPROVES** the implementation of a differential pricing system which charges households a lower amount for a 140 litre red lidded general waste bin when compared to a 240 litre red lidded general waste bin;
- 4 **NOTES** that the refuse charge/s will be set as part of the City's annual budget;
- 5 **REQUESTS** the Chief Executive Officer to make an application to the Waste Authority on behalf of the City for grant funding for the rollout of the three bin system;
- 6 **NOTES** the results of the 360 litre bin trial;
- 7 **ENDORSES** the further roll out of the 360 litre recycling bins until the implementation of the three bin system;
- 8 **REQUESTS** that the Chief Executive Officer undertake a review of the bulk green waste collection methodology prior to 30 June 2020.

Appendix 13 refers

To access this attachment on electronic document, click here: [Attach13brf180313.pdf](#)



Better Bins Kerbside Collection

Program Guidelines

September 2016





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Foreword

Household waste represents about a quarter of all waste generated in Western Australia. Each year, the municipal sector (comprising mostly household waste) generates about 1.6 million tonnes of waste, or about 630 kilograms of waste per person. In Perth, there has been little improvement in the municipal recycling rate since 2010-11, when it was 39 per cent. In 2014-15 it had only risen to about 40 per cent. This is below best practice recovery performance and well below the 2020 target for municipal solid waste (MSW) of 65 per cent diversion from landfill in the Perth metropolitan region and 50 per cent in major regional centres.

Kerbside systems collect the majority of household waste so it's important that these systems work well. However, only a handful of local governments offer comprehensive kerbside systems that are considered best practice, and only a few local governments are on track to meet the State Government's 2020 MSW targets.

The Waste Authority, on behalf of the State Government, has released several position statements which establish the policy foundation for achieving the Waste Strategy's objectives and targets, including MSW targets. The position statement on the waste hierarchy (2013) explains how the Waste Authority will apply the waste hierarchy in its decision making. The position statement on source separation (2014) confirms the State Government's commitment to separating waste at the source rather than relying on back end systems and technologies to separate and recycle waste.

The State Government is also committed to best practice.

The \$20 million Better Bins Program is a flagship infrastructure program which supports local governments to introduce best practice kerbside collection systems. The program gives effect to the policy positions expressed by the Waste Authority and a commitment to best practice services. Better Bins supports local governments to provide systems that: encourage source separation (primarily through the provision of a 'third' green/organic waste bin); provide more recycling capacity as a proportion of total disposal capacity; and use Australian Standard bin colours to support greater uniformity and better acceptance, awareness and engagement.

Better Bins is a unique opportunity for local governments to receive significant levels of support to transition to best practice kerbside infrastructure and service provision. Better Bins will:

- support local governments to increase recycling rates;
- support achievement of the State's 2020 recycling targets;
- help to better engage the community on preferred waste and recycling behaviours; and
- limit local governments' exposure to increasing landfill costs.

The Waste Authority encourages all local governments to take this opportunity to move their services into line with established industry benchmarks and standards.

Marcus Geisler
Chairman
September 2016



1. Overview

The Better Bins Kerbside Collection Program (Better Bins) is a \$20 million State Government initiative being delivered by the Waste Authority. The Program provides an incentive for local governments to introduce best practice kerbside waste and recycling services to increase resource recovery, and support the achievement of landfill diversion targets set out in the Western Australian Waste Strategy: *Creating the Right Environment*.

The *Better Bins Kerbside Collection Guidelines* provide information to help local governments select best practice kerbside collection systems to increase the recovery of materials. The Guidelines contain information on infrastructure (including bin types, colours and collection frequencies), performance benchmarks and complementary measures.

The Program offers funding to local governments that provide best practice kerbside collection systems consistent with the *Better Bins Kerbside Collection Guidelines*. The Program encourages the use of a three bin system (general waste, co-mingled recycling and organic/green waste) to support greater source separation and higher recovery. The Program also encourages local governments to provide greater recycling capacity, as a proportion of total waste, to households.

The Waste Authority has developed a funding method which provides a strong incentive for local governments to provide greater source separation and recycling capacity.

The Better Bins Program will pay local governments up to \$30 for each household that receives a best practice kerbside collection service.

A key objective of Better Bins is to support investment in best practice kerbside infrastructure (bins) and services. Complementary measures such as community engagement are critical to ensuring the community understands the benefits of the kerbside system and how to use it effectively. The Program includes investment priorities to ensure program funds are applied in the first instance to optimise roll out of best practice kerbside infrastructure and services, which are supported by suitable complementary measures.

The Better Bins Program represents a funding opportunity to support local governments' transition to providing best practice kerbside collection services.



Funding method

Better Bins funding is determined by the type of kerbside services provided by local governments and the number of households to which services are provided.

Table 1: Better Bins funding method

Kerbside Collection Preference	Kerbside Collection Services—Households			Funding allocation per household
	General waste Red lid	Comingled recycling Yellow lid	Green waste/ organic Green/lime lids	
Preference 1 Three bin system, small general waste	140L or less weekly	240L or more fortnightly	240L or more fortnightly	\$30
Preference 2 Three bin system, standard general waste	240L or less weekly	240L or more fortnightly	240L or more fortnightly	\$24
Preference 3 Two bin system, small general waste	140L or less weekly	240L or more fortnightly	–	\$10
Preference 4 Two bin system, standard general waste	240L or less weekly	240L or more fortnightly	–	\$4

Investment priorities

Investment priorities ensure that funds are applied in the first instance to providing optimal best practice kerbside infrastructure (bins) and services. Guidance is available (Attachment 1) to describe the conditions which should be met to achieve optimum rollout.

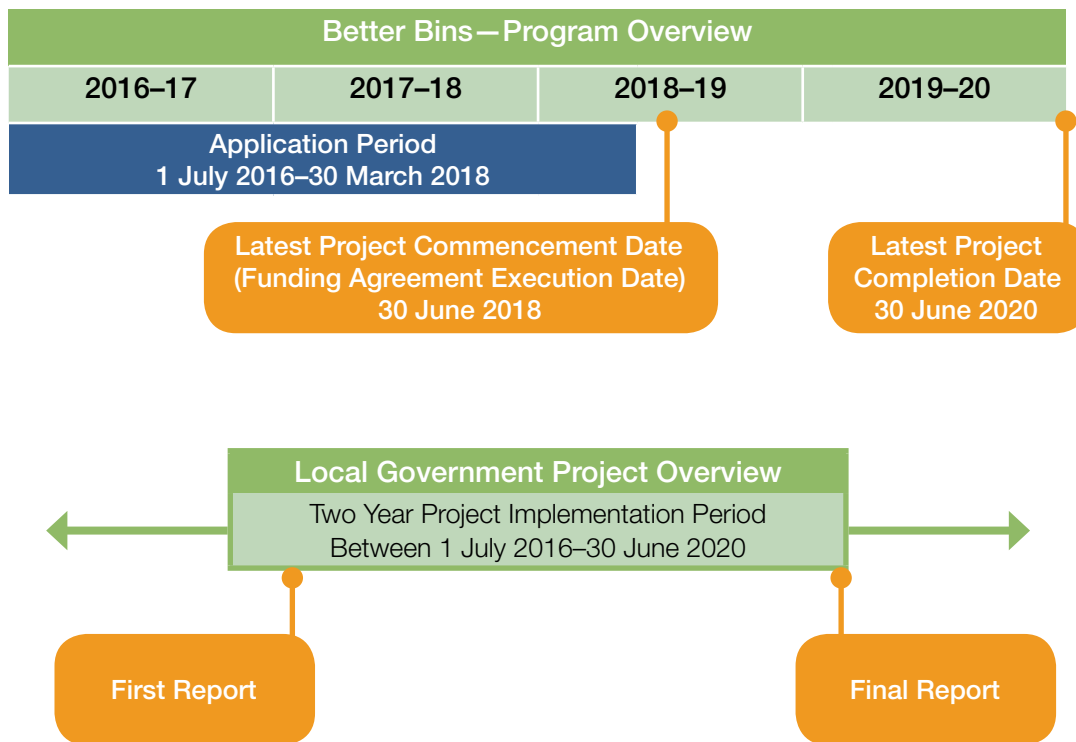
Once optimal infrastructure rollout has been achieved, remaining funds may be applied to complementary measures that target the performance of the system.



Timeline

The Program runs to 30 June 2020. Applications must be received no later than 30 March 2018 and funding agreements must be executed (signed) no later than 30 June 2018.

Each Better Bins project runs over a period of no less than two years to provide local governments with time to roll out the service and maximise the performance of the service. Projects must be completed no later than 30 June 2020.





2. Background

The State Government is committed to reducing waste and increasing recycling as outlined in the Western Australian Waste Strategy: *Creating the Right Environment* (Waste Strategy). The Waste Strategy contains landfill diversion targets for municipal solid waste (MSW), commercial and industrial waste (C&I) and construction and demolition waste (C&D).

MSW is waste derived from residential and public activities collected by local governments from households, public places and public buildings. The Waste Strategy contains targets to recycle 65 per cent of municipal solid waste in the Perth metropolitan region, and 50 per cent of MSW in major regional centres, by 2020.

In 2014–15, almost 26 per cent of the 6.2 million tonnes of waste generated in Western Australia was MSW. In that year, the MSW recovery rate in the metropolitan area was 40 per cent, which is below best practice recovery performance and well below the 2020 targets.

The majority of MSW is generated by households and collected by kerbside services. Improving the performance of kerbside services is therefore critical to achieving waste strategy targets.

In 2014, the Minister for Environment, the Hon Albert Jacob MLA, launched the Better Bins pilot program. The Better Bins pilot program informed the design of the Better Bins Program, which is now available to all Western Australian local governments.

The Better Bins Program provides up to \$20 million to support local governments to introduce best practice kerbside collection services.

3. Objectives

Better Bins provides funding to Western Australian local governments to implement best practice kerbside collection services to support higher recovery and the achievement of Waste Strategy targets.

Specifically, the Better Bins Program seeks to:

- increase resource recovery from kerbside collection services;
- increase the number of households with access to best practice kerbside collection services;
- support local governments with the cost of implementing best practice kerbside collection services;
- support local governments to limit their exposure to increasing landfill costs; and
- support local governments to implement complementary measures to ensure the community understands the benefit of the kerbside collection service and how to use it effectively.



4. How the program works

The Program offers payments to local governments that provide best practice kerbside collection systems consistent with the *Better Bins Kerbside Collection Guidelines* (Guidelines). The Guidelines contain information on infrastructure (including bin types, colours and collection frequencies), performance benchmarks and complementary measures.

The Program applies a **funding method** to determine payments to local governments, and **investment priorities** to ensure that funds provided by the program are applied consistently with the objectives of the program. Details are provided below and examples are provided in Attachment 5.

Local governments must commit to providing best practice kerbside collection services (described in these guidelines as Preference 1, 2, 3 or 4 services) and delivering complementary measures to support the recovery performance of the services.

Local governments can apply using the Better Bins Application Form. Successful applicants will be required to enter into a funding agreement with the State of Western Australia.

Funding method

The Better Bins Program categorises kerbside services into four 'Kerbside Service Preferences' that reflect the amount of source separation and recycling capacity provided to households (see Table 1 for details).

The funding amount offered to each local government is determined by the type of kerbside service provided (Preference 1, 2, 3 or 4) and the number of households to which those services are provided. Local governments are eligible to receive up to \$30 per household.

Local governments will be funded based on the actual services provided to households by the project end date, regardless of when services are introduced. A project implementation period of at least two years allows time for local governments to plan, implement and refine services over a period of time, and maximise the amount of available funding over the life of the project.

Local governments that already provide services described in Table 1 are eligible to receive payments in relation to those services; however, Better Bins funds must be applied to new activity as per the investment priorities.

Local governments are also eligible for funding for services provided to multi-unit dwellings (MUDs) residences with shared services. Each MUD residence must receive the following waste and recycling capacity to be eligible for funding for Preference 1, 2, 3 or 4 services:

- fifty per cent or less of the general waste capacity provided to households; and
- fifty per cent or more of the recycling capacity (comingled and green/organic) provided to households.



Investment priorities

A key objective of the Program is to provide funding to support investment in better practice kerbside systems consistent with the Guidelines. Investment priorities ensure that Better Bins funds are allocated, in the first instance, to provide optimum infrastructure (bins) and services. Guidance in relation to optimal provision of infrastructure and services is shown in Attachment 1.

Once a local government can demonstrate that optimal provision of kerbside infrastructure and services has been achieved, remaining funds may be applied to complementary measures that aim to improve the recovery performance of the service.

Investment priority	Expenditure of funds
Investment type A Optimise kerbside infrastructure and collection services	New bins (for example green/organic waste, small general waste, large co-mingled). Retrofitting bins with Australian Standard coloured bin lids. Service modifications (to increase recycling volume and/or reduce general waste volume).
Investment type B Complementary measures	Measures such as communication, education and engagement which target the collection service with the aim of improving the recovery performance of the service.

Complementary measures

Complementary measures, including communication, education and engagement, are essential to the performance of a kerbside collection system. It is important that the community understands the benefits of the kerbside system and how to use it effectively.

Better Bins participants are required to deliver complementary measures to support the recovery performance of the kerbside services provided to households. Minimum requirements include:

- consistency with Waste Authority key messages;
- printed communications (including direct household communications and public communications);
- website communications;
- local government staff training; and
- complementary measures data collection.

Minimum requirements for complementary measures are set out in Attachment 3.



The Right Bin—Communications toolkit

The Waste Authority is developing a communications toolkit as part of its The Right Bin program. The toolkit will provide template materials to help local governments provide clear and consistent behaviour change messages to the community to support the performance of their Better Bins system.

To be eligible for Better Bins funding, local governments will be required to deliver communications based on The Right Bin toolkit templates, or demonstrate that their proposed Better Bins communications are consistent with the toolkit.

Reporting

Better Bins participants must submit a preliminary and final report containing financial and recovery (waste and recycling) data to inform the performance of the kerbside collection service before and after the program.

In most cases, the data required for Better Bins reports will be readily available, and most data will already be generated for the local government's internal purposes and/or the Annual Local Government Waste and Recycling Census. Better Bins requires the following information to be reported:

- general project information;
- services—including number of households and types of services provided;
- costs—including costs for each service (general waste, co-mingled recycling, green/organic waste);
- waste and recycling data—including tonnes collected, disposed and recycled; and
- complementary measures.

A reporting template is available from the Waste Authority website and the Better Bins Program Manager.

Review

Data provided in the preliminary and final report will be independently reviewed at no cost to the local government.

The review process provides multiple benefits. The review will verify program performance and expenditure required for project acquittal. The review will also assess local governments' financial and recovery (waste and recycling) data to identify opportunities to improve data capture, analysis and reporting. This will help local governments analyse waste and recycling costs, and support better decision making in relation to waste and recycling services.

Independent consultants will work constructively and collaboratively with each local government to verify and, where possible, improve data management and reporting.



5. Funding conditions

1. The Better Bins Program is available to all Western Australian local governments.
2. Local governments must have no outstanding levy payments as required under the Waste Avoidance and Resource Recovery Levy Regulations 2008.
3. Local governments must have completed and submitted the most recent annual Local Government Waste and Recycling Services Census to be eligible for funding.
4. Local governments should commit to taking back and using compost or mulch produced from green waste collected in the local government area.
5. Local governments will be required to use The Right Bin communications toolkit (once published) or demonstrate their proposed Better Bins communications are consistent with the toolkit.
6. Funding recipients will be required to provide reports to verify project details and expenditure. The Waste Authority may produce case studies in relation to the program. Funding recipients may be expected to provide information to support the production of case studies.
7. Better Bins funds must be applied to new activities from the project commencement date as per the Funding Agreement.
8. A local government is eligible to receive a maximum of \$30 per household or multi-unit dwelling residence over the life of the program.
9. The Waste Authority's acknowledgment guidelines will be included as part of the Funding Agreement.
10. Participants must agree to cooperate with independent consultants in relation to the review of the preliminary and final report.
11. The Waste Authority reserves the right, at its absolute discretion, to withhold funds claimed under the program to entities that it reasonably determines do not meet these eligibility requirements.
12. The Waste Authority reserves the right to update Better Bins Program details by way of addendum to this Program Guide.
13. Local Governments are eligible for the maximum funding of \$30 per household if:
 - a local government offers Preference 1 services to households with an option for householders to 'opt out' of the smaller (140 litres or less) general waste service; and
 - the local government implements a differential pricing system which charges households a lower amount for a general waste service of 140 litres or less per week, and a higher amount for a general waste service of more than 140 litres per week.
14. Multi-Unit Dwellings
 - A multi-unit dwelling (MUD) is a development containing more than one residential dwelling in an allotment area and, for the purposes of this program, receives shared waste and recycling services.



- A MUD residence must receive the following waste and recycling capacity to be eligible for funding for preference 1, 2, 3 or 4 services.

Preference 1	General waste: 70 L or less weekly Comingled recycling: 120 L or more fortnightly Green waste/organic: 120 L or more fortnightly
Preference 2	General waste: 120 L or less weekly Comingled recycling: 120 L or more fortnightly Green waste/organic: 120 L or more fortnightly
Preference 3	General waste: 70 L or less weekly Comingled recycling: 120 L or more fortnightly
Preference 4	General waste: 120 L or less weekly Comingled recycling: 120 L or more fortnightly

- Services to MUD residences will be determined by the total waste and recycling capacity provided to a MUD divided by the number of inhabited residential dwellings in the allotment area.





6. Contact

Waste Authority
Level 4, The Atrium
168 St Georges Terrace
Perth WA 6000
Tel: (08) 6467 5325
betterpractice@der.wa.gov.au

7. Application details

- Application forms are available on the Waste Authority website and from the Better Bins Program Manager.
- Applicants are encouraged to contact the Better Bins Program Manager to ensure applications are clear and complete.
- Local governments must submit a completed application form to the Waste Authority. Final applications must be received by 5pm on Friday, 30 March 2018. Applicants are strongly advised to submit applications well prior to this date to ensure applications are clear, complete and able to be assessed.
- Applications must be signed by the CEO of the local government.
- The Waste Authority reserves the right to request additional details that may not be included in the application form.
- Applications must be submitted at www.wasteauthority.wa.gov.au/programs/public-submissions/better-bins. You will receive confirmation that your application has been received.



Attachment 1

Optimising infrastructure and services

The Better Bins investment priorities ensure that Better Bins funds are allocated, in the first instance, to infrastructure (bins) and services so as to maximise the potential coverage and effectiveness of the system. A local government may need to satisfy the Waste Authority that Better Bins funds will/have been applied in the first instance to optimise the rollout of infrastructure and services.

Once a local government can demonstrate that optimal provision of infrastructure and services has been achieved, remaining funds may be applied to complementary measures that target the collection service with the aim of improving the recovery performance of the service.

The Program recognises there may be limitations to a full rollout of a particular service. The following table provides guidance as to what constitutes optimal provision of infrastructure and services.

Local governments should consider mechanisms to optimise rollout, such as providing ‘opt-out’ services and differential pricing. An ‘opt-out’ service model (where householders can opt-out of a local government’s standard service offering) generally results in a higher uptake of a preferred service than an ‘opt-in’ model. Differential pricing (for example, charging householders a higher amount for more general waste capacity) can be used as an incentive for householders to use a preferred service.

Preference	Optimal infrastructure and service
1 and 2	<p>General waste service—the local government will provide no more than 140 L of weekly volume (Preference 1) or 240 L of weekly volume (Preference 2) for general waste to all residential properties within the collection service area.</p> <p>Co-mingled recycling service—the local government will provide at least 240 L of fortnightly volume for co-mingled recycling to all single-residential properties within the collection service area.</p> <p>Green waste service—the local government will provide at least 240 L of fortnightly volume for green waste/organics to all single-residential properties with a block size of over 320–400 metres squared within the collection service area.</p>
3 and 4	<p>General waste service—the local government will provide no more than 140 L of weekly volume (Preference 3) or 240 L of weekly volume (Preference 4) for general waste to all residential properties within the collection service area.</p> <p>Co-mingled recycling service—the local government will provide at least 240 L of fortnightly volume for co-mingled recycling to all single-residential properties within the collection service area.</p>



Attachment 2

Australian Standard Bin Colours

The *Australian Standard 4123.7–2006 Mobile Waste Containers—Colours, markings and designation requirements* (Australian Standard) specifies requirements for mobile waste containers, including bin and/or bin lid colours.

Consistent colours for different waste streams allow for more consistent communications and can increase resource recovery, by improving source separation and reducing contamination. Consistent bin and/or bin lid colours can help residents to use kerbside bins more effectively, irrespective of which local government they are in.

Considerations

The Waste Authority recognises that a transition to Australian Standard bin colours needs to consider a range of factors. Local governments should plan their transition to Australian Standard bin lid colours with consideration of the following:

- Contracts—the timing of transition may be constrained by existing contractual arrangements. Any new or amended contract must include a commitment to transition to Australian Standard colours by 30 June 2020.
- Attrition rates—the attrition rates of bin stock may inform the timing of a local government's transition to Australian Standard bin colours. All new or replacement bins/bin lids provided to households in the local government area must conform to the Australian Standard.

Minimum requirements

- Only bins and/or bin lids that are compliant with the Australian Standard colours are to be purchased with Better Bins funding.
- Properties must receive Australian Standard colour compliant bin / bin lid if they:
 - require a new bin and/or bin lid (for example, due to damage);
 - have requested a new service and / or additional bins;
 - are receiving a bin as part of an expansion to the existing collection service; and
 - all services funded through the Better Bins Program must be compliant with the Australian Standard's colours by 30 June 2020.



Attachment 3

Complementary measures

Complementary measures, including communication, education and engagement are essential to the performance of a kerbside collection system. It is important that the community understands the benefits of the kerbside system and how to use it effectively.

As part of the application process, a local government (the Applicant) must produce a Complementary Measures Plan which:

- addresses the minimum requirements set out below, including actions and timing;
- refers to the *Waste Authority Communications Guidelines: Communicating effectively for improved recycling and waste minimisation*; and
- considers local demographics and the needs of culturally and linguistically diverse community members.

If the applicant believes that any of the minimum requirements are not relevant to their local area, or have already been implemented, alternative activities that meet the objectives may be proposed for approval by the Waste Authority.

Minimum requirements

1. Consistency with Waste Authority key messages

The Applicant must deliver communications based on The Right Bin toolkit templates or demonstrate their proposed Better Bins communications are consistent with the toolkit (once it has been released).

All materials must be consistent with the *Waste Authority Acknowledgement Guidelines* and key messages contained within *Better Bins: Kerbside Collection Guidelines*.

Local government may be required to include links or references to websites or programs nominated by the Waste Authority.

2. Printed communications

As a minimum, printed communications, including direct household communications and public communications, must be produced:

- prior to the introduction of the Better Bins service; and
- at the time the Better Bins service is introduced.

Direct household communications: The local government must provide directly to each household that receives (or is scheduled to receive) a Better Bins service, printed material (such as a letter, pamphlet or calendar) containing information about the service.

Public communications: The local government must advertise the Better Bins service in appropriate local media, such as local newspapers.



Printed communications must include:

- details of bins and services, including the types of bins and services (general waste service, co-mingled recycling service and green waste service), colour of bin/bin lid for each service, and the collection days;
- service implementation date;
- required householder actions, including details of what to put in each bin;
- benefits of the service; and
- details of where the householder can access additional information, including the local government's contact details and website.

3. Website communications

The applicant must provide clear, up-to-date, accurate and easily accessible information on the local government website, containing:

- information as per 2. *Printed communications* (above);
- information about the performance of the service (such as the local government recycling rate) or key issues (such as contamination); and
- links to websites of waste and recycling programs as nominated by the State Government.

4. Local government staff training

The local government must provide training to staff likely to interact with the community about the Better Bins service, such as front line (customer service) staff and waste management staff. The local government should also consider training for elected representatives.

The content of the training should include:

- details of bins and services, including the types of bins and services (general waste service, co-mingled recycling service and green waste service), colour of bin/bin lid for each service and the collection days;
- service implementation date;
- required householder actions, including details of what to put in each bin;
- benefits of the service, including the benefits of source separation and diverting waste from landfill;
- details of where the householder can access additional information, including the local government's contact details and website; and
- responses to frequently asked questions.

The format of the training should include:

- face-to-face sessions;
- printed reference materials;
- refresher training; and
- staff induction training.



5. Complementary measures data collection

The local government must collect the following to enable monitoring and evaluation of complementary measures and to support continuous improvement of complementary measures:

- a record of all communication and engagement activities undertaken by the local government to support the Better Bins service;
- a record of issues raised by householders; and
- a record of activity of the waste and recycling section of the local government's website, including the number of relevant hits and downloads.





Attachment 4

Key references

The Waste Authority website contains information relevant to the Better Bins Program, including:

1. Western Australian Waste Strategy: Creating the Right Environment

The [Western Australian Waste Strategy](#) sets out the long term strategic directions and priorities for the State Government. The strategy is committed to developing best practice guidelines, measures and reporting frameworks and promoting their adoption.

2. Better Bins Kerbside Collection Guidelines

The [Better Bins Kerbside Collection Guidelines](#) are designed to help local governments' select kerbside collection systems to support higher resource recovery rates.

3. Better Bins Reference Report

The Better Bins Reference Report provides information that supports the *Better Bins Kerbside Collection Guidelines*, including the rationale for the Waste Authority's support for a three bin kerbside collection system.

4. Better Bins Reporting Template

The Better Bins Reporting Template provides reporting guidance for Better Bins participants.

5. Waste Authority Position Statement: Source Separation of Waste (January 2014)

The Position Statement: Source Separation of Waste confirms the Waste Authority's support for source separation as an important way of contributing to the objectives and targets established in the Western Australian Waste Strategy.

6. Waste Authority Position Statement: Communication on the waste hierarchy (June 2013)

The Waste Authority Position Statement: Communication on the waste hierarchy explains the waste hierarchy and how the Waste Authority will apply the hierarchy in its decision making in delivering the waste strategy.



Attachment 5

Example project scenarios

The following scenarios are provided as examples of how the Better Bins funding method and investment priorities are applied. In each example:

- The notional funding amount included in a funding agreement will be determined based on a local government's commitment to the types of kerbside services to be provided (Preference 1, 2, 3 or 4) and the number of households to which services are intended to be provided.
- The actual funding amount paid to the local government will be determined based on the actual kerbside services provided (Preference 1, 2, 3 or 4) and the number of households to which services are provided at the project end date.
- The maximum funding available to the local government is \$30 per household/MUD residence.

Example 1: Introducing a three bin service (Preference 1)

Local Government 1						
Preference	Current system		Proposed Better Bins System		Funding amount per household/residence	Funding amount
	Households	Multi-Unit Dwelling (MUD) residences	Households	Multi-Unit Dwelling (MUD) residences		
1	-	-	15,000	-	\$30	\$450,000
2	-	-	-	-	\$24	-
3	-	-	-	-	\$10	-
4	-	-	-	-	\$4	-
Other	15,000	5,000	-	5,000	-	-
Total	15,000	5,000	15,000	5,000	-	\$450,000

Funding method

Local Government 1 has 15,000 households and 5,000 residences in MUD residences. Prior to the Better Bins Program, the local government provided kerbside services that were not described by the Better Bins Program as either Preference 1, 2, 3 or 4 services.

As part of the Better Bins Program, the local government commits to introducing a Preference 1 service to all 15,000 households. As part of its service, the local government will also offer:

- an 'opt-out' service which allows householders to opt-out of a smaller (140 litre or less weekly capacity) general waste service; and
- differential pricing, which charges households less for a smaller (140 litre or less weekly capacity) general waste service.

The local government will not provide Better Bins services to MUD residences. The notional funding amount available to the local government is \$450,000.



Investment priorities

Better Bins funds must first be applied to Investment Type A to cover the new infrastructure and collection services costs which, in this example, is likely to be the purchase of smaller (140 litres or less) general waste bins, green waste bins and collection services.

Remaining funds must be applied to Investment Type B—complementary measures which aim to improve the recovery performance of the service. Complementary measures will be set out in a complementary measures plan. If there are no funds remaining after being applied to Investment Type A, the local government must still implement minimum complementary measures to ensure the community understands the benefits of the kerbside system and how to use it effectively.

Actual funding

By the project end date, the local government offered Preference 1 services to all 15,000 households. Two thousand households 'opted out' of the Preference 1 service and ordered a 240 litre weekly general waste service.

The local government was paid the full \$450,000 because it offered Preference 1 services to all 15,000 households as the standard service, which included an 'opt-out' option for the smaller general waste service and differential pricing for the general waste service.





Example 2: Optimising an existing three bin service (Preference 1)

Local Government 2						
Preference	Current system		Proposed Better Bins system		Funding amount per household/residence	Funding amount
	Households	MUD residences	Households	MUD residences		
1	10,000	-	15,000	-	\$30	\$450,000
2	-	-	-	-	\$24	-
3	10,000	-	5,000	-	\$10	\$50,000
4	-	-	-	-	\$4	-
Other	-	-	-	-	-	-
Total	20,000	-	20,000	-	-	\$500,000

Funding method

Local Government 2 has 20,000 households. Prior to the Better Bins Program, the local government provided an 'opt-in' three bin service (Preference 1 service) to 10,000 households and a two bin service (Preference 3 service) to 10,000 households.

Many of the larger households in the local government area do not receive a Preference 1 service. As part of the Better Bins Program, the local government commits to optimising the rollout of better practice services (by providing Preference 1 services to more households) and improving the performance of services. The local government aims to provide Preference 1 services to an additional 5,000 households.

The notional funding amount available to the local government is \$500,000.

Investment priorities

Better Bins funds must first be applied to Investment Type A to cover the new infrastructure and collection services costs associated with the 5,000 additional Preference 1 services.

The local government is able to demonstrate to the Waste Authority that it has optimised the rollout of better practice services with reference to Attachment 1 in this Program Guide. Remaining funds may be applied to Investment Type B—complementary measures which aim to improve the recovery performance of the service. Complementary measures will be set out in a complementary measures plan.

Actual funding

By the project end date, the local government provided 16,000 Preference 1 services (1,000 more than it originally committed to) and 4,000 Preference 3 services.

The local government was paid a total of \$520,000 being:

- 16,000 households with Preference 1 services x \$30 per household = \$480,000; and
- 4,000 households with Preference 3 services x \$10 per household = \$40,000.



Example 3: Introducing a two bin service to households and MUD residences (Preference 3)

Local Government 3						
Preference	Current system		Proposed Better Bins system		Funding amount per household/residence	Funding amount
	Households	MUD residences	Households	MUD residences		
1	-	-	-	-	\$30	-
2	-	-	-	-	\$24	-
3	-	-	15,000	2,000	\$10	170,000
4	15,000	-	-	-	\$4	-
Other	-	5,000	-	3,000	-	-
Total	15,000	5,000	15,000	5,000	-	\$170,000

Funding method

Local government 3 has 15,000 households and 5,000 MUD residences. Prior to the Better Bins Program, the local government provided a two bin service (Preference 4) to all 15,000 households.

As part of the Better Bins Program, the local government commits to introducing a Preference 3 service to all 15,000 households and 2,000 MUD residences.

The notional funding amount available to the local government is \$170,000.

Investment priorities

Better Bins funds must first be applied to Investment Type A to cover the new infrastructure and collection services costs which, in this example, is likely to be the purchase of smaller (140 litres or less) general waste bins. Alternatively, the local government could retain existing 240 litre bins and offer a fortnightly collection service, which provides an equivalent general waste service of 140 litres weekly.

Remaining funds must be applied to Investment Type B—complementary measures which aim to improve the recovery performance of the service. Complementary measures will be set out in a complementary measures plan. If there are no funds remaining after being applied to Investment Type A, the local government must still implement minimum complementary measures to ensure the community understands the benefits of the kerbside system and how to use it effectively.

Actual funding

By the project end date, the local government provided Preference 3 services to all 15,000 households and 1,000 MUD residences (1,000 less than the local government's original commitment).

The local government was paid a total of \$160,000 being:

- 15,000 households with Preference 3 services x \$10 per household = \$150,000; and
- 1,000 MUD residences with Preference 3 services x \$10 per residence = \$10,000.



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